Character strengths, life satisfaction and

orientations to happiness –

a study of the Nordic countries

Master thesis

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FORWEORD

My interest in positive psychology kick started when I as an undergraduate in psychology got to see Prof. Martin Seligman's guest lecture in August 2005 at the University of Bergen. This approach to psychology really hit home with me, and I started to read up on the subject quite voluntarily – as there was little or no trace of it in any of the curriculums on the courses I was taking. That is, not before I took an introductory course to health promotion.

I started my master's degree in health promotion hoping that I would somehow be able to write my thesis on some theme that was close to positive psychology. And where there is hope, there is will. And where there is will, there is a way. Now I have completed my thesis on character strengths and subjective well-being, which are in fact very central to positive psychology. Academically this is a dream come through for me.

First and foremost I would like to thank my supervisor Marianne Skogbrott Birkeland for guiding me through this work, and for patience and understanding in times of slow progress. Also I would like to thank co-supervisor Bente Wold for valuable comments and insights, and for letting me gain access to the data from the Authentic Happiness web site. On that note, thanks also to the team behind this web site, for allowing me to use the data - including Prof. Seligman, also for inspiring me in the first place.

Academically, writing a master thesis is rewarding, but also a challenging process at times. This process was for me made more challenging than necessary, by factors in my life that had nothing to do with my studies, but still impacted them. In that regard, I especially want to thank my parents for all their support and for always believing in me. The same goes for other near ones and dear ones and my good friends, with whom I have been able to share sorrows and frustrations, as well as joys and laughter. I also want to thank my fellow students for rewarding discussions on both academic and not so academic subjects, and not to forget: some excellent parties!

Saving the best for last; this work is in its entirety dedicated to my beautiful boys, Andreas and Jonathan. You inspire me every single day, and I love you way past the moon and all the stars to!

Kristin Hool

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ABSTRACT

Health promotion and positive psychology both focus on the positive aspects of health, and share a view in which the prevention of health problems are as important as repairing damage. Whereas much is known about how to promote physical health, research is now also emerging on how to promote mental health. One way of elevating mental well-being, is through focusing on personal virtues and character strengths.

This study used data collected from the Authentic Happiness web site, and investigated different aspects of the relative prevalence of the VIA character strengths in the Nordic countries ($N = 1601$). The main findings indicated six categories of character strengths, which in part correspond to the theoretical classification of the strengths. The most commonly endorsed strengths were curiosity, fairness, judgment, love, and love of learning. The countries showed converging strengths profiles. Some small differences were found between the genders and the different age groups. In general women scored higher on the strengths than men, and typically scores increased with age. Hope, zest, gratitude, love, and curiosity were robustly associated with subjective well-being. The character strengths turned out to be highly predictive of subjective well-being, explaining 51.6% of the total variance after demographic variables had been accounted for. In this sample, only meaning turned out to be significantly related to subjective well-being, whereas the other orientations to happiness, engagement and pleasure, were not.

These results may have implications for future research of virtues and strengths in positive psychology, and for health promotion practice.

Key words: positive psychology, virtues, character strengths, subjective well-being, life satisfaction, orientations to happiness

SAMANDRAG

Helsefremjande arbeid og positiv psykologi fokuserer begge på dei positive aspekta ved helse, og deler eit syn der førebygging av helseproblem blir sett på som like viktig som å reparere skade. Mykje er allereie kjent om korleis å fremje den fysiske helsa, men no kjem det også meir forsking om korleis å fremje den mentale helsa. Ein måte å oppnå betre mentalt velvære på, er gjennom å fokusere på personlege dyder og karakterstyrker.

Denne studien har nytta data innsamla frå websida til Authentic Happiness, og har utforska ulike aspekt ved den relative prevalensen av VIA karakterstyrker i dei nordiske landa ($N = 1601$). Hovudfunna indikerte seks kategoriar av karakterstyrker, som delvis korresponderer til den teoretiske klassifikasjonen av styrkene. Dei vanlegaste styrkene var curiosity, fairness, judgment, love og love of learning. Landa viste konvergerande styrkeprofilar. Nokre små forskjellar vart funne mellom kjønna og dei ulike aldersgruppene. Generelt skårte kvinner høgare på styrkene enn menn, og som regel auka skårene med alder. Hope, zest, gratitude, love og curiosity var robust relatert til subjektivt velvære. Karakterstyrkene viste seg å ha høg prediksjonsverdi for subjektivt velvære, då dei forklarte 51,6% av variansen etter at variansen frå demografiske variablar var trekt i frå. For dette utvalet viste det seg at kun meining var signifikant relatert til subjektivt velvære, men det var ikkje engasjement og glede.

Desse resultata vil kunne ha implikasjonar for framtidig forsking på dyder og styrker i positiv psykologi, og for helsefremjande arbeid i praksis.

Nøkkelord: positive psychology, virtues, character strengths, subjective well-being, life satisfaction, orientations to happiness

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1. INTRODUCTION

1.1. Background

Well-being, more commonly referred to as happiness, might be considered as a goal in itself, but recent research implies that happiness can also be considered a means towards a better life, as it has been discovered that happiness is not merely an end result of a positive mental process – but in many instances happiness can precede and potentially cause valued outcomes, like better health, work performance and social functioning (Lyubomirsky, King, & Diener, 2005).

There appears to be quite a strong link between personality and well-being, however this topic of research is outnumbered by studies investigating how situational factors influence happiness (Lucas & Diener, 2008). This is why it is important to broaden the understanding on matters of well-being and personality, and this study aims to contribute to the existing knowledge on this subject, more specifically by investigating the relationship between subjective well-being in the form of life satisfaction and positive personality traits; in the following conceptualized as character strengths. These may be defined as positive personality traits on which we place moral value, and are classified within a taxonomy of virtues and character strengths (Peterson & Seligman, 2004), a rather new addition to personality psychology.

The study was performed on a sample of the Nordic countries of Denmark, Finland, Iceland, Norway and Sweden. A main purpose of this study was also to find out which character strengths seemed to be the most common for these countries, and which were the most important for well-being, and if the emerging pattern was similar or different to what have been found in previous research. The classification of the strengths is an on-going project, and more research is needed to understand the structure and nature of the virtues and the character strengths (Park & Peterson, 2007). This study also includes a factor analysis to investigate this issue further. To date, such an extensive study performed exclusively on a Nordic population has not been published.

Even though the sample consisted of populations from five different nationalities, they presumably share many common attributes and features, such as history, language, religion, culture, financial and political structures in addition to geographical location (Lahelma, Lundberg, Manderbacka, & Roos, 2001), and was as such analysed as a whole, when appropriate.

The study is guided by theory and findings within health promotion and positive

psychology, both in which the concept of well-being is seen as crucial for good health and a good life (Green & Tones, 2010; Seligman & Csikszentmihalyi, 2000)

1.2 What is health?

In 1946 the World Health Organization (WHO) defined health as "state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (p 1). This definition has been criticized for being unrealistic, and hard to attain for all human beings. But by describing health in this way, also the mental and social aspects of health were included, which extended the scope of health beyond the mere physical aspect. It also included a view on health as being more than an absence from disease and illness, it also means having a certain quality of life and feel a sense of well-being (Mæland, 2005).

This concept of health has been incorporated into the field of health promotion, which can be described as the process of enabling people to increase control over, and to improve their own health (WHO, 1986). Work and research within the field of health promotion entail a perspective on health which focuses on coping and resources, implying that health is viewed as a positive concept and as a resource for being able to live a fulfilling life. This again means that health promotion is as, or even more, concerned with scientific knowledge about factors that are positive to the extent that they can promote health, well-being and increase quality of life, as it is with investigating factors that are negative and lead to disease and ill health (Mittelmark, Kickbush, Rootman, Scriven, & Tones, 2007). This is a basic presumption that the health promotion field shares with positive psychology.

1.3 Positive psychology and how it relates to health promotion

The term positive psychology was actually introduced already in 1954 by Abraham Maslow. He states that psychology has been preoccupied with shortcomings and problems, thereby restricting itself to the negative sides of the human nature. He argued that psychology needed to reveal a more complete story about human life, which needed to take account of i.e. virtues, aspirations and how to achieve ones full potential. However, this area of psychology did not really start expanding until about a decade ago, and has since grown considerably (Diener, 2009a).

Positive psychology is said to be an umbrella term for the study of positive emotions, positive character traits, and enabling institutions (Seligman, Steen, Park, & Peterson, 2005). It can be described as the study of what people do right, and how they do it, and involves aiming towards helping people to develop those qualities that will help them lead more

fulfilling lives (Compton, 2005). Peterson (2009) holds that positive psychology is about studying scientifically what makes life most worth living, and that it is important to "be as concerned with strength as with weakness; as interested in building the best things in life as in repairing the worst; and as concerned with making the lives of normal people fulfilling as with healing pathology. " (p. XXIII).

Positive psychology is however, not without its opponents. For instance, Lazarus (2003) says that it is not always possible – if even at all - to separate the positive aspects life from the negative. But the intention of positive psychology is not to find ways to avoid negative affect, thoughts or incidents, or to ignore those aspects of life or claim they do not matter. As Park and Peterson state (2009, p.424); "the good life is not the troubled life avoided or undone". Positive psychology is about adding to the body of psychological knowledge that already exist about solving problems and healing illness, in terms of how to achieve a good life by studying life's more positive aspects.

Central to the study of life's more positive aspects, is the study of well-being, which is a concept that refers to optimal psychological functioning and experience (Ryan & Deci, 2001). One of the fundamental questions within positive psychology is whether it is possible to increase individual levels of well-being, and if so, how. This is considered an important question, as how to achieve and maintain good mental health would be relevant for individuals, public policy and health-care systems (Lopez & Gallagher, 2009).

Within the field of positive psychology the terms subjective well-being and life satisfaction is often used interchangeably with happiness, which are more scientifically solid terms for what people usually associate with happiness (Seligman & Csikszentmihalyi, 2000).

Quite a lot of research point towards a happy person also being a healthy person (Dockray & Steptoe, 2010; Pressman & Cohen, 2005; Salovey, Rothman, Detweiler, & Steward, 2000). Even though mental health is the basic subject of positive psychology, mental health cannot necessarily be separated from the physical health. Thought patterns and emotional states influence the physical health, and vice versa (Morrison & Bennett, 2009).

For instance, in a meta-analytic review of the links between optimism and physical health, the authors conclude that dispositional optimism, defined as a generalized expectation that good things will happen, is a significant predictor of positive physical health outcomes (Rasmussen, Scheier, & Greenhouse, 2009). They report research showing that optimists compared to people that are more pessimistic, for instance report better physical functioning, fewer physical symptoms and less pain. It has been found that happier people and those who

were more satisfied with their lives reported better health, after adjustment for baseline health, smoking, drinking, physical activity, and socio-demographic factors (Siahpush, Spittal, & Gopal, 2008).

Positive affect seem to have a direct effect on the immune system, as positive emotions may directly affect and boost the immune system in several ways, thereby preventing disease and help maintain or build good health (Barak, 2006; Pressman & Cohen, 2005). In their review on positive affect and health Pressman and Cohen also refer to longitudinal research showing that positive affect build coping resources and enhance social functioning, and that it is associated with increased longevity and decreased mortality. Xu and Roberts (2010) also conclude in their 28-year study that subjective well-being significantly predicts longevity in the general population.

Exactly how these links between happiness and good health work, are beyond the scope of this thesis, but this research is important in establishing the importance of different indicators of subjective well-being and its positive health outcomes. As such, this research is also important to the field of health promotion (Bull, 2008). It might be contended that positive psychology is too individualistic in its approach, thereby not acknowledging social and political processes. However, within the field there is also focus on positive institutions and positive societies, for example on positive schools (Huebner, Gilman, Reschly, & Hall, 2009) and workplaces (Luthans & Youssef, 2009), law and policy (Huang & Blumenthal, 2009).

But the basic focus is on the individual, and what people themselves can do to change in a more positive direction. In turn, this will benefit the institutions which the individual belongs to and society at large (Seligman, 2002). This is related to how the health promotion field views the health of the individual; that the health of each individual member of society has implications for how society functions as a whole (Mittelmark, et al., 2007). Diener (2009a) notes that it could actually be destructive for society if individualism is pursued without having the well-being of the larger society in mind, and that positive psychology do emphasize the actualization of the individual, but within a broader perspective which includes how the individual will contribute to the well-being of others and the world. Hence, positive psychology goes beyond an individualistic perspective by trying to answer questions central to developing healthier societies.

How to prevent disease and malfunction is central to the field of health promotion, and there is a major focus on mastery and resources essential to coping and development

(Mittelmark, et al., 2007). Also within the field of positive psychology, it is seen as important to devise interventions that prevent different mental disorders from occurring in the first place (Peterson & Seligman, 2004).

A premise of positive psychology is that it is possible to improve mental health, and make development and growth feasible, by focusing on and elaborate on strengths of character and positive personality traits (Seligman, 2002). To be able to put a name to what one does well, to gain knowledge about and cultivate ones strengths is thought to promote well-being. To become aware of what one does well and what one is good at, might also be thought of as empowering for the individual (Peterson & Park, 2009).

Empowerment is an important concept in health promotion, which goes to the very core of what health promotion is. To be able to take control over and improve one's health, one has to possess the power and autonomy to do so. One way to gain such power, is through fostering personal development and skills (Mittelmark, et al., 2007). Bull (2008) notes that the concept of autonomy, which in health promotion is sees as critical to improving health, is closely linked to positive psychology's focus on personal fulfilment of one's true nature, in that it will increase freedom to flourish, to act and to pursue goals.

2. THEORETICAL FOUNDATIONS

2.1 Happiness and the good life

The goal of researchers and practitioners within positive psychology is to improve the quality of human life (Diener, 2009a). Throughout history, happiness has been a much debated and written upon subject in philosophy, literature and in modern times' self-help books (Boehm & Lyubomirsky, 2009). It may seem like the recent interest in happiness and the good life follows the development of especially Western societies into rich and stable welfare-societies, in where basic needs are met for most people, and where people are free from the constant worries of the lesser developed societies, like hunger, wars and lack of basic health care. We enjoy the benefits of democracy, security, education and the prospects of a long life (Diener, 2009a).

When material needs for the most part are met, we can thereby allow ourselves the "luxury" of seeking psychological fulfilment. This might come naturally as people gradually come to understand that well-being does not necessarily increase as a consequence of more material wealth (Boehm & Lyubomirsky, 2009; Csikszentmihalyi, 1999). It can then make sense to return to one of philosophy's basic questions of what makes a good life and a good person (Diener, 2009a).

2.1.1 What is happiness?

As mentioned, happiness is in theory and research often substituted with the term well-being, in particular referring to individual, or subjective, well-being (SWB). This concept refers to the extent to which people think and feel that their lives are going well (Lucas & Diener, 2008). It is described as being subjective in the sense that it is the individual's experience. Objective conditions (i.e. marital status, income, health status) are absent from the definition. It also includes positive measures, not just an absence of negative factors (Diener, 2009b). It can be defined in terms of the individual's cognitive and affective evaluations of his or her life as a whole (Diener, Oishi, & Lucas, 2009). As such, these judgements will consist of both cognitive evaluations of life satisfaction, as well as emotional responses to events.

Thus, subjective well-being is an individual experience that implies high levels of pleasant moods and emotions (not just the absence of negative ones) and high life satisfaction, resulting from a global judgement of all aspects of a person's life (Diener, 2009b). So if an individual both feels good about his or her life, and also cognitively evaluates his or her life to

be good, the person is happy.

In the following, the present study revolves around life satisfaction, i.e. the more cognitive part of SWB, i.e. when the term SWB is used it implies life satisfaction. Judgements of life satisfaction can possibly be seen as more stable and enduring than affective evaluations, which are thought of as more temporary reactions towards situations – even though the two cannot always be seen as interdependent (Diener, et al., 2009; Kahneman & Riis, 2005).

2.2 Perspectives on happiness

There can be many roads to happiness, and the study of happiness in positive psychology revolves around three possible pathways; positive emotions and pleasure (the pleasant life), engagement (the engaged life) and meaning (the meaningful life) (Seligman, 2002). For different reasons, these three are seen as important (Peterson, Park, & Seligman, 2005b).

Today's research on well-being primarily stems from two main perspectives (Ryan & Deci, 2001); the hedonic approach, which is concerned with feelings associated with happiness, and where well-being is defined in terms of attaining pleasure and avoiding pain. The eudemonic approach is more concerned with meaning and self-realization; in which well-being is defined in terms of growth and development and to what degree the person reaches its full potential. Hence, the research foci within these two perspectives are somewhat different.

In positive psychology these two views are not treated as mutually exclusive in that there is only one way of achieving happiness, but rather as different and distinct routes to well-being. Pleasure (hedonism) and meaning (eudemonia) have been integrated within the same theoretical framework, together with a third route to well-being, engagement (Seligman, 2002). The latter contribution to the theory of well-being is mainly built on Csikszentmihalyi's (1990) theory and research on flow. These three routes to happiness will now be described more in detail.

2.2.1 Pleasure

It may seem obvious that it is important to focus on positive emotions and pleasure to increase life satisfaction and happiness, something that philosophers have debated throughout the centuries (Peterson, et al., 2005b). The elaboration of hedonism started perhaps with Epicurus (342–270 BCE), who said that the fundamental moral obligation is the maximizing

of pleasurable experiences. This view was not shared by the early Christian philosophers, who held that the main goal for humanity was to avoid sin, thereby denouncing hedonism. However, the case for hedonism was not lost, as Renaissance philosophers, among them Erasmus (1466-1536) and Thomas Moore (1478-1535), argued that it was God's wish for people to be happy.

But this did require becoming preoccupied with genuine ways of achieving pleasure. Hedonism can also be said to be the basis of utilitarianism, a perspective of philosophy founded among others by Jeremy Bentham (1748-1832), in which the presence of pleasure and the absence of pain are seen as necessary qualities of a good life (Bentham, 1789/1948, ref. in Diener, 2009b). Utilitarian thinking also has affected psychology, such as psychoanalysis and behavioral psychology (Peterson, et al., 2005b). A more recent field of psychology, known as hedonic psychology, studies what makes life pleasant or unpleasant, and the feelings connected to different life experiences (Kahneman, Diener, & Schwarz, 1999).

In recent years attention has also been drawn to the possible evolutionary importance of positive emotions. The broaden-and-build theory (Fredrickson, 1998, 2001) suggests that positive emotions serve the role of broadening thought-action repertoires, through being a necessary prerequisite for e.g. curiosity, creativity and learning, and for connecting with and building relationships to other people; thereby building physical, intellectual and social resources. As such, positive emotions may be seen as advantageous, or even necessary, to human survival and development. Also, Fredrickson posits that positive emotions might have a regulatory influence on the detrimental effects of lingering negative emotions, that serve to undo such negative effects by helping restore homeostasis after experiencing e.g. a stressful event.

2.2.2 Meaning

The focus on meaning as a way to increase happiness has a different origin, maybe originating from Aristotle's (384-322 BCE) concept of eudemonia which implies being true to one's inner self, or one's inner "demon". To him, the pursuing of simple pleasures was vulgar, and he considered the way to true happiness meant identifying one's virtues and to cultivate and exercise them. As such, the way he used the word happiness can also be described as "flourishing" or "fulfillment", and denotes being a morally good person – not just for the sake of the individual, but also for the common good, as decent people doing good acts will benefit

society (Ross & Brown, 2009). The British philosopher John Stuart Mill (1806-1873), also a proponent of utilitarianism but more in line with Aristotle, holds that the sensual pleasures are inferior to the moral and intellectual pleasures. He formulated what has become known as the "greatest-happiness principle", implying that one should act in service of the common good, and as far as possible do what produces the greatest happiness for the greatest number of people (Mill, 1863).

A line can be drawn from this philosophical perspective to influential psychological theories of human development, like for instance Maslow's concept of self-actualization (1954). He says that "what a man can be, he must be" (p. 91), and argues that human beings has an innate need to become aware of and then realize their full potential, and that this is possible once more basic needs like physiological needs and the need for love and belonging are met.

Also Deci and Ryan's self-determination theory (Deci & Ryan, 2000) entails a positive perspective on human growth and development. They hold that all humans are born with what they call inherent growth tendencies, which reflect on humans persistently showing commitment, effort and agency to master challenges and better their lives. Three basic needs are seen as universal, in that they can be identified in humans across gender, time and culture; these are the need for competence, relatedness and autonomy. These three needs are seen as the basis for self-motivation, in that they will determinate factors and initiate behavior that are essential for the psychological well-being and health of the individual. Such behavior is seen as inherent, but it does not happen automatically. A supportive social environment is an essential factor for individual development to occur. If these needs are met, it will allow for growth and optimal functioning. If these needs are not met, the consequences might be negative for the individual, as development then might not occur or take the wrong direction.

What these eudemonic perspectives seem to share, is a point of view which implies that people should develop their positive qualities and capacities, and use their abilities and skills to serve something more than themselves. This view takes the greater good into account, with an emphasis on what will benefit the welfare of other people (Peterson, et al., 2005b).

2.2.3 Engagement

To be fully engaged in what one does can bring forth a sense of flow, which very often brings forth a sense of well-being in people (Csikszentmihalyi, 1997). Flow can be described

as a state of mind that can be a result of doing something enjoyable and meaningful for the person, in which the person becomes completely absorbed, and loses sense of time, surroundings and bodily sensations (Csikszentmihalyi, 1990). One is fully immersed in what one is doing and the sense of self is lost. Attention and motivation are focused on the task at hand, and action is described as feeling effortless. An experience of flow usually happens when the activity in question is learned and practiced, and it requires a certain match between skills and challenge. If the challenge is too easy, it can result in boredom, but if it is too difficult, it can result in anxiety. It is further stated that flow-experiences can result from doing almost any kind of activity, like sports, music, cooking, reading, etc., as long as one is interested in and enjoy what one is doing - for the activity's own sake. As such, intrinsic motivation seems necessary for flow to occur, as well as an ability to loose oneself and become fully involved.

Flow is described as a state of mind devoid of any particular emotions, particularly since the sense of self is lost and one does not seem to be conscious of anything but the activity itself (Csikszentmihalyi, 1999). There might not be any cognitive capacity left for reflecting upon one's subjective experience. So the relationship between flow and happiness might not seem very clear. But when the experience is over, people report having been in a positive state and seems to feel invigorated and content. It is noted that experiences of flow is not all it takes to increase well-being in the long run, as people can also engage themselves in and experience flow during activities that are destructive or addictive.

Csikszentmihalyi calls for attention towards finding flow in more complex activities that can be more rewarding and fulfilling in the long run, that is activities that allows for personal growth, development of new skills and new opportunities for action. Active mental, emotional and physical involvement in several aspects of life, such as work, sports, hobbies and meaningful relationships, increases the chances of lasting happiness. Research on flow indicates that happiness is associated with whether a person is able to experience flow during the activities he or she engages in (Csikszentmihalyi, 1997).

Flow is seen as a distinct way of attaining happiness, as it is not the same as sensual pleasure (Peterson, et al., 2005b). It is non-emotional and non-conscious, and is therefore regarded as distinct from the positive emotional experiences elaborated upon in the hedonistic tradition. Flow is also distinct from the pursuit of meaning, because not all flow-generating experiences are meaningful, and not all meaningful activities will bring forth a sense of losing oneself in them.

The theory goes on to differentiate between what is called the full life, implying that all these three components of happiness are a vital part of a person's life, and the empty life, meaning that they are inferior in that person's life, or even missing completely (Peterson, et al., 2005b; Seligman, 2002).

2.3 Personality

Allport (1961) defines personality as "the dynamic organization within the individual of those psychosocial systems that determine his characteristic behavior and thought (p. 28). Larsen and Buss (2005) include in their definition "the set of psychological traits and mechanisms within the individual that are organized and relatively enduring and that influence his or her interactions with, and adaptations to, the intrapsychic, physical, and social environment" (p. 4). This implies the sum of a person's more stable characteristics that involves an inclination towards emotional patterns, thought -, and action patterns that the person carries with him or her over time and situations, which are different from, or can be shared with, those of other people.

There are different opinions regarding how personality develops, and what the determining factors are. For instance, Freud and other psychoanalysts have highlighted the important role of childhood experiences, and how these affect the development of the adult disposition through inner drives and forces. From a social psychologist's point of view, personality develops mainly from a "tabula rasa" that is shaped by situational influences through learning and modeling. Trait theorists hold that there is a certain set of traits that everybody embodies to a greater or lesser degree, and the exact composition of these within each person, is what make up the individual personality (Larsen & Buss, 2005).

2.3.1 The Five Factor Model

A well-known and widely accepted trait theory is the five-factor model of personality (FFM), also known as the Big Five (Digman, 1990; McRae & John, 1992). This model can be described as a consensus of different trait theories and research findings. Many researchers from different perspectives have concluded that these are fundamental dimensions of personality, as they are shown to have convergent and divergent discriminant validity across instruments and observers, are found in both genders, across cultures and age groups, and seem to be enduring for decades in adults (McCrae & Costa, 1990; McCrae & Costa, 1997).

These five factors are known as extraversion, agreeableness, conscientiousness, neuroticism, and openness, and they each denote dimensions along which individuals can

vary. High scores on these traits are associated with the following characteristics: extraversion with being energetic, outgoing and talkative, agreeableness with being kind, sympathetic and trusting, conscientiousness with being efficient, organized and responsible, neuroticism with being anxious, unstable and worrying, and openness with being curious, imaginative and insightful (McRae & John, 1992). According to McCrae and Costa (1994) personality develops mainly until the age of 30, and thereafter essentially remains stable and unchanging.

2.3.2 Genetic contributions to personality

Advances in modern research have paved way for yet another point of view, highlighting the hereditary influences on personality. Gene research has uncovered that a major part of personality seems to be genetically determined. These results stem mainly from adoption studies investigating the personalities of dizygotic and monozygotic twins reared together and apart (Larsen & Buss, 2005). For example, Tellegen et al (1988) found that about 50% of measured variance in personality, as measured by the Multidimensional Personality Questionnaire (MPQ), can be attributed to genetic diversity. Also the Big Five, as measured by the NEO Personality Inventory (NEO-PI-R), have been reported to show substantial heritability. The genetic influence has been estimated to be between 40% and 60% for these personality traits (Jang, Livesley, & Vernon, 1996; Riemann, Angleitner, & Strelau, 1997). Bouchard (1994) concludes that many behavior-genetic studies of personality traits show an heritability of the dimensions of the FFM that explains about 40-50% of the variance in these personality traits, and estimates the genetic influence for all five traits in a simple additive model to 46%.

As for other factors affecting a developing personality, the above mentioned research indicates that non-shared environments and unique experiences are much more important factors than shared environments. Results for environmental influence shared by siblings or twins, for instance shared family effects, are either absent or marginal. This is not to say, however, that environmental influences are not an important factor in how the individual personality develops. At the level of the individual, there is a complex interplay between both nature and nurture involved in this process. Research has started to take such gene-environment interactions into account, by suggesting that the individual on the basis of his or her genotype is led to or actively chooses its own environment and stimuli, and thereby creates a unique set of experiences (Scarr, 1992).

In this view, people are seen as dynamic and creative organisms for whom stimuli in

the environment amplifies the effect of genotype on phenotype – meaning that the role of learning is not minimized, and neither is the type of environment one exist in, whether good, inadequate or debilitating for optimal development (Bouchard, 1994).

Positive psychology shares a similar view in which the trait theory is embraced, as individual differences are seen as stable and general, but it is also shaped by the individual's surroundings and are as such viable to change (Peterson & Seligman, 2004). It is said that positive traits needs to be placed in context, and their development are contingent on enabling conditions, like for instance positive role models, a supportive family environment, safe neighborhoods, and political stability.

2.4 Personality and well-being

Psychology has predominantly been occupied with those elements of personality that causes problems and malfunction, and with finding treatments for suffering and mental illness (Seligman & Csikszentmihalyi, 2000). Traditionally, there has been little research to address the relationship between personality and subjective well-being. However, research on SWB over the last four decades show a strong link between personality and SWB. For example, SWB has been found to be very stable over time, also in the presence of changing life circumstances.

In part, this can be explained by personality (Lucas & Diener, 2008). Particular personality traits are related to different types of well-being, for instance extroversion is associated with positive emotions, and neuroticism to negative emotions (Steel, Schmidt, & Shultz, 2008). DeNeve and Cooper (1998) found in their meta-analysis, comprising 137 personality traits and their association with SWB, an overall correlation of $r = .19$. Among those traits which showed robust correlations with SWB, in addition to extraversion and neuroticism, were agreeableness and conscientiousness, locus of control and hardiness. Steel, Schmidt and Schulz (2008) found in their meta-analysis that personality (basically as measured by the FFM) can account for between 39% and 63% of SWB, and found that prior estimates of this relationship had been underestimated.

Research on objective life circumstances (i.e. income, age, education level, health) has revealed that the links between SWB and such factors tend to be weak (Diener, 2009b). It seems that health and an income that adequately provides for life`s necessities are necessary, but not sufficient conditions for SWB (DeNeve & Cooper, 1998).

Such findings are often attributed to the notion of hedonic adaptation, which implies

that people adapt to circumstantial changes, especially positive ones (e.g. winning the lottery), and soon become accustomed to new conditions (Brickman & Campbell, 1971; Brickman, Coates, & Janoff-Bulman, 1978). This might be referred to as a psychological process in which the emotional effect of a stimulus (e.g. a circumstance, a single event, or recurrent events) is attenuated over time (Lyubomirsky, 2011). Quite a lot of research support the existence of this psychological process, and confirms that it happens faster to positive than to negative experiences (see Lyubomirsky, 2011, for a review). As such, hedonic adaptation might be seen as a barrier to a sustainable increase in well-being (Lyubomirsky, 2009).

SWB has been found to be moderately heritable, different studies have showed that heritability estimates for well-being constructs, regardless of the measure being used, tend to lie between .40-.50 (Roysamb, Harris, Magnus, Vitterso, & Tambs, 2002; Stubbe, Posthuma, Boomsma, & De Geus, 2005). Also, research indicates that SWB might be tied to personality via common genes (Weiss, Bates, & Luciano, 2008). So it seems then, that personality and genetic composition explains a significant amount of the variability of SWB.

But, as Lucas and Diener (2008) note, even if a characteristic is heritable to a certain degree, this does not necessarily correspond to the extent to which it can change. For example, changing life circumstances can have a significant effect on SWB. On a group level, it seems that most of us adapt and bounce right back to our baseline levels once we have gotten used to the new situation (i.e. marriage, divorce, unemployment, disability). However, on the individual level, the differences can be quite large, as people show considerable individual differences in the amount of change that follow major life events, and how long these changes last (Fujita & Diener, 2005; Mancini, Bonanno, & Clark, 2011).

Also the culture in which people are brought up and live in, significantly influences SWB (Diener, Oishi, & Lucas, 2003). For instance, international surveys have found consistent mean level differences between nations (Inglehart & Klingemann, 2000). It seems that culture variables affect mean levels of SWB, and these are attributed to factors such as norms influencing appropriate feelings and how important SWB is considered to be in the culture in question.

SWB is also considerably higher in wealthy than poor countries, which is linked not only to income, but also to human rights, equality, longevity and democratic governance (Diener, et al., 2003). As regards income, there is a curvilinear relation to SWB between nations, which seems to be the same as for individuals: income is strongly correlated with SWB when money is scarce (Inglehart & Klingemann, 2000). That is, differences in income

are more important to SWB at low levels of wealth. This can be due to increases in income when poor, might make a large difference in covering basic human needs, like food and housing (Veenhoven, 1993).

So, even if personality strongly influences individual levels of SWB, so do culture and individual life events (Diener, et al., 2003). This also gives hope for change. As Nes (2010) notes; strong heritability does not limit the possibilities for becoming happier, and even though genes generate stability, the environment can generate change.

According to the sustainable happiness model (Lyubomirsky, Sheldon, & Schkade, 2005), chronic happiness is influenced by three factors, the set point (or baseline level) determined by genes and personality (about 50%), objective life circumstances (about 10%), and the intentional activities in which one engages (about 40%).

They posit that for lasting change in happiness to occur, one has to focus on intentional activity. These are committed and effortful acts in which people choose to engage, and can be behavioral, cognitive, or motivational. Such intentional activities are naturally variable and episodic, and thus have the potential to counteract hedonic adaptation.

2.5 Positive traits and the good of man

In psychology, a disease model of human functioning has been at the front and center of the field, which largely has focused on repairing damage (Peterson & Seligman, 2004). Research has led to great advances in the understanding and treatments of mental illness. What seems to have been missing in psychological theory and research though, is more focus on prevention – on how and if it is possible to prevent mental illness from occurring in the first place (Seligman & Csikszentmihalyi, 2000).

Some research has, however, revolved around such issues, finding that there are certain characteristics that can work protectively against mental illness, for example optimism, faith, interpersonal skills, and hope (Seligman & Csikszentmihalyi, 2000). So the question is then how to identify and promote such advantageous characteristics in individuals, in a scientific and verifiable manner (Seligman, 2002). Positive psychology has taken upon itself the task of developing a classification of human virtues and character strengths, to provide a basic for research and interventions to enhance mental health by identifying and providing means to develop the individual's positive characteristics (Peterson & Seligman, 2004)

2.5.1 Virtues

This work has revolved around identifying significant strengths of character and developing ways to measure them, with the goal in mind to develop scientifically solid and useful interventions to build mental health (Peterson & Park, 2009). Especially important in the early stages of this work, was a literary review of some of the world's most influential texts, like the Bible, the Koran, and important writings in Taoism, Buddhism and Greek philosophy (Dahlsgaard, Peterson, & Seligman, 2005). The focus here was on what each of these texts said about moral behavior and the good life, to extract what was common between them, and as such be able to say something about human positive traits that might me universal and applicable to all cultures and nationalities (Peterson & Seligman, 2004).

This review provided the basics for what has become known as the six core virtues of psychological strength; *courage*, meaning emotional strengths that involve the exercise of will to reach goals in the face of difficulties, *justice*, denoting civic strengths that underlie healthy community life, *humanity*, which implies interpersonal strengths that enhance meaningful social relationships, *temperance*, implying strengths which protect against excess, *wisdom*, denoting cognitive strengths that imply the gaining and using of knowledge, and finally, *transcendence*, which means strengths that are thought to lie at the basis for being able to connect to the larger universe and provide meaning (Peterson & Seligman, 2004).

The concept of *virtue* is explained as comparable to a personality trait and involves a "disposition to act, desire, and feel that involves the exercise of judgment and leads to a recognizable human excellence or instance of human flourishing" (Yearley, 1990, ref. in Peterson & Park, 2009, p.13), and are core characteristics shared and appreciated by religious thinkers and moral philosophers. McCullough and Snyder (2000) define virtue as "a psychological process that constantly enables a person to think and act so as to benefit him- or herself and society" (p. 3). They refer to *character* as possessing several of the virtues, which then is a higher-order construct.

This project continued with defining and classifying different strengths of character under each of the core virtues. That is to say, that this work has been purely theoretical, and has resulted in a conceptual organization of what is thought of as positive traits – virtues and strengths (Peterson & Park, 2009). This classification is not seen as final. As empirical investigations are done, the organization might change, and new strengths can be added, some might disappear and some may be combined. For instance, culture specific strengths have been omitted, but that is not to say they are not important and worthy of future investigation.

2.5.2 Character strengths

Character strengths are defined as the subset of personality traits, on which we place moral value (Peterson & Park, 2009), and are psychological processes or mechanisms that constitute positive traits reflected in thoughts, feelings, and behaviors (Park, Peterson, & Seligman, 2004). For instance, introversion or extroversion might be seen as neutral concepts, but gratitude and fairness has a moral value, and can as such be called character strengths. Virtue and character are thus different from personality and temperament in that they have moral relevance. But like other personality traits, they presumably exist in degrees rather than either-or categories (Peterson, Park, & Seligman, 2005a).

So far then, the organization of positive traits entails 6 core virtues, or categories encompassing shared characteristics, under which 24 different character strengths are placed according to category resemblance (see Table 1, based on Park, Peterson, & Seligman, 2006; Peterson & Seligman, 2004).

Table 1 *The VIA Virtues and Character Strengths*

1.Wisdom and knowledge

- *creativity*: thinking of novel and productive ways to conceptualize and do things

- *curiosity*: taking an interest in all of ongoing experience for its own sake, exploring and discovering

- *judgment*: being open-minded and thinking things through and examining them from all sides

- *love of learning*: mastering new skills, topics, and bodies of knowledge, to add systematically to what one knows

- *perspective*: being able to provide wise counsel to others

2. Courage

- *honesty*: speaking the truth and presenting oneself in a genuine way, being sincere and without pretense

- *bravery*: not shrinking from threat, challenge, difficulty, or pain, speaking up for what is right and act on conviction in the face of opposition

- *persistence*: finishing what one starts, persisting in a course of action in spite of obstacles

- *zest*: approaching life with excitement and energy, feeling alive and activated

3. Humanity

- *kindness*: doing favors and good deeds for others, helping and taking care of others

- *love*: valuing close relations with others, sharing, caring and being close to other people

- *social intelligence*: being aware of the motives and feelings of oneself and others, knowing how to fit into different social situations

4. Justice

- *fairness*: treating all people the same according to notions of fairness and justice, giving everyone a fair chance

- *leadership*: organizing group activities and seeing that they happen and at the same time maintain good relations within the group

- *teamwork*: working well as a member of a group or team, being loyal to the group and doing one's share

5. Temperance

- *forgiveness*: forgiving those that have done wrong, giving people a second chance and accept their shortcomings

- *modesty*: letting one's accomplishments speak for themselves, avoiding the spotlight

- *prudence*: being careful about one's choices; not saying or doing things that might later be regretted

- *self-regulation*: regulating what one feels and does, appetites and emotions, being disciplined

6. Transcendence

- *appreciation of beauty and excellence*: noticing and appreciating beauty, excellence, and/or skilled performance in all domains of life

- *gratitude*: being aware of and thankful of the good things that happen, also expressing them

- *hope*: believing in a good future , expecting the best and working to achieve it

- *humor*: seeing the light side, liking to laugh and joke; bringing smiles to other people

- *religiousness*: having coherent beliefs about the higher purpose and meaning of life, also beliefs that shape conduct and provide comfort

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The character strengths need to meet certain criteria to be defined as strengths within this classification (Peterson & Seligman, 2004): each strength is conceptually and empirically distinct from the other strengths in the classification. They are trait like in that they are displayed in individuals across time and situations, and they can be assessed as individual differences. They need to be fulfilling in a way that contributes to the realization of the good life, for oneself and others. The strengths are also morally valued in their own right, not as a means to an end, but also without any obvious beneficial outcomes. Displaying strengths elevate other people and produce admiration; it does not diminish other people or bring forth jealousy.

The strengths have negative or less fortunate opposites, for example love as opposed to hate, but some are unipolar in that they do not have a meaningful negative antonym, but more of a zero point, like e.g. sense of humor. The character strengths are embodied in consensually recognizable paragons, and also in some instances in prodigies; children encompassing exceptional abilities. On the other hand, some people will show a selective absence of a given strength, in that it is completely lacking in that given individual. Also, the strengths are deliberately cultivated by the larger society which provides institutions and rituals for their development.

Peterson and Park (2009) also list ubiquity and measurability as necessary criteria. Not all of the character strengths satisfy all of the criteria, but in each case most of the criteria are met. These strengths are in theory regarded as universally distributed and valued, although an individual will not display all of them, and it is held that an individual is of good character if she or he manifests one or two strengths within each virtue group. Those which describe the person more than any of the other strengths are a person's signature strengths – those which the person owns, appreciates and frequently exercises (Peterson & Seligman, 2004).

To assess these character strengths, a measure called VIA (Values in Action) Survey of Character Strengths have been developed (Peterson, et al., 2005a). Also – a specific measure for youth, the VIA Inventory of Strengths for Youth, have been developed to better assess the strengths for young people, in which the items are age-appropriate, for instance using a simpler language and referring to settings and situations familiar to youths (Park & Peterson, 2006).

By taking the test, one will be provided with information and gain knowledge about those five strengths that are scored the highest, which thereby denotes one's signature

strengths. A list of the remaining strengths is also provided, ranked by scores. It was earlier mentioned that focusing on strengths might lead to higher levels of well-being. To be more specific, it is the exercise of the signature strengths that are hypothesized to be fulfilling for the person as these are linked to the individual's sense of self, identity and authenticity. Using one's signature strengths are thought to be associated with excitement, yearning, inevitability, discovery, and invigoration (Peterson & Seligman, 2004).

2.6 A summary of the underpinning theory

The classification of virtues and character strengths is a rather new addition to personality psychology, with a goal of providing scientifically solid information about the positive side of personality. The virtues resemble personality traits, and the character strengths are the virtues "in action", as reflected in thoughts and behavior. The classification might be revised based on scientific development and new research on the taxonomy of strengths (Peterson & Seligman, 2004).

Subjective well-being (SWB), or life satisfaction, is strongly influenced by personality, possibly even more so when studying positive personality characteristics, like virtues and character strengths, in relation to SWB. Personality can be thought of as partly genetically determined, and partly determined by the individual's personal experiences in life, but not so much by objective life circumstances (i.e. shared family environments, income etc.).

Theory posits that life satisfaction increases when focusing on incorporating meaning, engagement, and positive feelings in life (Peterson, et al., 2005b). Supposedly, this is best done when becoming aware of one's signature strengths and using these to the best for one self and others (Peterson & Park, 2009). According to Lyubomirsky et al (2005), happiness might be elevated sustainably through intentional activities, due to the importance of genes and personality for individual baseline levels of happiness. Character strengths are seen as stable personality characteristics, but by definition also malleable and as such it is thought to be possible to influence personality development in a positive direction (Peterson & Seligman, 2004), and thereby elevate happiness.

3. EMPIRICAL FINDINGS

3.1 The structure of virtues and character strengths

The classification of the virtues and character strengths being theoretically and conceptually organized, it is still an open matter how the virtues and the strengths relate to one another empirically (Peterson & Park, 2009). Based on research findings, some of the strengths might be removed, or new ones might be added (Park & Peterson, 2007). In previous research a number of different dimensions have been found.

For instance, Peterson and Seligman (2004) found five factors which were identified as restraint strengths, interpersonal strengths, intellectual strengths, emotional strengths and theological strengths, which are not identical to the original classification, but still similar. Accordingly, restraint strengths corresponded to temperance. Interpersonal strengths combined the virtues of humanity and justice. Intellectual strengths corresponded to wisdom and knowledge. Emotional strengths corresponded to courage and the theological strengths to transcendence. It was furthermore noted that the three first components were viewed as being similar to the FFM factors of conscientiousness, openness, and agreeableness and that emotional strengths may be similar to the opposite of neuroticism. The fifth factor of theological strengths has no FFM equivalent.

In another exploratory factor analysis, Peterson (2006) found a clear two factor-solution, that was interpreted as follows: 'heart vs mind' and 'self vs other', in that the results could be depicted in a circumplex model that shows which strengths that often co-occur in people, and those that are less compatible (Peterson & Park, 2009). For instance, gratitude, kindness, love, and forgiveness seem to co-occur ('heart' strengths with focus on others), and so do e.g. fairness, modesty, and honesty ('mind' strengths with focus on others). Also zest, hope, and curiosity often co-occur ('heart' strengths with focus on self), and for instance creativity, bravery, love of learning, and perspective ('mind' strengths with focus on self). This implies that people for instance tend not to be kind and honest, or religious and open-minded simultaneously, and that trade-offs are made between strengths.

Shryack et al (2010) provides an overview of different studies with different results, where all from one to five factors or components have been found, saying that previous research specifically support a five- rather than six-factor model. Commonly, these studies show that the justice and humanity strengths collapse into one. These studies have much common data material, so they performed their own study on a new sample, comprising 332

monozygotic and dizygotic twins from the Minnesota Twin Registry, with a mean age of 49. Their results, determined by several criteria to judge the dimensionality of the data (in addition to the eigenvalues-greater-than-one criterion) showed that a model with three or possibly four dimensions best fit the data. The three component solution was interpreted as follows: an agency/self-assuredness dimension, a sociability dimension and a conscientiousness dimension (Shryack, et al., 2010).

To date, many of the factor and component analyses have been performed on American samples, or international samples analyzed as a whole. One exception is a study performed on an Australian sample (Macdonald, Bore, & Munro, 2008), in which there was found support for both a one and a four factor solution. The authors mention that the cultural context of character strengths needs to be considered. However, cultural differences between countries or nationalities have not been an issue in this research.

The present study also includes a component analysis, to explore the structure of the character strengths for the Nordic countries. The result of this analysis is thought to add to the body of knowledge on this matter.

3.2 Character strengths

In a study that included 117 676 adults from fifty –four different nations and all the fifty US states, it was found that the most commonly endorsed strengths in the US were kindness, fairness, honesty, gratitude, judgement, love and humor (Park, et al., 2006). The lowest scores were found for the strengths of temperance: modesty, prudence, and self-regulation. The ranking of the strengths in the US were compared to the ranking of strengths in other nations. Results showed that the profiles were very similar, with Spearman's correlations ranging from .90 to .64, all statistically significant ($p < .001$).

The Nordic countries showed the following correlations with the US profile (wp is correlation with weighted US profile, in which US scores are weighted for the respondent's state of residence, gender, age, and educational attainment) ; Denmark ($N = 52$, $p = .82$, w$p = .69$), Finland ($N = 132$, $p = .90$, w$p = .79$), Iceland ($N = 24$, $p = 88$, w$p = .83$), Norway ($N = 77$, $p = .84$, w$p = .71$), and Sweden ($N = 170$, $p = .90$, w$p = .79$). Some nations were more similar than others, for instance it was found that the Scandinavian nations showed more convergence, as did the UK, Australia and New Zealand. Also, states in the south of the US showed slightly higher scores for religiousness than did the other states and nations. But all in all, the authors conclude that these results may disclose something universal about human

nature, and the character requirements needed for a viable society (Park, et al., 2006).

A study on a large British population of about 17 000 people largely supported the above findings of which were the most common strengths (Linley et al., 2007). In addition, it was found that women overall had higher scores than men, except for creativity. Four out of five signature strengths were the same for both genders; open-mindedness (judgement), fairness, curiosity, and love of learning. Results from this study also revealed that strength scores generally increased with age, except for humor. The strongest correlations with age were found for curiosity, love of learning, fairness, forgiveness, and self-regulation.

Based on this research, it was expected to find kindness, fairness, honesty, gratitude, judgement (the top five for the US) among the top five of the most common strengths for the Nordic countries, as the correlations between the US profile with each of the countries were quite high. It was also expected to find that women overall will have higher scores than men, and that scores will increase with age.

3.3 Character strengths and well-being

In a study of 5 299 participants from three internet samples (Park, et al., 2004), of which 80% were U.S. citizens, there was found consistent and robust associations between life satisfaction, or subjective well-being (SWB), as measured by the Satisfaction With Life Scale (SWLS) (Diener, Emmons, Larsen, & Griffin, 1985), and the character strengths of hope, zest, gratitude, love, and curiosity. Of these, hope and zest were substantially related to life satisfaction. Only weak associations to life satisfaction were found for modesty, as well as other intellectual strengths like appreciation of beauty, creativity, judgement, and love of learning.

In a study of two youth samples (*N*=986) which completed the VIA-Youth, as well as the Student's Life Satisfaction Scale (Huebner, 1991), four strengths showed robust correlations to greater life satisfaction, namely love, gratitude, hope and zest. Strengths of the mind were also here only weakly associated with life satisfaction, so these findings are consistent with those of adults (Park & Peterson, 2006). The authors find that strengths of the heart are consistently associated with happiness, and that strengths of the mind are not.

In a study on character strengths and well-being on a student population of 881 people in Croatia, it was found that zest, curiosity, gratitude and hope had the strongest associations with elevated life satisfaction, as measured by the SWLS (Brdar & Kashdan, 2010), which is consistent with previous research.

A study on a Chinese population (*N*=228) of teachers, revealed a somewhat other result. Also here, hope, zest, and gratitude emerged with the strongest links to life satisfaction (again, the SWLS was used). But then self-regulation, social intelligence, and teamwork were among those strengths with the highest correlations to life satisfaction. The weakest associations were found for creativity, judgement/open-mindedness, and humour. One obvious limitation to this study is that it is a quite small study compared to the other ones, and it includes teachers only, as well as the character strengths being measured by The Strengths Inventory, a self-report measure in Chinese, based on the definitions and descriptions of the 24 character strengths (Chan, 2009).

But still, this result could be an indication that other cultures might have other patterns for how the character strengths relate to life satisfaction, maybe depending on what values are appreciated in that specific culture. Peterson et al (2007) found in a study with two samples of American and Swiss adults, that hope, zest, love, and curiosity were highly linked to life satisfaction for both groups. However, for the American sample also gratitude was strongly linked to life satisfaction, but for the Swiss sample perseverance turned out to be a robust predictor of life satisfaction. The authors find that it is not unlikely that the character strengths most associated with life satisfaction might vary among different cultural contexts.

It has been demonstrated that identifying and focusing on one's character strengths, can elevate life satisfaction (Rust, Diessner, & Reade, 2009). An intervention designed to have participants use signature strengths in new ways for a week, led to an increase in well-being (as measured by the Steen Happiness Index, developed and used for the first time in this particular study), and a decrease of depressive symptoms for a period of up to six months (M. E. P. Seligman, et al., 2005). It has also been demonstrated that positive therapy, in which there is a focus on identifying one's strengths, to create meaning and positive feelings, can be just as effective in treating depression as conventional pharmacological treatment (Seligman, Rashid, & Parks, 2006).

In sum, some of the strengths seem to show a stronger relationship to subjective well-being than others, but there are indications that there may be at least some cultural variations as regards which strengths that may be, when considering studies on non-American populations. This issue was considered in the present study, in which the relationship between character strengths and SWB (life satisfaction) was investigated using both correlational analysis and regression analysis.

3.4 Character strengths, well-being and orientations to happiness

In a study of how the three different orientations to happiness (as described earlier) assessed by the Orientations to Happiness measure (OTH) relate to life satisfaction (measured by the SWLS) on a largely American population (*N*=845), it was found that all three orientations individually predict life satisfaction, from small (pleasure) to moderate (engagement, meaning) degrees, after demographic variables (i.e. age, gender, level of education, ethnicity) were accounted for (Peterson, et al., 2005b). Younger people, less educated and unmarried people showed higher scores on the pleasure orientation. It was also found that those who had high scores on all three orientations reported the greatest life satisfaction, and those low on all three orientations reported the least life satisfaction.

As regard character strengths, it has been found a robust association between religiousness and the meaning orientation, and of the remaining character strengths gratitude and hope were more strongly related to meaning. There appears to be strong links between zest, curiosity, and perseverance to the engagement orientation, and the strength most important for the pleasure orientation, was humour, but also zest and hope (Peterson, et al., 2007). The study population consisted of an American (*N* = 12,439) and a Swiss (*N* = 445) sample. Also here all three orientations to happiness predicted life satisfaction, meaning and engagement did however provide larger contributions to life satisfaction than did pleasure. The different character strengths were linked to life satisfaction through positive effects on all three orientations, even though some more or less than the others. It is noted that the character strengths have a stronger effect on life satisfaction than any of the three orientations to happiness. It is noted that the character strengths more strongly associated with life satisfaction, are overall the same which are more strongly associated to the orientations to happiness.

Also another study, this time with an Australian (*N*=332) and an American (*N*=18,326) sample, supports the above findings, in that all three orientations to happiness predict life satisfaction beyond socio-demographic variables (Vella-Brodrick, Park, & Peterson, 2009). For the Australian sample, also a measure of personality which assessed the Big Five was included in the analyses. For both samples the findings were relatively consistent showing that meaning and engagement explained the greatest variance in subjective well-being, however for the Australian sample in which personality was measured, a greater percentage of the overall variance was explained.

In a study performed with German-speaking participants from Austria, Switzerland and Germany (*N*=5,386) using a German version of the OTH (Ruch, Harzer, Proyer, Park, & Peterson, 2010), the results showed significant correlations between the three orientations and life satisfaction. However these results indicated higher correlations for engagement (*r* = .29) and pleasure (*r* = .26), than for meaning (*r* = .24), even though the differences were quite small. It was also found that younger, non-married, and non-religious participants had higher scores on the pleasure orientation, and that religious participants scored higher on the meaning orientation. Also here it was found that higher scores on all three orientations to happiness was linked to higher satisfaction with life.

In sum, the research shows that meaning and engagement are more strongly related to SWB than pleasure, and that some strengths of character show stronger relationships to the different orientations to happiness than do others.

4. RESEARCH QUESTIONS AND HYPOTHESES

According to relevant theory and previous research, the main research questions for this study are as follows:

1. How many virtue classes of character strengths will emerge for the Nordic countries?

(The analysis is exploratory by nature, therefore no hypothesis is stated)

2. Which are the most commonly endorsed character strengths in the Nordic countries, and will the different countries show similar profiles? Will there be differences between genders, and between different age groups?

H1: The most commonly endorsed strengths will be kindness, fairness, honesty, gratitude, and judgement

H2: The countries will show converging profiles

H3: Men and women will show converging profiles.

H4: Women will have higher scores than men on the character strengths.

H5: The scores on the character strengths will increase with age

3. To what extent do the different character strengths relate to life satisfaction for the Nordic countries?

H1: The following strengths will show the highest correlations with and predictive value of life satisfaction (SWB): love, gratitude, hope, curiosity, and zest

4. To what extent do the character strengths relate to the three orientations to happiness, and how are these linked to life satisfaction (SWB)?

H 1: Religiousness, gratitude, and hope will have the highest correlation with meaning, zest curiosity, and perseverance with engagement, and humour, zest and hope with pleasure.

H2: Engagement and meaning will show stronger associations with life satisfaction than will pleasure.

5. METHOD

5.1 Research participants

The sample consisted of 1601 respondents from the Authentic Happiness website (http://www.authentichappiness.sas.upenn.edu/Default.aspx) who all voluntarily registered to this website and filled out various questionnaires between 2002 and 2006. The sample consisted of respondents from the Nordic countries: Denmark (*N*=351), Finland (*N*=253), Iceland (*N*=77), Norway (*N*=481), and Sweden (*N*=439). There were more females than males in the sample (58.5% vs. 41.4%). The age of the respondents ranged from 13 to 65+, with the majority of the respondents in the age groups from 24-34 years (*N*=538) and 35-44 years (*N*=448). These two categories constituted 61.6% of all the respondents. Educational attainment ranged from less than high school to post-baccalaureate, but the sample was characterized by a rather large proportion having a higher education consisting of a bachelor`s degree or more (72,2%).

As such, the sample might differ from the general population on some dimensions which could affect the generalizability of the results. The sampling procedure can be characterized as a convenience sampling due to the fact that those who have filled out the various questionnaires were people who had knowledge about the website, looked it up and registered voluntarily (and as such, were English literate, computer knowledgeable and had internet access). This is also a factor that might affect the degree to which this sample is representative for the population as a whole (Polit & Beck, 2008). These considerations were taken into account when discussing the results.

5.2 Measures

5.2.1 Character Strengths

The character strengths are assessed by the VIA Survey of Character Strengths (VIA-IS), a self-report questionnaire intended for use by English-reading adults (Peterson & Park, 2009; Peterson & Seligman, 2004). It consists of 240 items, where each of the strengths is measured by 10 items. It takes approximately 20-40 minutes to fill out. Respondents are instructed to answer each item according to the degree to which a strength-relevant statement describes themselves, and response options are given as a five-point Likert-scale ranging from 1 = very much unlike me to 5 = very much like me. Scores are computed by averaging responses within scales, with a high score indicating a higher endorsement of the strength in

question.

Then the strengths are ranked according to score, with the one with the highest score as the top signature strength. Respondents are given feedback about their five top strengths (signature strengths), as well as how the other 19 are ranked. As regards reliability, all scales have a Cronbach`s alpha of >.70, and as for stability, test-retest correlations are substantial over a 4-month period and approach their internal consistencies in almost all cases ($r = 0.70$). As for validity, there is a substantial correlation of self-nomination of strength scores with the actual scores ($r > 0.5$) and a moderate correlation of friends` and families` ratings of a respondent`s top strengths with the matching scale scores ($r = 0.30$) (Peterson, et al., 2005a; Seligman, Park, & Peterson, 2004). In the current study, the Chronbach's alpha coefficient was .92.

5.2.2 Life Satisfaction

Satisfaction With Life Scale (SWLS) is one of the most commonly utilised measures for life satisfaction in particular, and subjective well-being in general (Vittersø, 2009). The SWLS questionnaire consists of five items, and takes two-three minutes to complete (Pavot & Diener, 1993b). Every item is scored on a Likert-scale ranging from 1 = strongly disagree to 7 = strongly agree. The items are rather general in nature, and reflect the respondents` own judgement of their lives by allowing them to weight domains of their lives in terms of their own values and comparing them to one's own standards (e.g. "In most ways, my life is close to my ideal"). The scores on each item are summed up to a total sum score ranging from five to 35, and are interpreted as follows: scores of 31 or more represents very satisfied, 26-30 indicates satisfied, 21-25 slightly satisfied, 20 represents the neutral point of the scale, 15-20 indicates slightly dissatisfied, 10-14 dissatisfied and 9 or below indicate extremely dissatisfied (Pavot & Diener, 1993b).

This measure have been shown to have a consistent high reliability, with a Chronbach`s alpha between .70 and .90 for most populations. Also test-retest stability has been high when tests have been given at short intervals of time, with a correlation of .70 to .80 for time intervals of up until three months. For longer periods, up until four years, there is a correlation between .50 and .60 (Vittersø, 2009). As such, it seems that the SWLS predicts a fair amount of stability over time. However, it has also been shown to be sensitive enough to detect changes in life satisfaction, for example as a result of changing life circumstances, but also to current mood and more immediate circumstances (Pavot & Diener, 1993b).

Regarding validity, there is substantial support for the measure when it comes to convergent and divergent validity. It consequently correlates positively to other measures of well-being and life satisfaction, and negatively to measures for e.g. clinical measures for distress, such as depression (Pavot & Diener, 1993b). When it comes to dimensions of individual differences, it has been shown that the SWLS correlates negatively with neuroticism, and positively to extraversion (Pavot & Diener, 1993a). It might be contended that the theoretical foundation for the validity of the SWLS is weak, as it for the most part is tied to convergent and divergent validity and that it correlates with other self-report measures it intuitively would seem to relate to (Vittersø, 2009). It normally correlates positively to e.g. optimism and extroversion (from about .20 to .50), and negatively to e.g. depression and neuroticism (from about -.40 to -.60). But there also is evidence pointing towards discriminant validity of the SWLS, it has for example been shown to be different from various forms of affective well-being, such as affect intensity (Diener, et al., 1985).

5.2.3 Orientations to Happiness

The three different approaches to happiness are measured by the Orientations to Happiness Questionnaire (Peterson, et al., 2005b). It consists of three subscales, measuring meaning, engagement and pleasure respectively. Example items include: "My life serves a higher purpose" (meaning subscale), "I am always very absorbed in what I do" (engagement subscale), and "I agree with this statement: "Life is short-eat dessert first" (pleasure subscale). Each subscale contains six items, and each item requires an answer on a 5-point Likert-scale which ranges from 1 = very much unlike me to 5 = very much like me.

The answers are then averaged, which gives a total score on each subscale from one to five and where a higher score indicates more of that specific orientation to happiness. Respondents are given feedback about their scores on each of the three subscales, and how high their score is compared to e.g. their age class and occupational class. A clear three-factor solution representing three distinct dimensions for the three orientations to happiness have been supported by initial psychometric data. As regards reliability, a high Chronbach`s Alpha have been reported for each of the three items, .82 for meaning, .72 for engagement and .82 for pleasure (Peterson, et al., 2005b).

5.3 Procedure

The data were subjected to statistical analysis using PASW Statistics 18. The following analyses were used; frequencies and descriptives for all groups and scales, one-way between-group analysis of variance (ANOVA) to investigate the mean level differences of nationality, gender and age of the 24 character strengths with additional post-hoc tests where appropriate. The relationship between the character strengths and life satisfaction, as well as the different approaches to happiness, was investigated using correlation analysis. The results were interpreted according to Cohen (1988), stating that in the behavioral sciences a correlation is regarded as strong if it exceeds .50, moderate between .30-.49, and small from .10-29.

As regards life satisfaction also hierarchical multiple regressions were utilized. An assumption for performing regression analysis, is that correlations between the independent variables and the dependent variable should be between above .3, and that the correlations between the independent variables should not exceed .7 (Pallant, 2007). 10 of the variables showed correlations with SWB of .30 or higher, another six from .25-.28, so it was decided that this was sufficient for going through with the analysis. As for the relationship between the independent variables, the character strengths' correlation matrix (see Appendix) revealed only two correlations above .70, between teamwork and love of learning ($r = .72$) and between hope and zest ($r = .73$), which was not regarded as too high to dismiss the regression analysis. In that respect, it can be noted that as for multicollinearity, Tabachnick and Fidell (2007) recommends that none of the correlations should exceed .9, which none did.   Some caution is taken as regards sample size, as the SWL questionnaire was completed by 204 individuals. According to Tabachnick and Fidell (2007) this might not be a large enough sample size, based on their formula to calculate sample size requirements: $N > 50 + 8m$ (m = number of independent variables), which in this case would amount to 242 cases. It was still decided to go forward with the regression analysis, but keeping in mind that this could affect the generalizability of the result. As for other assumptions for regression analysis, preliminary analyses were conducted to ensure no violations of the assumptions of normality, linearity ad homoscedasticity.

The factor structure of the 24 character strengths was explored by using principal component analysis. Also here, sample size is an issue, however it is not agreed upon what would be a perfect number of cases. It has been suggested that five cases for each item would

be adequate in most instances, others say 10 (Tabachnick & Fidell, 2007). In this case, the sample size was more than adequate. As for other assumptions of component analysis, these were found to be adequate (see Results, 6.1).

All subjects in the original data set were included in the analyses, for instance even though the Icelandic sample was small, the choice was taken to keep this group in the analyses.

The original data set split the youngest age group in three, from 13-15, 16-17 and 18-20. As there were relatively few subjects in these age groups (*N*=53) they were collapsed into one (13-20 years), and kept in all analyses except for the one-way ANOVA analysis that was performed to investigate possible differences between age groups on levels of the 24 character strengths, as there were too few of subjects in these groups to obtain any useful results. The original data set also included an age group of 65+, which only consisted of eight individuals. It was decided to include these individuals in the 55-65 group, which was renamed 55+.

As for the regression analysis on to what extent SWB is predicted by the character strengths, demographic variables (i.e. age, gender and education) were also put into the analysis to investigate their impact on the outcome. When utilizing hierarchical regression, it is possible to explore the effect of key independent variables after first removing the effect of confounding variables (Polit & Beck, 2008). In the regression analysis in this study, it was decided to enter demographic variables in Step 1, and then afterwards the personality variables. This was decided as the personality variables were thought to be most important, so it made sense to remove the effect of the demographic variables in the first step.

Preliminary analyses revealed that the strengths were normally distributed, and in most cases slightly skewed to the right, but not to such an extent that it would cause problems for the analyses.

6. RESULTS

1601 respondents completed the character strengths inventory as measured by the VIA Inventory of Strengths.

6.1 Component structure

The 24 items of the VIA-IS were subjected to principal component analysis (PCA). Prior to performing PCA, the suitability of the data for factor analysis was assessed. Inspection of the correlation matrix (see Appendix) revealed the presence of many coefficients of .3 and above. The Kaiser-Meyer-Olkin value was .91, exceeding the recommended value of .6 (Kaiser, 1960). Also Bartlett`s Test of Sphericity (Bartlett, 1954) reached statistical significance, supporting the factorability of the correlation matrix.

Principal component analysis revealed the presence of six factors with eigenvalues exceeding 1, explaining 69.64% of total variance. An inspection of the scree plot revealed a small break after the sixth component. As such, based on Kaiser`s (1960) criterion and Catell`s (1960) scree test, it was decided to keep the six components and not try to reduce them any further.

To aid the interpretation of the components, both oblique (Oblimin) and orthogonal (Varimax) rotations were performed, which produced near to identical results. The components showed a number of strong loadings, where all the variables (except maybe for kindness, love and honesty) loaded substantially on one component.
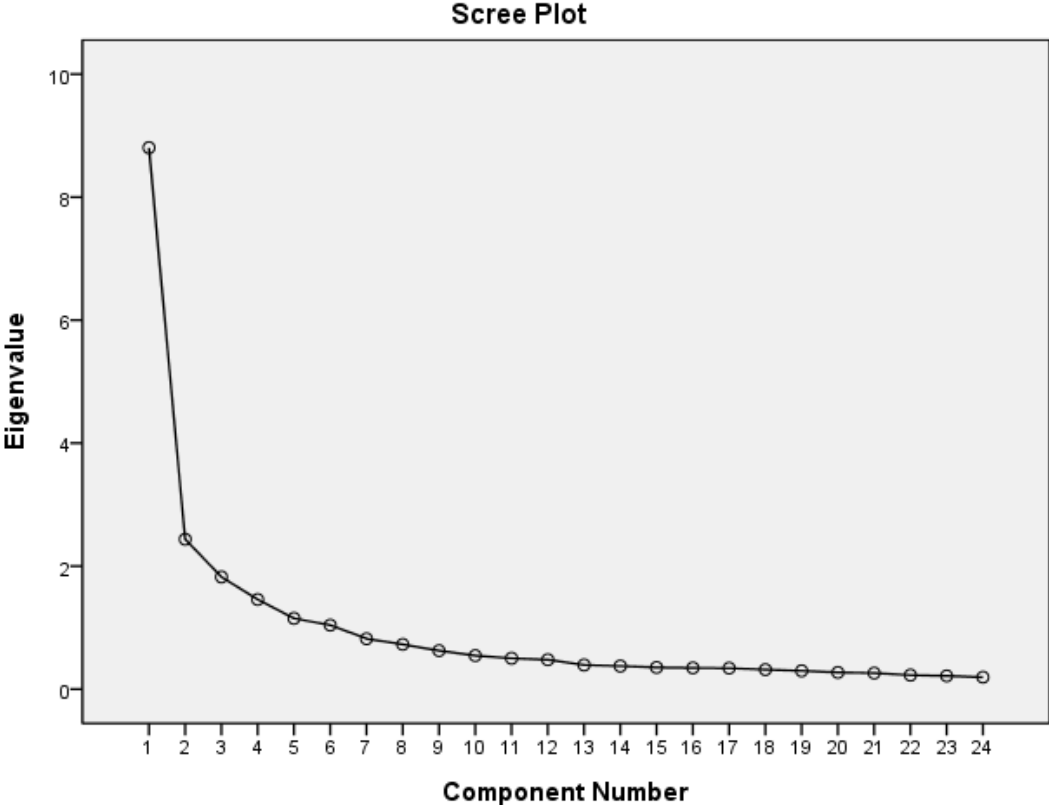
Figure 1. Scree plot of of the VIA character strengths (*N* = 1601)

Table 2 *Pattern and structure matrix for PCA with Varimax orthogonal of six-component solution of the VIA Character Strengths (N = 1601)*

Character strength	Component loadings						Communalities
	I	II	III	IV	V	VI	
Fairness	**.78**						.73
Teamwork	**.73**						.70
Forgiveness	**.73**						.64
Leadership	**.63**	.41					.66
Modesty	**.58**	-.36				.32	.66
Kindness	**.53**	.44			.42		.68
Social intelligence		**.75**					.71
Humor	.34	**.60**					.56
Bravery		**.58**	.36				.61
Perspective		**.57**		.38		.40	.70
Love	.32	**.54**			.45		.66
Perseverance			**.79**				.76
Self-regulation			**.70**			.36	.69
Hope		.34	**.66**				.71
Zest		.40	**.66**	.35			.82
Love of learning				**.81**			.73
Curiosity			.35	**.70**			.77
Creativity		.41		**.69**			.67
Appreciation of beauty				.32	**.77**		.75
Gratitude		.31			**.73**		.79
Religiousness					**.69**		.62
Prudence						**.76**	.72
Judgement				.34		**.76**	.74
Honesty	.31		.41			**.54**	.65
Eigenvalue	8.80	2.44	1.82	1.46	1.15	1.04	
% of variance (unrotated)	36.69	10.16	7.60	6.07	4.79	4.34	
(rotated)	14.39	13.39	12.02	10.52	10.18	9.15	

Note: Boldface indicates highest component loading.

6.2 Character strengths

The top five strengths for the Nordic countries were as follows after calculating raw mean scores: curiosity, fairness, judgment, love, and love of learning. After computing profiles of strengths for each respondent, from top (=1) to bottom (=24), and counting the actual prevalence of cases, the same result were found, except for love and judgment changing places in the order. As regards the lowest mean scores, these were found for religiousness, modesty, and self-regulation.

As can be seen from Table 3 (next page), where the Nordic and the national profiles have been computed by ranking the mean scores, the ranked strengths profiles are quite similar, except for Finland and Iceland showing slightly different patterns. There are some differences in the mean scores between the countries, with Denmark and Iceland displaying the highest values, whereas Finland in general had the lowest.

6.2.1 Character strengths and nationality

A one-way between-group analysis of variance was conducted to investigate differences between the countries regarding the levels of the 24 character strengths. There were statistically significant differences between the countries for the following strengths: appreciation of beauty, bravery, love, creativity, curiosity, gratitude, honesty, hope, kindness, love of learning, perspective, self-regulation, social intelligence, and zest (see Table 4).

However, the actual differences in mean scores between the countries on these character strengths were quite small, despite reaching statistical significance. Effect sizes were calculated using eta squared, and according to Cohen`s classification (1988) 01-.05 is considered a small effect, .06-.13 is a medium effect, and .14 and higher a large effect. As such, there were small effect sizes for appreciation of beauty, bravery, creativity, curiosity, forgiveness, gratitude, honesty, kindness, love of learning, self-regulation, social intelligence, and zest, but none for love, hope or perspective.

Table 3 *Nordic strengths profiles based on mean scores of the VIA Character Strengths*

Country		Nordic	DK	FI	IS	NO	SE
Character strength	*N*	*1601*	*351*	*253*	*77*	*481*	*439*
Curiosity		**1** (3.94)	**1** (4.06)	**1** (3.92)	**3** (3.91)	**1** (3.93)	**2** (3.88)
Fairness		**2** (3.91)	**4** (3.90)	**2** (3.92)	**1** (3.99)	**2** (3.91)	**1** (3.91)
Judgement		**3** (3.88)	**2** (3.94)	**4** (3.84)	**5** (3.88)	**4** (3.89)	**3** (3.85)
Love		**4** (3.86)	**5** (3.90)	**5** (3.77)	**2** (3.96)	**3** (3.91)	**4** (3.83)
Love of learning		**5** (3.82)	**3** (3.90)	**3** (3.90)	**6** (3.88)	**5** (3.74)	**5** (3.79)
Honesty		**6** (3.82)	**6** (3.88)	**6** (3.75)	**4** (3.89)	**7** (3.81)	**7** (3.77)
Kindness		**7** (3.78)	**7** (3.83)	**10** (3.66)	**7** (3.83)	**6** (3.83)	**8** (3.77)
Perspective		**8** (3.75)	**9** (3.78)	**9** (3.66)	**10** (3.74)	**8** (3.77)	**6** (3.77)
Creativity		**9** (3.71)	**8** (3.82)	**8** (3.68)	**15** (3.64)	**12** (3.63)	**9** (3.74)
Social intelligence		**10** (3.69)	**11** (3.71)	**14** (3.54)	**12** (3.67)	**9** (3.72)	**10** (3.73)
Humor		**11** (3.66)	**10** (3.72)	**12** (3.63)	**13** (3.66)	**10** (3.68)	**12** (3.67)
Leadership		**12** (3.65)	**14** (3.64)	**11** (3.65)	**11** (3.68)	**11** (3.63)	**11** (3.67)
Bravery		**13** (3.62)	**12** (3.69)	**16** (3.49)	**14** (3.64)	**15** (3.60)	**13** (3.66)
Appreciation of beauty		**14** (3.62)	**18** (3.62)	**7** (3.74)	**8** (3.78)	**18** (3.57)	**16** (3.57)
Teamwork		**15** (3.61)	**13** (3.65)	**13** (3.54)	**17** (3.62)	**13** (3.62)	**14** (3.61)
Gratitude		**16** (3.58)	**17** (3.63)	**15** (3.50)	**9** (3.75)	**14** (3.61)	**20** (3.53)
Forgiveness		**17** (3.57)	**16** (3.64)	**17** (3.48)	**16** (3.62)	**19** (3.56)	**15** (3.58)
Perseverance		**18** (3.57)	**19** (3.61)	**18** (3.47)	**18** (3.55)	**16** (3.59)	**17** (3.56)
Zest		**19** (3.54)	**15** (3.64)	**20** (3.42)	**19** (3.48)	**20** (3.54)	**18** (3.54)
Hope		**20** (3.53)	**20** (3.59)	**19** (3.42)	**20** (3.43)	**17** (3.57)	**19** (3.54)
Prudence		**21** (3.33)	**21** (3.36)	**21** (3.26)	**21** (3.42)	**21** (3.37)	**22** (3.30)
Self-regulation		**22** (3.32)	**22** (3.36)	**22** (3.21)	**23** (3.22)	**22** (3.34)	**21** (3.35)
Modesty		**23** (3.13)	**23** (3.12)	**23** (3.18)	**22** (3.26)	**23** (3.11)	**23** (3.13)
Religiousness		**24** (3.10)	**24** (3.10)	**24** (3.16)	**24** (3.21)	**24** (3.04)	**24** (3.11)

Table 4 *Means, standard variations and one-way analyses of variance for the effects of nationality on the VIA Character Strengths*

Character strength	Denmark (1)		Finland (2)		Iceland (3)		Norway (4)		Sweden (5)		F (4, 1596)	Post-hoc	η^2
	M	SD	M	SD	M	SD	M	SD	M	SD			
Appreciation of beauty	3.62	.68	3.74	.62	3.78	.61	3.57	.69	3.57	.68	4.6**	2 > 4, 5	.01
Bravery	3.69	.58	3.49	.60	3.64	.60	3.60	.54	3.66	.57	5.6**	2 < 1, 5	.01
Creativity	3.82	.68	3.68	.59	3.64	.71	3.63	67	3.74	.66	5.0**	4 < 1	.01
Curiosity	4.06	.53	3.92	.55	3.91	.59	3.93	.55	3.88	.54	5.8**	1 > 2, 4, 5	.01
Forgiveness	3.64	.58	3.48	.52	3.62	.64	3.56	.55	3.58	.56	3.1*	2 < 1	.01
Gratitude	3.63	.58	3.50	.60	3.75	.57	3.61	.58	3.53	.60	4.7**	1 > 4, 2	.01
Honesty	3.88	.43	3.75	.45	3.88	.48	3.81	.43	3.77	.41	5.5**	1 > 2, 5	.01
Hope	3.59	.66	3.42	.64	3.43	.67	3.57	.65	3.54	.66	3.5**	2 < 1, 5	.00
Kindness	3.83	.50	3.66	.51	3.83	.45	3.82	.53	3.77	.51	5.2**	2 < 1, 5	.01
Love	3.90	.61	3.77	.58	3.96	.53	3.91	.58	3.83	.60	3.5**	2 < 4	.00
Love of learning	3.90	.57	3.90	.58	3.88	.61	3.74	.60	3.79	.58	5.5**	5 < 1, 2	.01
Perspective	3.78	.51	3.66	.48	3.74	.50	3.77	.48	3.77	.50	2.5*	2 < 4, 5	.00
Self-regulation	3.36	.58	3.21	.55	3.22	.66	3.34	.57	3.35	.58	4.0**	2 < 1, 4, 5	.01
Social intelligence	3.71	.59	3.54	.56	3.67	.54	3.72	.50	3.73	.53	5.9**	2 < 1, 4, 5	.02
Zest	3.64	.63	3.42	.61	3.48	.71	3.54	.61	3.54	.61	4.9**	2 < 1	.01

Note: The numbers in parentheses in column heads refer to the numbers used for illustrating significant differences in the "Post hoc" column. Tukey HSD was used for post-hoc comparisons. Only the character strengths for which there were found significant differences between the countries are represented in this table.

6.2.2 Character strengths and gender

Table 5 shows ranged mean scores for women and men for each of the character strengths. The order differs somewhat, but three of the top five character strengths are the same for both genders (eight of the top ten), also the bottom four are the same for both women and men. Women generally had higher mean scores than men, except for creativity, judgment, perspective, self-regulation, and humor.

A one-way between-group analysis of variance was also conducted to explore if there were any statistically significant differences between the genders for the 24 character strengths. There were statistically significant differences between the genders regarding appreciation of beauty, love, creativity, fairness, gratitude, honesty, perseverance, kindness, leadership, perspective, self-regulation, social intelligence, religiousness, and zest.

Despite reaching statistical significance, the actual differences in mean scores between women and men on these character strengths were for the most part small. Again, effect sizes were calculated using eta squared. The results indicated a medium effect size for gratitude, small effect sizes for appreciation of beauty, love, creativity, perseverance, kindness, social intelligence, and religiousness, but none for leadership, perspective or self-regulation (see Table 6).

Table 5 *Strengths profiles of the VIA Character Strengths according to gender*

Character strength	Women [1] M	Character strength	Men [2] M
Love	3.97	Curiosity	3.94
Curiosity	3.94	Judgment	3.91
Fairness	3.94	Fairness	3.88
Judgment	3.86	Creativity	3.85
Kindness	3.86	Love of learning	3.83
Honesty	3.84	Perspective	3.80
Love of learning	3.83	Honesty	3.77
Social intelligence	3.75	Love	3.71
Appreciation of beauty	3.74	Humor	3.70
Perspective	3.72	Kindness	3.67
Gratitude	3.71	Social intelligence	3.61
Leadership	3.69	Bravery	3.59
Humor	3.66	Leadership	3.59
Teamwork	3.65	Forgiveness	3.56
Bravery	3.64	Teamwork	3.56
Perspective	3.63	Hope	3.52
Creativity	3.61	Perserverance	3.49
Forgiveness	3.58	Zest	3.49
Zest	3.57	Appreciation of beauty	3.46
Hope	3.55	Gratitude	3.40
Prudence	3.34	Self-regulation	3.35
Self-regulation	3.30	Prudence	3.32
Religiousness	3.20	Modesty	3.10
Modesty	3.16	Religiousness	2.95

Note: [1] $N = 937$, [2] $N = 663$

Table 6 *Means, standard variations and one-way analyses of variance for the effects of gender on the VIA Character Strengths*

Character strength	Women [1]		Men [2]		F (2, 1598)	η^2
	M	SD	M	SD		
Appreciation of beauty	3.74	.65	3.45	.67	37.9**	.05
Love	3.97	.55	3.71	.60	43.4**	.05
Teamwork	3.65	.53	3.56	.52	6.2**	.01
Creativity	3.61	.67	3.85	.62	26.4**	.03
Fairness	3.94	.45	3.88	.47	6.0**	.01
Gratitude	3.71	.56	3.40	.60	54.1**	.06
Honesty	3.84	.43	3.77	.44	7.4**	.01
Perserverance	3.63	.63	3.49	.70	8.7**	.01
Kindness	3.86	.48	3.67	.54	29.5**	.04
Leadership	3.69	.49	3.59	.51	7.3**	.00
Perspective	3.72	.49	3.80	.50	6.1**	.00
Self-regulation	3.30	.58	3.35	.57	6.3**	.00
Social intelligence	3.75	.50	3.61	.59	12..3**	.02
Religiousness	3.20	.84	2.95	.86	17.6**	.02
Zest	3.57	.61	3.49	.65	3,6*	.01

Note: [1] $N = 937$, [2] $N = 663$. Tukey HSD was used for post-hoc comparisons. Only the character strengths for which there were found significant differences between the genders are represented in this table.

6.2.3 Character strengths and age

Mean scores of the different age groups were calculated. In general, scores tended to become higher with age (see Table 7).

A one-way ANOVA analysis was also conducted to investigate possible differences between the age groups. Statistically significant differences were found between the age groups for appreciation of beauty, bravery, teamwork, creativity, curiosity, fairness, forgiveness, gratitude, honesty, perseverance, leadership, love of learning, modesty, self-regulation, religiousness and zest. Eta squared was calculated to find the effect sizes, which turned out to be small in all cases (see Table 8).

Some caution must be taken regarding the results of this particular analysis in the

present study, as effect sizes for the youngest age group was not calculated due to few subjects in the group. But looking at the mean scores for this group, it can be seen that the lowest scores were found among the 21-24 year olds (lowest scores on 13 of the 24 strengths) and among the 25-34 year olds (lowest scores on 7 of the strengths). Thereafter a rise in the mean scores of the strengths can be observed, as they become even higher through middle and old age than for the teenager group.

This may indicate a u-shaped relationship of the mean scores of the character strengths through the life span, and it can be observed for most of the strengths: appreciation of beauty, bravery, creativity, curiosity, gratitude, honesty, hope, kindness, leadership, love, love of learning, perseverance, perspective, social intelligence, teamwork, and zest. Only one of the strengths, judgment, shows a reverse u-shaped relationship with age, with a peak in the age group from 25-34 years. As regards the others, fairness, forgiveness, and self-regulation show a steady rise in scores from the youngest to the oldest group, and humor show a steady decline. Only modesty and prudence show no particular pattern of development over the different age groups in this study.

Table 7 *Mean scores of the VIA Character Strengths according to age*

Character strength	N	13-20	21-24	25-34	35-44	45-54	55+
		53	160	538	448	307	95
Appreciation of beauty		3.70	3.59	3.52	3.60	**3.77**	3.74
Bravery		3.63	3.49	3.57	3.66	**3.71**	3.70
Creativity		3.82	3.54	3.69	3.73	3.74	**3.84**
Curiosity		3.85	3.74	3.88	3.98	4.06	**4.13**
Fairness		3.78	3.84	3.84	3.95	4.01	**4.04**
Forgiveness		3.39	3.46	3.50	3.65	3.65	**3.68**
Gratitude		3.57	3.52	3.52	3.56	3.70	**3.76**
Honesty		3.79	3.79	3.76	3.82	**3.88**	3.81
Hope		3.57	3.48	3.49	3.56	3.57	**3.62**
Humor		**3.72**	**3.72**	3.66	3.70	3.65	3.62
Judgement		3.84	3.88	**3.93**	3.87	3.85	3.82
Kindness		3.82	3.81	3.75	3.76	**3.83**	3.82
Leadership		3.54	3.58	3.57	3.69	**3.76**	3.73
Love		3.79	3.83	3.85	3.86	**3.91**	3.87
Love of learning		3.68	3.53	3.79	3.86	3.95	**4.03**
Modesty		3.07	3.12	3.08	3.14	**3.25**	3.12
Perseverance		3.52	3.41	3.54	3.60	**3.65**	3.60
Perspective		3.73	3.70	3.76	3.77	3.75	**3.78**
Prudence		3.20	3.40	3.32	3.34	3.31	**3.36**
Religiousness		3.08	2.93	2.95	3.12	**3.36**	3.29
Self-regulation		3.21	3.23	3.26	3.36	3.39	**3.46**
Social intelligence		**3.75**	3.63	3.67	3.74	3.68	3.69
Teamwork		3.60	3.59	3.55	3.64	3.67	**3.68**
Zest		3.48	3.36	3.48	3.59	3.64	**3.66**

Note: bold face indicate highest mean score

Table 7 *Means, standard variations and one-way analyses of variance for the effects of age on the VIA Character Strengths*

Character strength	21-24 (1)		25-34 (2)		35-44 (3)		45-54 (4)		55+ (5)		F (4, 1543)	Post-hoc	η^2
	M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*			
Appreciation of beauty	3.59	.64	3.52	.73	3.60	.66	3.77	.60	3.74	.58	7.9**	4 > 1, 2 , 3	.02
												5 > 2	
Bravery	3.49	.60	3.57	.58	3.66	.57	3.71	.53	3.70	.55	5.9**	1 < 3, 5	.02
												2 < 4	
Teamwork	3.59	.52	3.55	.53	3.64	.53	3.67	.52	3.68	.50	3.4**	2 < 4	.01
Creativity	3.54	.70	3.69	.68	3.73	.68	3.74	.62	3.84	.59	3.7**	1 < 3, 4, 5	.01
Curiosity	3.74	.51	3.88	.57	3.98	.54	4.06	.51	4.13	.51	14.2**	1 < 2 < 3, 4, 5	.04
Fairness	3.84	.43	3.84	.47	3.95	.45	4.01	.44	4.04	.42	10.2**	1 < 4, 5	.03
												2 < 3, 4, 5	
Forgiveness	3.46	.54	3.50	.57	3.65	.55	3.65	.55	3.68	.50	8.2**	1, 2 < 3, 4, 5	.02
Gratitude	3.52	.59	3.51	.59	3.56	.59	3.70	.59	3.76	.59	7.9**	4, 5 > 1, 2, 3	.02
Honesty	3.79	.42	3.76	.44	3.82	.43	3.88	.42	3.81	.43	3.8**	2< 4	.01
Perseverance	3.41	.66	3.54	.69	3.60	.66	3.65	.62	3.60	.61	4.1**	1 < 3, 4	.01
Leadership	3.58	.51	3.57	.49	3.69	.51	3.76	.47	3.73	.48	9.1**	4 > 1, 2	.02
												5 > 2	
Love of learning	3.53	.63	3.79	.57	3.86	.59	3.95	.55	4.03	.53	17.9**	1 < 2, 3, 4, 5	.04
												2 < 4, 5	
Modesty	3.12	.60	3.08	.63	3.14	.61	3.25	.59	3.11	.55	3.9**	2 < 4	.01

Table 7 *Continued*

Character strength	21-24 (1) M	SD	25-34 (2) M	SD	35-44 (3) M	SD	45-54 (4) M	SD	55+ (5) M	SD	F (4, 1543)	Post-hoc	η²
Self-regulation	3.23	.60	3.26	.59	3.36	.57	3.39	.53	3.46	.56	5.5**	1, 2 < 4, 5	.01
Religiousness	3.63	.56	3.67	.58	3.74	.53	3.68	.50	3.69	.56	15.0**	4> 1, 2, 3	.04
												5 > 1, 2	
Zest	3.36	.57	3.48	.63	3.59	.63	3.64	.61	3.66	.63	3.1**	1 < 3, 4, 5	.02
												2< 4	

Note: 1 $N = 160$, 2 $N = 538$, 3 $N = 448$, 4 $N = 307$, 5 $N = 95$. The numbers in parentheses in column heads refer to the numbers used for illustrating significant differences in the "Post hoc" column. Tukey HSD was used for post-hoc comparisons. Only the character strengths for which there were found significant differences between the age groups are represented in this table.

6.3 Satisfaction with life

204 respondents completed the Satisfaction With Life Scale. The result indicated that people of the Nordic region are slightly satisfied (see 5.2.2).

Table 8 *Mean scores, minimum and maximum scores, and the standard deviations of the Satisfaction With Life Scale*

	Mean	Min	Max	STD
Satisfaction With Life Scale	22.4	5	34	7.5

The 5% trimmed mean was 22.6, which do not differ much from the original result.

6.3.1 Character strengths and satisfaction with life – correlation analysis

The relationship between life satisfaction, as measured by the Satisfaction With Life Scale, and the character strengths, as measured by the VIA-IS was investigated using the Pearson product-moment correlation coefficient (see Table 9). There were strong and positive correlations between life satisfaction and hope, zest, and gratitude, but also to love and curiosity. There were moderate and positive correlations between life satisfaction and forgiveness, perseverance, self-regulation, and religiousness. The weakest associations were found between life satisfaction and judgment, modesty and prudence.

Partial correlations were carried out, controlling for age and gender. These did not differ much from the original correlations, and the order is the same for the first 19 character strengths, but differs somewhat for the last five. However, the last three are the same as in the original analysis.

Table 9 *Correlations for the VIA Character Strengths and the Satisfaction With Life Scale*

Character strength	Correlation with SWL, *r*	Partial correlation after controlling for gender and age, *r*
Hope	.60**	.60**
Zest	.55**	.55**
Gratitude	.50**	.50**
Love	.48**	.49**
Curiosity	.43**	.42**
Perseverance	.33**	.33**
Forgiveness	.33**	.32**
Religiousness	.32**	.31**
Self-regulation	.32**	.31**
Bravery	.30**	.29**
Perspective	.30**	.30**
Humor	.28**	.29**
Leadership	.27**	.25**
Fairness	.26**	.25**
Teamwork	.25**	.25**
Honesty	.25**	.24**
Appreciation of beauty	.21**	.20**
Social intelligence	.21**	.21*
Kindness	.20**	.20*
Love of learning	.17*	.14*
Creativity	.16*	.16*
Prudence	.13	.13
Modesty	.11	.10
Judgement	.10	.11

Note: ** correlations are significant at the .01 level, * correlations are significant at the .05 level

6.3.2 Character strengths and satisfaction with life – regression analysis

Hierarchical multiple regression was used to assess the ability of the character strengths to predict life satisfaction. This analysis yielded a somewhat different picture than the correlation analysis. First, demographic variables (age, gender and education) were

entered at Step 1. These variables explained 1.9% of the variance in life satisfaction, but this was not statistically significant.

Then the character strengths which had the highest correlations with SWB were entered at Step 2; hope ($r = .60^{**}$), zest ($r = 55^{**}$), gratitude ($r = .50^{**}$), love ($r = .48^{**}$) and curiosity ($r = 43^{**}$) were entered at Step 2, as these were hypothesized to be the most important predictors of SWB in the regression. At Step 2 the model accounts for 43.9% of the variance in life satisfaction ($p < .001$). After the entry of the other 19 character strengths at Step 3, the total variance explained by the model as a whole was 53.5%, $F (27, 176) = 8.51$, $p < .001$, meaning that the character strengths explain 51.6% of the total variance of SWB, after demographic variables are accounted for.

The last 19 measures explained an additional 9.6% of the variance in life satisfaction, R squared change = .096, F change $(19, 176) = 1.92$, $p < .05$. However, in this model, only three of the variables entered in Step 2 were statistically significant ($p < .05$); these were love, gratitude, and hope, of which hope recorded the highest beta value (beta = .34). After checking the other 19 values entered in Step 3, it was found that kindness and social intelligence gave statistically significant contributions and that they both recorded high beta values (beta = -.26 and -.24).

Another hierarchical multiple regression analysis was then performed, in which hope, love, gratitude, social intelligence, and kindness were entered at Step 2, and the other 19 character strengths at Step 3. Here the first two steps explained 49.2% of the total variance in life satisfaction, $F (8, 195) = 23.57$, $p < .001$. The other 19 measures explained an additional 4.4% of the variance, R squared change = .044, F change $(19, 176) = .87$. However, the contribution to the explanation from the variables entered in Step 3 was not statistically significant.

A note must be made on the negative beta values for kindness and social intelligence. These variables are not negatively correlated to SWB, meaning that the negative beta values may instead be an indication of multicollinearity. In that respect, values for tolerance and variance inflation factor (VIF) were checked, as these may give indications of multicollinearity that are not evident in the correlation matrix (Pallant, 2007). Tolerance is not to be under .10, VIF is not to be above 10. All the values for all the variables are within these limits.

6.4 Orientations to happiness

139 respondents completed the Approaches to Happiness questionnaire, and the mean scores are shown in the table below:

Table 10 *Mean scores, minimum and maximum scores, and the standard deviations of the Orientations to Happiness*

Orientations to Happiness	Mean	Min	Max	STD
The Meaningful Life	3.35	1.33	5	0.88
The Engaged Life	3.17	1.67	4.67	0.64
The Pleasant Life	3.04	1.50	4.83	0.78

The 5% trimmed means were 3.37 for meaning, 3.17 for engagement, and 3.03 for pleasure.

6.4.1 Character strengths and Orientations to happiness - correlations

Correlations were also computed between the character strengths and the variables that make up the Approaches to Happiness Questionnaire, again using the Pearson product-moment correlation coefficient. Throughout, The Meaningful Life had the highest correlations with the character strengths, ranging from r .71 to .11, followed by The Engaged Life ranging from r .54 to .07. The results are shown in Table 11. The Pleasant Life had the weakest associations with the character strengths, of which only four showed statistically significant correlations. These were humor, love, forgiveness, and social intelligence.

Table 11 *Correlations for the VIA Character Strengths and the Orientations to Happiness*

Character strength	Meaning, *r*	Character strength	Engagement, *r*	Character strength	Pleasure, *r*
Religiousness	.71**	Zest	.54**	Humor	.28**
Gratitude	.51**	Curiosity	.49**	Love	.19*
Hope	.49**	Hope	.45**	Forgiveness	.17*
Love	.48**	Perseverance	.38**	Social intelligence	.17*
Kindness	.45**	Love of learning	.37**	Appreciation of beauty	.16
Perspective	.44**	Religiousness	.36**	Fairness	.13
Curiosity	.43**	Creativity	.36**	Perspective	.13
Zest	.42**	Gratitude	.35**	Creativity	.10
Bravery	.41**	Bravery	.34**	Kindness	.10
Fairness	.39**	Perspective	.34**	Love of learning	.09
Leadership	.39**	Honesty	.31**	Zest	.09
Appreciation of beauty	.37**	Self-regulation	.31**	Hope	.07
Forgiveness	.34**	Appreciation of beauty	.26**	Curiosity	.06
Social intelligence	..33**	Love	.25**	Gratitude	.04
Teamwork	.31**	Forgiveness	.23**	Honesty	.04
Love of learning	.30**	Fairness	.23**	Leadership	.03
Creativity	.29**	Humor	.22**	Prudence	.03
Honesty	.28**	Leadership	.22**	Teamwork	.02
Humor	.27**	Kindness	.21**	Bravery	.00
Perseverance	.24**	Teamwork	.18*	Religiousness	-.02
Prudence	.23**	Judgement	.17*	Modesty	-.03
Judgement	.22**	Social intelligence	.16	Judgement	-.09
Self-regulation	.20**	Modesty	.07	Perseverance	-.10
Modesty	.11	Prudence	.04	Self-regulation	-.14

Note: ** correlations are significant at the .01 level, * correlations are significant at the .05 level

6.4.2 Satisfaction with life and orientations to happiness - correlations

A correlation analysis was also performed to assess the associations between the Satisfaction with Life Scale and the Approaches to Happiness-measures. The results did show the strongest association between life satisfaction and The Meaningful Life. The correlation

between life satisfaction and The Engaged Life however, was not statistically significant, and as regards The Pleasant Life, there was no association whatsoever.

Table 12 *Correlations for the Satisfaction With Life Scale and the Orientations to Happiness*

Orientations to Happiness	Meaning, *r*	Engangement, *r*	Pleasure, *r*
Satisfaction With Life Scale	.34**	.18	-.01

Note: ** correlations are significant at the .01 level, * correlations are significant at the .05 level

7. DISCUSSION

7.1 Summary of the results

In general, many of the findings were in line with previous research. The component analysis resulted in six components like the theory states, which is actually more than has been found in previous factor analyses. The loadings showed a somewhat different pattern than in theory.

The most commonly endorsed strengths for the Nordic countries as a whole were curiosity, fairness, judgment, love, and love of learning, meaning that only two out of what was assumed to be the top five in the hypothesis were confirmed, namely fairness and judgment. Two of the character strengths thought to be among the top five, were however ranged as no six and seven, namely honesty and kindness. The least common strengths were prudence, self-regulation, modesty and religiousness, which is in accordance with earlier research.

The countries showed quite resembling profiles in that the ranking of the strengths were quite similar. There were some significant differences on mean scores of the strengths, but the effect sizes revealed that these differences were only small, which confirmed the hypothesis that the results would indicate converging profiles. This finding justified performing the rest of the analyses regarding life satisfaction and orientations to happiness (OTH) on the countries seen as a whole, as opposed to analyzing them separately.

As for differences between genders, the hypothesis regarding women and men showing converging profiles was also largely confirmed, but there were some differences between the genders in how the character strengths were ranged. It was confirmed that women in general had higher scores on the character strengths than did men.

It was presumed that the scores on the strengths would increase with age, which was also confirmed. This was however not a very strong tendency, as the differences between the age groups turned out to be small.

As for the associations between the strengths and SWB, it was hypothesized that love, gratitude, hope, curiosity, and zest were to have the highest correlations with life satisfaction. This was confirmed. But in the regression analysis it was found that curiosity and zest no longer were significant, these were however replaced by social intelligence and kindness which both provided significant contributions to the analysis.

Regarding the different orientations to happiness, it was found that religiousness,

gratitude, and hope had the strongest association to meaning, zest, curiosity, and hope to engagement, and humor, love, forgiveness and social intelligence to pleasure, which is very similar to the predictions of the hypothesis. It was presumed that engagement and meaning would be more strongly associated with SWB than would pleasure. This was confirmed.

The above findings will now be interpreted and discussed in further detail, presented in the same order as above, but starting first with some limitations with the study.

7.2 Study limitations

7.2.1 Methodological issues

First, many of the findings in this study were based on mean values of scores of the different variables. The mean provides information of the central tendency, it does not however, provide any information of the variation of scores within the different categories (Polit & Beck, 2008), which is important to keep in mind.

Many of the analyses performed in this study were correlational analyses. This is also true for much of the previous research that has been referred to earlier. An obvious limitation to such studies is that the results only provide information about possible associations between variables. It does not however, yield information about cause and effect, so what causes what to happen, may be difficult to judge (Polit & Beck, 2008). There is always a risk of the "third variable problem", that variables not included in the analyses might be responsible for the outcome.

Regression analyses can be more useful in that respect, in that they lend more predictive power to the results. But the relationship between the variables can still be difficult to disentangle. For instance, the order of entry of the variables in the equation is of importance – but there does not seem to be an agreed upon procedure of which variables are supposed to come first, this may be left up to the theoretical considerations of the researcher (Polit & Beck, 2008).

However, it can be noted that the stronger the correlations between the variables are, the greater the percentage of variance explained (Polit & Beck, 2008). Several of the variables in this study had rather strong correlations, something that will be kept in mind when discussing the result in further detail.

7.2.2 Sample characteristics

The sample that filled out the VIA Survey of Character Strengths was quite large, which is considered advantageous in quantitative research as it diminishes the chance of getting a markedly deviant sample (Polit & Beck, 2008).

But this is also probably the reason for finding many statistically significant results regarding the correlation analyses, as with large samples even very small differences can become statistically significant (Pallant, 2007). So effect sizes were calculated to obtain more information about the probability values, and these revealed that the differences were small in almost all cases, some even non-existent.

This however, might be due to the fact that the sample is rather homogenous. As previously mentioned, a rather large proportion of the sample is characterized by having a higher education of a bachelor's degree or more. Also most of the population is between 24-44 years old. Accordingly, the results may be representative for this group, but not necessarily for the general population. In addition, the sampling procedure may also affect the representativeness of the sample as it may differ from the general population on different characteristic (e.g. knowledge of and interest in positive psychology).

Then again, Internet studies may actually attract more diverse samples than are common in conventional psychological studies, in which samples often consist of for instance psychology students or different patient groups. Internet studies have been shown to be as valid as traditional research methods, in that samples are relatively diverse for instance with respect to gender, socioeconomic status, and age, and in that findings are consistent with findings from more traditional research (Gosling, Vazire, Srivastava, & John, 2004).

But as regards this study, ideally, the results would have been more representative if the sample differed more as regards education, age, and if the sampling procedure was more of a probability sampling. On the other hand, considering the large sample size consisting of people from the whole Nordic region, consisting of both women and men with a rather large age span between them, with different types of jobs and educations probably makes the sample more diverse than what is common in psychological research. This can be considered an asset in judging the quality of the study. In that respect, also the utilization of standardized and validated questionnaires is an advantage.

7.3 The structure of the character strengths

The result of the component analysis indicated a structure of six components, which grouped as follows:

1. Fairness, teamwork, forgiveness, leadership, modesty, kindness

2. Social intelligence, humor, bravery, perspective, love

3. Perseverance, self-regulation, hope, zest

4. Love of learning, curiosity, creativity

5. Appreciation of beauty, gratitude, religiousness

6. Prudence, judgment, honesty

Also the theory states six different virtues or classes of character strengths. Compared to the theoretical classification though, this result was somewhat different. All the strengths of justice collapsed into the first component, together with kindness (from the virtue of humanity) and forgiveness and modesty (from temperance). The second component included the remaining humanity strengths (love and social intelligence), bravery (from the virtue of courage), perspective (from wisdom and knowledge), and humor (from transcendence). The third component included two of the courage strengths, perseverance and zest, together with self-regulation (from the virtue of temperance) and hope (from transcendence). The fourth component consisted of three of the strengths from the virtue of wisdom and knowledge. Component five consisted of three of the strengths from the virtue of transcendence, and component six consists of honesty (from the virtue of courage), prudence (from temperance), and judgment (from wisdom and knowledge).

On the whole, in this study some of the character strengths are then grouped like in theory, whereas others are not. Finding six factors is a rather unusual finding, compared to earlier research on adult samples, in which there seems to be support for a model with five factors (Peterson & Park, 2004; Peterson, Park, Pole, D'Andrea, & Seligman, 2008; Peterson & Seligman, 2004).

Considering previous research, the justice and humanity strengths commonly collapse into one factor in both youth and adult samples (Shryack, et al., 2010). In this study, there was a similar result, with all of the justice-strengths in one component, but only one of the

humanity-strengths (kindness), and in addition two of the temperance-strengths. Also, some studies have found a clear wisdom or intellect factor (Park & Peterson, 2006; Peterson, et al., 2008), which is also the case here. In addition this study finds support for a transcendence component, which has also been found earlier (Peterson & Park, 2004; Peterson, et al., 2008; Peterson & Seligman, 2004). Previous research often shows a clear temperance component (Park & Peterson, 2006; Peterson & Park, 2004), but such a component is not found here.

There might be several reasons for the result of the component analysis, and why the strengths group as they do. Sample characteristics (see 7.2.2) might be one of them. It could be that the sample being rather homogenous affects the result, and that it would have been different if the sample was more diverse.

It could also be that the Nordic countries might show a different pattern for co-occurrence of the character strengths than other countries and nationalities, i.e. that in this region these personality characteristics may be organized in another manner. This is a possibility considering that personality appears to have quite a strong hereditary influence, and it is possible that shared cultural factors in this region also affect the development of virtues and strengths. For instance, it might be that in the Nordic countries, that if people are fair (a justice-strength), they are also modest and forgiving (temperance-strengths), and that if they are prudent (a temperance-strength), they will also be open-minded (a wisdom-strength) and honest (a courage-strength). If so, this might indicate that the strengths are not ubiquitously distributed, like the theory states (Peterson & Seligman, 2004), but that there can be cultural differences in the relative distribution of strengths.

Generally, this result adds to the previous knowledge on the structure of the character strengths, especially in that it was found support for six components, which has not been found earlier. However, the clustering of the character strengths correspond only partly to the virtues as classified in theory. If also taking into consideration that previous research indicate everything from one unidimensional virtue factor, to five categorically different factors (Shryack, et al., 2010), this may indicate that the results of factor and component analyses are characterized by being varied. This might happen based on for instance sample characteristics, and how the results are interpreted by different researchers.

But as Macdonald et al (2008) note, even if none of the studies support the classification of the strengths at the level of the virtues, that is not to say that the six virtues are meaningless, as they were found to be universal in cross-cultural and cross-generational

literature. Neither do these results lessen the value or importance of each of the individual character strengths.

But given these results, it might be that using factor and component analyses might not be sufficient for giving directions for altering the theoretical classification of the virtues and strengths in a manner that would better represent reality. Even though research show some converging results, it still might be difficult to draw final conclusions based on such mixed support, and as this study shows, the possibility of cultural differences in the co-occurrence of traits.

The original classification of the strengths is based on professional consensus on what strengths were thought to combine into virtue classes (Dahlsgaard, et al., 2005; Peterson & Seligman, 2004). A study which used a different method than factor or component analysis, in which the participants judged grouping of the character strengths based on pairwise covariation or semantic similarity to examine the implicit structure of the strengths, did actually find six groupings, based on cluster analysis (Haslam, Bain, & Neal, 2004). These only corresponded partly to the theoretical classification. They were interpreted as self-control, love, wisdom, drive, vivacity and collaboration. This study also included the FFM personality traits, and it was found that agreeableness and conscientiousness was clearly reflected in the implicit structure of positive characteristics, but openness and extraversion were not. The generalizability of this study is limited by being performed on a young and educated Australian sample; on the other hand it might say something about how Australians judge good character. This again implies that the results of this study are influenced by Australian social and cultural factors.

Still, in order to revise the classification of the strengths, it seems sensible to consider results from factor and component analyses, but also to include results from studies using a different methodology like for instance Haslam, Bain and Neal's (2004) study. It is probably important to beware of possible cultural and social differences in the grouping of the strengths, and investigate further how much such factors influence the co-occurrence of character strengths. This will have implications for the generalizability and universality of the classification.

7.4 The ranking and pattern of character strengths – similarities and differences

7.4.1 The Nordic countries – in general

The most common strengths for the Nordic countries were curiosity, fairness, judgment, love, and love of learning, meaning that the hypothesis, which proposed kindness, fairness, honesty, gratitude, and judgement, was only partially confirmed. Two of the character strengths thought to be among the top five, were however ranged as number six and seven, namely honesty and kindness, which is still close to what was predicted by the hypothesis. As regards love, number four in the Nordic countries, this was number six in the US ranking (Park, et al., 2006), the study that largely formed the hypothesis of this study. Thereby this result is still in accordance with previous findings.

The least common strengths were prudence, self-regulation, modesty and religiousness, which was also in accordance with earlier research (Park, et al., 2006).

Curiosity and love of learning, number one and five in the Nordic countries, were ranked eight and 15 in the US, respectively (Park, et al., 2006). The results of the British study (Linley, et al., 2007) however, were more in line with the current study, as curiosity and love of learning were in the top five for both men and women. It is a possibility that the differences between these results can be attributed to the fact that both the sample in this study, as well as the British sample, was characterized by the respondent's having a rather high level of education (72.2% and 73.2 % with a bachelor's degree or more, respectively). It probably makes sense that love of learning and curiosity are among the top strengths for these samples, as these might be strengths that are significant for attaining high levels of education. The typical educational level for the US respondents was a few years of college, and 26% had a college degree, which is notably less than in this and in the British study.

What is more noteworthy regarding the results of this analysis, is that gratitude, predicted to be among the top five, is somewhat longer down the list, ranked as number 16. One should probably think the opposite, as the Nordic countries are among the world's most affluent, and characterized by e.g. political stability and rather well-functioning welfare systems. In other words, people living in the Nordic countries are luckier than most, and as such, this character strength maybe ought to be among the Nordic signature strengths.

However, considering the result from the component analysis, in which there were found support for a transcendence component of the strengths, showing that gratitude often co-occurs along with appreciation of beauty, which was number 14, and religiousness, which

was the least common strength of all 24. That is, say that people are not very religious; hence they will not be very grateful either. Given this result, which shows that the transcendence strengths are among the least endorsed strengths in the Nordic region, gratitude being number 16 is probably not such an odd result.

This explanation might be supported by what has been found in research regarding objective life circumstances and how they affect SWB, in that as long as one has what is necessary for providing for a decent life, no further contributions to SWB from objective life circumstances are made (DeNeve & Cooper, 1998; Diener, 2009b). This could very well also be valid for gratefulness, in that having more (e.g. money, cars, furniture, clothes) than what is necessary, does not add to gratefulness, other things might be more important, for instance also being religious and having a sense of a higher purpose and meaning in life.

This finding may also be explained by the concept of hedonic adaptation (see 2.4). People in the Nordic region are probably accustomed to being well off, and people are not necessarily more grateful for what they have, as compared to many other places in the world in where people are not that well off. As for social comparison, according to social identity theory and research, comparisons with others are made more likely by proximity, perceived similarity, and frequent contact (Zagefka & Brown, 2005, 2006). In that respect, comparisons with people in more deprived parts of the world might not happen that often, hence missing possible important insights that would allow for the growth of gratitude.

7.4.2 Differences between the countries

As predicted, it was found that the countries showed converging profiles regarding the character strengths, as the ranking of the strengths are quite similar when comparing each country's strength profile. It was found that Finland and Iceland displayed somewhat different patterns in the ranking of the character strengths. It was also found that Finland had the lowest mean scores, whereas Denmark had the highest.

Finland is probably the country in the Nordic region which is most different from the others, especially regarding language, as Finnish belongs to the Uralic languages, as opposed to the rest of the Nordic languages, which belong to the Germanic languages. Typically, according to popular opinion, the Finnish are perhaps seen as for instance a bit on the low side as regards mood, and more quiet and reserved and perhaps drink more and have more alcohol problems as compared to the other Nordic nationalities. This can be supported by Finland having the highest rate of suicide in this region, of which e.g. depression and alcohol abuse

are major risk factors (Retterstol, 1992; WHO, 2009).

The Danish on the other hand, had the highest scores. This also seems to confirm popular stereotypes, as the Danish are seen as good spirited, jovial, and outgoing. Iceland also had rather high scores, and the ranking of the Icelandic scores differed somewhat from the other countries, for instance creativity is ranked as number nine for the region as a whole, but is number 15 for Iceland. Appreciation of beauty is number 14 for the region, but number eight for Iceland. Gratitude is number 16 for the region, but number nine for Iceland. It is perhaps not surprising that the Icelandic ranking of the strengths stand out somewhat, as this country differs from the others more, e.g. as regards language, and also geographical situation.

There were some statistically significant differences regarding the scores of the character strengths between the countries (see Table 4). However, this can probably be explained by the rather large sample. Iceland, standing out with both rather high scores and a somewhat different ranking of the strengths, did not, on the other hand, show many statistically significant differences towards the other countries, most likely due to being the country with the least respondents.

Also, the calculated effect sizes revealed that the differences between the countries were only small, some even non-existent. So all in all, the conclusion is that there are some differences regarding the ranking and the mean values of the character strengths, but these differences are small, thus the Nordic countries are quite similar and do show converging profiles of positive personality characteristics.

7.4.3 Differences between the genders

Men and women did show converging strength profiles, however the differences between the genders as regards the order of the strengths were somewhat bigger than expected. However, gender issues have not been an important topic in earlier research on character strengths, so thereby some unexpected results should perhaps have been anticipated.

To sum up the findings from the current study; three out of the five top strengths were the same for women and men; these were curiosity, fairness, and judgment. Linley et al (2007) found four out of the top five to be the same, these were identical to those reported here, but also included love of learning.

As regards differences, love was the top strength for Nordic women, but only number eight for men. Creativity was ranked fourth among men, but was strength number 17 for

women. Appreciation of beauty of beauty and gratitude were ranked as number nine and 11 for women, respectively, but as number 19 and 20 for men. Perspective was number 6 for men, but only ranked as number 16 for women. Other than this, the order of the character strengths was very much the same for both genders, also the last four strengths are the same for both genders. Regarding scores, 15 of the character strengths did show significant differences between the genders (see Table 6).

It is a common finding that women tend to score higher than men on the character strengths, particularly on all of the humanity strengths (Seligman, et al., 2004). Linley et al (2007) found that women scored higher than men on all strengths except for creativity. This was true for the present study as well, but in addition men had higher scores also on the strengths of judgement, perspective, self-regulation, and humor.

Taken together, these findings seem to point to a tendency of women scoring higher on 'strengths of the heart', and men perhaps having their strongest traits among the 'strengths of the mind' (see 3.1), which again seem to confirm stereotypical gender roles – in where women are "feelers" and men are "thinkers", depicted in popular literature like e.g. 'Men Are from Mars, Women Are from Venus' (Gray, 1992).

But it has actually been found that women tend to show make more extreme positive ratings than men (Crandall, 1973), but if judgments are neutral and more cognitive in nature, men tend to show a more extreme response style (Crandall, 1965). Marshall and Lee (1998) found the same pattern in their study, but also point out that the research in this area remains somewhat inconclusive, which is also supported by Naemi, Beal and Payne (2009).

This result could perhaps reflect that women in general view themselves more positively than men. This is however, contrary to the literature on self-esteem, indicating that men overall have significantly higher self-esteem than women. Even though the differences are small and more pronounced in adolescence, they are found to be consistent (Feingold, 1994; Kling, Shibley Hyde, Showers, & Buswell, 1999). A more recent review on gender differences in self-esteem, taking specific domains of self-esteem into account, report that men have higher self-esteem in the domains of physical appearance, athleticism, personal self, and self-satisfaction, whereas women score higher on moral-ethical and behavioural conduct self-esteem. No gender differences were found in the domains of affect, social acceptance, family, or academic self-esteem. But this result, specifically indicating that men have higher self-esteem in the personal self and self-satisfaction domains, seem to be counterintuitive to

the findings on gender differences in the scores of character strengths.

Women scoring higher on the strengths could perhaps be explained by women and men answering the VIA Questionnaire according to perceived gender roles, and subsequent social desirability. Then again, all the traits measured by the VIA are supposedly positive character traits, indicating that social desirability should not be a problem. It has actually been shown that the character strengths do not correlate significantly with social desirability, as measured by the Marlow-Crown social desirability scale, except for prudence ($r = .44$) and religiousness ($r = .58$) (Seligman, et al., 2004).

However, this is not to say that perceived gender roles do not affect scores – as these might influence how some statements can be judged as more suitable or appropriate than others by men and women, accordingly. This could be a probable explanation, as many similar gender stereotypes have been shown to exist within nations and cross-culturally (Williams & Best, 1990). For instance, males are associated with being aggressive, clear-thinking, daring, inventive, humorous, rational, serious, and wise. Females are associated with being affectionate, curious, emotional, fearful, kind, pleasant, sensitive, soft-hearted, and talkative.

Such stereo-types may have originated on the basis of actual differences between the genders (e.g. rooted in biological differences) and then being amplified by socialization, and as such men and women may have developed different psychological traits. Then again, gender role ideology might specifically dictate how men and women should be, and lead to socialization practices incorporating misrepresented perceptions of male and female traits. This again may promote underlying differences in biology (Berry, Poortinga, Segall, & Dasen, 2002).

However, the differences regarding scores that was found between the genders in this study are not to be exaggerated, as they turned out to be small or even non-existent in all but one case, gratitude, for which there was found a medium effect size. It can be noted though, that the effect sizes for appreciation of beauty and love were both .05, which can nearly be considered medium effect sizes as well. Regarding the finding in the component analyses, in which there were found support for a transcendence virtue, these above results indicate that Nordic women and men differ from each other especially regarding the virtue of transcendence, also considering that there was found a significant (but small) difference in scores for religiousness. In contrast, Linley et al (2007) found the strongest effect sizes for

kindness, love, and gratitude.

But even though some differences regarding the ranking and scores on the character strengths were found between the genders, the differences are not large. The question of whether the differences can be attributed to actual differences between the genders, a tendency for more extreme responding for women, or bias according to perceived gender roles and how these might affect results, remains unsolved.

7.4.3 Differences between the age groups

The results of this study revealed a general tendency of the strength scores to become higher with age. This is in accordance with Linley et al (2007), and thus supports their suggestion that there might be a tendency towards character development over the life span, as suggested by e.g. Maslow (1970). These results seem to oppose McCrae and Costa's (1994) view that personality does not change notably after the age of 30, but are more in line with findings indicating that personality traits show development also through adulthood, but only to a small degree after the age of 50 (Caspi, Roberts, & Shiner, 2005).

On the other hand, taking the rather strong heritability of personality into consideration, it seems that personality traits probably do not shift (e.g. from introvert to extrovert) as one grows older. But since personality also is a product of the interplay between genes and environment, it is also quite possible that personality develops beyond the age of 30, as then people will have acquired more life experiences that can affect how personality develops, than in the younger years. It is however difficult to conclude on this matter on the basis of this study, as it would take a longitudinal study design to be able to say something about the development of intra-individual character strengths over the life span.

Linley et al (2007) found the only strength to be negatively associated with age to be humor. This is also in line with the present study, finding that humor had the highest scores in the two youngest age groups. Also Seligman et al (2004) has found humor to be more pronounced among younger people. The current study also found social intelligence to receive the highest score among the youngest individuals (3.75); this did not however, prove to be very different from the score of the age group of 35-44 years, which had a score of 3.74.

The strongest effect sizes were found for curiosity, love of learning, religiousness, and fairness. This is similar to Linley et al (2007), who found the strongest associations with age also for curiosity, love of learning and fairness, but in addition also forgiveness and self-regulation. Some caution must be taken when interpreting the results of this particular result,

as effect sizes for the youngest age group in the present study was not calculated due to few subjects in the group.

Mean scores for this group were nevertheless calculated, revealing an interesting result: the lowest scores were not found among the youngest individuals, they were found among the 21-24 year olds and among the 25-34 year olds. That is, scores on a major part of the character strengths actually drop from the teenage years to the years from 21-24, or 25-34, and rises thereafter, and then become even higher than for the teenager group.

This is somewhat contrary to findings saying that the level of continuity in personality development increases in a rather linear fashion through adolescence and young adulthood (Caspi, et al., 2005), indicating linear rather than u-shaped relationships between personality traits and age. This review study did, however, for the most part incorporate evidence regarding the FFM factors. Linley et al (2007) do examine character strengths, but does not report scores below the age of 18, so in this respect the results are not comparable.

So what then, can account for the drop in scores of the strengths between adolescence and young adulthood? A possible explanation might be found in research on well-being, keeping in mind that there is a strong relationship between personality and well-being (Lucas & Diener, 2008). This relationship might even be particularly strong when it comes to positive personality traits, as the current study shows (see 6.3.1 and 6.3.2). Psychological well-being has actually also been found to be u-shaped through life. In a large study on 500 000 subjects from America and Western Europe, results indicated that happiness reaches its minimum in middle age (Blanchflower & Oswald, 2008). This u-shaped relationship was found to hold true on both sides of the Atlantic, after controlling for different birth cohorts, income, marital status, and education.

This article does not go into the underlying causes of this development of well-being through the life span, other than suggest that in mid-life aspirations are quelled, and that older people have learned to value their blessings. Another possible explanation is offered, indicating that miserable people actually might die earlier, and that the well-being u-shape in age thus reveals in part a selection effect.

But as many of the character strengths in the present study did show u-shaped relationships with age, and given that there is a strong relationship between character strengths and well-being, it could actually be possible that the u-bend of well-being could be an effect of the development of positive personality characteristics, i.e. that personality directs

the development of well-being during life. This can be supported by findings regarding personality development as measured by the FFM, indicating that people change for the better as they grow older, as neuroticism decreases (especially for women), and agreeableness and conscientiousness increases (Srivastava, John, Gosling, & Potter, 2003). It is possible that this development can account for the rise in well-being as people grow older.

Some precautions must be made, however. Even though a u-shape is seen both for character strengths and well-being, the fall in scores is more pronounced from adolescence to young adulthood in the present study, but declines from adulthood to a low point in middle age as regards well-being (Blanchflower & Oswald, 2008). The study on well-being does not include subjects under the age of 18. In the present study, the adolescence group is rather small, as opposed to the other age groups, and for that reason might not be representative for the age group as a whole. As regards the oldest group, keeping sample characteristics in mind, it seems probable that this group might excel even more on the characteristics describing much of the sample (see 7.2.2), in that they might have even higher education, be more knowledgeable in English and familiar with computers and using the Internet than the same age group in the general population. Also, there were found significant differences between the age groups on 16 (not all) of the character strengths, but the effect sizes were small (see table 7).

It seems safe to assume that there probably are interaction effects regarding the development of personality and well-being, even if it is difficult to judge cause and effect. The idea that the development of the character strengths over the life span might resemble the development of well-being is an interesting one, and might be worth investigating in future research using a longitudinal study design to be able to say something more specific about the development of personality in the form of individual character strengths through the life span.

7.4.4 General considerations regarding results on character strengths

To sum up the results from the different analyses presented in this part of the discussion, it seems safe to conclude that the Nordic countries show converging profiles, something that confirms the hypothesized similarities between the countries. There were some differences to results of earlier, international research, pointing in the direction of some cultural differences. Also there were some small, but consistent differences between the genders, and between the different age groups on some of the character strengths.

An interesting question is what these differences actually reflect. Do they show actual

differences between the compared groups? Might they reflect different response sets or styles, for instance due to differing values of the different groups? For instance, people from Iceland may value gratitude more highly than people from the other Nordic countries, men might value cognitive strengths more highly than women, and younger people might value humor more highly than older people.

Such thoughts bring forth a rather essential question of what is actually measured by the VIA-IS; is it personality or is it values, or a combination of the two? After all, the concept of character is in itself moral-laden (which is also recognized in the literature, see Peterson & Seligman, 2004) and as such, implies attitudes or values of some sort or the other. Parks and Guay (2009) sum up the relationship between the two concepts of personality and values, by saying that personality relates to what we tend to do, while values relate to what we ought to do, thereby incorporating an evaluative component. Also personality is comprised of relatively innate and stable dispositions, whereas values are more learned beliefs reflecting what is considered acceptable in society, and are as such learned and more malleable than personality. Personality traits do not conflict with each other (e.g. it is possible to be extrovert and agreeable at the same time), but values can, as often some are pursued at the expense of others. But in practice, the relationship between personality and values is difficult to entangle and as such, it might not be unlikely that completing the VIA-IS might also in part reflect the values of the respondents, in what is seen as desirable strengths, and not just actual personality characteristics.

In so far as the character strengths might reflect values, and that these can conflict with each other, it has been noted that character strengths and virtues might limit each other, and create tensions (Martin, 2007; Schwartz & Sharpe, 2006), for instance between honesty and love, and fairness and forgiveness. This implies that if these are among a person's signature strengths they will sometimes contradict each other and create dilemmas for the person, meaning that having a certain set of signature strengths is not necessarily solely positive. It is recognized in the literature that trade-offs between strengths do occur (Peterson, 2006; Peterson & Park, 2009), but this issue does not seem to be explored beyond empirical investigations of which character strengths seem to co-occur more often than others, and inferring that people thus seem to make such trade-offs in characteristic ways.

But the possibility of signature strengths also creating inner conflict implies that it is as important to explore how the virtues and strengths interact, as it is to identify and classify

them. As regards virtues, it is also possible that they might take the wrong direction, e.g. being brave on behalf of immoral causes, and forgiveness of people who do not deserve it (Martin, 2007). These are important points from moral philosophy's point of view, which deserve consideration in future research.

It has been pointed out that the distinction between the concepts of virtue and character strengths might be a bit blurry, for instance Martin (2007) hold that "all the moral strengths are virtues in the ordinary sense of morally desirable traits of character" (p. 97). Also the classification of the character strengths is questioned, for instance forgiveness and gratitude might fit better under the virtue of humanity, than under temperance and transcendence, respectively. The classification might for instance lack the virtue of self-respect, which in moral philosophy is seen as a basic virtue which overlaps with healthy self-esteem, especially since the latter is viewed by psychologists as an essential part of subjective well-being (Martin, 2007). It has also been questioned whether it is right to treat virtues and strengths in isolation from each other (i.e. to focus on primarily developing one's signature strengths), as they might not be that effective when exercised independently. It might not be good for character if one overdevelops certain strengths and ignore others (Schwartz & Sharpe, 2006).

It has also been pointed out that the classification seem to lack a grading of strengths, as some strengths might be more valued and perhaps more important for the development of good character than others (Kristjansson, 2010). In that respect, attention has been called to what Aristotle called *phronesis*, or the virtue of practical wisdom, which may be likened to the virtue of wisdom and knowledge as well as incorporating the strength of social intelligence. This virtue is essential to solving problems of specificity and relevance and to judge between different virtues in situations of conflict (like for instance in situations where one needs to either be kind or honest). Aristotle saw this as a basic and fundamental virtue (Kristjansson, 2010; Schwartz & Sharpe, 2006). It might be just as important to consider these points when revising the classification, as it is to consider factor analyses and other empirical research (see 7.3).

The question of whether virtues and character strengths incorporate moral aspects is an important one, as it can be inferred that the virtue project of positive psychology includes not only science, but also normative ethics. There might be a certain danger in emphasizing positive health in a manner that is moral-laden, as moral judgments may become a source of

bias that may influence research (Martin, 2007). It has also been noted that positive psychology might enter into activity of prescriptive valuation, and that there is a certain danger of violating the "is-ought" distinction in psychology by incorporating normative precepts into scientific theory, by not only describing what is, but what ought to be. This is probably an important distinction between psychology and moral philosophy that should be retained, but objectivity might be strengthened in describing factual values instead of prescribing (Kristjansson, 2010). These thoughts on the morality of the virtues and character strengths probably need to be considered in positive psychology. As Martin (2007) notes, it is important to be aware of and make distinctions between value judgments and science.

These points will be revisited towards the end of the discussion, after the relationship between character strengths, subjective well-being, and orientations to happiness are discussed, recognizing that there is a certain danger for positive psychology for entering into prescription. Then again, this might be considered an issue in all the health sciences, also health promotion. For instance, it is common knowledge that in order to stay in good health everybody ought to for instance eat vegetables and exercise regularly. Now science is progressing in the area of mental health, accumulating evidence on how to stay fit also mentally. The prescription-problem can also be turned around, in asking the question if it is not also morally right to share knowledge about how people can attain better health and more well-being in their lives.

7.5 The relationship between character strengths and life satisfaction

Consistent with previous findings as well as the hypothesis for this study, love, gratitude, hope, curiosity, and zest were found to have the strongest relationships with life satisfaction (SWB). Out of these five, hope, zest, and gratitude were substantially related to SWB. Prudence, modesty and judgment revealed the weakest links to SWB. Also creativity and love of learning were rather weakly related to SWB. These results are in accordance with earlier research (Park & Peterson, 2006; Park, et al., 2004), and seem to support their assumption that what they term 'strengths of the heart' are more closely associated with SWB than strengths of the mind.

Some differences were found, especially regarding perspective and social intelligence, which show more robust associations with SWB in the Park et al study (2006), than in the present study. Appreciation of beauty was however more strongly associated with SWB in the present study. This may point to some cultural differences, which is also indicated by some

results of previous research (see 3.3). It is also a possibility that the differences found may be attributed to characteristics of the sample in this study.

However, most of the character strengths are positively and significantly associated with SWB, indicating that there is in fact a strong relationship between positive personality characteristics and life satisfaction. A regression analysis was performed to be able to investigate this relationship more in detail, to investigate which of the character strengths that have the highest predictive value of SWB.

Results indicated that these were hope, gratitude, love, kindness, and social intelligence. Curiosity and zest did not provide significant contributions to the solution, even though zest came rather close (r = .054) and might still be considered to have a certain predictive value of life satisfaction. It does not seem unreasonable that kindness and social intelligence can contribute to SWB, and it has actually been found that performing intentional acts of kindness increases well-being (Lyubomirsky, Sheldon, et al., 2005). Being kind and knowing how to handle and behave in different social situations and settings probably can be important for building good relations with other people. Strong and healthy relationships are seen as crucial for health and well-being (Reis & Gable, 2003), and it is a well-established finding that other people matter a great deal in a happy life (Peterson, 2006).

Curiosity on the other hand, can probably be thought of as a double-edged sword, in that being curious can lead to both positive, but also to negative consequences. An example of the latter can be trying addictive drugs because one is curious and wants to find out what being high feels like.

However, even if the result of this analysis is quite clear, the result is perhaps still not that easy to interpret. A precaution must be made as regards multicollinearity, as can be indicated by the negative beta values of kindness and social intelligence (see 6.3.2), and the fact that several of the variables were rather strongly correlated, e.g. hope and zest, curiosity and zest, and curiosity and hope. This implies that some of the character strengths may share a sizeable portion of the same variance.

This can also explain why zest and curiosity did not make significant contributions to SWB, even though they were strongly related to SWB in the correlation analysis, and why kindness and social intelligence were significant, in spite of their rather small correlations with SWB. In other words, the character strengths may be too similar, and also too many for the regression analysis to be able to separate the effects of the individual strengths. As such,

which ones turn out to be significant might be random, and the result must be interpreted accordingly.

However, looking at the model as a whole, even though the strengths may overlap and it is not entirely clear which of them makes the largest contributions to life satisfaction, it seems clear that the character strengths explain a major part of the variation in SWB. It has already been established that personality is strongly related to SWB (see 2.4), and the result of this analysis seems to confirm the assumption made earlier that positive personality characteristics may be highly predictive of SWB.

The finding in the present study is in line with Steel, Schmidt, and Schultz' (2008) conclusion that personality might explain up to about 60% of the variance in SWB. The question of exactly how personality traits are related to SWB still remains, but part of the explanation are probably evident from common biological mechanisms. For instance, Weiss, Bates and Luciano (2008) found that well-being was genetically not distinguishable from personality, and suggest that this close relationship might be termed 'covitality' as opposed to the concept of comorbidity from psychopathology. They suggest that these findings might have implications for the set-point theory of happiness (see 2.4), in that the genetic effect of personality may affect the extent of changes in well-being due to environmental events, and how long such changes last. This again implies a possibility for personality to create what they call an 'affective reserve' that may act as a buffer in times of distress.

This can be seen in relation to the broaden-and-build theory (Fredrickson, 1998), which suggest that positive emotions have the capacity of both undoing the negative effects of negative emotions in the short term, as well as in the long term building resources that can be drawn upon in difficult times. It seems that some personality traits have a stronger relationship to positive emotions than others (e.g. extraversion), and these may as such also be indirectly responsible for SWB through building resources and affective reserves into emotional capital that can be "spent" in tough times. This may also be true for virtues and character strengths.

Steel et al (2008) note that since personality is very important for SWB, it might clarify the paradox that people in countries of considerable wealth, SWB no longer improves after reaching a certain point, and that the answer to improving SWB does not lie in increasing wealth even further, but rather in taking the effects of personality into account. They suggest that personal and societal well-being can be improved through enabling

conditions for the development of desirable personality traits, something that is very much in line with the focus on building character strengths in positive psychology.

7.5.1 Having the strengths vs. using them

Previously, most of the research on character strengths and well-being revolves around having the strengths, not using them – which does not answer the question of whether using the strengths actually result in improved well-being (Wood, Linley, Maltby, Kashdan, & Hurling, 2011). A measure for testing strengths in practical use have been developed (Strengths Use Scale) and tested on British samples, and both initial and longitudinal research supports the hypothesis that using one's strengths, lead to elevated life satisfaction (SWB), as well as less stress, elevated self-esteem and more positive affect (Govindji & Linley, 2007; Wood, et al., 2011). These two studies both include the SWLS as measure, but not the VIA-IS, which potentially flaws the results, as it is not clear how the participants identified their strengths.

However, another study that makes explicit use of the 24 character strengths (but in a manner which involved participants choosing their signature strengths from a list containing the definitions of each strength, as well as the Strengths Use Scale) also did show that strengths use is positively correlated with well-being, and the results revealed strengths use as a unique predictor of SWB (Proctor, Maltby, & Linley, 2011). Specifically, hope and zest were significant positive predictors of SWB. Regression analyses also revealed love, kindness, social intelligence and judgement to be significant predictors of life satisfaction. However, curiosity was not. This is an interesting result compared to the results of the regression analysis in the present study, as it does seems to confirm that kindness and social intelligence are important for SWB, when using a different measure.

Additionally, it can be mentioned that the intentional exercising of gratitude seems especially promising when it comes to improving well-being (Seligman, et al., 2005; Wood, Froh, & Geraghty, 2010). Interestingly, results of the present study revealed that gratitude is not among the more highly endorsed character strengths in the Nordic region, it was only ranked as number 16 (see 7.4.1). This suggests that working on enhancing gratitude might turn out to be a promising way of elevating happiness in these countries.

7.6 Character strengths, orientations to happiness, and well-being

As regards the relationship between the character strengths and the different orientations to happiness, the meaning orientation was found to be more strongly associated with the character strengths than the other two orientations, but also engagement was for the most part significantly related to the strengths. Pleasure on the other hand, was for the most part not found to be significantly related to the strengths, with overall weaker correlations than has been found previously.

As predicted, religiousness, gratitude, and hope were the strengths with the highest correlations with meaning. Zest, curiosity, and hope had the highest correlations to engagement, confirming to out of three in the stated hypothesis. The hypothesis included perseverance, which actually had the fourth highest correlation to engagement. Humor was the strength with the strongest correlation to pleasure as predicted, followed by love, forgiveness, and social intelligence (the two latter both with a correlation of $r = .17*$). These were the only four strengths that were significantly related to pleasure. Zest and hope were predicted to be among the top three strengths related to pleasure, but turned out not to be.

But on the whole these results were in accordance with previous research, with a partial exception for pleasure. The result seem to confirm Peterson et al's (2007) conclusion that it is the same character strengths that have the strongest relationship with SWL, that have the strongest relationship with the different orientations to happiness. This is perhaps not an unlikely result, as the two constructs both incorporate well-being or happiness, the difference being that SWLS measures overall life satisfaction, whereas the OTH splits happiness into three different parts that each contribute to overall happiness.

As regards the relationship between SWB and the orientations to happiness, meaning displayed a robust relation to life satisfaction. Engagement however, was only weakly associated (and not significantly) to life satisfaction. The relationship between pleasure and life satisfaction proved to be none for this sample. That is to say that these links between OTH and SWB were weaker than what have been found in previous research.

These results may indicate some cultural differences, especially on the part of pleasure, as the results regarding pleasure are the ones that are different from earlier research, both regarding how it is related to character strengths, as well as SWB. It could indicate that in the Nordic region, different character strengths relate to pleasure than elsewhere, and also that pleasure does not add to life satisfaction. As regards engagement, much the same

character strengths are in the present study found to relate more strongly to this particular orientation to happiness as in earlier research, but it was not found to be significantly associated to SWB. In summary, only meaning seems to be robustly associated with life satisfaction in the Nordic region.

But yet again, the characteristics of the sample need to be considered. Maybe this sample consists of people who are not that preoccupied with pleasure, but rather acquire their life satisfaction from what provides them with meaning in life. Possibly other results could have emerged with a more diverse sample. For instance, it has been found that younger as well as less educated people have higher scores on the pleasure orientation (Peterson, et al., 2005b). Given that the sample in this study for the most part consists of rather highly educated people between the ages of 24 and 44, the results regarding pleasure might have been different had the sample consisted of a greater part of young people below the age of 24 and also more people with less education.

It is a common finding that the pleasure orientation is the one with the weakest relationship to SWB (see 3.4), which indicates that to increase well-being it is not enough to focus exclusively on increasing the amount and intensity of positive feelings. That is not to say that feelings of pleasure and joy are not important in life, even though they might play a small part in SWB. Consider for instance the broaden-and-build theory of positive emotions (Fredrickson, 1998, 2001), positing that positive emotions are important for i.e. curiosity, creativity and learning, and for building good relationships to other people. Also considering that positive emotions seem to have a direct and positive influence on health (see 1.3), it seems that pleasurable feelings are important for good health and a good life. But perhaps they influence the good life in a more indirect manner than what has been found here, through for instance building emotional capital (see 7.5.2). This implies that what is being measured by the pleasure orientation, might not capture essential parts of what constitutes a good life.

7.7. General considerations regarding the concept of character and theory of happiness and well-being in positive psychology

First, revisiting the thoughts set forth earlier (see 7.4.4) on virtues and character strengths, it has been noted that even if a person has a capacity for developing desirable character strengths, this does not necessarily transform this person into a person of good character (Kristjansson, 2010; Martin, 2007), i.e. a nice, good-willed, and decent person. This can be exemplified by saying that even a serial killer and a suicide bomber may cultivate

essential character strengths, and may possibly lead both a pleasant, engaging and meaningful life - even if unlikely (Kristjansson, 2010). There is even a possibility that some people can also find happiness and gratification in the exercising of vices, e.g. tyrants and sociopaths have traits that can at some times promote happiness (Martin, 2007).

From the point of view of moral philosophy the question is raised whether Aristotle's concept of eudemonia might not be fully understood in positive psychology, especially in that Aristotle saw some virtues as more essential for building good character than others. From this perspective practical wisdom (*phronesis*) is the master virtue, from which the other virtues unfold. It enables one to do the right thing in the right way at the right time. As such, it is seen as having an 'executive' function over the other virtues (Schwartz & Sharpe, 2006). Positive psychology is criticized for withholding to take a stand on this issue on the grounds of being afraid of making moral judgments, even though the character strengths are by definition morally valued (Kristjansson, 2010; Martin, 2007). Kristjansson holds that positive psychology *should* incorporate value judgments into its theories, and that it is possible to do this in a way that retains objectivity by including empirically grounded moral evaluations, i.e. describe factual values and not prescribe them.

The idea that some character strengths might be more important for good character than others is interesting, but it is beyond the scope of this thesis to make any inferences on which these strengths may be. For now, it is suggested that these points deserve attention in future refinements of the classification of virtues and character strengths.

The question has also been raised whether the three orientations to happiness as suggested by positive psychology (Seligman, 2002), can quite capture what constitutes happiness and well-being, and whether there might not be several roads to happiness not covered by the theory. For instance, this question has been discussed taking human development needs into consideration, highlighting that balance in life, derived from being able to meet needs in different domains of life, is very important for SWB (Sirgy & Wu, 2009). It is posited that there is a limit to how much life satisfaction can be derived from a single life domain, and that people need to be involved in several domains to satisfy the full range of human development needs. Balance is said to contribute to SWB because only when both survival and growth needs are met, high levels of SWB can be met – this cannot be attained in satisfying basic needs or growth needs alone (Sirgy & Wu, 2009).

This is probably also an important point that deserves consideration. It seems that the

theory of well-being in positive psychology starts off on the grounds of findings that objective circumstances (e.g. income, housing, clothes) do not contribute to SWB further than to a certain point, as it is recognized that these factors are necessary, but not sufficient conditions for SWB (Diener, 2009b). So the theoretical starting point for how character strengths relate to SWB is that personality seems to be the single most important factor for SWB (see 2.4), and as such the focus is on the development of personal strengths to foster good character and thereby happiness. But on the other hand, objective factors are vital to survival, and thus SWB, especially when resources are scarce. For instance, income is strongly correlated with SWB when poor (Inglehart & Klingemann, 2000). So survival needs are recognized as necessary for SWB in the literature, but they are still not incorporated into the theory of well-being itself. It is possible that this may in fact make the theory less applicable to the not so affluent parts of the world, and as such challenge its universality.

Recently, the theory of well-being has been revised, with two new additions in recognition of that there may be more roads to happiness than the original theory posits. The theory now includes positive relationships and accomplishment as distinct and significant routes to well-being (Seligman, 2011). Including positive relationships is done on the background of findings indicating that good relations to other people are a very important factor for a happy life. Accomplishment is included on the basis of achievement and mastery often being pursued for their own sake (implying intrinsic and not extrinsic motivation) – even if it does not bring about e.g. positive feelings or meaning, and as such it is seen as a distinct way of attaining well-being.

In relation to the discussion of human developmental needs earlier, it can be noted that these two factors resemble the needs of relatedness (positive relationships) and competence/autonomy (accomplishment), which are defined as inherent and universal growth needs in self-determination theory (Deci & Ryan, 2000). It is noted that the addition of the achieving life emphasizes that positive psychology's task is to describe, not prescribe, what people actually do to achieve well-being (Seligman, 2011).

The theory also evolves from being centered on subjective well-being in which the ultimate goal is life satisfaction or happiness, to a theory of well-being in which the ultimate goal is flourishing (Seligman, 2011), which implies a shift in terminology. Flourishing may be defined as a combination of feeling good and functioning effectively, and a person is flourishing if he or she perceives that their life is going well. As such, it is a subjective

measure of well-being which focuses on the top end of the spectrum of well-being (Huppert & So, 2009), and it can be operationalized by measurements of the five elements seen as central for well-being – pleasure, engagement, meaning, relationships and accomplishment, PERMA in short (Seligman, 2011).

These changes in the theory are made on the grounds of life satisfaction being a measure of hedonistic well-being (Nave, Sherman, & Funder, 2008), i.e. it might not capture eudemonic well-being that well, which is seen as a more essential part of well-being in positive psychology. Even though life satisfaction is separable from positive and negative affect, measures of life satisfaction can be influenced by the way people feel at the moment (Veenhoven, 2009). In general, also most associate the word happiness with positive feelings, also critics of positive psychology who seem to think that positive psychology is an unscientific endeavor ('happiology') in which the sole object is to make people smile and think happy thoughts (see for instance Ehrenreich, 2010; Held, 2004).

Taken together, the term happiness might not be perceived as a scientific term, or even manage to cover the full meaning of well-being, as it scientifically implies a lot more than positive feelings. That well-being implies more than positive feelings is supported by research findings, including the present study. A person might very well lead a good and meaningful life, even though positive feelings are not abundant in that person's life. That does not necessarily limit possibilities for attaining higher levels of well-being (Seligman, 2011).

8. CONCLUSION

The present study has taken a closer look on character strengths, subjective well-being and orientations to happiness in the Nordic countries. It can be concluded that the findings for the most part support previous findings in this area of research, but that there might be some cultural differences, for instance in the relative co-ocurrence of strengths. Among the main findings were that curiosity, fairness, judgment, love, and love of learning were the most commonly endorsed strengths in the Nordic region, and that the countries showed similar strengths profiles. An important finding is that in this region, gratitude, being highly correlated with and a consistent predictor of SWB, is one of the lesser endorsed strengths. But research shows promise in that exercising gratitude intentionally often lead to lastingly elevated well-being. Such findings indicate a possibility for improving general SWB in the Nordic region through gratitude.

The findings of the study also indicate some small, but consistent differences between the countries of the region, between men and women, and between the different age groups in the study. The countries still seem more alike than different, both as regards mean scores and ranking of the strengths. The differences between the genders were more pronounced in that matter, but are still not to be exaggerated, as they may reflect measurement issues and/or different attitudes towards the most valued characteristics for women and men, respectively. As regards age groups, results of the study indicate that scores fall from adolescence to adulthood, and then rise to be even higher through middle and old age. It is suggested that this may resemble the u-shape of the development of SWB through the life span, and that it would be interesting to investigate this issue further in future studies.

The character strengths of love, gratitude, hope, curiosity, and zest are strongly related to SWB in this region, which support earlier findings. Also kindness and social intelligence were found to be predictive of SWB, which is supported by findings implying that kindness exercises also elevate SWB substantially, and that social intelligence may very well be important for the development of positive relationships with other people, which is seen as crucial for well-being in general.

Regarding the orientations to happiness, the findings regarding the pleasure orientation were somewhat remarkable, as it in the Nordic region seems to be related to other character strengths (besides humor) than what have been found in earlier research, and in that pleasure does not seem to be related to SWB. This could imply a cultural difference, or it can possibly

be attributed to sample characteristics, such as education level.

Some points from the theoretical perspective of moral philosophy have been discussed, which may be worthy of consideration in future research on virtues, character strengths, happiness and well-being. Most importantly that it is quite possible that some character strengths are more important for the development of good character than others, and that positive psychology might need to take a stand on this matter. It seems that even if character strengths are seen as morally valued and important to develop to elevate SWB, the question can be still be raised if you automatically become a better person of good character if your well-being is being heightened through the exercising of just any of the character strengths.

8.1 Implications for research, theory, and practice

The results of the present study regarding how the strengths co-occur in different categories seem to underline the varied nature of the results of previous research on virtue classes. This may indicate cultural variation of co-occurrence of traits, something which seems worth investigating in future research, and that might affect the classification of the strengths as well as its universality. It may prove important to triangulate methods, and not rely solely on factor analyses. The strengths that were found to be the most common in the Nordic region do however compare to what have been found in previous research, suggesting similarities that support the ubiquity of the most commonly endorsed character strengths, thereby supporting the universality of the theory. It may prove necessary to take into account that some character strengths are more fundamental to the building of good character than others.

In future research it is also suggested to take a closer look on gender differences, as the results of this study indicated that there are in fact are some. It is however difficult to judge why this was the result, and future studies may shed light on this issue. It might also be interesting to investigate whether there are gender differences regarding which strengths are more closely related to SWB. As regards the differences between age groups, it is suggested to study the intra-individual development of character strengths through the life span, also in relation to SWB. The present study suggests that there is a possibility that the development of personality directs how SWB develops through the life span, and it is recommended to explore the relationship between the two in longitudinal studies.

On the background of results from this and previous studies, it seems rather clear that

some character strengths are more important to SWB than others. In practice it is probably important to focus on developing these strengths to sustainably elevate SWB.

Regarding the orientations to happiness, the results of the present study underlines that having a sense of meaning and purpose in life, is more strongly related to SWB than engagement and pleasure. This implies that incorporating factors that provide meaning in life are vital to elevating SWB. In the future, it will be interesting to see also how the new additions to well-being theory, positive relationships and accomplishment, will relate to measures of SWB, or any additional measures that can incorporate the concept of flourishing. It is suggested that further amendments of the theory might incorporate survival needs, as these are especially important to SWB when resources are scarce. This can make the theory more applicable to the lesser developed parts of the world, and can as such strengthen the universality of the theory.

It is recommended that results from this and other studies in positive psychology are incorporated into health promotion practices, as the two disciplines share much common ground, as established earlier. For instance both have a main focus on positive health, and share a view in which prevention of health problems are important. On the basis of this and similar studies in the area of positive psychology, it seems important that the health promotion field recognizes the importance of personality for well-being, especially in the more developed countries of the world in which survival needs are for the most part met. Theory and research on the classification of virtues and character strengths provide tools to promote personality characteristics that are advantageous for well-being and health, that can be utilized in health promotion practices. The results of the present study suggest that promoting gratitude and factors that provide meaning in life can be of special importance in the Nordic region.

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APPENDIX

Intercorrelations of the VIA Character Strengths

Table A1 *Correlation matrix of the VIA Character Strengths*

	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.	12.	13.	14.	15.	16.	17.	18.	19.	20.	21.	22.	23.
1. Appr of beauty																							
2. Bravery	.30**																						
3. Love	.34**	.42**																					
4. Prudence	.13**	.03**	.10**																				
5. Teamwork	.20**	.21**	.45**	.32**																			
6. Creativity	.35**	.48**	.17**	.03	.04																		
7. Curiosity	.41**	.44**	.40**	.04	.23**	.48**																	
8. Fairness	.32**	.29**	.38**	.33**	.58**	.15**	.33**																
9. Forgiveness	.24**	.23**	.36**	.22**	.45**	.17**	.35**	.60**															
10. Gratitude	.57*	.41**	.63**	.22**	.41**	.25**	.48**	.41**	.37**														
11. Honesty	.20**	.46**	.35**	.47**	.46**	.19**	.27**	.44**	.33**	.38**													
12. Hope	.18**	.45**	.49**	.16**	.35**	.31**	.54**	.28**	.40**	.52**	.36**												
13. Humor	.24**	.33**	.42**	.02	.33**	.35**	.41**	.26**	.30**	.39**	.23**	.43**											
14. Perseverance	.11**	.47**	.29**	.32**	.32**	.16**	.31**	.25**	.18**	.32**	.54**	.50**	.15**										
15. Judgement	.16**	.29**	.12**	.50**	.13**	.32**	.26**	.27**	.18**	.19**	.40**	.23**	.11**	.28**									
16. Kindness	.41**	.37**	.55**	.24**	.58**	.21**	.32**	.52**	.39**	.59**	.45**	.36**	.45**	.29**	.16**								
17. Leadership	.31**	.41**	.45**	.24**	.60**	.30**	.37**	.66**	.47**	.46**	.42**	.41**	.39**	.37**	.23**	.56**							
18. Love of learning	.37**	.31**	.18**	.10**	.07**	.49**	.63**	.23**	.22**	.31**	.19**	.27**	.21**	.18**	.33**	.18**	.25**						
19. Modesty	.16**	-.13**	.08**	.43**	.39**	-.16**	.02	.40**	.32**	.23**	.34**	.07**	.02	.12**	.11**	.29**	.23**	.00					
20. Perspective	.26**	.51**	.37**	.28**	.24**	.49**	.45**	.31**	.33**	.40**	.46**	.54**	.39**	.36**	.50**	.34**	.44**	.36**	.04				
21. Self-regulation	.15**	.32**	.21**	.42**	.37**	.13**	.29**	.32**	.27**	.30**	.49**	.42**	.14**	.61**	.29**	.27**	.36**	.21**	.29**	.33**			
22. Soc intelligence	.30**	.49**	.55**	.12**	.34**	.33**	.39**	.30**	.27**	.48**	.37**	.44**	.48**	.35**	.28**	.47**	.51**	.19**	.00	.61**	.27**		
23. Religiousness	.44**	.37**	.39**	.17**	.27**	.27**	.38**	.31**	.31**	.59**	.29**	.45**	.21**	.28**	.13**	.35**	.37**	.25**	.18**	.34**	.26**	.33**	
24. Zest	.26**	.52**	.53**	.09**	.37**	.39**	.66**	.30**	.37**	.55**	.39**	.73**	.50**	.54**	.16**	.43**	.46**	.37**	.01	.47**	.44**	.50**	.41**

Note: ** correlations are significant at the .01 level