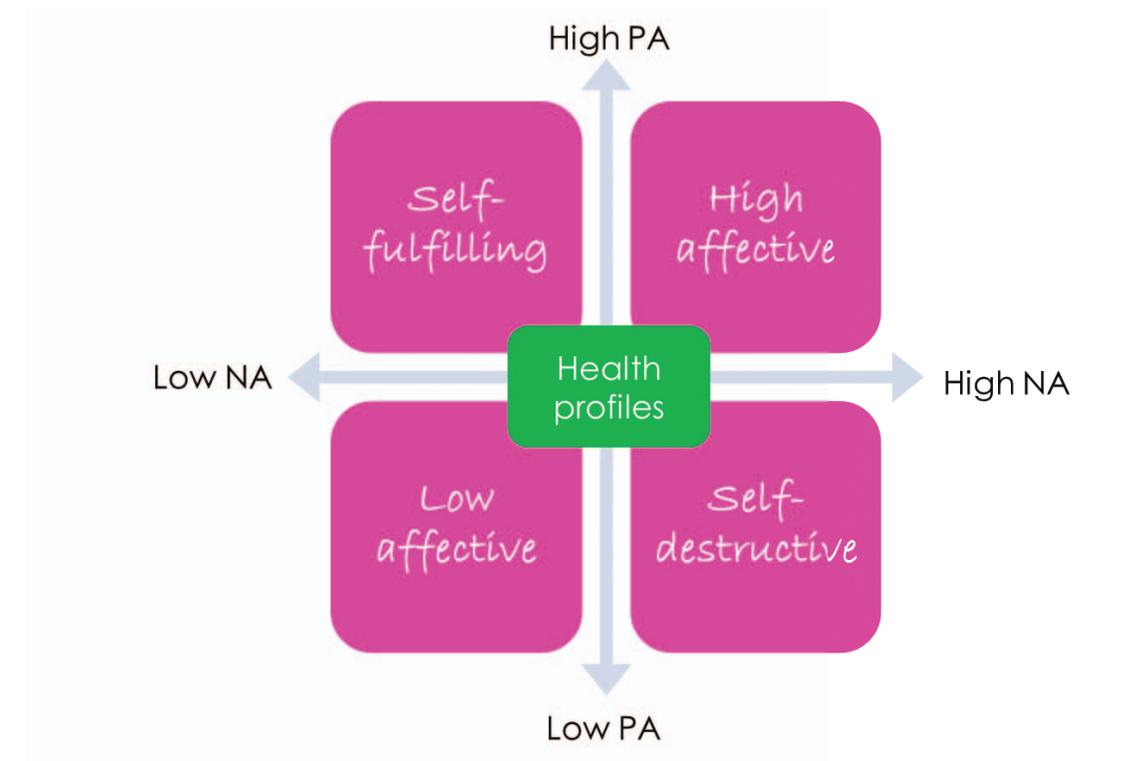


# THE AFFECTIVE PROFILE MODEL: ill-being and well-being

Erica Schütz



The Affective Profile Model:  
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Erica Schütz



**UNIVERSITY OF GOTHENBURG**  
**DEPT OF PSYCHOLOGY**

Doctoral Dissertation in Psychology  
Department of Psychology  
University of Gothenburg  
(150508)

"A dream is the beginning of anything great or meaningful in life. With dreams we have purpose, and life is worth living." (Marc Allen)

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Printing: Ineko, Göteborg, 2015  
ISBN: 978-91-628-9401-6  
ISSN: 1101-718X Avhandling/Göteborgs universitet, Psykologiska inst.  
ISRN: GU/PSYK/AVH--314—SE  
<http://hdl.handle.net/2077/38582>

*To my family:  
Magnus, Sixten & Tyra  
For always being there for me!  
For always believing in me!*



# DOCTORAL DISSERTATION IN PSYCHOLOGY, 2015

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## Abstract

Schütz, E. (2015). *The Affective Profile Model: ill-being and well-being*.  
Department of Psychology, University of Gothenburg, Sweden.

Positive and negative affect have emerged as significant independent dimensions in studies of affective structure. Seeing affect as composed of two systems that can be categorized in high and low enables the possibility of four different combinations (i.e. affective profiles), “Self-fulfilling” (high positive affect, low negative affect), “Low affective” (low positive affect, low negative affect), “High affective” (high positive affect, high negative affect) and “Self-destructive” (low positive affect, high negative affect). The affective profiles offer a unique approach by taking into account how positive affect and negative affect interact. The aim of the present thesis was to validate the affective profiles as health profiles through investigating the role of affectivity and its relation to various personal attributes (personality characteristics and character profiles) and markers of ill- and well-being, such as somatic and psychological stress, stress and energy, depression, happiness, life satisfaction, happiness-increasing strategies, coping and Type A-personality in the light of the affective profiles and gender. This thesis comprises 4 different studies based on self-report of 2637 adolescents and adults from Sweden and the United States of America.

The self-fulfilling individuals compared to all the other affective profiles, expressed a higher level of responsibility, emotional stability, better personal relations, vigor, more cognitive coping, more physical coping, more social coping, emotional coping, and total coping (Study I) as well as significantly higher level of energy (Study I and II), significantly higher scores on happiness-increasing strategies (Study III), significantly lowest level of stress and Type A-personality (Study II), in the context of character profiles, relating to agentic (self-directedness), communal (cooperation) and spiritual (self-transcendence) values, self-directedness was positive related to the self-fulfilling profile, only when cooperativeness was high (Study IV). The self-destructive individuals, compared to all the other affective profiles, expressed significantly more stress, as well as psychological and somatic stress (Study I), significantly higher levels of depression and lower level of happiness and life satisfaction as well as lower scores in all happiness-increasing strategies with the exception for mental control, which is an ambivalent strategy of rumination and repression of negative events (Study III). The high affective and low affective individuals showed a mix of this pattern.

There were also significant marked gender differences pertaining to personal attributes and markers of ill- and well-being. The female participants expressed a significantly higher level of responsibility, vigor, more psychological stress, more emotional coping (Study I), higher level of stress, Type A-personality (Study II), higher level of negative affect (Study II and III), higher level of happiness, social affiliation, instrumental goal pursuit, religion, passive leisure, direct attempts (Study III).

The results suggest that the pursuit of happiness through agentic, communal, and spiritual values leads to a self-fulfilling experience defined as frequently experiencing positive emotions and infrequently experiencing negative emotions. In conclusion psychological health is a complex state and the results from this thesis points in the direction that it seems to be the various combinations of positive and negative affect offered in the affective profiles (namely the interaction of both dimensions of positive and negative affect) that offers the widest and detailed health profile. The results suggests, that high positive affect seems to be a more important component than both high and low negative affect for having continuous good health, happiness and well-being (i.e. being a protector against damaging influences such as stress, anxiety, depression, type A-personality, coping styles on health). An understanding of

personality development, conscious strategies (i.e. growth in self-awareness) could offer a positive health profile model in providing a systematic way to promote and combine state of physical, mental, social, and spiritual well-being. Further, while agency and communion (cooperation) seems to lead to happiness and health, spiritual values might be necessary for becoming a self-fulfilled individual that lives in harmony with the changing world.

*Keywords:* affective profile, affect, ill-being, well-being, character

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## Swedish summary

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En individs vardag innebär ofta att möta oväntade utmaningar, svårigheter och motgångar. Hur man hanterar dessa händelser i livet, positiva eller negativa, och om du tycker att livet är intressant och roligt, är kärnan i psykisk hälsa och välbefinnande. Psykisk hälsa och välbefinnande speglar hur vi som människor fungerar, anpassar och utvecklar oss och de är beroende av faktorer, såsom stress, känslor och kognitioner. När man studerar psykisk hälsa i allmänhet, tenderar vi att hänvisa till hur vanliga människor upplever sin vardag. Med andra ord, om du känner dig bekymrad, betyder det inte nödvändigtvis att du är psykiskt sjuk, men det kan vara en signal om ohälsa.

Positiv och negativ affekt har framkommit som två viktiga dimensioner i studiet av hälsa och ohälsa, och har presenterats som två oberoende dimensioner: hög kontra låg positiv affekt och hög kontra låg negativ affekt. Att se affekt som bestående av två system ger möjligheter till fyra olika kombinationer (dvs. affektiva profiler), ”självförverkligande”, ”lågaaffektiva”, ”högaaffektiva” och ”självdestruktiva”. De affektiva profilerna erbjuder en unik utgångspunkt genom att ta hänsyn till hur positiv affekt och negativ affekt samverkar. Syftet med denna avhandling var att validera de affektiva profilerna som hälsoprofiler genom att undersöka affektivitet och dess relation till olika personliga egenskaper och markörer för ohälsa och hälsa, såsom somatisk och psykologisk stress, stress och energi, depression, lycka, livstillfredsställelse, lyckohöjande strategier, coping och Typ A-personlighet i ljuset av de affektiva profilerna och könsskillnader. Denna avhandling består av 4 olika studier och bygger på självrapporter från 2637 ungdomar och vuxna från Sverige och USA.

Resultatet visade att de självförverkligande individerna uttryckte en högre nivå av ansvar, känslomässig stabilitet, bättre personliga relationer, mer vigör, mer kognitiv coping, mer fysisk coping, mer social coping, mer emotionell coping, och mer total coping (Studie I) samt betydligt högre nivå av energi (Studie I och II), signifikant högre poäng på lyckohöjande strategier (Studie III), lägst nivå av stress och Typ A-personlighet (Studie II) jämfört med övriga affektiva profiler. När det gäller karaktärsprofiler avseende agentic (självstyrande – vad har jag för mål i livet?), communal (samarbete – vad har jag för uppgift i gruppen/samhället?) och spirituella (vad har jag för roll i universum?) värden, så var karaktärsprofilen Self-directedness (självstyrande) positivt relaterad till en självförekligande profil, men bara när Cooperativeness (samarbetsvilja) var hög, jämfört med de andra affektiva profilerna (studie IV). De självdestruktiva individerna, uttryckte betydligt mer stress, psykisk och somatisk stress (studie I), signifikant högre nivåer av depression och lägre nivå av lycka och tillfredsställelse med livet

samt lägre nivåer i alla lyckohöjande strategier med undantag för strategin mental kontroll, vilket är en ambivalent strategi av grubblande och förtryck av negativa händelser (Studie III) i jämförelse med övriga affektiva profiler. De högaffektiva och lågaffektiva individerna visade en blandning av detta mönster.

Det fanns också signifikanta könsskillnader avseende personliga egenskaper och markörer för ohälsa och hälsa. De kvinnliga deltagarna uttryckte en betydligt högre nivå av ansvar, vigör, mer psykisk stress, mer emotionell coping (studie I), högre nivåer av stress, Typ A-personlighet (Studie II), högre nivåer av negativ affekt (Studie II och III), högre nivå av lycka, flitigare användning av lyckohöjande strategier såsom social tillhörighet, strävan efter nå sin fulla potential, religiösa/andliga aktiviteter, le mer men också syssolöshet, (Studie III).

Resultaten tyder på att strävan efter lycka genom agentic, communal och spirituella värden leder till en självförverkligande erfarenhet, ofta definierad som upplevelsen av positiva känslor och mer sällan upplevelsen av negativa känslor. Sammanfattningsvis är psykisk hälsa ett komplext tillstånd och resultaten från den här avhandlingen pekar i den riktningen att det verkar vara olika kombinationer av positiva och negativa affekter, som erbjuds i de affektiva profiler (nämligen samverkan mellan de båda dimensionerna av positiv och negativ affekt), som ger en mer allomfattande hälsoprofil. Resultaten antyder att hög positiv affekt verkar vara en viktigare komponent, än både hög och låg negativ affekt, för att ha kontinuerlig god hälsa, lycka och välbefinnande (dvs. att vara ett skydd mot skadlig påverkan, baserad på t.ex. stress, ångest, depression, Typ A-personlighet, copingstil på hälsan). En förståelse av personlighetsutveckling medvetna strategier med styrkor och svagheter, (dvs. en tillväxt i självkännet) tycks kunna erbjuda en positiv hälsoprofilmodell genom ett systematiskt sätt för att främja och kombinera tillstånd av fysiskt, psykiskt, socialt, och spirituellt välbefinnande. Dessutom tycks agency (självstyrande) och communion (gemenskap) leda till lycka och hälsa, samt att spirituella värden kan vara en nödvändigt för att bli en självförverkligande individ som lever i harmoni i vår föränderliga värld.

# Acknowledgements

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This journey started back in 2005 and it was a dream that came true when I was admitted to the PhD program and now nearly 10 years later am I finally approaching the end of this era. A great number of people have in one way or the other contributed to the completion of this thesis, but unfortunately only a few of these can be mentioned below. Despite this, I wish to thank all of you, who are not mentioned below, but still in some way have helped me with encouragement, understanding or just a laugh!

First of all, I would like to express my sincere gratitude to my supervisor through all these years, Professor Trevor Archer. I will always remember the diversity of wisdom and inspiration of research questions bubbling at your round table. Thank you for your knowledge, experience, ideas, research, and support. And foremost thank you for believing in me no matter what!

I would also like to express my sincere gratitude to my assistant supervisor, Danilo Garcia. Without your excellent guidance there would not have been any thesis. Thank you for our openness, critical discussions and for believing in me.

I would like to express my gratitude to the deceased Professor Margaret Kerr for being my first inspiration to be a PhD-student when she was my lecturer in developmental psychology and Professor Håkan Stattin (at Örebro University) for giving me, as a student, the opportunity to be a part of the research team at the Örebro University.

I would like to express my gratitude to Professor Annika Dahlgren Sandberg at Göteborg University for her valuable and important comments on this dissertation.

I would also like to thank Anders Biel for his last minute comments on the dissertation.

I would also like to thank Petra Löfgren at Göteborg University for invaluable support and assistance with the administrative. Could not have done it without you!

My work with this thesis began at the University of Kalmar and elaborated and was completed at the University of Göteborg and Linnaeus University. I wish to thank all of those colleagues at both departments who have shown an interest in and, in different ways, contributed to my research. I am furthermore grateful to the respondents that enrolled as participants and made

the dissertation possible. I would also like to thank Caroline Andersson, Carina Axelsson and Marcus Johansson for excellent assistant in the collection of empirical data as well as the Stiftelse Kempe-Carlgrenska Fonden.

Finally, I would like to thank the most important people in my life and the people who indirectly have made the greatest contribution to this thesis; my family. Marita (mom) and Bosse (dad), thank you for always believing in me and supporting me at all time. To Magnus, the love of my life, and my two children, Sixten and Tyra, for their love and patience and for that they always remind me of what is important in life.

## List of Publication

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This thesis consists of a summary and the following four papers, which are referred to by their roman numerals:

- I. Karlsson, E., & Archer, T. (2007) Relationship between Personality Characteristics and Affect: Gender and Affective Personality. *Individual Differences Research*, 5, 44-58.
- II. Schütz, E., Garcia, D., & Archer, T. (2014) Affective state, stress and Type A-personality as a function of gender and affective profiles. *International Journal of Research Studies in Psychology*, 3(1), 51-64. doi:10.5861/ijrsp.2013.450
- III. Schütz, E., Sailer, U., Nima, A. A., Rosenberg, P., Andersson-Arntén, A-C., Archer, T., & Garcia, D. (2013). The affective profiles in the USA: happiness, depression, life satisfaction, and happiness-increasing strategies. *PeerJ* 1:e156. doi: 10.7717/peerj.156
- IV. Schütz, E., Archer, T., & Garcia, D. (2013) Character profiles and adolescents' self-reported affect. *Personality and Individual Differences*, 54(7), 841-844. doi:10.1016/j.paid.2012.12.020

# Contents

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Introduction	1
Positive and Negative Affect	2
The Affective Profile model and ill-being	6
Gender, Coping Strategies and Affect	7
Well-Being, Personality, and Happiness-Increasing Strategies	10
Character traits as measures of agency, communion, and spirituality	12
Happiness-increasing strategies	15
Aims of the present dissertation	20
SUMMARY OF THE STUDIES	21
Study I	21
Aims and Predictions	21
Method	21
Results and Discussion	23
Conclusions	25
Study II	26
Aims and Predictions	26
Method	27
Results and Discussion	28
Conclusions	28
Study III	30
Aims and Predictions	30
Method	30
Results and Discussion	32
Conclusions	33
Study IV	34
Aims and Predictions	34
Method	35
Results and Discussion	35
Conclusions	36
General Discussion	37
Limitations and suggestions for further studies	44
Conclusions	46
References	49

# Introduction

Throughout our lives we tend to express a variety of individual differences in our typical behavior, emotions, attributes and thoughts. A question that most of us frequently use in our everyday-life is “How are you doing?” or to be more specific in terms of psychological research, “How is your mood?” How one is doing or feeling has to do with psychological health and well-being. Psychological health and well-being mirrors how we as humans function, adapt and develop, with regard to whether our lives are satisfying and productive. They are dependent upon a plethora of factors, such as stress, emotions and cognitions. It is also necessary to bear in mind that psychological health is an issue quite different from psychological or emotional disorder. The research on well-being concerns itself, not only with the feelings of normal individuals and subjects from the general population, but also with those individuals less fortunate in their life-situation. Nevertheless, when we consider psychological health in general, we tend to refer to how ordinary people are experiencing their everyday lives. In other words, if you are feeling distressed, that does not necessarily imply that you are psychologically ill, but it may be a signal of some underlying malady that requires attention.

Although any equation hinges upon two parts, for general purposes it may be said that distress and happiness are each other’s opposites. Usually, people are either happy or they are unhappy, and if they are unhappy, i.e. their mood status is not satisfactory; they are often distressed to some extent. The experience of psychological distress, or ill-being, might involve feelings of anxiety, depression, and the feeling of losing control and not being able to do anything about one’s feelings. In contrast, a positive mood generates feelings of emotional satisfaction as well as the propensity to feel harmonious and peaceful. An individual’s everyday life often presents unexpected challenges, difficulties, and setbacks. The resourcefulness of how you cope, how you are coping in response to life events, positive or negative, and whether you find life to be interesting and enjoyable, is the core of psychological health and well-being (McDowell, 2010). Although life is better when we are feeling good, there is no avoiding the fact that there will be ups and downs.

The general aim of the present dissertation is to examine the role of affectivity and its relation to various personal attributes and markers of ill- and well-being, such as depression, life satisfaction, personality characteristics, conscious strategies in light of the affective profile model and gender.

## Positive and Negative Affect

Two dominant dimensions have emerged consistently in studies of affective structure. Watson and Tellegen (1985) named these dimensions positive affect and negative affect. Negative affect reflects expressions of ‘distressful’ affect, such as anger, contempt, guilt, shame, fear and depressiveness that appear to present relatively stable characteristics (Spector & O’Connell, 1994; Watson, Clark, & Tellegen, 1988b) up to ten years or more. The negative affect dimension moves from unpleasant engagement (e.g., anger and fear) to disengagement (e.g. calm and serene) (Watson & Clark, 1984; 1994). High negative affect is associated with subjective complaints, poor coping and trait anxiety (Watson & Pennebaker, 1989; Watson & Tellegen, 1985). Further, individuals expressing high negative affect also experience greater stress, and cynicism in various situations in which they experience slight, if any, control (Spector & O’Connell, 1994; Watson & Pennebaker, 1989). On the other hand, according to Watson and colleagues (1994; 1988b), positive affect is a dimension that moves from pleasant engagement (e.g., enthusiastic and active), to unpleasant disengagement (e.g., sad and bored). Individuals expressing positive affect display satisfactory perception and appraisals of potentially stressful events (Melvin & Molly, 2000; Watson, Pennebaker, & Folger, 1986). This propensity results in enthusiasm, activity, alertness, and “hardiness” (control, commitment and challenge), with a general disposition towards a positive attitude both over time and varying circumstances (McCrae & Costa, 1987; Watson et al., 1986). Individuals expressing high positive affect also experience a greater appreciation of life in general, resulting in feeling more secure and confident, having more social relations, and derive greater satisfaction from friends (Costa & McCrae, 1980; Varg, 1997; Watson & Clark, 1984; 1994).

One of the most used instruments to measure affect is the Positive Affect and Negative Affect Schedule (PANAS) developed by Watson et al. (1988b). The PANAS scales were developed on the notion that positive affect and negative affect represents two opposite poles, rather than two ends of one dimension (Watson et al., 1988b; Russell & Carroll, 1999; for a review, see MacLeod & Moore, 2000). The PANAS scales are slightly different from other scales in that they include various aspects of negative and positive affect that may not be common in other scales, e.g., the item ‘interested’ may not be common in other scales but are included in PANAS, whilst other items e.g., ‘happy’ are not included (Garcia, 2011a). Though, it has been suggested that the PANAS items reflect engagement, involve more mood and social traits (Schimmack, 2007). Watson and Tellegen (1985) have presented positive affect and

negative affect as two independent dimensions: high versus low positive affect and high versus low negative affect. Accordingly, Russell and Carroll (1999) used level of activation to differentiate between positive and negative affect. According to Garcia (2011a), seeing affect as composed of two systems, each one of them categorized as high and low, enables an approach beyond the particular two-system, allowing four different possible combinations (for a point of view on two-system theories see, Keren & Schul, 2009). The notion that positive affect and negative affect as measured by the PANAS, potentially would be genetically predisposed depends on their showed strong stability over time (Fujita & Diener, 2005). Watson and colleagues (1994; 1988b) suggested positive and negative affect as factors reflecting stable emotional-temperamental dispositions. The research concerning the relationship between positive and negative affect have gained increased interest, in particularly the notion of impact that positive emotions have on regulating negative emotions (Tugade & Fredrickson, 2004).

How an individual evaluate, make decision, reacts and responses to situations in everyday life and across the lifespan may be influenced by her/his affective state. The final outcome of an individual's evaluations of the nearest social/physical/occupational environment may be expressed in a variety of behavioral forms, some of which may be suitable to the situation/event, others may give an impression of normality and others may express various affective disorders such as depression and mania (Kolb & Wishaw, 2001). Affective problems/disorders may, to some extent, be heritable (Gershon, Bunney, Leckman, Van Eerdeweg, & DeBauche, 1976; Moldin, Reich, & Rice, 1991; Spence et al., 1995), but for present purposes this dissertation will focus upon the role of environmental and social influences in final common pathways of affect. A remaining central issue is what individuals bring with them to daily events, confronting them and the suitability of coping resources available (Cohen, 1986; Cohen & Hoberman, 1983; Cohen, Kamarck, & Mermelstein, 1983). It is clear that situations associated with stress, anxiety, fatigue and depression pose potentially grave effects on well-being, quality-of-life and adverse health (Hevey, McGee, & Horgan, 2004; Fountoulakis, Iacovides, Kaprinis, & Kaprinis, 2006; Nykliék & Pop, 2005; Penninx et al., 1998; Smith & Ruiz, 2002). Individuals' particular responses to negative events are directed generally by the total sum of a complex assay of personal characteristics, including intellectual and cognitive abilities, emotional feelings as reflected by the relationship between positive and negative affect, originality and flexibility in problem solving, degree of social support and contacts, and willingness to take personal risks (Archer, Adriansson, Plancak, & Karlsson, 2007). As mentioned above, affect refers to subjective moods and feelings, rather than thoughts concerning specific events (Russell & Carroll, 1999). However, there are some discrepancies

whether positive affect and negative affect are to be described as an emotional state rather than a ‘trait-like’ temperament. According to Garcia (2011a), these discrepancies may be addressed by referring to the lack of coherence in the literature—namely; the different measures used in the assessment of affects (see Lyubomirsky, King & Diener, 2005). This inconsistency is problematic not only with regard to methodological issues of operationalizing affect, but also in the context of studying individuals’ well-being. Affect have emerged as a core element as an indicator of well-being (Almagor & Ben-Porath, 1989; Diener, 1984; Fujita & Diener, 2005; Urry et al., 2004; Watson & Tellegen, 1985; Zevon & Tellegen, 1982). Positive and negative affect are also measures of anxiety and depression - anxiety is a state of high negative affect whereas depression is a mixed state of high negative affect and low positive affect (Clark & Watson, 1991). Moreover, in the context of personality, positive and negative affect are somewhat synonymous with extraversion and neuroticism. For instance, Larsen and Ketelaar (1991) found that individuals who experience high levels of positive affect (i.e., extroverts) are more enthusiastic, more active, more alert, have a greater appreciation of life in general, feel more secure, are more confident, have more social relations, greater satisfaction of friends, and both attend and react more intensely to positive stimuli than individuals with low levels of positive affect (i.e., introverts). In contrast, individuals with high levels of negative affect tend to show more anger, more contempt, more guilt, more shame, more fear (i.e., neurotics), and are more attentive to and react more intensely to negative stimuli than individuals with low levels of negative affect (i.e., emotional stable individuals). Several studies have demonstrated repeatedly that negative affect is associated with measures of neuroticism and negative emotionality (Judge & Larsen, 2001; Rusting & Larsen, 1997; Watson, Clark, & Carey, 1988a; Watson et al., 1988b) as well as marked symptoms of stress (Watson & Clark, 1984). Furthermore, positive affect and negative affect are perhaps not only temperamental dispositions but also complementary to extraversion and neuroticism (Tellegen, 1993). As earlier mentioned, there is large evidence that positive affect and negative affect may be construed as two separate systems (for review, see MacLeod & Moore, 2000). The investigation of different models of the relationship between ill- and well-being have yielded results suggesting that health states represent activity of both dimensions of positive and negative affect (Ito & Cacioppo, 2001).

Adolescence is a period of developmental, social and cognitive transitions and ill-being research on young adults, children, and adolescents in the context of social and academic demands at school, links school performance as one of the main stressors for adolescents (Byrne, Davenport, & Mazanov, 2007). Adolescents show also more vulnerability to uncontrollable stressful

situations and are therefore more predisposed for negative affect (Chorpita & Barlow, 1998). Increased affective sensitivity towards stressors in adolescence has been suggested to be associated with adolescent's brain development (Archer, Kostrzewa, Beninger & Palomo, 2008). Low levels of positive affect (Colder & Chassin, 1997) has been related to adolescent impulse behavior (Crews & Boettiger, 2009) as a risk factor for addiction and other related problems (Churchwell, Lopez-Larson, & Yurgelun-Todd, 2001; White et al., 2011). Lindahl and Archer (2013) suggested that stress could be a source of vulnerability since stress may be impelled by negative affect (Denollet & De Vries 2006) especially as negative affect may present a genetic attribute (Trzaskowski, Zavos, Haworth, Plomin & Eley, 2012; Cloninger & Garcia, 2014).

In sum, both positive affect and negative affect are important dimensions expressing an individual's emotional experience (Almagor & Ben-Porath, 1989; Urry et al., 2004; Watson & Tellegen, 1985; Zevon & Tellegen, 1982). Research has shown consistent evidence that the structures of positive and negative affect can be experienced by both older and younger adults and also among men and women, thus, allowing comparisons across age groups as well as between genders. (Ready et al. 2011; Mackinnon et al. 1999; Watson & Clark, 1999). Norlander, Bood, and Archer (2002) found the estimates of positive and negative affect potential corresponding to measures of personality and emotionality but also providing a probability against which aspects of cognitive performance that may be assessed. Previous studies (Bood, Archer & Norlander, 2004; Norlander et al., 2002; Palomo, Beninger, Kostrzewa, & Archer, 2004) have modified and developed the PANAS instrument further through a subject-response based derivation of the four types of affective profiles<sup>1</sup>.

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<sup>1</sup>Although Archer and colleagues (Norlander et al., 2002) coined the term, affective personalities as their 'working' classification; others (Garcia, 2011a) suggest that their model goes beyond the view of affect as two separate systems and takes into account the interaction between both dispositions. Other researchers sometimes use the label Affective Temperaments (e.g., Garcia, 2011a), however, affective temperaments are usually not measured using PANAS but instead the TEMPS-A (Akiskal, Akiskal, Haykal, Manning, & Connor, 2005). Garcia and Archer (e.g., Garcia, Kerekes, Andersson Arntén & Archer, 2012) have during the last years used the label affective profile.

## The Affective Profile model and ill-being

The affective profile classification was developed in an orthogonal manner through an individual's experience of positive affect and negative affect (often measured by PANAS). This procedure was implemented in the present thesis through dividing the results on the positive affect-scale into two parts (median split) thereby distributing the participants into one group with high positive affect and another group with low positive affect. The same procedure was implemented for the participants' responses on the negative affect-scale (cf. Norlander et al., 2002). Following this, the results from these two scales were combined in order to assign each one of the participants into one of the four affective profiles: self-fulfilling (originated "self-actualizing", modified to "self-fulfilling", consisting of high positive affect, low negative affect, Karlsson & Archer, 2007; Garcia & Siddiqui, 2009a); high affective (high positive affect, high negative affect); low affective (low positive affect, low negative affect); and self-destructive (low positive affect, high negative affect) (Norlander et al., 2002; Garcia & Siddiqui, 2009a). Norlander and colleagues (2002) and Norlander, Johansson, and Bood (2005) found that the affective profiles reacted differently to stress and have different exercise habits and blood pressure. During stress the affective profiles of self-fulfilling and high affective adults showed the best performance and have a more active life and lower blood pressure than adults with low affective and self-destructive profile. Subsequently, Bood et al. (2004) found that the self-fulfilling individuals expressed less stress than the other three types of affective profiles. Recent studies (Agerström, Möller, & Archer, 2006; Andersson-Arntén, Jansson, & Archer, 2008; Garcia, 2009; Garcia 2011a) have indicated that self-fulfilling individuals presented a more psychologically healthy profile, pertaining to subjective stress, energy and stress, dispositional optimism, depression and anxiety, total stress at work, emotional stability and partner relationships, than individuals presenting a self-destructive type of affective profile. Nevertheless, Kunst (2011) showed that high affective profiles, as self-destructive profiles, were strongly associated with increased posttraumatic stress disorder symptoms severity (for similar results among psychiatric patients see Zöller & Archer, 2009; Zöller, Karlsson, & Archer, 2009). Moreover, while low affective profiles have responded maladaptively to induced stress, compared to self-fulfilling and high affective individuals (Norlander et al., 2002), they have at the same time reported less stress in their life, as the self-fulfilling profiles (Norlander et al., 2005). Recent studies on adolescents also present a similar and more psychological healthy profile for the self-fulfilling adolescents than for the self-destructive adolescents. The self-fulfilling adolescents presents higher levels of sleep quality, energy, self-image, optimism, intrinsic motivation,

self-efficacy as well as lower levels of stress, anxiety, depression, and psychophysiological problems. The self-destructive adolescents presents more distractiveness, non-planning impulsivity, amotivation, stress, helplessness, hopelessness, difficulties to sleep and to fall asleep, depressive mood, anxiety, as well as lower levels of optimism and energy (Archer et al., 2007; Archer, Adolfsson & Karlsson, 2008; Garcia, Kerekes, Andersson-Arntén, & Archer, 2012; Lindahl & Archer, 2013).

In sum, the affective profile model offers something unique beyond the single dimensional framework of PANAS by taking into account how both dimension, positive affect and negative affect, interact. These interactions may offer a novel way for studying individual differences in cognitive and emotional aspects of health and well-being (for a review see Garcia, Ghiabi, Moradi, Siddiqui, & Archer 2013b). Most psychological research among adults and adolescents has previously focused on measures of ill-being including the early research using the affective profile model as the framework. However, an argument is being made by researchers in the field of well-being and mental health that researchers should turn their attention towards a more positive posture in the aspects of mental health for instance, positive measures of well-being (Cloninger, 2006; Seligman, 2008). Recently research on the affective profile model has also turned its focus toward well-being. This based in the argument that well-being is a key factor predicting an individual's future health condition (Chida & Steptoe, 2008). A systematic way to promote health, as an integrated state of physical, mental, social, and spiritual well-being, rather than merely the absence of disease or infirmity, an understanding of the mechanisms of personality development is essential (WHO, 1946; 2001). After all, a high level of well-being does not equal a problem-free easygoing life with only positive emotions but the absence of positive emotions, and other positive measures of well-being such as life satisfaction, is more predictive of subsequent mortality and morbidity than the presence of negative emotions (Cloninger, 2006; Huppert & Whittington, 2003; Josefsson et al., 2011). Affect, mood, stress and coping behavior have also yielded an increasing number of studies regarding possible gender differences in psychological health profiles.

## Gender, Coping Strategies and Affect

Gender is an important social category which we early on learn to identify since it is basic for both our society and existence, recognizing which activities to engage in and what clothes are appropriate to wear. It has been demonstrated that gender is one of the first characteristics that we as humans encode about another human being (Beall & Sternberg, 1993). The notion

that personality is a function of the environment and the life circumstances as well as the childhood environment, is plausible and individuals may develop personality traits and different moral aspects due to early learned experiences (Pervin & John, 2010). Several studies have pointed out that feelings, such as negative affect and positive affect, affect how stress is experienced and expressed (Melvin & Molly, 2000). Watson and Pennebaker (1989) consider the correlation between negative affect and measures of health complaints to be a sign that individuals high in negative affect tend to be more self-observing and dwell upon matters more than individuals with low negative affect. Watson et al. (1988) consider the relationship between negative affect and symptoms of stress, a negative temperament and mood, forces humans to re-evaluate questions that exist on how stress affects health in a longer period of time. Wilson, Pritchard and Revallee (2005) found gender differences in psychological and somatic health symptoms (such as, anger, tension, depression, negative mood), as well as coping style among adolescents. The female participants in that study exhibited significantly more somatic health symptoms (e.g. cold or flu, shortness of breath, etc.), vigor, anger, tension, depression, confusion and negative mood, and yet more problem-focused, avoidant and emotion-focused coping styles than the male participants. It ought to be noted too that for the female participants only, markedly high correlations between the avoidant coping style and anger, tension, depressed and confused were evidenced. Previous research of adults and adolescents had found that different coping strategies influence an individual appraisal of situations and intensity of the stress reaction (Carver, Scheier, & Segerström, 2010; Carver, Scheier, & Weintraub, 1989; Lazarus, 1990). Studies have also showed that the relationship between type of coping strategy and an individual's personality characteristics are relatively stable (Watson & Walker, 1996). Implying that aspects of personality may affect reactions to stress, leading to both positive or negative outcomes and therefore affective profiles might select different coping strategy (Vollrath, Banholzer, Caviezel, Fischli, & Jungo 1994; McCrae & Costa, 1986)

There seems a consensus that women's experienced health generally is deteriorating and that their stress-related problems increase, specifically among younger females. Individuals characterized by aggressiveness, hostility, competitive spirit, fast pace, impatience and a tendency to engage in two or several activities at the same time, hasten chronically, interrupt when other people are speaking and suffer from being a workaholic are postulated to present a Type A-behavior. Furthermore, the Type A-personality/behavior pattern is linked with several aspects of illness, e.g. vascular diseases, enhanced blood pressure, increased levels of adrenaline and noradrenaline in the blood, over several decades (Friedman & Booth-Kewley, 1988; Hintsa, Jokela, Pulkki-Råback, & Keltikangas-Järvinen, 2014; Perski, 1999; Shi et

al., 2013; Sirri et al., 2012). Research has shown also possible differences between male and female participants' psychological health profiles whereby various health variables seem to be at risk for health hazards in men and women, respectively. For example, Schulz, Cowan, Cowan and Brennan, (2004) suggested that gender differences are enhanced by stress due to their results showing gender differences in responses to workday stress but not in marital behavior. Studies have shown that individuals with inherited affective conditions (e.g. gene susceptibility for depression, bipolar disorder, or anxiety) are more sensitive for negative events than those lacking these inherited characteristics (Kato, Kunugi, Nanko, & Kato, 2001; Munakata, Fujii, Nanko, Kunugi, & Kato, 2007).

### A-Type personality

Regarding ill and ill-being several studies indicate the effects of different variables on psychological health, such as sleep (Sadeh, Keinan, & Daon, 2004), depressive symptoms (Ebmeier, Donaghey, & Steele, 2006), stress and energy or lack of it (Archer et al., 2007; Archer et al., 2008), characteristics of personality (Bood et al., 2004; Pressman & Cohen, 2005). However, the personality trait, neuroticism, which bears certain similarity with negative affect, is correlated strongly with depression in regard to individuals lacking genetic vulnerability (Drieling, van Calker, & Hecht, 2006) This implies that for individuals without high risk, i.e. lacking genetic predisposition, personality factors may be critical for mental health.

The Type A personality/behavior pattern has over several decades been linked with numerous aspects of illness and several aspects of risk for health problems (e.g. Friedman-Booth-Kewley, 1987; Friedman, Byers, Roseman, & Elevitch, 1970; Harbin, 1989; Suls & Sanders, 1988; Williams et al., 1988). Several aspects of Type A-behavior may be relevant for how individuals experience affect: (i) Insecurity of status implies that Type A individuals lack self-esteem, are cynical and suffer from self-doubt, (ii) Hyper-aggressiveness is characterized by need to dominate despite other viewpoints, (iii) Free-floating hostility, linked to hyper-aggressiveness, is deeply embedded, permanent and erupt unpredictably, (iv) Sense of time urgency, whereby Type A individuals chronically experience a shortage of time, due to unrealistic and inadequately planned schedules, (v) Drive to self-destruction, which implies that Type A individuals adopt self-destructive behavior patterns e.g. drinking, smoking, unhealthy styles, hazardous driving (Friedman & Booth-Kewley, 1987; 1988; Friedman et al., 1970). Cohen and Edwards (1989) envisage Type A-individuals as seeking stressors in different situations, which might predispose these individuals toward emotional disorders (Cloninger, Bayon & Svrakic, 1998). Some studies have showed

that this behavior is more common for men than women, and that Type A-behavior does not hold the same risk for women as it does for men (Währborg, 2002). Nevertheless, several women, especially those with a higher position in their work, show a Type A-behavior pattern to the same extent as men. Gender differences occur in the way a specific behavioral characteristic is expressed. In general, men seem to be, already as children, socialized to think that their self-confirmation results from success in their professions and women are socialized thinking their confirmation results from being a perfect care-giver. Environmental factors that affect the development of Type A-behavior among females differ principally in which role the females have undertaken. Working females report a need for a sense of upholding at home as well as at work, which exposes these women for different environmental factors producing Type A-behavior (Price, 1982). In younger students higher stress levels were found for white females students and for those with more upsetting life events (Price, Jurs, Jurs, Rhonehouse, & Isham, 1985). The long-term developmental pattern of Type A-behavior is poorly studied. A Finnish longitudinal study found that components of Type A-behavior (i.e. aggression, leadership, hard driving and eagerness energy) change from adolescence to adulthood and reached its highest level around age 33 (Hintsala et al., 2014). It is suggested that the Type A-behavioral pattern is a learned behavior, or a coping model or a personality trait (Kivimäki, Kalimo, & Julkunen, 1996) or is it only one aspect of personality associated to temperamental differences? Thus, character might be needed to get a more complete picture of personality.

## Well-Being, Personality, and Happiness-Increasing Strategies

Mental health has been described as “A state of well-being in which the person realizes and uses his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to contribute to his or her community” (WHO, 2001). Josefsson et al. (2011) and Cloninger (2004) suggest that well-being is a concept of complexity, which cannot be reduced into one single dimension of physical, mental or social well-being, but rather studied as a whole with developmental changes to get a fuller picture of the concept. Happiness, which is considered a positive measure for well-being, can be usefully understood as the opposite end of depression (e.g., Joseph et al., 2004; Russell & Feldman Barrett, 1999; Barrett & Russell, 1999; Watson, David & Suls, 1999; Yik, Russell, & Feldman Barrett, 1999). Happiness is characterized by the experience of more frequent positive affective states than negative ones (Bradburn, 1969)

as well as by the perception that one is progressing towards important life goals (Diener, Suh, Lucas, & Smith, 1999). Another positive measure and a component of happiness is life satisfaction (Diener, 1984; Bradburn, 1969; Diener et al., 1999; Pavot, 2008), which refers to a process in which individuals assess the quality of their lives on the basis of their own self-imposed standard (Pavot & Diener, 1993). Research suggests personality is a key factor in determining happiness and life satisfaction among adults (Lyubomirsky et al., 2005). Diener and colleagues (1999) report that as much as 40-50% of the variance in individual differences in happiness is accounted for by personality traits and this appear to be critical to well-being. The relationship of personality to happiness is also equivalent among adolescents. (e.g., Huebner 1991; Fogle, Huebner, & Laughlin, 2002; Garcia, 2011b). Research of personality in relation to happiness have revealed that Extraversion, presenting positive emotions and being more reactive to positive affect, has been found to influence happiness, whereas neuroticism is strongly related to negative emotions and being more reactive to negative affect (Larsen & Eid, 2008).

According to previous research, happiness may be defined as the opposite end of depression but it is not just mere that. "Happiness is not just the absence of depression, but also the presence of a number of positive emotional and cognitive states " (Joseph et al., 2004, p. 464) Therefore a happy person that experience more positive affect than negative affect may be thought of as satisfied with life. Recent adolescent studies, in the light of various affective profiles, have focused on different measures of well-being, personality and self-regulation (e.g., Garcia, 2009; Garcia, 2011b; Garcia, 2012a; Garcia, 2013; Garcia & Archer, 2012; Garcia & Siddiqui, 2009a, b; Garcia et al., 2012; Garcia, Rosenberg, Erlandsson, & Siddiqui, 2010). Trying to map differences among the affective profiles and identify the complexity of the concept of well-being. Garcia and colleagues have found that, adolescents with a self-fulfilling profile in comparison to other affective profiles, report higher satisfaction with life, higher psychological well-being, lower depressive symptoms, and scored higher in personality traits related to agentic values (i.e., autonomy, responsibility, self-acceptance, intern locus of control, self-control). Nevertheless, low affective individuals, in comparison to self-destructives, reported being more satisfied with life and experiencing higher levels of psychological well-being (e.g., Garcia & Siddiqui, 2009b). These differences in personality and well-being among profiles are suggested to, in accordance with Higgins' (1997) notion, further prevent and promote through its focus on principles, resulting in differences among the affective profiles in how they increase their happiness levels (i.e., by approaching happiness or avoiding unhappiness). If this is the case, the pursuit of

happiness may differ among the affective profiles in the use of intentional and specific strategies.

Happiness is something the majority of people around the world seek and desire (Diener, 2000). However, there is substantial evidence that individual differences in happiness and life satisfaction are strongly influenced by genetics (e.g., Lykken & Tellegen, 1996), specially research linking stable personality traits such as extraversion and neuroticism to well-being. On the other hand, previous research suggests that much of individual's happiness and life satisfaction is under their own control (Lyubomirsky, Sheldon, & Schkade, 2005). By examining the characteristics of dispositional happiness (e.g., peoples tendencies to be grateful, exhibit optimistic thinking, and engage in prosocial behavior; Lyubomirsky, 2001), researchers have been able to posit activities that might increase people's happiness if deliberately practiced (Cloninger, 2006; Lyubomirsky & Layous, 2013). As previously mentioned, psychological health is complex and is dependent upon number of factors, as stress, emotions and cognitions. Several aspects of individuals' daily lives involve situations associated with stress, with both acute and long-term psychological, physiological and health consequences (Watson, David, & Suls, 1999). An understanding of personality development and intentional activities to increase positive emotions and the feeling of happiness provides a systematic way to promote and combine state of physical, mental, social, and spiritual well-being, rather than merely striving after the absence of disease or infirmity (WHO, 1946, 2001).

### Character traits as measures of agency, communion, and spirituality

Cloninger's psychobiological model of temperament and character presents the notion that individual differences underlie susceptibility to psychiatric disorders (Cloninger, Svrakic, & Przybeck, 1993). Temperament is defined as the part of our personality that is heritable, stable both developmentally and sociocultural as well as affective. Temperament displays individual differences in conscious experiences and affects how intensely we react. Character on the other hand is defined as within the individual; self-image, personal goals, personal values and even defense mechanisms (Cloninger 2004). Character as a concept holds a major position in the field of psychology (e.g., Allport 1955; Rogers 1959), and most research on well-being and happiness based on adults and adolescents have previously been in light of a trait models approach of personality (e.g., the five-factor model; Costa & McCrae 1992).

The formulation of temperament (Cloninger, 1987) was inferred from genetic studies of personality and neurobiological studies of the functional

organization of brain networks and includes the following dimensions: Novelty seeking, proposed to associate with variation in dopamine levels, is a tendency toward exploratory activity, intense excitement in response to novelty, impulsive decision making, and active avoidance of monotony or frustration. Harm avoidance is suggested to associate with individual variation in serotonin levels and is characterized by inhibition and social withdrawal, shyness, and slow adaptation to change. Reward dependency, proposed to associate with individual variation in norepinephrine levels, refers to a tendency to respond intensely to signals of reward, in particular to signals of social approval. Persistence refers to resistance to extinction despite intermittent reinforce. The different temperament dimensions are defined in terms of basic stimulus-response characteristics. Of the character dimensions, Self-directedness refers to an individual's ability to control, regulate and adapt their behavior in accord with chosen goals and values (i.e., the ability to identify the self as autonomous or agency), Cooperativeness to their tendency towards social tolerance, empathy, helpfulness and compassion (i.e., the ability to identify the self as an integral part of society or communion), and Self-transcendence to their identification with nature and the ability to accept ambiguity and uncertainty (i.e., the ability to identify the self as part of the whole universe and in union with all things or spirituality) (Cloninger, 2004). Different combinations of three character traits, measured by the temperament and character Inventory (TCI; Cloninger, Przybeck, Svrakic, & Wetzel, 1994) are strongly associated with aspects of health (e.g., frequent positive and infrequent negative affect; Cloninger & Zohar, 2011). Among adolescent character have also been associated to positive measures of well-being (Garcia 2011a; Garcia, Kerekes, & Archer, 2012; Garcia & Moradi, 2012). Personal characteristics contribute to a marked degree the outcome of appraisal, physiologic and behavioral incursions and the applications of affective profiles and other personality instrument suggest that there is quite a substantial degree of consistency of personal characteristics over longer period (Archer et al., 2007).

It is important to notice that temperament is a disposition that does not include experiences through environmental learning and that most of the research on the relation between personality and well-being involves traits that endure through individual differences in habit learning of emotional responses (Cloninger, 2004). McAdams (2001, p. 111) suggested that personality traits may be limited to traits that “are global, stable, linear and comparative dimensions of human individuality”. Thus, measuring personality as solely trait does not account for personality development (for review, see Cloninger, 2004). As a result, temperamental traits alone are suggested to not be sufficient in the prediction of affective disorders (for review, see Gunderson, Phillips, Triebwasser, & Hirschfeld, 1994). If it is so,

nor yet are temperamental traits alone adequate in the prediction of happiness. Quite certain, however, is the fact that heritable traits, environment and learning experiences influence the complex concept that constitutes our personality (Lucas 2008). Cloninger (2004) has suggested that character modifies the significance or meaning of what is experienced, hence also changing emotional reactions and habits. For instance, adults with a mature character development perceive themselves in more complex ways (e.g., see themselves as autonomous and being an integral part of humanity, society or part of the universe) as well as transforming recollected negative life events into good outcomes, and find more meaning in life experiences (for a review see McAdams 2001).

As a development of the research conducted in the field of character, Cloninger and Zohar (2011) created eight character profiles by grouping participants according to all the possible combinations of high and low scores of the character traits. By evaluating the linear effects of character on positive affect, Cloninger and Zohar (2011) found that adults with the “Creative” profile (high in all three character traits) reported higher levels of positive affect than all other profiles with the exception of the “Organized” profile (high Self-directedness, high Cooperativeness, low in Self-transcendence). Moreover, all profiles high in Self-directedness reported experiencing less negative affect; suggesting that this specific character trait is the strongest linear discriminator for negative affect. Nevertheless, it might be inappropriate to assume linearity of effects in the context of “phenomena in which every antecedent variable can have different outcomes (“multifinality”) and every outcome can have different antecedents (“equifinality”)” (Cloninger & Zohar, 2011, p. 25), that is, complex phenomena such as personality. The creation of the character profiles, however, allows also the evaluation of the non-linear effect of each of the character traits on affect by comparing the effect of extremes (high vs low) of each character trait when controlling the other two. Cloninger and Zohar (2011) found that higher Cooperativeness, compared to lower Cooperativeness, was associated with higher positive affect in the contrast of “Moody” (low self-directedness, high cooperativeness, high self-transcendence) vs “Disorganized” (low self-directedness, low cooperativeness, high self-transcendence) profiles. Cloninger and Zohar (2011) suggested that the association of affect with character profiles was therefore highly non-linear. This is also in line to the propositions made by Archer and Garcia and colleagues (2011a; 2012a; 2013c) regarding the affective profile model. The advantage of studying multidimensional profiles of specific combinations of character traits is that it allows the understanding of the affective experience in an individual who is “adapting within his or her biopsychosocial context” (Cloninger & Zohar, 2011, p.25). Focusing on character profiles might add something unique to

the research on the affective aspects of health. Moreover, the relationship between personality and affect has often been analyzed using the Big Five model of personality. As stated before, personality constitutes of heritable traits, environment and learning experiences. For instance, among adults as well as among adolescents, character traits are strongly related to affect whereas temperament traits are only weakly associated (Cloninger, 2004, Garcia, 2012a, Garcia, 2012b and Porubanova-Norquist, 2012). It might be necessary to explore other models of personality, than those commonly used in current well-being research, to better understand the role of personality on affect. Situations associated with stress and energy or lack of it, anxiety, fatigue and depression pose potentially serious effects on well-being, quality-of-life and psychological health.

### Happiness-increasing strategies

As earlier stated, happiness seems to be an essential part of a desirable life (King & Napa, 1998) and it seems to be the focus of most people's daily thoughts (Freedman, 1978). However, Tkach and Lyubomirsky (2006) found a gap in the well-being research literature addressing the questions, "What can people do to become happier? What specific strategies do people use to try to make themselves happy?" and "Are these strategies effective?" (p.184). In the process of attempting to address these questions, Tkach and Lyubomirsky performed a pilot study in which 70 participants completed an open-ended survey in which they were asked to list things that they did to maintain or increase their happiness level. The participant's responses yielded a list of 66 happiness-enhancing strategies. This list of 66 happiness-enhancing strategies was then completed by 500 undergraduate students in which they were asked to rate each of the 66 items on how frequently they use a specific strategy to increase or maintain their happiness. Using factor analysis, Tkach and Lyubomirsky (2006) identified, eight happiness-increasing strategies used by residents of the USA (for studies using this scale among Swedes see, Garcia, 2012b; Nima, Archer, & Garcia, 2012; Nima, Archer, & Garcia, 2013a). The identified factors are presented in Table 1.

Tkach and Lyubomirsky (2006) showed that these happiness-increasing strategies accounted for 52% of the variance in happiness, while the Big Five personality traits, which traditionally have been linked to happiness, accounted for 46%. Further, even after controlling for the contribution of personality, the happiness-increasing strategies accounted for 16% of the variance in happiness. However, these relationships might not be a direct one. For example, extraversion, which is strongly related to high positive affect (Larsen & Ketelaar, 1991), is related to the use of the social affiliation

strategy, which, in turn, is related to happiness. Tkach and Lyubomirsky (2006) suggested that the efficacy of the happiness-increasing strategies is also likely to vary to some extent and that personality characteristics predict the use of certain happiness-increasing strategies, and both traits and happiness strategies jointly predict happiness levels. However, the strategy that was the most robust predictor of low levels of happiness was mental control, which was closely related to neuroticism.

Table 1. Happiness-increasing strategies and their definition

<b>Happiness-increasing strategies</b>	<b>Definition</b>
Social Affiliation	Comprise communal (i.e., cooperation) values to guide behavior such as: supporting and encouraging friends, helping others, trying to improve oneself, interacting with friends, and receiving help from friends.
Partying and Clubbing	Includes activity of a celebratory nature such as partying, dancing, going out to clubs.
Mental Control	Emphasis on the experience of negative thoughts or feelings and one's focus of attention on those negative experiences (i.e., trying not to think about being unhappy)
Instrumental Goal Pursuit	Includes activities directed to achieving goals by trying to reach one's full potential, studying, organizing one's life and goals, and striving for the accomplishment of tasks.
Passive Leisure	Characterized by idleness such as watching TV, playing video games and sleeping, surfing the internet.
Active Leisure	Comprises a propensity for wellness through fitness and flow, that is, exercising and working on hobbies or activities in which the individual uses her/his strengths and becomes absorbed by the activity itself.
Religion	Comprises performing religious activities such as praying, performing religious ceremonies and directed towards seeking support from faith
Direct Attempts	Expressive behaviors of acting happy and smiling

Mental control concerns ambivalent intentional efforts on the one hand and avoidance of negative thoughts and feelings on the other. Which has much resemblance to negative affect and even depression (Archer et al., 2008). Nima and colleagues (2012; 2013a) found that strategies such as active leisure and instrumental goal pursuit could predict subjective well-being among Swedish adolescents. After factor analyzing the results showed that Swedish adolescent girls were more likely to use social interaction, mental control, partying, and religion as happiness-increasing strategies than Swedish adolescent boys, who scored higher in prevented activities.

The different strategies are related to self-awareness which people use in order to guide their behavior in daily life. The strategies of instrumental goal pursuit and active leisure comprises autonomous, self-directed values, enabling people to have control over their lives and be contributors to one's well-being and quality in life which is equivalent to agentic values (Bandura, 2001). Wiggings (1991) argue that besides agency, communion (i.e. cooperation, nurturance and warmth in relation to others) is an umbrella term that can sub organize personality characteristics (for a review of agency and communion versus the Big Five, see Digman, 1997). The activities of the strategy social affiliation comprise communal (i.e., cooperation) values to guide behavior such as: supporting and encouraging friends, helping others, trying to improve oneself, interacting with friends, and receiving help from friends. Indeed, agency and communion (cooperation) are related to psychological well-being (Helgesson, 1994; Urry et al., 2004; Ryff, 1989), mental health, psychological dysfunction and suffering (Cloninger & Zohar, 2011; Garcia, Anckarsäter, & Lundström, 2013a; Garcia, et al., 2013b; Garcia, Nima & Archer, 2013c) and are suggested to help the individual become happier and healthier (Cloninger, 2013; see also Johansson, Lyssarides, Andersson, & Rousseau, 2013, who showed that increases in agency and cooperation are associated to improvement in depression). Agency and communion have also been related to gender differences. Agency has been related to characteristics found in male stereotypes and communion to more female stereotypes (Bem, 1974; Eagly, 1987; Spence, Helmreich, & Stapp, 1974). Another important key point for self-awareness is spirituality, which is mirrored in the religion happiness-increasing strategy: frequently seeking support from faith, performing religious activities, and praying. Nevertheless, spirituality should not pass for religiousness. Cloninger, (2013) has suggested that while agency and communion (cooperation) might lead to happiness and health, spiritual values might be necessary for becoming a self-fulfilled individual that lives in harmony with the changing world. Moreover, some cultures do use agentic, communal, and spiritual values to a different extent (Shweder, Much, Mahapatra, & Park, 1997). Some cultures have a tendency to view pleasant emotions as desirable

and unpleasant emotions as relatively inappropriate, while other cultures tend to be relatively more acceptant of unpleasant emotions and relatively less acceptant of pleasant emotions (Diener, Suh, & Oishi, 1997). Myers and Diener (1995) have pointed out that there may be cultural differences in the interpretation of life events and situations due to some cultures explain the world as good and controllable and others emphasize negative emotions as normal. However, the affective profiles model has shown identical results in the few studies using other populations. Kunst (2011), for example, showed using a Dutch sample of victims of violence that individuals with a self-destructive and high affective profile were strongly associated with increased post-traumatic stress disorder symptom severity. High affective profiles were the only profilers that were significant predictors of post-traumatic growth. Adrianson, Djumaludin, Neila, and Archer (2013) compared individuals from Indonesian culture with individuals from Swedish culture. The results showed that affective state was predicted by health, optimism and self-esteem and counter predicted by stress among the Indonesian sample. The affective profiles were predicted by optimism and counter predicted by stress in the Swedish sample. Further, Garcia and Moradi (2013) compared a sample of Iranian adolescents with a sample of Swedish adolescents. The results showed no difference in life satisfaction between cultures and the interaction of nationality and gender had no effect on life satisfaction. Taken together with previous research (Adriansson et al., 2013; Kunst, 2011; Garcia & Moradi, 2013) cross-cultural aspects needed to be further investigated.

Previous research, including adolescents and adults, have identified cognitive, emotional and physical differences among the affective profiles. The interactions of positive and negative affect may offer a unique way of approach and something beyond the single dimensional framework of affectivity. As a continuance of previous research, including a cultural aspect as well as the aspect of adolescents ranging to adults, the affective profile model may be used as a backdrop in order to better understand individual differences in cognitive and emotional aspects of ill-being and well-being raising the question of whether or not the affective profile model can be validated as a health profile model.

## Aims of the present dissertation

The affective profiles offer a unique avenue of approach and something beyond the single dimensional framework of affectivity by taking into account how dimension, positive affect and negative affect, interact. These interactions may offer help to discern individual differences in cognitive and emotional aspects of health and well-being (for a review see Garcia et al., 2013b). In this dissertation, research on ill-being and well-being includes both adolescents and adults offering a wider aspect using the affective profile model as framework offering a link to character profiles that may add further integrative capacity to the research on the affective aspects of health.

The aim of the present dissertation was to validate the affective profiles as health profiles through investigating the role of affectivity and its relation to various personal attributes and markers of ill- and well-being, such as depression, life satisfaction, personality characteristics, conscious strategies in the light of the affective profiles and gender. Specifically:

Study I investigated affectivity and its relation to ill-being with respect to affective profiles and gender. Specifically, whether there were any differences between personality characteristics, somatic and psychological stress and coping with respect to affective profiles and male versus females.

Study II investigated affectivity also and its relation to ill-being with respect to affective profiles and gender. However, the focus of Study II centred upon on Type A-personality and stress with respect to affective profiles and male versus females.

Study III investigated differences in well-being among citizens of the United States of America. Specifically, whether or not there were any differences between profiles and gender in happiness, depression, life satisfaction, and happiness-increasing strategies.

Study IV investigated affect in the context of character profiles related to agentic (self-directedness), communal (cooperation) and spiritual (self-transcendence) values.

# SUMMARY OF THE STUDIES

## Study I

### Aims and Predictions

The aim of the first study of this dissertation was to examine the differences between affective profiles (self-fulfilling, low affective, high affective and self-destructive) in personal characteristics necessary for a normal individual's adequate functioning in everyday life, as assessed through Gordon's Personal Profile and Inventory (Gordon, 1978; Wirberg, 1986) and examine whether or not the four affective profiles differ in levels of stress, energy and, coping behaviors. In the light of an increasing number of studies showing gender effects in the matter of affect, mood, stress and coping behavior the first study also investigated differences among male and female participants regarding personality characteristics, stress and energy, subjective stress, coping behavior and affect. It was expected that females may express somewhat more negative psychological health profiles (i.e. higher levels of negative affect, stress, lower level of energy) on the basis of gender differences effect (Wilson et al., 2005). The self-fulfilling individuals, with characteristics of being high in positive affect and low in negative affect, were expected to show less stress, higher level of responsibility, more emotional stability and original thinking than the self-destructive individuals.

### Method

A total of 186 university students, 139 female and 47 male participated in Study I.

#### *Instruments*

*Positive Affect and Negative Affect Schedule (Watson et al., 1988).* The instrument asks participants to rate to what extent they generally experience 20 different feelings or emotions (10 positive affect and 10 negative affect) during the past week, using a 5-point Likert scale (1 = *very slightly*, 5 = *extremely*). The 10-item positive affect scale includes adjectives such as strong, proud, and interested. The 10-item negative affect scale includes adjectives such as afraid, ashamed, and nervous.

*Stress and Energy (Kjellberg & Iwanowski, 1989).* The stress and energy-instrument asks individuals to assess the experience of their own stress and energy. The test is divided into two sub-scales that express each participant's level of mood in the two dimensions: "experienced stress" and "experienced

energy". Response alternatives are ordered using a 6-point Likert scale (0 = not at all, 5 = very much).

*Subjective Stress Experience (López-Ibor, 2002).* The participants are instructed to estimate the extent to which the different statements comply with the way they feel during a normal working day. The test consists of 30 statements from which the participants were instructed to respond the extent to which they experienced each statement, e.g. "nausea or stomach ache", "overreaction to unimportant, sudden events, easily frightened", "muscle tension" and "sleep problems caused by worry". The test contains statements concerning symptoms of autonomic activation, mood changes, mental strain as well as other non-specific symptoms. The participants self-estimates were expedited by marking with a cross a point on a line that extended from "do not agree at all" at one pole (scoring 1 point) to "agree completely" at the other pole (10 points). The results were summarized to provide measures for somatic and psychological stress, respectively.

*Coping Resources Inventory (Ekecrantz & Norman, 1991; Hammer, 1988).* The coping resources inventory measures individuals' resources in stressful situations and consists of five scales: a cognitive (i.e. the extent to which the individual maintains a positive view of themselves and others, and have a general optimistic attitude), a social (i.e. the extent to which the individual is part of a social network), an emotional (i.e. the degree to which the individual is able to accept and express all types of emotions), a spiritual/philosophical (i.e. the degree to which the individual documents is controlled by the stable values derived from religious, familial or cultural tradition or from a personal philosophy) and a physical (i.e. the degree to which the individual performs health promoting activities). The scales reflect different aspects of the ability to effectively confront cope with and recover from stressful situations. The questionnaire consists of 60 statements that incorporate four different response alternatives: "Never or very seldom", "sometimes", "often" or "almost always/always".

*Gordon's Personal Profile and Inventory (Gordon, 1978; Wirberg, 1986).* The instrument measures eight personality traits that are important for the normal individual to function adequately in his/her everyday life. It consists of 38 statement-presentations of four different descriptive alternatives. Of the four descriptive alternatives, two retain the same high preference value (i.e. these are equally complementary for the 'typical' person). Participants are required to decide which of the statements are most fitting to himself/herself, or least fitting, respectively, by choosing that alternative that is considered most appropriate. The eight different factors (subscales) include: Ascendancy (i.e. whereby high scoring characterizes persons who are verbally superior, who assume an active/assertive role in group situations), Responsibility (i.e. whereby high scoring persons characterizes of capability satisfactory completion of tasks assigned to them), Emotional stability (i.e. whereby high

scores are achieved by persons who maintain a stability of affect and who are not easily distressed by worry, anxiety and nervous tension, Sociability (i.e. high scores characterize persons who enjoy being in the company of others and are perceived as companionable and social), Cautiousness (i.e. whereby individuals are defined by their extreme carefulness; persons who do not enjoy taking risks at all generally obtain high scores on this scale), Original thinking (i.e. whereby persons who achieve high scores enjoy working on difficult tasks, they devour knowledge and are fascinated by confrontations with novel ideas/innovations), Personal relations (i.e. high scores characterize those persons who show trust in other people, who show tolerance, patience and understanding, and Vigor (i.e. whereby high scoring usually characterizes energetic people, who enjoy working at a high tempo and whose performance exceeds the average levels. The response sheet consists of 28 items for each scale. Each participant received four alternatives on an ipsative scale and was required to select that alternative with which he/she agreed most with or that with which he/she least agreed with.

*Background and Health questionnaire (Rosén, 2002).* This instrument was used to collect background data with health and health-related information about each participant. The questionnaire consists of items pertaining to gender, age, education, smoking habit, exercise, sleep problems, time spent watching TV, degree of immobile occupation as well as questions relating to occupation and choice of place of work. Some examples of these questions are: “How often during the past year have you experienced sleep problems?” Response alternatives in this case provided for a choice between five different options including: “Constantly”, “2-3 times a week”, “Once a week”, “Once a month”, or “Never”. Each participant was instructed to mark the alternative that was most appropriate for himself/herself.

## Results and Discussion

The aim of the first study of this dissertation was to examine differences between affective profiles (self-fulfilling, low affective, high affective and self-destructives) in personal characteristics necessary for a normal individual's adequate functioning in everyday life, levels of stress and coping behavior. The results showed marked effects of affective profiles. The self-fulfilling individuals expressed a higher level of responsibility, emotional stability and vigor than individuals with a self-destructive affective profile. Further, self-fulfilling individuals expressed more energy, showed more cognitive coping and physical coping than the self-destructive individuals who expressed more stress, as well psychological and somatic stress. The self-fulfilling individuals also expressed more emotional stability, better

personal relations and a higher level of physical coping than high affective individuals who expressed more psychological stress. Furthermore, self-fulfilling individuals expressed a higher level of cognitive coping, social coping, emotional coping, physical coping and total coping, as well as energy, than the low affective individuals. In the study by Bood et al. (2004), which also used university students (with a mean age of 24.33 years ( $SD = 5.84$ ,  $range = 19 - 42$ ) as participants, the self-fulfilling and low affective individuals showed a greater level of responsibility, emotional stability and dispositional optimism than the self-destructive individuals. They found too that the self-fulfilling and high affective individuals displayed more original thinking than the self-destructive individuals; self-destructive, high affective and low affective individuals all expressed more stress than self-fulfilling individuals. Taken together, the present findings confirm Bood et al. (2004) results in some aspects but not others.

The second aim of the first study of this dissertation was to examine gender differences with regard to personal characteristics necessary for a normal individual's adequate functioning in everyday life, levels of stress and coping behavior. The results showed marked gender differences pertaining to aspects of personality characteristics, level of stress and coping behavior. Whereby the female participants expressed a higher level of responsibility and vigor yet more psychological stress and more emotional coping than the male participants who expressed a higher level of physical coping. These results are in accordance with those of Andersson Arntén and colleagues (2008) who found that the female participants expressed a higher level of anxiety, energy and stress, more stress at work, a greater work burden and more total work-related stress, and also more emotional and spiritual coping. Schulz et al. (2004) have suggested that gender differences are enhanced by stress. Moreover, Klag and Bradley (2004) showed that although hardiness (i.e., attitudes such as commitment, control, and challenge) was expected to work as a 'buffer' against stressful situations, this effect was only found among males. Taken together with the present findings, women seem to have more sense of responsibility and use different coping strategies (e.g., emotional and spiritual). At the same time, women experience more vigor and energy but also more stress. The question is why is it so? One possible explanation can be based on research showing that women in contrast to men experience emotions more intensely (Fujita, Diener, & Sandvik, 1991). Intensity is a dimension of emotions with a double edged blade, if you experience positive emotions intensely, then you are most likely to also experience negative emotions intensely (Diener et al., 1991a, b).

## Conclusions

The combination of positive and negative affect in the profiles seems to be useful to discern patterns of ill-being (e.g., stress), well-being (e.g., energy), coping styles and personality characteristics that help the individual to function adequately in everyday life. Nevertheless, as a first step, unhealthy personality (e.g., Type A-personality) among affective profiles needs to be further investigated before addressing these profiles as health profiles.

## Study II

### Aims and Predictions

Several aspects of individuals' daily life involve situations associated with stress with both acute and long-term psychological, physiological and health consequences, with predisposition and vulnerability that may vary considerably as a function of personal characteristics. The Type A-personality has over several decades been linked with several aspects of illness and several aspects of risk for health problems among adults however there is a limitation in studies with a different population (i.e. adolescents and young adults). The general aim of the second study of this dissertation was to examine stress and energy, and Type A-personality as a function of affective profiles and gender. More specifically, the first aim was to examine the differences between affective profiles (self-fulfilling, low affective, high affective and self-destructive) in stress, energy and Type A-personality. The second aim was to investigate differences among male and females regarding affect, stress and energy, and Type A-personality.

The predictions for the study were that individuals with self-fulfilling and high affective profiles, were expected to report less stress, more energy, lower level of Type A-personality than the self-destructive. Further, the predictions of this study regarding gender differences were that women were expected in greater extent to report negative aspects of health; to report higher levels of stress, lower level of energy, higher level of negative affect.

Even though the affective profile framework has been used in various studies not many of them have ranged from adolescents to young adulthood. This is important since adolescents might experience emotion in different ways than adults (Silk, Steinberg, & Sheffield Morris, 2003). Therefore, Study II included three samples with mean age ranging between 18.45 and 23.61 years. In this context, research implies that female participants, are more likely to experience the psychological and somatic expressions of ill-health, in expressing frequently more anxiety, more headaches, more suicidal thinking and make more suicide attempts, more likely to experience major depression, and express more stress, worse general health, more somatic illness, more visits to the physician and greater use of medication.

## Method

Participants were a total of 612 students divided into 3 different samples. In sample one; 304 (152 male and 152 female) of these were university students. Sample two and three consisted of students in upper secondary school from different parts of the country and were collected at different times in order to replicate, since there are not that many studies on Type A-personality among adolescents or young adults. Sample two consisted of 142 (95 male and 47 female) students. And sample three, 166 (84 male and 82 female) students. All completed the following self-reports: Positive Affect and Negative Affect Schedule, Stress and Energy, Background and Health questionnaire, Type-A scale. The three samples were analyzed separately.

### *Instruments*

*Positive Affect and Negative Affect Schedule (Watson et al., 1988).* The instrument asks participants to rate to what extent they generally experience 20 different feelings or emotions (10 positive affect and 10 negative affect) during the past week, using a 5-point Likert scale (1 = *very slightly*, 5 = *extremely*). The 10-item positive affect scale includes adjectives such as strong, proud, and interested. The 10-item negative affect scale includes adjectives such as afraid, ashamed, and nervous.

*Stress and Energy (Kjellberg & Iwanowski, 1989).* The stress and energy-instrument asks individuals to assess the experience of their own stress and energy. The test is divided into two sub-scales that express each participant's level of mood in the two dimensions: "experienced stress" and "experienced energy". Response alternatives are ordered using a 6-point Likert scale (0 = *not at all*, 5 = *very much*).

*Background and Health questionnaire (Rosén, 2002).* This instrument was used to collect background data with health and health-related information about each participant. The questionnaire consists of items pertaining to Gender, age, education, smoking habit, exercise, sleep problems, time spent watching TV, degree of immobile occupation as well as questions relating to occupation and choice of place of work. Some examples of these questions are: "How often during the past year have you experienced sleep problems?" Response alternatives in this case provided for a choice between five different options including: "Constantly", "2-3 times a week", "Once a week", "Once a month", or "Never". Each participant was instructed to mark the alternative that was most appropriate for himself/herself.

*Type A scale (Kawachi, et al., 1998; Butcher, Graham, Williams & Ben-Porath, 1990).* Participants are asked to answer 27 statements that describe different reactions to experiences of situations in life. The statements consist of items pertaining to notions concerning time (e.g., "Do you try to fit more and more activities into your schedule within an ever shorter interval?"),

mood (e.g., “Can you relax without getting a bad conscience?”), and receptiveness (e.g., “When you meet someone whom you experience as aggressive or hostile towards you, do you treat him/her in the same way?”, “Are you unaffected when you watch others carry out tasks that you know you could accomplish quicker?”). The response alternatives consists of *yes/no* scales. In the present study, an overall Type A score was derived by summarizing all items.

## Results and Discussion

For the affective profiles, the result showed marked effects upon stress, energy, and Type A-personality in all three samples. Across samples, the self-fulfilling individuals reported significantly lowest level of stress, as well as significantly higher level of energy and finally significantly lowest level of Type A-personality. Marked gender differences were found in all three samples as well. The results showed gender differences with regard to negative affect, stress, energy, and Type A-personality in sample I (university students) and to negative affect, stress and Type A-personality in sample II and III (students in upper secondary school). In each sample, the female participants scored higher than the male participants.

The results of Study II are in line with research on Type A-personality, which has repeatedly demonstrated that individuals expressing the characteristics of Type A-behavior are at risk for various aspects of ill-health. Negative affect appears to be associated with the risk for ill-health and/or risky health behaviors. High levels of expressed negative affect are associated with subjective complaints, ineffective coping behavior, trait anxiety and stress. In the present study, Type A-personality was predicted by negative affect to a marked extent in all three samples, the self-destructive type of affective profiles, expressed more Type A-personality than the self-fulfilling affective profile.

## Conclusions

Study II served to further reinforce the affective profiles as health profiles by investigating differences in unhealthy personality (e.g., Type A-personality), as well as gender differences. Based on previous research and the results from Study I in this dissertation, different combinations of positive and negative affect as it is in the profiles seems to be useful to discern patterns of ill-being (e.g., stress), well-being (e.g., energy), coping styles and personality

characteristics that might help an individual's everyday life. The results from Study II, which consisted of three relatively young populations, provided differences among affective profiles and gender differences that require consideration. Specifically in terms of the health status of young women: (i) higher ratings of stress and Type A-personality were associated with the self-destructive and high affective profile type, which in turn are linked in general with disadvantageous aspects of both psychological and somatic health, (ii) in all three studies, the female participants expressed more negative affect, stress and Type A-personality than the male participants. In other words, there appears to exist marked risks for psychosomatic health problems in young women, with an affective profile characterized of high negative affect, still on the threshold of their future careers.

In sum, the affective profiles have shown differences in both their ability to cope with stressors (Study I) and well-adapted personality characteristics (Study I and II). These differences influence ill-being. At the 'flip of the coin', in the field of well-being, the affective profiles might then be useful to discern differences in happiness, life satisfaction, and intentional activities to increase positive emotions (i.e., happiness-increasing strategies). Therefore, the next step in the validation of the affective profiles as health profiles, was to investigate differences between profiles in measures of well-being.

## Study III

### Aims and Predictions

The essential notion of affective profiles needed to be further tested using measures of well-being, such as, happiness, life satisfaction, and happiness-increasing strategies; but also other measures of ill-being, such as, depression. In Swedish samples, individuals with a self-fulfilling profile (high in positive affect and low in negative affect) have reported higher life satisfaction, higher psychological well-being, and lower depressive symptoms. Low affective individuals (low in positive affect and low in negative affect) have reported being more satisfied with life and experience higher levels of psychological well-being in comparison to self-destructive individuals. However, there might be some cultural differences. Some cultures explain the world as good and controllable whereas others emphasize negative emotions as normal (Myers & Diener, 1995; Diener et al., 1997). The aim of the third study was to investigate differences in happiness, depression, life satisfaction and use of strategies to increase happiness between affective profiles and between gender in residents of the United States of America (US-residents). If the affective profiles also differ in the way individuals pursue happiness, then it could also be expected that the profiles differ in the use of strategies to increase happiness. Due to the close relationship between positive affect and both approach-goal-directed behavior and the ability to create and maintain positive relations with others (Urry et al., 2004; Ryff, 1989), it was expected that individuals high in positive affect (self-fulfilling and high affective) would score high in strategies with agentic and communal values compared to individuals with low positive affect (low affective and self-destructive).

### Method

A total of 1400 US-residents participated in Study III. The participants consisted of two samples (I and II). Sample I consisted of 900 US-residents (550 males and 350 females) all recruited through Amazon's Mechanical Turk (MTurk; <https://www.mturk.com/mturk/welcome>) who self-reported affect, happiness, depression. Sample I was the initial study for using MTurk as new way of collecting data. MTurk allows data collectors to recruit participants (workers) online for completing different tasks in change for wages. Sample II was also collected through MTurk and comprised 500 participants (217 male and 283 female) who self-reported affect, life satisfaction, and use of happiness-increasing strategies. Sample II was a

replication of sample I, but with other measures of well-being. All participants in Study III were recruited by the following criteria: resident of the USA and to both speak and write fluent in English. The samples were analyzed separately.

*Instruments used for sample I*

*Positive Affect and Negative Affect Schedule (Watson et al., 1988).* The instrument asks participants to rate to what extent they generally experience 20 different feelings or emotions (10 positive affect and 10 negative affect) during the past week, using a 5-point Likert scale (1 = *very slightly*, 5 = *extremely*). The 10-item positive affect scale includes adjectives such as strong, proud, and interested. The 10-item negative affect scale includes adjectives such as afraid, ashamed, and nervous.

*The Short Depression-Happiness Scale (Joseph et al., 2004).* Participants are asked to rate how frequently they feel the way described in the 3 items, measuring happiness (e.g., “I felt happy”) or in the 3 items measuring depressive states (e.g., “I felt my life was meaningless”) on a four-point scale: “*never*”, “*rarely*”, “*sometimes*”, “*often*”.

*Instruments used for sample II*

*Positive Affect and Negative Affect Scales (Watson et al., 1988).* The instrument asks participants to rate to what extent they generally experience 20 different feelings or emotions (10 positive affect and 10 negative affect) during the past week, using a 5-point Likert scale (1 = *very slightly*, 5 = *extremely*). The 10-item positive affect scale includes adjectives such as strong, proud, and interested. The 10-item negative affect scale includes adjectives such as afraid, ashamed, and nervous.

*Satisfaction with Life Scale (Diener, Emmons, Larsen, & Griffin, 1985).* The instrument consists of 5 statements (e.g., “In most of my ways my life is close to my ideal”) for which participants are asked to indicate degree of agreement in a 7-point Likert scale (1 = *strongly disagree*, 7 = *strongly agree*). The life satisfaction score was established by summarizing the 5 statements for each participant.

*Happiness-Increasing Strategies Scales (Tkach & Lyubomirsky, 2006).* The participants were asked to rate (1 = *never*, 7 = *all the time*) how often they used the strategies identified by Tkach & Lyubomirsky (2006). The happiness-increasing strategies are organized in eight clusters: Social Affiliation (e.g., “Support and encourage friends”), Partying and Clubbing (e.g., “Drink alcohol”), Mental Control (e.g., “Try not to think about being unhappy”), Instrumental Goal Pursuit (e.g., “Study”), Passive Leisure (e.g., “Surf the internet”), Active Leisure (e.g., “Exercise”), Religion (e.g., “Seek support from faith”), and Direct Attempts (e.g., “Act happy/smile, etc.”).

## Results and Discussion

The aim of the third study was to investigate differences in happiness, depression, life satisfaction and use of strategies to increase happiness between affective profiles and between gender. As for the affective profiles, the result showed marked effects upon happiness and depression (sample I) as well as life satisfaction and happiness-increasing strategies (sample II). In sample I, the self-destructive individuals (low in positive affect and high in negative affect) reported significantly higher level of depression and lower level of happiness than all the other affective profiles. The high affective individuals (high in positive affect and high in negative affect) reported higher level of depression and lower level of happiness than the self-fulfilling individuals (high in positive affect and low in negative affect). In sample II, the self-destructive individuals reported lower levels of life satisfaction compared to all the other affective profiles. The self-destructive individuals also reported lower scores in all happiness-increasing strategies except for mental control. Self-fulfilling individuals scored lower than high negative affect individuals (high affects and self-destructives) in the strategy of mental control. The mental control scale has been defined as ambivalent behavior, that is, the individual using this happiness-increasing strategy make efforts to avoid negative experiences by suppressing negative thoughts and feelings but also pondering about negative aspects of life. These tendencies may not only prolong unhappiness, suppressing negative thoughts actually may end up in maintaining these thoughts and thereby aggravate negative affect, which may explain why these tendencies are more frequent among high affective and self-destructive than self-fulfilling individuals.

The self-fulfilling participants showed significantly higher scores than all other profiles on happiness-increasing strategies suggesting a more pronounced tendency to directly attempt to smile, get themselves in a happy mood, improve their social skills, and work on their self-control. Compared to low positive affect individuals (i.e., low affect and self-destructives), the self-fulfilling individuals reported also using more often three other happiness-increasing strategies: social affiliation (comprise communal i.e., cooperation values), instrumental goal pursuit (comprise agentic i.e., autonomous, self-directed values) and active leisure (also comprise agentic values). Among Swedish individuals, research has found that these three strategies (social affiliation, instrumental goal pursuit, and active leisure) are positively related to subjective well-being (Nima et al., 2012). Moreover, compared to the self-destructives, the self-fulfilling individuals reported more frequently seeking support from faith, performing religious activities, praying, and drinking less alcohol (i.e., the religion happiness-increasing strategy). Previous research has suggested that low positive affect among low

affectives seems to influence happiness negatively as high negative affect influences happiness negatively among high affects (Garcia et al., 2010). The results from Study III correspond to the results found in research with Swedish populations showing that high positive affect is related to less stress, depression, and anxiety (Nima et al., 2013b). Moreover, the results showing that self-fulfilling, high affective and low affective participants all have higher life satisfaction compared with self-destructive participants is also corresponding findings among Swedish populations (Garcia & Archer, 2012).

The result of study III showed also that marked gender differences effects relating to happiness (sample I), negative affect, social affiliation, instrumental goal pursuit, religion, passive leisure, direct attempts (sample II) were obtained. In each sample, the female participants scored higher than the male participants. The contrast of females reporting higher level of happiness in sample I and higher level of negative affect in sample II could be on account of different samples but it could reflect also the situation that female participants seem to experience positive and negative emotions equally intense. Women often report experiencing more negative emotions and depressive symptoms as well as higher level of happiness than men (Fujita et al., 1991; Diener et al., 1991a, b).

## Conclusions

This third study expands earlier results among Swedish individuals to a relative large sample of US-residents. The affective profiles model seems to distinguish important differences in happiness, depression, and life satisfaction as well as the use of happiness-increasing strategies. These differences suggest that promoting positive emotions can positively influence a depressive-to-happy state as well as increasing life satisfaction. These specific results in study III suggest that the pursuit of happiness through agentic, communal, and spiritual values leads to a self-fulfilling experience defined as frequently experiencing positive emotions and infrequently experiencing negative emotions. The final step in this dissertation was, therefore, to investigate whether or not health profiles based on character traits associated to individual differences in agency, communion, and spirituality are related to affectivity. This information is especially important since affectivity is the basic construct in which the affective profiles rely upon.

## Study IV

### Aims and Predictions

The aim of this fourth study in this dissertation was to offer a link between affect and conscious strategies related to agentic (self-directedness), communal (cooperation) and spiritual (self-transcendence) values, that is, character profiles. Different combinations of three character traits, measured by the Temperament and Character Inventory are associated strongly with aspects of health behavior and status. The three character dimensions are: self-directedness, which indicates how responsible, purposeful, and resourceful an individual is working to achieve her goals and values (i.e., the ability to identify the self as autonomous); cooperativeness, which indicates how well adapted the individual is in getting along with others fairly and flexibly, with kindness (i.e., the ability to identify the self as an integral part of society); and self-transcendence, which indicates transpersonal identification or conscience (i.e., the ability to identify the self as part of the whole universe and in union with all things). Grouping participants according to all the possible combinations of high and low scores of the character traits results in eight different character profiles. This categorization is much alike the one used when the affective profiles are created.

Previous research (Cloninger & Zohar, 2011) among adults reported that an individual high in all three character traits (i.e., “Creative” profile) scores higher in positive affect compared to all other character combinations. The only exception to this rule is individuals with a character combination of high self-directedness, high cooperativeness, and low in self-transcendence (i.e., “Organized” profile). While this might suggest that spirituality is not associated to well-being, the findings from Study III and suggestions by Cloninger (2013) indicate that spirituality may increase positive emotions. Moreover, all profiles high in self-directedness have reported experiencing less negative affect; suggesting that this specific character trait is the strongest linear discriminator for negative affect (Cloninger & Zohar, 2011). The creation of the character profiles, however, allows also the evaluation of the non-linear effect of each of the character traits on affect by comparing the effect of extremes (high vs low) of each character trait when controlling for the other two. The non-linear comparisons show that higher cooperativeness, compared to lower cooperativeness, is associated with higher positive affect. The study of character and happiness among adolescents may offer something unique to the research on the affective aspects of health. Character is after all influenced by changes in one’s life and adolescence is a period with many developmental, cognitive and social transitions. Agentic,

communal, and spiritual character traits should be expected to be positively associated to a self-fulfilling experience defined as frequently experiencing positive emotions and infrequently experiencing negative emotions,

## Method

Participants were 508 high school pupils from two different schools in the west and south of Sweden. They were from different socioeconomic and cultural backgrounds and specializing in different subjects during their studies. A total of 69 pupils (13% of the total sample) left more than 5% of the questionnaires' items unanswered, thus, the final sample consisted of 439 pupils (220 boys, 217 girls, 2 unknown).

### *Instruments*

*Positive Affect and Negative Affect Scales* (Watson et al., 1988). The instrument asks participants to rate to what extent they generally experience 20 different feelings or emotions (10 positive affect and 10 negative affect) during the past week, using a 5-point Likert scale (1 = very slightly, 5 = extremely). The 10-item positive affect scale includes adjectives such as strong, proud, and interested. The 10-item negative affect scale includes adjectives such as afraid, ashamed, and nervous.

*Character* (Cloninger et al., 1994). The Temperament and Character Inventory measures the seven dimensions of personality suggested by Cloninger et al., (1994). The dimensions are computed by summarizing binary answers (true = 1, false = 0) to 238 statements. The character dimensions in focus are: self-directedness (e.g., "In most situations my natural responses are based on good habits that I have developed"); cooperativeness (e.g., "I often consider other persons' feelings as much as my own"); and self-transcendence (e.g., "I sometimes feel so connected to nature that everything seems to be part of one living organism"). We used the validated Swedish version of the Temperament and Character Inventory (Brändström, Sigvardsson, Nylander, & Richter, 2008), which has been used among adolescents (Garcia, Kerekes, Andersson-Arntén, & Archer, 2012)

## Results and Discussion

The results of Study IV showed that individuals high in all three character traits or high in both self-directedness and cooperativeness but low in self-transcendence ("Creative", "Organized") reported significantly higher positive affect than individuals who were low in all three character traits ("Depressive") and those with low self-directedness/high cooperativeness/low self-transcendence ("Dependent"). Those adolescents

who were high in self-directedness and cooperativeness but low in self-transcendence (“Organized”) also reported significantly lower negative affect than those with the following character profiles: low self-directedness/high cooperativeness/high self-transcendence (“Moody”), low self-directedness/high cooperativeness/low self-transcendence (“Dependent”), low self-directedness/low cooperativeness/high self-transcendence (“Disorganized”). The relationship between both self-directedness and cooperativeness to positive and negative affect in this study among adolescents is not as straightforward as previous studies among adults (see Cloninger & Zohar, 2011). When examining the non-linear associations of each of the character dimensions and affect, the result showed that self-directedness was associated with higher positive affect and lower negative affect (i.e., a self-fulfilling experience/profile) when cooperativeness and self-transcendence were both high (“Creative” vs “Moody”) or when cooperativeness was high and self-transcendence was low (“Organized” vs “Dependent”). The association of higher cooperativeness with positive affect was non-significant. For self-transcendence, differences were non-significant for positive affect, but high self-transcendence was associated with higher negative affect when self-directedness and cooperativeness were high (“Creative” vs “Organized”). In sum, self-directedness was the only character trait to be associated with self-reported positive and negative affect showing moderated associations and differences between 1 and 2 standard deviations. This association was present when cooperativeness was high.

## Conclusions

The creation of the character profiles allows the evaluation of the non-linear effects of each of the character traits on affect by comparing the effect of extremes (high vs low) of each character trait when controlling for the other two. Although linear analysis showed that all three character traits are related to affect, the non-linear analysis showed the complexity of how character is associated to affect in adolescence. Specifically, self-directedness’ positive relationship to a self-fulfilling experience/profile, high positive affect and low negative affect, was present only when cooperativeness was high. In other words, an agentic adolescent (i.e., high self-directedness) might experience more positive and less negative emotions as long as she/he feels as an integral part of or in communion with society (i.e., high cooperativeness).

## General Discussion

The general aim of the present dissertation was to investigate and verify the affective profiles as health profiles through examining the role of affectivity and its relation to various personal attributes and markers of ill- and/or well-being, such as depression, life satisfaction, personality characteristics, conscious strategies in the light of the affective profiles and gender. Using the interaction of positive and negative affect in the profiles was expected to show individual differences in patterns of ill-being (e.g., stress, Type A-personality, depression), well-being (e.g., energy, happiness, life satisfaction, happiness-increasing strategies), coping styles, personality characteristics and character profiles that facilitate the individual to function in everyday life (i.e. confronting challenging unexpected situations, difficulties, positive or negative responses to life, whether or not you find life to be interesting and enjoyable) (Cullberg, 2000; Garcia et al., 2013a; McDowell, 2010). The results from study I and II revealed that individuals with a self-fulfilling affective profile (high in positive affect and low in negative affect) scored higher, compared to the other three affective profiles, in personality characteristics defining them as responsible, emotional stable, energetic and hard-working, trusting and tolerant of others. These individuals also scored low in Type- A personality, thus, suggesting they are more secure of themselves, have less need of dominate people around them, less hostile, less stressed, and show less destructive behavior, such as, drinking, smoking, etcetera. Moreover, when coping with life experiences and life in general, individuals with a self-fulfilling profile showed a tendency to take care of their bodies (i.e., eating healthy food, good sleeping, exercising), to maintain a positive view of themselves and others, to be able to identify and communicate emotions, and to rely on family and friends for social support. In sum, in Study I and II, the self-fulfilling profiles showed personality characteristics and coping styles that seem associated to agency and communion. On the other hand, the individuals with a self-destructive profile (low in positive affect, high in negative affect) expressed to a greater extent a more negative health state, here exemplified as being emotional instable with anxiety and distress, irresponsibility, both psychological and somatically stressed, as well as being less energetic in challenges of everyday life. It seems that the self-destructive individuals do not require the support or trust of others, nor do they care for someone else. Could it be that their profiles suggests as the Swedish proverb; Alone is strong? Further, the results from Study I and II also revealed that the individuals with at high affective profile (high in positive and negative affect) also have a more negative health state and as for the self-destructives, the high affectives also display more emotional instability, having less tolerance and acceptance in other people,

scoring higher in Type- A personality, thus, suggesting they are more hostile and intolerant of others and less frequent use of health promoting activities when dealing with situations in everyday-life than the individuals with a self-fulfilling profile. The high affective and self-destructive individuals seem much alike at first. However, the high affective individuals reported lower levels of stress, as well as lower level of psychological and somatic stress than the self-destructive individuals suggesting that they have a less negative health status than the self-destructive individuals.

Affect has, indeed, emerged as a core element in being an indicator of well-being (Almagor & Ben-Porath, 1989; Diener, 1984; Fujita & Diener, 2005; Urry et al., 2004; Watson & Tellegen, 1985; Zevon & Tellegen, 1982) and different models of the relationship between ill- and well-being have been tested and the results have shown that health states represent the activity of both dimensions of positive and negative affect (Ito & Cacioppo, 2001). When it comes to distinguishing patterns of ill-being and well-being the crucial factor seems to be various combinations of positive and negative affect offered in the affective profiles. The results from Study I and II suggest that solely negative affect or positive affect are not enough in determining health factors but it is the combination of positive affect and negative affect that offers the widest and detailed health profile. The affective profiles model seems to distinguish important differences in agentic and communal values, that is, being in control over one's life, having the opportunity to change a situation by helping oneself or others through for instance wellness or coping styles or being in warm close relationships.

Furthermore, the results from study III and IV expanded the previous notion that the affective profiles discern significant differences in patterns of ill-being and well-being (i.e. happiness, depression, and life satisfaction as well as the use of happiness-increasing strategies). In study III, the self-fulfilling individuals reported more happiness and lower depression than all the other affective profiles. The results from study I, in which individuals with a high affective profiles presented slightly higher negative health profile than the self-fulfilling individuals, but not as negative as that of the self-destructive individuals, induced some complexity in that positive affect and negative affect seemed not to be separate dimensions. This complexity leaves a tendency for assuming that high positive affect offers a more important component than both high and low negative affect for good health. Further, the results from study III revealed that the individuals with a self-fulfilling affective profile (high in positive affect and low in negative affect) scored higher, compared to the other three affective profiles, in happiness-increasing strategies defining them as finding the strength, being supporting and helpful in the strive to reach one's full potential suggesting a more active and

pronounced tendency to for instance directly attempt to smile, get themselves in a happy mood, improve their social skills, and work on their self-control. In sum, in Study III, the self-fulfilling profiles showed activities and use of strategies associated to agency and communion. In comparison to the individuals with a self-destructive profile, the self-fulfilling individuals used more often a spiritual happiness-increasing strategy. These results suggest that promoting positive emotions through agentic, communal, and spiritual values leads to a self-fulfilling experience defined as frequently experiencing positive emotions and infrequently experiencing negative emotion increases life satisfaction, generating a more favorable health profile.

As previously mentioned, affect and its relation to well-being as a factor have been investigated through numerous studies (Almagor & Ben-Porath, 1989; Diener, 1984; Fujita & Diener, 2005; Urry et al., 2004; Watson & Tellegen, 1985; Zevon & Tellegen, 1982) and various models testing the relationship between ill- and well-being have shown that health states represent activity of both dimensions of positive and negative affect (Ito & Cacioppo, 2001) generating different health profiles based upon affectivity. Therefore, the last study of this dissertation, investigated affective dimensions' relation to character profiles based on self-directedness, cooperativeness, and self-transcendence (i.e., agency, communion, and spirituality). Self-directedness refers to an individual's ability to control, regulate and adapt their behavior in accord with chosen goals and values (i.e., the ability to identify the self as autonomous or agency), Cooperativeness to their tendency towards social tolerance, empathy, helpfulness and compassion (i.e., the ability to identify the self as an integral part of society or communion), and Self-transcendence to their identification with nature and the ability to accept ambiguity and uncertainty (i.e., the ability to identify the self as part of the whole universe and in union with all things or spirituality) (Cloninger, 2004). The advantage of the character profiles is that it allows each of the character traits to evaluate affect by comparing the effect of extremes (high vs low) of each character trait when controlling for the other two. The results from study IV initially showed that all three character traits (i.e. self-directedness, communal, and self-transcendence are related to affect, the further non-linear analysis revealed the complexity by which character are associated to affect in adolescence. The results showed that self-directedness was positively related to high positive affect and low negative affect (i.e. a self-fulfilling experience/profile) but only when cooperativeness was high. In other words, an agentic adolescent (i.e., high self-directedness) might experience more positive and less negative emotions as long as she/he feels as a part of or in communion with society (i.e., high cooperativeness). In sum, in order to be able to address and validate the affective profiles as health profiles, the role of affectivity and its relation to various personal

attributes and markers of ill- and/or well-being, such as depression, life satisfaction, personality characteristics, conscious strategies was investigated. The affective profiles have shown differences in both their ability to cope with stressors (Study I) and well-adapted personality characteristics (Study I and II). In the field of well-being, the affective profiles showed differences in happiness, life satisfaction, and intentional activities to increase positive emotions (Study III) as well as character profiles (Study IV). The most important finding when it comes to the use of the affective profiles model as health profiles is that both dimensions in affectivity (i.e. positive affect and negative affect) interact. The conclusion that high positive affect seems to be a more important component than both high and low negative affect for having continuous good health, happiness and well-being is reiterated. The results in this dissertation are from different samples including both adolescents and adults in different environment. Evidence from previous research and the results from this dissertation points in the direction of positive affect being a protector against damaging influences on health (i.e. stress, anxiety, depression, type A-personality, coping styles). However, on the other hand, the individuals with a self-destructive profile seem to acquire characteristics (i.e. less well-adapted personality characteristics, poorer coping styles, depression, stress) and the non-use of happiness-increasing strategies contributing to ill-being.

During the work on this dissertation another important aspect has emerged. When studying health, much research regarding health and well-being is conducted in the western world, where health is regarded as the norm. As previously mentioned, psychological health is a complexity and is dependent upon number of factors, as stress, emotions and cognitions. Several aspects of individuals' daily lives involve situations associated with stress, with both acute and long-term psychological, physiological and health consequences (Watson et al., 1999). An understanding of personality development and intentional activities to increase positive emotions and the feeling of happiness provides a systematic way to promote and combined state of physical, mental, social, and spiritual well-being, rather than merely striving after the absence of disease or infirmity (WHO, 1946, 2001). Therefore it seems that health and well-being contra ill and ill-being, is not just the absence of disease. It is something more. Cloninger (2013) and Garcia et al. (2012) have suggested and it is confirmed in this dissertation (see table 2 for an overview of the results), that while agency and communion (cooperation) might lead to happiness and health, spiritual values might be necessary for becoming a self-fulfilled individual that lives in harmony with the changing world.

Table 2. The profile of the self-fulfilling individuals, in comparison with the other affective profiles, in the four studies of this dissertation.

<b>Study</b>	<b>Agency</b>	<b>Communion</b>	<b>Spiritual</b>
<b>I</b>	More Responsibility More Emotional stability More Vigor  More Cognitive coping More Physical coping More Emotional stability	More Personal relations More Social coping More Emotional coping	
<b>II</b>	Low Type A-personality		
<b>III</b>	More Instrumental Goal pursuit More Active leisure	More Mental control  More Social affiliation	
<b>IV</b>	More Self-directedness	More Communion	More Spirituality
<b>I-IV</b>	<i>Character</i> <i>Coping</i> <i>Energy</i>	<i>Positive affect</i> <i>Well-being</i>	<i>Empowerment</i>

However, the self-fulfilling individuals in study I did not score significantly higher than the other affective profiles in the spiritual coping style. One explanation for this might be methodological in that the spiritual of self-transcendence captures more active and direct actions in comparison to spiritual coping style which generates an individual's stable values from family or cultural traditions. Another possible explanation presented by Cloninger and colleagues (1993; 1997) is that even though research has found that character seem to develop as ones mature and is expected to be relatively stable, increased self-awareness of the meaning and consequences of one's actions could be due to sociocultural learning. Among the character traits, self-directedness and cooperativeness have been found to be strongly correlated with increased age. Though this relationship does not seem to be as

straightforward when it comes to self-transcendence (i.e. spirituality). Josefsson et al. (2013) found in a longitudinal study, consisting of a young Finnish population that character develops when one matures but that self-transcendence decreases with age. However, Allport (1951) and Cloninger (2004) have considered spirituality and connectedness with the world as a sign of maturity. High self-transcendence has previously been found to be associated with both negative and positive affect (Cloninger & Zohar, 2011; Josefsson et al., 2011). Self-transcendence may increase over time because it is associated with greater positive emotion, although such changes may take place only after middle age (Cloninger, 2004). Another possible explanation to why the Swedish populations in Study I and III scored lower in spirituality than previous studies might be cultural as for the results from the Finnish population (Josefsson et al., 2013). Sweden is perhaps, as Finland, a culture that values more nonspiritual, skeptical and rational perception of the world (Kääriäinen, Ketola, Niemelä, Palmu, & Salomäki, 2009) and therefore as one age and incorporates cultural values, self-transcendence decreases.

Against a background of an increasing number of studies showing gender effects in the matter of affect, mood, stress and coping behavior and as a complement in the process of validating affective profiles as health profiles, gender differences were included in the studies of this dissertation. Research has shown that gender is an important social category, and one that is one of the first characteristics that we as humans encode about another human being (Beall & Sternberg, 1993). Gender differences occur in the way a specific behavioral characteristic is expressed. Further, already established, different models have been tested regarding the relationship between ill- and well-being. The gender results from study I and II, which consisted of relatively young populations (upper secondary school and university students), provided differences to consider. Specifically, in terms of the health status of young women. The female participants expressed a higher level of responsibility and vigor yet more psychological stress and more emotional coping as well as higher negative affect, stress and Type A-personality than the male participants. In other words, there appear to exist marked risks for psychosomatic health problems in young women, with an affective profile characterized by high negative affect, still on the threshold of their future careers. These results are complex and the question arises to why there is such diversity? One possible explanation may be based on research showing that women in contrast to men experience emotions more intensely (Fujita et al., 1991). Intensity is a dimension of emotions with a double-edged blade, if you experience positive emotions intensely, then you are most likely to also experience negative emotions intensely (Diener et al., 1991a, b). It may also be the difference in the transition from adolescent to young adult. Adolescents have shown more vulnerability to uncontrollable stressful

situations, due to ‘psychobiological potentiation’ effects, and therefore more predisposed for negative affect (Chorpita & Barlow, 1998). In adolescence, increased affective sensitivity towards stressors has been suggested to be associated with brain development (Archer et al., 2008). Further low levels of positive affect (Colder & Chassin, 1997) has been related to adolescent impulse behavior (Crews & Boettiger, 2009) as a risk factor for addiction and other related problems (Churchwell et al., 2010; White et al., 2011). In sum, however the results show negative affect to be associated with the risk for ill-health and/or risky health behaviors especially among young women in risks for psychosomatic health problems.

Gender differences have also been found in agency and communion. Agency has been related to characteristics found in male stereotypes and communion to more female stereotypes (Bem, 1974; Eagly, 1987; Spence et al., 1974). Agency and communion (cooperation) has been related to happiness and health. Nevertheless, in order to become a self-fulfilled individual that lives in harmony with the changing world, spiritual values might be essential (Cloninger, 2013). Based on the results from study I, II and III, the female participants seem to value both agency (more responsibility, more instrumental goal pursuit, more passive leisure, more active leisure), communion (more sociability, more personal relations, more emotional coping, more social affiliation) and spirituality (more religion and direct attempts as happiness increasing strategies) more than the male participants. However, the results from Study I, II and III also revealed that women experienced more stress, had more Type A-personality and more negative affect. This could perhaps be explained by the complexity of how females seem to experience positive and negative emotions equally intense. Research on emotional behavior shows that women in contrast to men experience emotions more intensely. If you experience positive emotions intensely, then you are more likely to also experience negative emotions intensely. For instance, women often report experiencing more negative emotions and depressive symptoms as well as higher level of happiness than men (Fujita et al., 1991; Diener et al., 1991a, b). Crucial for an individual’s (i.e. adolescent, young adult or adult) health and well-being seems to be the level of negative affect a person experiences. Cloninger’s (2013) notion that positive affect as well as agentic and communal values serve as protective factor for happiness and life satisfaction generating a positive health profile has much support. Nevertheless spirituality, as measured by self-transcendence, may be a sufficiency but not a necessity in the experience of positive emotions.

## Limitations and suggestions for further studies

One major limitation, based on the methodological aspects, is that the results presented here were based on self-reports and therefore subject to personal perceptual bias. In general, research participants respond in a socially desirable ways (i.e. they want to respond in a way that makes them look as good as possible). Participants tend to under-report behaviors that seem inappropriate by researchers or other observers, and/or participants tend to over-report behaviors viewed as appropriate. Further the validity of studies relying on one method (self-reports) of data has been questioned. The problem of self-report bias is compounded by the fact that when all variables in a behavior study are based on one method of measurement, substantive findings are likely to be contaminated by shared method variance. However it is important to point out that the common method variance problem is not unique to self-report measures (Wilson & MacLean, 2011). Besides the issue of social desirability, there is also the question of reliability (i.e. consistency of measurement) and validity (i.e. the truthfulness of a measure). Several of the measurements have been used in different studies and among different populations generating similar results regarding the affective profiles. The instruments used in the studies are considered to be validated and reliable measures (i.e. Cronbach's alphas are included in all studies but the first study where it was not requested when article I was published). Nevertheless there might also be limitations due to the suitability of measuring Type A-personality in university students and students in upper secondary school as they are in a developmental period. Maybe some of the results should be interpreted with caution. However, to my knowledge there is not much research regarding Type A-personality, when it comes to young people, but most of it is based on adults and their ill-being. Studying Type A-personality in relation to adolescents is interesting because the adolescent years can be a turbulent time of development and studies have suggested that a Type A behavior can be a learned behavior, a coping mechanism or perhaps even a personality trait and thus may be present already in their teens. The Type A scale used to measure the Type A-personality in adolescence and young adults in study II was used because it had prior showed to be of high reliability. There may of course be instruments that are more appropriate but in study II the Cronbach's alpha for the Type A scale was .89 and it may perhaps be considered acceptable. In study II there might also be some limitations in analyzing the samples of students in upper secondary school separately. And indeed, merging the two samples and testing how different the samples really were could have resulted in more power. However, the data from the samples were collected at different times as well as from different part of the country in order to replicate. There might also be some limitations in the results due to the use of TCI among adolescents. And

admittedly it might have been better to use the TCI Junior for children and teenagers (10-14 years old). In the Swedish version of TCI, it is noted that the TCI should be used with caution for young people (i.e. under 17 years old) with reference to that part of the personality structure that is still under development (Brändström, Sigvardsson, Nylander, & Richter, 2008). As a further development and replication of earlier research in study IV, the validated Swedish version of the TCI was used (Brändström, Sigvardsson, Nylander, & Richter, 2008) which has previously been used among adolescents (Garcia, Kerekes, Andersson-Arntén, & Archer, 2012). Further Garcia et al. (under evaluation) have studied if there is any change in reliability for the TCI due to age. And the initial results show no drop in reliability for the TCI.

In order to limit the researchers influence on the participants, the information that was given to the respondents were standardized and prior to testing, participants were ensured that all participation was on a volunteer basis with total anonymity as well as the fact that each set of responses was unidentifiable among all the other sets of responses. With the exception of study III (which used online data collection) the same procedure for data collection was used. To avoid the possible effects of ordering of each instrument, the order in which each instrument/questionnaire occurred was randomly distributed. Suffice it to say, all four studies have been designed to present self-report basis that is intended to provide a “springboard” for the analysis of interventional studies that focus upon attributes that empower or disempower individuals.

Further, since median splits distort the implications of high and low, it is plausible to criticize the validity of the procedure used here to create the different affective profiles scores just-above and just-below the median become high and low by fiat, not by reality. Nevertheless, a recent study (MacDonald & Kormi-Nouri, 2013) used k-means cluster analysis to test if the affective profiles model emerged as theorized by Archer and colleagues. The affective profile model was replicated using the k-means cluster analysis and the four affective profiles emerged as the combinations of high vs. low affectivity. In a more recent study, Garcia and colleagues (McDonald, Archer, & Garcia, 2014) has showed, using data comprising 2,225 participants, that the positive and negative affect cut-offs do not significantly differ when either K-means cluster analysis or median split is used to create the affective profiles. The K-means cluster procedure used by these researchers is useful for person-oriented analyses (see Bergman, Magnusson, & El-Khoury, 2003), thus, suggesting the original procedure by Archer and other researches may hold a sufficient degree of validity. Nevertheless, the absence of a manipulation or interventional variation remains a limitation.

Moreover, in Study III, US-residents were used as respondents, which raises the question of cultural differences. Some cultures use agentic, communal, and spiritual values to a different extent (Shweder et al., 1997). While spiritual values seemed to play a role in the US-residents' self-fulfilling experience, this was not the case for Swedish participants with a self-fulfilling profile in Study I. This could, however, be due to the use of different spirituality constructs in Study I and III and not the use of participants from different cultures - spirituality as coping style in Study I and Spirituality as a character trait in Study III. Nevertheless, the affective profiles model has shown identical results in studies using other populations. Taken together with previous research (Adriansson et al., 2013; Kunst, 2011; Garcia & Moradi, 2013) as well as study III in this dissertation, cross-cultural aspects need to be further investigated but these initial results points in the direction of affective profile being consensus regardless of culture.

In the present dissertation, gender differences were investigated in all the studies but one (i.e. study IV). For continuity among the studies the best would have been to include gender in study IV as a factor. However, since the aim of the present dissertation was to validate the affective profiles as health profiles and there already existed evidence (i.e. from study I, II, and III) how affect and various markers of ill- and/or well-being were related to affective profiles and gender, a developing stage in the process of validating the affective profiles as health profiles was to investigate if health profiles based on character traits were related to affectivity (i.e. since affectivity is the basic construct in which the affective profiles rely upon).

## Conclusions

Previously, it has emerged that affect is an essential indicator of well-being (Almagor & Ben-Porath, 1989; Diener, 1984; Fujita & Diener, 2005; Urry et al., 2004; Watson & Tellegen, 1985; Zevon & Tellegen, 1982). It has also emerged that when it comes to health states, it is the representation of both positive and negative affect that is important in distinguishing patterns of ill-being and well-being (Ito & Cacioppo, 2001). The results from this dissertation points in the direction that it seems to be the various combinations of positive and negative affect offered in the affective profiles (namely the activity of both dimensions of positive and negative affect) that offers the widest and detailed health profile. In this dissertation the hypothesis, from previous research, that high positive affect seems to be a more important component than both high and low negative affect for having continuous good health, happiness and well-being (i.e. being a protector

against damaging influences on health such as stress, anxiety, depression, type A-personality, coping styles) is repeated.

And it seems that the affective profiles model distinguish important differences in agentic and communal values, that is, being in control over one's life, having the opportunity to change a situation by helping oneself or others through for instance wellness or coping styles or being in warm close relationships. Further, the results also suggested that promoting positive emotions through agentic, communal, and spiritual values leads to a self-fulfilling experience defined as frequently experiencing positive emotions and infrequently experiencing negative emotion increases life satisfaction, generating a more favorable health profile regardless of an individual are an adolescent or an adult.

Psychological health is a complex state responsive to stress, emotions and cognitions. And since we in our daily lives constantly interact with such situations, an understanding of personality development, and intentional activities to increase our positive emotions and the feeling of happiness (i.e. growth in self-awareness) could offer a positive health profile model in providing a systematic way to promote and combine state of physical, mental, social, and spiritual well-being. In this dissertation it has been confirmed that while agency and communion (cooperation) might lead to happiness and health, spiritual values might be necessary for becoming a self-fulfilled individual that lives in harmony with the changing world. Despite the fact that spirituality does not seem to be as distinct in its relationship to well-being, happiness and health as the other character traits; agentic (self-directed) and cooperativeness. Spirituality captures active and direct actions that in relation to agentic and communal values seem to develop as ones mature as (Allport, 1951; Cloninger, 2004).

A growth in self-awareness, an action of strengthening, enabling individual to have an actual influence on any of our spheres in life is personal empowerment. As a development of the findings presented here in using the interaction of positive and negative affect in the profiles to show individual differences in patterns of ill-being (e.g., stress, Type A-personality, depression), well-being (e.g., energy, happiness, life satisfaction, happiness-increasing strategies), coping styles, personality characteristics and character profiles that enable and individual to function in everyday life one could combine the results in this dissertation in a tentative model, incorporating a driving force of character, influencing coping and happiness-increasing strategies, to provide a producing or retarding force of wellbeing; positive affect, energy, happiness and life satisfaction or ill-being; negative affect, stress and depression and that set the condition for personal empowerment. Se figure 1

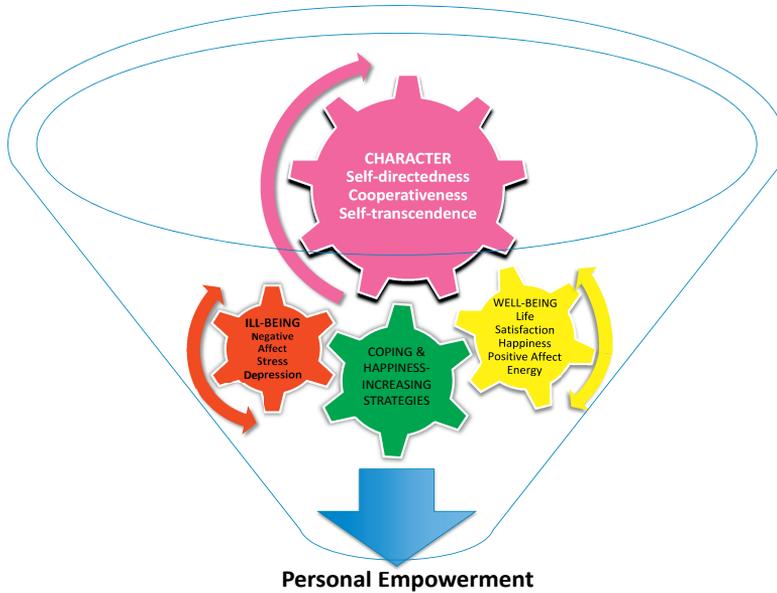


Figure 1. A single "cogwheel" approach influencing coping and happiness-increasing strategies, generates a producing or retarding force of well-being or ill-being

## References

- Adrianson, L., Djumaludin, A., Neila, R., & Archer, T. (2013). Cultural influences upon health, affect, self-esteem and impulsiveness: An Indonesian-Swedish comparison. *International Journal of Research Studies in Psychology*. doi: 10.5861/ijrsp.2013.228.
- Agerström, J., Möller, K., & Archer, T. (2006). Moral reasoning: The influence of affective personality, dilemma content and gender. *Social behavior and personality*, *34*, 1259-1276.
- Allport, G. W. (1951). *Personality: A psychological interpretation*. London: Constable & Company.
- Allport, G. W. (1955). *Becoming Basic considerations for a psychology of personality*. New Haven: Yale University Press
- Almagor, M., & Ben-Porath, Y. S. (1989). The Two-Factor Model of Self-Reported Mood: A Cross-cultural Replication. *Journal of Personality Assessment*, *53*, 10-21.
- Akiskal, H. S., Akiskal, K. K., Haykal, R. F., Manning, J. S., & Connor, P. D. (2005). TEMPS-A: progress towards validation of a self-rated clinical version of the Temperament Evaluation of the Memphis, Pisa, Paris, and San Diego Autoquestionnaire. *Journal of Affective Disorders*, *85*, 3-16.
- Andersson-Arntén, A - C., Jansson, B., & Archer, T. (2008). Influence of affective personality type and gender upon coping behavior, mood stress. *Individual Differences Research*, *6*(3), 139-168.
- Archer, T., Adolfsson, B., & Karlsson, E. (2008). Affective personality as cognitive-emotional presymptom profiles regulatory for self-reported health predispositions. *Neurotoxicity Research*, *14*(1), 21-44  
doi: 10.1007/BF03033573.
- Archer, T., Adrianson, L., Plancak, A., & Karlsson, E. (2007). Influence of affective personality on cognitive-mediated emotional processing: Need for empowerment. *European Journal of Psychiatry*, *21*, 21-44. doi: 10.1007/BF03033573.
- Archer, T., Kostrzewa, R. M., Beninger, R. J., & Palomo, T. (2008). Cognitive symptoms facilitatory for diagnoses in neuropsychiatric disorders: Executive functions and locus of control. *Neurotoxicity Research*, *14*, 205-225.
- Bandura, A. (2001). Social Cognitive Theory: An Agentic Perspective. *Annual Review of Psychology*, *52*, 1-26. doi: 10.1146/annurev.psych.52.1.1
- Barrett Feldman, L., & Russell, J. A. (1999). Structure of current affect. Controversies and Emerging Consensus. *Current Directions in Psychological Science*, *8*, 10-14. doi: 10.1111/1467-8721.00003
- Beall, A. E., & Sternberg, R. J. (1993). The Psychology of Gender. *Applied Cognitive Psychology*, *11*(2), 95-185.
- Bem, S. L. (1974). The measurement of psychological androgyny. *Journal of Clinical and Consulting Psychology*, *42*, 155-162. doi:10.1037/h0036215
- Bergman, L. R., Magnusson, D., & El-Khoury, B. M. (2003). *Studying individual development in an interindividual context: A person-oriented approach*. Mahwah, NJ: Lawrence Erlbaum.

- Bood, S. Å., Archer, T., & Norlander, T. (2004). Affective personality in relation to general personality, self-reported stress, coping and optimism. *Individual Differences Research, 2*, 26-37.
- Bradburn, N. M. (1969). *The structure of psychological well-being*. Chicago: Aldine.
- Butcher, J. N., Graham, J. R., Williams, C. L., & Ben-Porath, Y. S. (1990) *MMPI-2 monograph series*. Minneapolis, MN, US: University of Minnesota Press.
- Byrne, D. G., Davenport, S. C., & Mazanov, J. (2007). Profiles of adolescent stress: The development of the adolescent stress questionnaire (ASQ). *Journal of Adolescence, 30*, 393-416.
- Brändström, S., Sigvardsson, S., Nylander, P. & Richter, J. (2008). The Swedish version of the Temperament and Character Inventory (TCI): A cross-validation of age and gender influences. *European Journal of Psychological Assessment, 24*(1), 14-21.
- Carver C. S., Scheier, M. F., & Segerstrom, S. C. (2010). *Optimism*. Clinical psychology review, *30*(7), 879-889. doi: 10.1016/j.cpr.2010.01.006.
- Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretical based approach. *Journal of Personality and Social Psychology, 56*, 267-283.
- Chida, Y., & Steptoe, A. (2008). Positive psychological well-being and mortality: a quantitative review of prospective observational studies. *Psychosomatic Medicine, 70*(7), 741-56. doi: 10.1097/PSY.0b013e31818105ba.
- Chorpita, B. F., & Barlow, D. H. (1998). The development of anxiety: The role of control in early environment. *Psychological Bulletin, 124*, 3-21.
- Churchwell, J. C., Lopez-Larson, M., & Yurgelun-Todd, D. A. (2010). Altered frontal cortical volume and decision making in adolescent cannabis users. *Frontiers in Psychology, 1*, 225. doi:10.3389/fpsyg.2010.00225.
- Clark, L. A., & Watson, D. (1991). Tripartite model of anxiety and depression: psychometric evidence and taxonomic implications. *Journal of Abnormal Psychology, 100*, 316-336.
- Cloninger, C. R. (1987). A systematic method for clinical description and classification of personality variants. *Archives of General Psychiatry, 44*, 573-588.
- Cloninger, C. R. (2004). *Feeling good: The science of well-being*. New York: Oxford University Press.
- Cloninger, C. R. (2006). Fostering spirituality and well-being in clinical practice. *Psychiatric Annals, 36*, 1-6.
- Cloninger, C. R. (2013). What makes people healthy, happy, and fulfilled in the face of current world challenges? *Mens Sana Monographs, 1*, 16-24. doi: 10.4103/0973-1229.109288.
- Cloninger, C. R., Bayon, C., & Svrakic, D. M. (1998). Measurement of temperament and character in mood disorders: a model of fundamental states as personality types. *Journal of Affective Disorders, 51*, 21-32.
- Cloninger, C. R., & Garcia, D. (2014). The Inheritance and Development of Positive Affect and Emotionality. In M. Pluess (Ed.), *Genetics of Psychological Well-Being – The Role of Heritability and Genetics in Positive Psychology*. New York: Oxford University Press. Under evaluation.
- Cloninger, C. R., Przybeck, T. R., Svrakic, D. M., & Wetzel, R. D. (1994). *The*

- temperament and character inventory (TCI): A guide to its development and use.* St. Louis: Washington University Center for Psychobiology of Personality.
- Cloninger, C. R., Svrakic, D. M., & Przybeck, T. R. (1993). A Psychobiological model of temperament and character. *Archives of General Psychiatry*, *50*, 975–989. doi: 10.1001/archpsyc.1993.01820240059008.
- Cloninger, C. R., Svrakic, N. M., & Svrakic, D. M. (1997). Role of personality self-organization in development of mental order and disorder. *Development and Psychopathology*, *9*, 881-906.
- Cloninger, C. R., & Zohar, A. H. (2011). Personality and the perception of health and happiness. *Journal of Affective Disorders*, *128*, 24-32. doi: 10.1016/j.jad.2010.06.012
- Cohen, S. (1986). Contrasting the hassle scale and the perceived stress scale. *American Psychologist*, *41*, 716-719.
- Cohen, S., & Edwards, J. R. (1989). Personality characteristics as moderators of the relationship between stress and disorder. In R. W. Neufeld (Ed.), *Advances in the Investigation of Psychological Stress* (pp. 235–283). New York: John Wiley & Sons.
- Cohen, S., & Hoberman, H. (1983). Positive events and social supports as buffers of life change stress. *Journal of Applied Social Psychology*, *13*, 99-125.
- Cohen, S., Kamarck, T., & Mermelstein, R. (1983). A global measure of perceived stress. *Journal of Health and Social Behavior*, *24*, 385-396.
- Colder, C. R., & Chassin, L. (1997). Affectivity and impulsivity: Temperament risk for adolescent alcohol involvement. *Psychology of Addictive Behaviors*, *11*, 83-97.
- Costa, P. T. J., & McCrae, R. R. (1980). Influence of extroversion and neuroticism on subjective well-being: Happy and unhappy people. *Journal of Personality and Social Psychology*, *38*, 668-687.
- Costa, P. T., Jr. & McCrae, R. R. (1992). *Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) manual*. Odessa, FL: Psychological Assessment Resources.
- Crews, F. T., & Boettiger, C. A. (2009). Impulsivity, frontal lobes and risk for addiction. *Pharmacology, Biochemistry and Behavior*, *93*, 237-247.
- Cullberg, J. (2000). *Dynamisk psykiatri i teori och praktik* (6:e rev. Utg.). Falkenberg: Natur och Kultur.
- Denollet, J., & De Vries, J. (2006). Positive and negative affect within the realm of depression, stress and fatigue: the two-factor distress model of the Global Mood Scale (GMS). *Journal of Affective Disorder*, *91*, 171-180.
- Diener, E. (1984). Subjective well-being. *Psychological Bulletin*, *95*, 542–575.
- Diener, E. (2000). Subjective well-being. The science of happiness and a proposal for a national index. *The American Psychologist*, *55* (1), 34-43. doi:10.1037/0003-066X.55.1.34.
- Diener, E., Colvin, C. R., Pavot, W. G., & Allman, A. (1991a). The psychic costs of intense positive affect. *Journal of Personality and Social Psychology*, *61*, 492–503.
- Diener, E., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of Personality Assessment*, *49*, 71–75.

- Diener, E., Sandvik, E., & Pavot, W. (1991b). Happiness is the frequency, not the intensity, of positive versus negative affect. In F. Strack, M. Argyle, & N. Schwarz (Eds.), *Subjective well-being: An interdisciplinary perspective* (pp. 119–139). New York: Pergamon.
- Diener, E., Suh, E. M., Lucas, R.E., & Smith, H.L. (1999) Subjective well-being: three decades of progress. *Psychological Bulletin*, *125*, 276–302. doi: 10.1037/0033-2909.125.2.276.
- Diener, E., Suh, E. M., & Oishi, S. (1997). Recent findings on subjective well being. *Indian Journal of Clinical Psychology*, *24*, 25-41.
- Digman, J. M. (1997). Higher-order factors of the Big Five. *Journal of Personality and Social Psychology*, *73*(6), 1246-1256. doi:10.1037/0022-3514.73.6.1246
- Drieling, T., van Calker, D., & Hecht, H. (2006) Stress, personality and depressive symptoms in a 6.5 year follow-up of subjects at familial risk for affective disorders and controls. *Journal of Affective Disorders*, *91*, 195-203. doi:10.1016/j.jad.2006.01.004.
- Eagly, A. H. (1987). *Sex differences in social behavior: A social-role interpretation*. Hillsdale, NJ: Erlbaum.
- Ebmeier, K. P., Donaghey, C., & Steele, D. (2006). Recent developments and current controversies in depression. *Lancet*, *367*, 153-167. doi:10.1016/S0140-6736(06)68529-2.
- Ekecrantz, L., & Norman, N. (1991) *Instruktioner för Coping Resources Inventory – CRI*. Stockholm: Psykologiförlaget.
- Fogle, L. M., Huebner, E. S., & Laughlin, J. E. (2002). The relationship between temperament and life satisfaction in early adolescence: Cognitive and behavioral mediation models. *Journal of Happiness Studies*, *3*, 373–392.
- Fountoulakis, K. N., Iacovides, A., Kaprinis, S., & Kaprinis, G. (2006). Life events and clinical subtypes of major depression: A cross-sectional study. *Psychiatry Research*, *143*(2-3), 235-244.
- Freedman, J. (1978). *Happy People: What Happiness Is, Who Has It, and Why*. Harcourt Brace Jovanovic: New York.
- Friedman, H. S., & Booth-Kewley, S. (1987). Personality, Type A behavior, and coronary heart disease: the role of emotional expression. *Journal of Personality and Social Psychology*, *53*, 783-792.
- Friedman, H. S., & Booth-Kewley, S. (1988) Validity of the Type A construct: a reprise. *Psychological Bulletin*, *104*, 381-384. doi:10.1037/0033-2909.104.3.381
- Friedman, M., Byers, S. O., Rosenman, R. H., & Elevitch, F. R. (1970). Coronary-prone individuals (type A) behaviour pattern. Some biochemical characteristics. *Journal of the American Medical Association*, *212*, 1030-1037.
- Fujita, F., & Diener, E. (2005). Life Satisfaction Set Point: Stability and Change. *Journal of Personality and Social Psychology*, *88*(1), 158-164. doi:10.1037/0022-3514.88.1.158
- Fujita, F., Diener, E., & Sandvik, E. (1991). Gender differences in negative affect and well-being: The case for emotional intensity. *Journal of Personality and Social Psychology*, *61*(3), 427-434. doi:10.1037/0022-3514.61.3.427

- Garcia, D. (2009). Interpretation and recognition for words in a short story [database record]. Retrieved from the American Psychological Association's PsycTESTS .
- Garcia, D. (2011a). *Adolescents' happiness: the role of the affective temperament model on memory and apprehension of events, subjective well-being, and psychological well-being*. (Ph.D. Thesis). Retrieved from GUPEA.
- Garcia, D. (2011b). Two Models of Personality and Well-Being among Adolescents. *Personality and Individual Differences*, 50, 1208–1212. doi: 10.1016/j.paid.2011.02.009.
- Garcia, D. (2012a). The affective temperaments: differences between adolescents in the big five model and Cloninger's psychobiological model of personality. *Journal of Happiness Studies*, 13, 999-1017. doi: 10.1007/s10902-011-9303-5.
- Garcia, D. (2012b). Interpretation and Recognition for Words in a Short Story (IRWSS) [Database record]. Retrieved from the American Psychological Association's PsycTESTSTM.
- Garcia, D. (2013). La vie en rose: high levels of well-being and events inside and outside autobiographical memory. *Journal of Happiness Studies*, doi: 10.1007/s10902-013-9443-x.
- Garcia, D., Anckarsäter, H., Kjell, O. N. E., Rosenberg, P., Archer, T., Cloninger, C. R., & Sikström, S. (under evaluation). Agentic and Communal Traits are Related to the Semantic Representation of Written Narratives of Positive and Negative Life Events. *Psychology of Well-Being*.
- Garcia, D., Anckarsäter, H., & Lundström, S. (2013a) Self-Directedness and Cooperativeness, Psychosocial Dysfunction and Suffering in ESSENCE, *The Scientific World Journal*. doi:10.1155/2013/416981
- Garcia, D., & Archer, T. (2012). Adolescent Life Satisfaction and Well-Being. *Journal of Alternative Medicine Research*, 4, 271–279.
- Garcia, D., Ghiabi, B., Moradi, S., Siddiqui, A., & Archer, T. (2013b). The happy personality: a tale of two philosophies. In: Morris EF, Jackson M-A, (Eds.), *Psychology of personality*, (pp. 41–59). New York: Nova Science Publishers.
- Garcia, D., Kerekes, N., Andersson-Arntén, A-C., & Archer, T. (2012). Temperament, Character, and Adolescents' Depressive Symptoms: Focusing on Affect. *Depression Research and Treatment*. doi:10.1155/2012/925372
- Garcia, D., Kerekes, N., & Archer, T. (2012). A will and a proper way leading to happiness: self-directedness mediates the effect of persistence on positive affectivity. *Personality and Individual Differences*, 53, 1034-1038.
- Garcia, D., & Moradi, S. (2012). Adolescents' temperament and character: a longitudinal study on happiness. *Journal of Happiness Studies*, 13, 931-946.
- Garcia, D., & Moradi, S. (2013). The Affective Temperaments and Well- Being: Swedish and Iranian Adolescents' Life Satisfaction and Psychological Well- Being. doi:10.1007/s10902-012-9349-z.

- Garcia, D., Nima, A. A., & Archer, T. (2013c) International note: Temperament and character's relationship to subjective well-being in Salvadorian adolescents and young adults. *Journal of Adolescence*, *36*, 1115-1119. doi: 10.1016/j.adolescence.2013.08.018.
- Garcia, D., Rosenberg, P., Erlandsson, A., & Siddiqui, A. (2010). On lions and adolescents: Affective temperaments and the influence of negative stimuli on memory. *Journal of Happiness Studies*, *11*, 477-495. doi: 10.1007/s10902-009-9153-6.
- Garcia, D., & Siddiqui, A. (2009a). Adolescents' affective temperaments: Life satisfaction, interpretation and memory of events. *The Journal of Positive Psychology*, *4*, 155-167. doi: 10.1080/17439760802399349.
- Garcia, D., & Siddiqui, A. (2009b). Adolescents' psychological well-being and memory for life events: influences on life satisfaction with respect to temperamental dispositions. *Journal of Happiness Studies*, *10*, 387-503. doi: 10.1007/s10902-008-9096-3
- Gershon, E. S., Bunney, W. E., Jr., Leckman, J. F., Van Eerdewegh, M., & DeBauche, B. A. (1976). The inheritance of affective disorders: A review of data and hypotheses. *Behavior Genetics*, *6*(3), 227-261. doi: 10.1007/BF01065722
- Gordon, L. V. (1978). *Gordon personal profile-inventory. GPP-I. Manual. 1978 revision*. New York: The psychological Corporation.
- Gunderson, J. G., Phillips, K. A., Triebwasser, J., & Hirschfeld, R. M. (1994). The diagnostic interview for depressive personality, *American Journal of Psychiatry*, *151*, 1300-1304
- Hammer, A. L. (1988). *Manual for the Coping Resources Inventory*. Palo Alto, CA: Consulting Psychologists Press Inc.
- Harbin, T. J. (1989). The relationship between Type A behavior pattern and physiological responsivity: a quantitative review. *Psychophysiology*, *26*, 110-119. doi:10.1111/j.1469-8986.1989.tb03138.x
- Helgeson, V. S. (1994). Relation of agency and communion to well-being: Evidence and potential explanations. *Psychological Bulletin*, *116*, 412-428. doi:10.1037/0033-2909.116.3.412
- Hevey, D, McGee, H. M., & Horgan, J. H. (2004). Responsiveness of Health-Related Quality of Life Outcome Measures, *Journal of Consulting and Clinical Psychology*, *72*(6), 1175-1180.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, *52*, 1280-1300. doi:10.1037/0003-066X.52.12.1280
- Hintsa, T., Jokela, M., Pulkki-Råback, L., & Keltikangas-Järvinen, L. (2014). Age- and Cohort-Related Variance of Type-A Behavior Over 24 Years: the Young Finns Study. *International Journal of Behavioral Medicine*, *21*, 927-935. doi: 10.1007/s12529-013-9369-z
- Huebner, E. S. (1991). Correlates of life satisfaction in children. *School Psychology Quarterly*, *6*(2), 103-111 doi:10.1037/h0088805.
- Huppert, F. A., & Whittington, J. E. (2008). Evidence for the independence of positive and negative well-being: implications for quality of life assessment. *British Journal of Health Psychology*, *8*, 107-122. doi:10.1111/j.1758-0854.2009.01008.x

- Ito, A. T., & Cacioppo, J. T. (2001). *Affect and attitudes: A social neuroscience approach*. In J.P. Forgas (Ed.), *Handbook of affect and social cognition* (pp. 50–74). New Jersey: Erlbaum.
- Johansson, R., Lyssarides, C., Andersson, G., & Rousseau, A. (2013). Personality change after internet-delivered cognitive behavior therapy for depression. *PeerJ* 1:e39. doi: 10.7717/peerj.39.
- Josefsson, K., Cloninger, C. R., Hintsanen, M., Jokela, M., Pulkki-Raback, L., Keltikangas-Jarvinen, L. (2011). Associations of personality profiles with various aspects of well-being: A population-based study. *Journal of Affective Disorders*, 133, 265-73.
- Josefsson, K., Jokela, M., Cloninger, C. R., Hintsanen, M., Salo, J., Hintsanen, T., Pulkki-Råback, L., Keltikangas-Järvinen, L. (2013). Maturity and change in personality: Developmental trends of temperament and character in adulthood. *Development and Psychopathology*, 25, 713-727.
- Joseph, S., Linley, P. A., Harwood, J., Lewis, C. A., & McCollam, P. (2004) Rapid assessment of well-being: the short depression–happiness scale. *Psychology and Psychotherapy: Theory, Research, and Practice*. 77,1–14. doi: 10.1348/147608304322874227
- Judge, T. A., & Larsen, R. J. (2001). Dispositional affect and job satisfaction: a review and theoretical extension. *Organizational Behavior and Human Decision Processes*, 86, 67-98 doi:10.1006/obhd.2001.2973.
- Karlsson, E., & Archer, T. (2007). Relationship between personality characteristics and affect: gender and affective personality. *Individual Differences Research*, 5, 44-58.
- Kato, T., Kunugi, H., Nanko, S., & Kato, N. (2001). Mitochondrial DNA polymorphisms in bipolar disorder. *Journal of Affect Disorders*; 62(3), 151-64.
- Kawachi, I., Sparrow, D., Kubzansky, L. D., Spiro, A., Vokonas, P. S., & Weiss, S. T. (1998). Prospective study of a self-report Type A scale and risk of coronary heart disease. Test of the MMPI-2 Type A scale. *Circulation*, 98, 405-420.
- Keren, G., & Schul, Y. (2009). Two is not always better than one. A critical evaluation of two-system theories, *Perspectives on Psychological Science*, 4, 533-550.
- King, L. A., & Napa, C. K. (1998). What Makes a Life Good? *Journal of Personality and Social Psychology*, 75(1), 156-165.
- Kivimäki, M., Kalimo, R., & Julkunen, J. (1996) Components of Type A behaviour pattern and occupational stressor-strain relationship: testing different models in a sample of industrial managers. *Behavioral Medicine*, 22, 67-76. doi: 10.1080/08964289.1996.9933766.
- Kjellberg, A., & Iwanowski, S. (1989). *Stress/energy questionnaire: development of a method for studying mood at work [Stress/energiformuläret: Utveckling av en metod för skattning av sinnesstämning i arbetet]*. Unit of Psychophysiology, Institute for the Work Environment. Investigation report 1989:26. Solna, Sweden.

- Klag, S., & Bradley, G., (2004). The role of hardiness in stress and illness: An exploration of the effect of negative affectivity and gender. *British Journal of Health Psychology*, *9*(Pt 2), 137-61.
- Kolb, B., & Wishaw, I. Q. (2001). *An introduction to Brain and Behavior*. New York: Worth.
- Kunst, M. J. J. 2011. Affective personality type, post-traumatic stress disorder symptom severity and post-traumatic growth in victims of violence. *Stress and Health*, *27*, 42–51. doi: 10.1002/smi.1318.
- Kääriäinen, K., Ketola, K., Niemelä, K., Palmu, H., & Salomäki, H. (2009). *Facing diversity: The Evangelical Lutheran church of Finland from 2004 to 2007*. Tampere, Finland: Church Research Institute.
- Larsen, R. J., & Eid, M. (2008). Ed Diener and the science of subjective well-being. In M. Eid, & R.J. Larsen (Eds.), *The science of subjective well-being* (pp. 1–13). New York: The Guilford Press.
- Larsen, R. J., & Ketelaar, T. (1991). Personality and susceptibility to positive and negative emotional states. *Journal of Personality and Social Psychology*, *61*, 132-140. doi: 10.1037/0022-3514.61.1.132
- Lazarus, R. S. (1990). Theory-based stress measurement. *Psychological Inquiry*, *1*, 3-13. doi: 10.1207/s15327965pli0101\_1
- Lindahl, M., & Archer, T. (2013). Depressive Expression and Anti-Depressive protection in Adolescence: Stress, Positive Affect, Motivation and Self-Efficacy. *Psychology*, *4*(6), 495-505. doi:10.4236/psych.2013.46070
- López-Ibor, J. J. (2002). The classification of stress-related disorders in ICD-10 and DSM-IV. *Psychopathology*, *35*, 107-111.
- Lucas, R. E. (2008). Personality and Subjective Well-Being. In M. Eid, & R.J. Larsen (Eds.). *The science of subjective well-being* (pp. 171-194). New York: The Guilford Press.
- Lykken, D., & Tellegen, A. (1996). Happiness is a stochastic phenomenon. *Psychological Science*, *7*(3), 186-189. doi:10.1111/j.1467-9280.1996.tb00355.x
- Lyubomirsky, S. (2001). Why are some people happier than others?: The role of cognitive and motivational processes in well-being. *American Psychologist*, *56*, 239-249. doi: 1037//0003-066X.56.239.
- Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: Does happiness lead to success? *Psychological Bulletin*, *6*, 803–855. doi: 10.1037/0033-2909.131.6.803
- Lyubomirsky, S., & Layous, K. (2013). How do simple positive activities increase well-being? *Current Directions in Psychological Science*, *22*, 57-62. doi: 10.1177/0963721412469809
- Lyubomirsky, S., Sheldon, K. M., & Schkade, D. (2005). Pursuing happiness: The architecture of sustainable change. *Review of General Psychology*, *9*, 111–131. doi: 10.1037/1089-2680.9.2.111
- MacDonald, S., & Kormi-Nouri, R. (2013). The affective personality, sleep, and autobiographical memories. *The Journal of Positive Psychology: Dedicated to furthering research and promoting good practice*, *8*, 305-313. doi: 10.1080/17439760.2013.800904.

- Mackinnon, A., Jorm, A.F., Christensen, H., Korten, A.E., Jacomb, P.A., & Rodgers, B. (1999). A short form of the positive and negative affect schedule: Evaluation of factorial validity and invariance across demographic variables in a community sample. *Personality and Individual Differences*, *27*, 405–416.
- MacLeod, A., & Moore, R. (2000). Positive thinking revised: positive cognitions, well-being and mental health. *Clinical Psychology and Psychotherapy*, *7*, 2–10.
- McAdams, D. P. (2001). The psychology of life stories. *Review of General Psychology*, *5*, 100-122. doi: 10.1037/1089-2680.5.2.100
- McCrae, R. R. & Costa, P. T., Jr. (1986). Personality, coping, and coping effectiveness in an adult sample. *Journal of Personality*, *54*, 385-405.
- McCrae, R. R., & Costa, P. T., Jr. (1987). Validation of the five-factor model of personality across instruments and observers. *Journal of Personality and Social Psychology*, *1*, 81-90. doi: 10.1037/0022-3514.52.1.81
- McDonald, S., Archer, T., & Garcia, D. (2014). Two Different Approaches to the Affective Profiles Model: Median Split and Cluster Analysis. Under Editorial Evaluation.
- McDowell, I. (2010). Measures of self-perceived well-being. *Journal of Psychosomatic Research*, *69*, 69-79. doi: 10.1016/j.jpsychores.2009.07.002
- Melvin, G. A., & Molly, G. N. (2000). Some psychometric properties of the Positive and Negative Affect Schedule among Australian youth. *Psychological Reports*, *86*, 1209-1212.
- Moldin, S. O., Reich, T., & Rice, J. (1991). Current perspectives on the Genetics of Unipolar Depression. *Behavior Genetics*, *21*, 211-242.
- Munakata, K., Fujii, K., Nanko, S., Kunugi, H., & Kato T. (2007). Sequence and functional analyses of mtDNA in a maternally inherited family with bipolar disorder and depression. *Mutation Research*, *617(1-2)*, 119-24.
- Myers, D. G., & Diener, E. (1995). Who is happy? *Psychological Science*, *6*, 10-19. doi: 10.1111/j.1467-9280.1995.tb00298.x
- Nima, A. A., Archer, T., & Garcia, D. (2012). Adolescents' happiness-increasing strategies, temperament, and character: mediation models on subjective well-being. *Health*, *4*, 802–810. doi: 10.4236/health.2012.410124
- Nima, A. A., Archer, T., & Garcia, D. (2013a). The Happiness-Increasing Strategies Scales in a Sample of Swedish Adolescents. *International Journal of Happiness and Development*, *1*, 196-211. doi:10.1504/IJHD.2013.055647.
- Nima, A. A., Rosenberg, P., Archer, T., & Garcia, D. (2013b). Anxiety, Affect, Self-Esteem, and Stress: Mediation and Moderation Effects on Depression. *PLoS ONE* *8(9)*: e73265. doi:10.1371/journal.pone.0073265.
- Norlander, T., Bood, S. Å., & Archer, T. (2002). Performance during stress: Affective personality, age and regularity of physical exercise. *Social Behavior and Personality*, *30*, 495-508.

- Norlander T, Johansson, Å., & Bood, S. Å. (2005). The affective personality: its relation to quality of sleep, wellbeing and stress. *Social Behavior and Personality, 33*, 709–722.
- Nyklíček, I., & Pop, V. J. (2005). Past and familial depression predict current symptoms of professional burnout. *Journal of Affective Disorders, 88*, 63–68.
- Palomo, T., Beninger, R. J., Kostrzewa, R. M., & Archer, T. (2004). Gene-environment interplay in affect and dementia: Emotional modulation of cognitive expression in personal outcome. *Neurotoxicity Research, 6*, 159–173.
- Pavot, W. (2008). The assessment of subjective well-being: successes and shortfalls. In: Eid M, Larsen RJ, editors. *The science of subjective well-being*. (pp. 124–167) New York: The Guilford Press.
- Pavot, W., & Diener, E. (1993). Review of the satisfaction with life scale. *Psychological Assessment, 2*, 164–172. doi: 10.1037/1040-3590.5.2.164.
- Penninx, B. W. J. H., Guralnik, J. M., Ferrucci, L., Simonsick, E. M., Deeg, D. J. H., & Wallace, R. B. (1998) Depressive symptoms and physical decline in community-dwelling older persons. *Journal of American Medical Association, 279*, 1720–1726.
- Perski, A. (1999). *Det stressade hjärtat. Att förstå stress och hur vi hanterar livskriser*. Stockholm: Bromberg.
- Pervin, L. A., & Cervone, D. (2010). *Personality. Theories and research*. Hoboken: John Wiley and Sons.
- Porubanova-Norquist, M. (2012). Character as a predictor of life satisfaction in Czech adolescent sample: 3-year follow-up study. *Personality and Individual Differences, 53*, 231–235. doi:10.1016/j.paid.2012.03.022
- Pressman, S. D., & Cohen, S. (2005) Does positive affect influence health? *Psychological Bulletin, 131*, 925–971.
- Price, V. A. (1982). *Type A Behavior Pattern. A Model for Research and Practice*. New York: Academic Press, Inc.
- Price. J. H., Jurs. S. G., Jurs. J., Rhonehouse. M., & Isham. K. A. (1985) An empirical test of a cognitive social learning model for stress moderation with junior high school students. *Journal of School Health, 55*, 217–220.
- Ready, R. E., Vaidya, J. G., Watson, D., Lutzman, R. D., Koffel, E. A., Clark, L. A. (2011). Age-group differences in facets of positive and negative affect. *Aging & Mental Health, 15*, No. 6, 784–795.
- Rogers, C. R. (1959). A theory of therapy, personality, and interpersonal relationships, as developed in the client-centered framework. In S. Koch (Ed.), *Psychology: A study of a science*. (Vol. 3), McGraw-Hill, New York (1959) pp. 184–256
- Rosén, A. C. (2002). *Affective personality in relation to sexual satisfaction and affective state [Affektiv personlighet i relation till sexuell tillfredsställelse och affektivatillstånd]*. Unpublished Psychology Thesis, Department of Psychology, University of Göteborg, Sweden.
- Russell, J. A., & Carroll, J. M. (1999). The Phoenix of Bipolarity: Reply to Watson and Tellegen (1999). *Psychological Bulletin, 125*, No. 5, 611–617. doi:10.1037/0033-2909.125.5.611.

- Russell, J. A., & Feldman Barrett, L. (1999) Core affect, prototypical emotional episodes, and other things called emotion: dissecting the elephant. *Journal of Personality and Social Psychology*, 76, 805–819. doi: 10.1037/0022-3514.76.5.805.
- Rusting, C. L., & Larsen, R. J. (1997) Extraversion, neuroticism, and susceptibility to positive and negative affect: A test of two theoretical models, *Personality and individual differences*, 22(5), 607-612.
- Ryff, C. D. (1989). Happiness is everything, or is it? Explorations on the meaning of psychological well-being. *Journal of Personality and Social Psychology* 57:1069–1081.
- Sadeh, A., Keinan, G., & Daon, K (2004) Effects of stress on sleep: the moderating role of coping style. *Health Psychology*, 23, 542-545.
- Schimmack, U. (2007). Methodological issues in the assessment of the affective component of subjective well-being. In A. D. Ong & M. H. M. Van Dulmen (Eds.), *Oxford handbook of methods in positive psychology* (pp. 96-110). New York: Oxford University Press.
- Schulz, M. S., Cowan, P. A., Cowan, C. P., & Brennan, R. T. (2004). Coming home upset: Gender, marital satisfaction and the daily spillover of workday experience into marriage. *Journal of Family Psychology*, 18, 250-263.
- Seligman, M. E. P. (2008). Positive Health. *Applied psychology: An international review*, 57, 3-18.
- Shi, H., Yang, X., Wang, J., Xi, H., Huang, C., He, J., Chu, M., & Zhuang, G. (2013). Type A personality, hostility, time urgency and unintentional injuries among Chinese undergraduates: a matched case–control study. *BMC Public Health*, 13:1066.
- Shweder, R. A., Much, N. C., Mahapatra, M., & Park, L. (1997). The “big three” of morality (autonomy, community, divinity) and the “big three” explanations of suffering. In A. Brandt & P. Rozin (Eds.), *Morality and health*. Stanford, CA: Stanford University Press.
- Silk, J. S., Steinberg, L., & Sheffield Morris, A. (2003). Adolescents’ emotion regulation in daily life: Links to depressive symptoms and problem behavior. *Child Development*, 74, 1869–1880.
- Sirri, L., Fava, G. A., Guidi, J., Porcelli, P., Rafanelli, C., Bellomo, A., Grandi, S., Grassi, L., Pasquini, P., Picardi, A., Quartesan, R., Rigatelli, M., & Sonino, N. (2012), Type A behaviour: a reappraisal of its characteristics in cardiovascular disease. *International Journal of Clinical Practice*, 66: 854–861. doi:10.1111/j.1742-1241.2012.02993.x
- Smith, T. W.; Ruiz, J. M. (2002). Psychosocial influences on the development and course of coronary heart disease: Current status and implications for research and practice. *Journal of Consulting and Clinical Psychology*, 70, 548–568. doi:10.1037/0022-006X.70.3.548.
- Spector, P. E., & O’Connell, B. J. (1994). The contribution of personality traits, negative affectivity, locus of control and Type A to the subsequent reports of job stressors and job strains. *Journal of Occupational and Organisational Psychology*, 67, 1-11.
- Spence, M. A., Flodman, P. L., Sadovnik, A. D., Bailey-Wilson, J. E., Ameli, H., &

- Remick, R. A. (1995). Bipolar disorder: evidence for a major locus. *American Journal of Medical Genetics*, *60*, 370-376.
- Spence, J. T., Helmreich, R. L., & Stapp, J. (1974). The personal Attributes Questionnaire: A measure of sex role stereotypes and masculinity-femininity. *JSAS catalog of Selected Documents in Psychology*, *4*, 43.
- Suls, J., & Sanders, G. S. (1988). Type A behavior as a general risk factor for physical disorder. *Journal of Behavioral Medicine*, *11*, 201-226.
- Tellegen, A. (1993). Folk concepts and psychological concepts of personality and personality disorder. *Psychological Inquiry*, *4*, 122-130.
- Tkach, C., & Lyubomirsky, S. (2006) How do people pursue happiness? Relating personality, happiness-increasing strategies, and well-being. *Journal of Happiness Studies*, *7*, 183-225. doi:10.1007/s10902-005-4754-1.
- Trzaskowski, M., Zavos, H. M. S., Haworth, C. M. A., Plomin, R., & Eley, T. C. (2012). Stable genetic influence on anxiety-related behaviours across middle childhood. *Journal of Abnormal Child Psychology*, *40*, 85-94.
- Tugade, M. M., & Fredrickson, B. L. (2004). Resilient individuals use positive emotions to bounce back from negative emotional experiences. *Journal of Personality and Social Psychology*, *86*(2), 320-333.
- Urry, H. L., Nitschke, J. B., Dolski, I., Jackson, D. C., Dalton, K. M., Mueller, C. J. et al. (2004). Making life worth living: Neural correlates of well-being. *Psychological Science*, *15*, 367-372.
- Varg, N. (1997). *Negativ affektivitets inverkan på svarsbeteende i enkätformulär [The influence of negative affect upon responses to questionnaires]*. Stockholm: Stockholm University Reports.
- Vollrath, M., Banholzer, E., Caviezel, C., Fiscli, C. & Jungo, D. (1994). Coping as a mediator or moderator of personality in mental health? I B. De Raad, W. K. B. Hofstee, & G. L. M. Van Heck (red.), *Personality Psychology in Europe* (Vol. R, pps. 262-273).
- Watson, D., & Clark, L. A. (1984). Negative affectivity: The disposition to experience aversive emotional states. *Psychological Bulletin*, *96*, 465-490.
- Watson, D., & Clark, L. A. (1994). The PANAS-X, Manual for the Positive and Negative Affect Schedule – Expanded form. The University of Iowa reports copyright, 1-24.
- Watson, D., & Clark, L.A. (1999). *Manual for the positive and negative affect schedule – expanded form*. Iowa City, IA: The University of Iowa.
- Watson, D., Clark, L. A., & Carey, G. (1988a). Positive and negative affectivity and their relation to anxiety and depressive disorders. *Journal of Abnormal Psychology*, *97*, 346-353.
- Watson, D., Clark, L. A., & Tellegen, A. (1988b). Development and validation of brief measures of positive and negative affect. The PANAS scale. *Journal of Personality and Social Psychology*, *54*, 1063-1070.
- Watson, D., David, J. P., & Sulz, J. (1999). Personality, affectivity and coping. In C.R. Snyder (Ed), *Coping. The psychology of what works*. New York: Oxford University Press.
- Watson, D., & Pennebaker, J. W. (1989). Health complains, stress, and distress: Exploring the central role of negative affectivity. *Psychological Review*, *96*, 234-254.

- Watson, D., Pennebaker, J. W., & Folger, R. (1986). Beyond negative affectivity: Measuring stress and satisfaction in the workplace. *Journal of Organizational Behavior Management*, 8, 141-157.
- Watson D., & Tellegen, A. (1985). Toward a consensual structure of mood. *Psychological Bulletin*, 98, 219–235.
- Watson, D., & Walker, L. (1996) The long-term stability and predictive validity of trait measures of affect. *Journal of Personality and Social Psychology*, 70, 567-577.
- White, H. R., Marmorstein, N. R., Crews, F. T., Bates, M. E., Mun, E. Y., & Loeber, R. (2011). Associations between heavy drinking and changes in impulsive behavior among adolescent boys. *Alcoholism: Clinical and Experimental Research*, 35, 295-303.
- Wiggins, J.S. (1991). Agency and communion as conceptual coordinates for the understanding and measurement of interpersonal behavior. In: Grove & WM, Cicchetti D, (Eds).Thinking clearly about psychology: Vol 1. Personality and psychopathology. (pp. 89–113). Minneapolis, MN: University of Minnesota Press.
- Williams, R. B., Barefoot, J. C., Haney, T. L., Harrell, F. E., Blumenthal, J. A., Pryor, D., & Peterson, B. (1988). Type A behavior and angiographically documented coronary atherosclerosis in a sample of 2289 patients. *Psychosomatic Medicine*, 50, 139-152.
- Wilson, S., & MacLean, R. (2011). *Research Methods and Data Analysis for Psychology*. New York: McGraw-Hill Companies, Inc.
- Wilson, G. S., Pritchard, M. E., & Revalee, B. (2005). Individual differences in adolescent health symptoms: the effects of gender and coping. *Journal of Adolescence*, 28, 369-379.
- Wirberg, A. (1986). *Gordons personlighetsinventorium, formulär A. GP:A. Svensk manual* [Gordon personal profile and inventory, form A. GP:A. The Swedish version]. Stockholm: Psykologiförlaget.
- WHO, 1946. Definition of Health in Preamble to the Constitution of the World Health Organization. World Health Organization, Geneva, Switzerland.
- WHO, 2001. *Mental Health: New Understanding, New Hope*. World Health Organization, Geneva
- Währborg, P. (2002) *Stress och den nya hälsan [Stress and the new health]*. Stockholm: Natur och Kultur.
- Yik, M. S. M., Russell, J. A., & Barrett Feldman, L. (1999). Integrating four structures of current mood into a circumplex: Integration and beyond. *Journal of Personality and Social Psychology*, 77, 600-619.
- Zevon, M. A., & Tellegen, A. (1982). The structure of mood change: An idiographic/nomothetic analysis. *Journal of Personality and Social Psychology*, 43, 111-122.
- Zöllner, M., & Archer, T. (2009). Predicting stress in male and female psychiatric patients and healthy volunteers. *Social Behavior and Personality*, 7, 1081–1094. DOI 10.2224/sbp.2009.37.8.1081.
- Zöllner, M., Karlsson, E., & Archer, T. (2009). Self-rated affect among adults presenting psychiatric diagnosis. *Individual Differences Research*, 7, 14–28.

