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The importance of self-esteem and sense of coherence during adolescence in relation to health

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Acknowledgments

Based on my educational and working background I have always been interested in health questions, and especially how adolescents' health is developing and changing throughout the years. The adolescent phase is a critical period which I wanted to understand better and broaden my understanding on how much of an importance the developmental changes impacts the health of adolescents and further during adulthood. I was motivated to investigate the different impacting factors of adolescents' health which I view as important in reference to maintaining and improving their health and create a better understanding of the important life phase.

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Summary

The present master's thesis consists of investigations on the relation between self-esteem and sense of coherence, and the outcome of self-rated health and subjective health complaints in adolescents. Adolescence is a life phase filled with rapid changes and challenges, but also positive development and great potential for health. Self-esteem and sense of coherence are both shown to vary during adolescence and impact individuals' health. Research indicate that sense of coherence can be viewed as a moderator for subjective health complaints and self-rated health in adolescents, and that the level of self-esteem impacts the strength of sense of coherence. Further, the strength of self-esteem and sense of coherence is seen to vary during adolescence and differ between sexes.

The results showed relation between low self-esteem and higher symptom levels of subjective health complaints, weak sense of coherence and higher symptom levels of subjective health complaints, and strong sense of coherence and positive evaluation of self-rated health. Adolescent girls reported higher symptom levels of subjective health complaints, lower self-esteem and weaker sense of coherence than adolescent boys, but girls interestingly had a more positive evaluation of self-rated health. The results also showed that the older adolescents had a more negative evaluation of self-rated health. When separating subjective health complaints into emotional and physical complaints, the results showed that self-esteem and sense of coherence only had significant relations to emotional subjective health complaints. No conclusions can be drawn on causality from this cross-sectional study, but it can be viewed as a basis for future research.

Sammendrag

Masteroppgaven omfatter en undersøkelse av forholdet mellom selvfølelse og opplevelse av sammenhengen, og utfallet av selvvurdert helse og subjektive helseplager hos ungdommer. Ungdomstiden er fylt med raske endringer og utfordringer, men også positiv utvikling og stort potensial for utvikling og etablering av helse. Både selvfølelse og opplevelse av sammenheng er vist å variere i løpet av ungdomstiden, og begge har en innvirkning på individers helse. Forskning indikerer at opplevelse av sammenheng kan anses som en moderator for subjektive helseplager og selvvurdert helse hos ungdommer. Det indikeres også at selvfølelsesnivået har en innvirkning på styrken av opplevelse av sammenheng. Videre vises det at styrken av selvfølelse og opplevelse av sammenheng varierer gjennom ungdomstiden og mellom kjønnene.

Resultatene viste relasjon mellom lav selvfølelse og høyere symptomnivå av subjektive helseplager, og svak opplevelse av sammenheng og høyere symptomnivå av subjektive helseplager. De kvinnelige ungdommene rapporterte høyere symptomnivå av subjektive helseplager, lavere selvfølelse og svakere opplevelse av sammenheng enn gutter, men jenter hadde en mer positiv evaluering av selvvurdert helse. Resultatene viste også at de eldre ungdommene hadde en mer negativ evaluering av selvvurdert helse. Ved å dele subjektive helseplager inn i emosjonelle og fysiske plager viste resultatene at selvfølelse og opplevelse av sammenheng kun hadde signifikant relasjon til emosjonelle subjektive helseplager. Det kan ikke bli trukket noen konklusjon med tanke på kausalitet fra denne tverrsnittstudien, men den kan ses på som et grunnlag for fremtidig forskning.

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Article II: The impact of self-esteem and sense of coherence on adolescents' self-rated health and subjective health complaints

Main Introduction

This master's thesis is divided into two connected articles. The overall aim of this thesis was to investigate the relation between sense of coherence (SOC) and self-esteem (SE), and the outcome of self-rated health (SRH) and subjective health complaints (SHC) in adolescents. Adolescence is a period in life filled with positive development and establishment of health, but it is also a life phase filled with challenges and rapid changes which impacts the individuals' overall health. The mental health issues have increased over the past years, and there has especially been an increase among adolescents. SRH and SHC are areas which helps in understanding how the individuals evaluate own health. Both SE and SOC are important for an individuals' health and everyday life.

Article I is a theoretical article, review of literature, containing the theoretical and empirical foundation for the second article. The first aim was to investigate the theoretical understanding of SOC and SE. It also contains a description of the adolescent period, and how the changes and challenges impact the health and well-being during adolescence and later in life. Further, conceptualizations and definitions of the empirical concepts of SRH, SHC, SE and SOC are reviewed, in addition to a presentation of research. The second aim was to investigate the empirical relationship between SOC, SE and the outcome of SRH and SHC. This is discussed in relation to the theories and research in order to establish a possible link between the four constructs.

Article II is an empirical article. Initially, it is a brief review of the content in Article I in addition to the quantitative statistical analyses. The aims of this article were to investigate the distribution and significant means of sex on SHC, SRH, SE and SOC, and to investigate the relationship between SOC, SE and the outcome of SRH and SHC, controlled for age, sex, socioeconomic status and stress. Further on, the "oppvekst i bygder" survey, participants, procedure, measures and statistics is thoroughly described. The main aim was to investigate

the relationship between SOC, SE and the outcome of SRH and SHC. The results contain descriptive and correlation analyses of the study variables, in addition to a hierarchical multiple regression investigation the relation between SE, SOC and SRH and SHC.

The method used for Article I was a systematic literature search in the databases; PubMed, WebofScience, PsycInfo and EmBase. The "snowball" method was further used to detect other, similar articles and books. The search words used were; *self-rated health, subjective health complaints, self-esteem, sense of coherence, adolescence,* in addition to independent searches for specific theories and scales such as *salutogenesis, adolescence* and *Rosenberg Self-Esteem Scale*. The method used for Article II's empirical tests was SPSS version 25.0.

Both articles were written and referenced using the style guidelines described in the Publication Manual of the American Psychological Association (APA, 6th Edition). The articles were written with a possible publication in the *Journal of Adolescence.*

Article I

Adolescents' self-esteem and sense of coherence in relation to self-rated health and subjective health complaints

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Abstract

The aims of the present article are (1) to investigate the theoretical fundament of sense of coherence (SOC) and self-esteem (SE) and (2) to investigate the empirical relationship between SOC, SE and the outcome of self-rated health (SRH) and subjective health complaints (SHC) in adolescents. Adolescence is a life phase filled with opportunities for health and positive development and is a time to flourish into independent individuals. Research show that SE and SOC are important in relation with SRH and SHC, and in reducing stress and tension in individuals' life and further strengthen positive health and health behaviour. Girls are shown to report higher symptom levels of SHC, weaker SOC, lower SE and more negative SRH than boys. Research show that adolescence is an important phase regarding health and compromising behaviours later in life, where both SE and SOC play important roles.

Key words: *adolescence, sense of coherence, self-esteem, self-rated health, subjective health complaints.*

Hall (1904) argued that the youth's character, temperament, emotions and appetites changes during adolescence, where they move into an unrealized world, both in an inner and outer sense. Further, the mind and body changes so rapidly that it reaches a point of overestimation. The word *adolescence* stems from the Latin word *Adolescere'* which means "to grow up" and *adultus* which means "to have grown up" (Graham, 2004), and is a life phase filled with great opportunities for health and positive development, where the determinations for the health later in life is established (Sawyer et al., 2012). During puberty, the adolescent's cognitive development is still in development with new sets of behaviours and capacities, which further empowers the transitions in family, peer, education and health behaviours. White paper 19. (2014-2015) express the importance of how individuals are affected by social determinants, where adolescents' health is affected on several levels; personal, family, community and national (Viner et al., 2012), and the strength of the impact contributes to shape the health later in life.

There has been an increase in mental health problems in adolescents in Norway (Bakken, 2017; Folkehelseinstituttet [FHI], 2018), but the attention towards adolescents and young adults in global health and social policy has been limited. This can be explained by the health services perspective that adolescents have fewer needs, in medical terms, than in early childhood or later in life. This stems from the thoughts about adolescence as a time where the youth are at their healthiest (Patton et al., 2016). It is important to establish a foundation for understanding adolescent health and the role of risks and resources that impact the adolescents' health development. To view health as something more than somatic diseases or illness and switch the mindset in the direction of development and maintenance will improve and better adolescents' well-being and health.

Health has throughout the years been viewed as the absence of disorders and illness, but we have seen a shift towards more focus on resources for health. Studies show that

adolescents with a strong *sense of coherence* (SOC) experience better quality of life (Eriksson & Lindström, 2007), and the strength of SOC is related to the quality of health (Johnson, 2004). Due to the rapid changes mentally, physically and socially during adolescence, the individuals reflect to a greater degree over the self and identity, which can have an impact on self-esteem (SE) and SOC (Rosenberg, 1965). The strength of SOC and SE can influence the individual's overall health, self-rated health (SRH) and subjective health complaints (SHC). Girls show a more negative evaluation of health and report more SHC than boys (Moksnes & Espnes, 2017), which further can impact the health during adolescence and in adulthood. There is limited research on the relation between SOC and SE and the impact on the outcome of SRH and SHC. Therefore, it is important that adolescents' health have a high priority in health services, public health and social policies. An individuals' health is not only important during one specific life phase, but during the whole life span. Some phases are more critical than others, such as adolescence where the grounds for health throughout the life course is under development (Patton et al., 2016). To understand both the opportunities and difficulties during adolescence and the individuals' health potential it will be important to identify how SE and SOC effects health, or how health effects SE and SOC.

Main aims

The aims of the present review of literature are (1) to investigate the theoretical understanding of sense of coherence and self-esteem and (2) to investigate the empirical relationship between sense of coherence, self-esteem and the outcome of self-rated health and subjective health complaints in adolescents.

Search for literature

The method used in this review was a systematic literature search, with the databases; PubMed, WebofScience, PsycInfo and EmBase. The "snowball" method was further used to

detect other, relevant articles in the reference list of other respected articles. The search words used were; *self-rated health, subjective health complaints, self-esteem, sense of coherence, adolescence*. There has also been done independent searches for specific theories and scales such as *salutogenesis*, *adolescence* and *Rosenberg Self-Esteem Scale*. With intention, it has been done refinements in the searching process to locate the most recent and updated research, and there has been a focus to have a balanced view of the different perspectives of health.

Theoretical and Empirical Background

Adolescence

Adolescence is defined as "… the transition phase between childhood and adulthood" (Crone & Dahl, 2012:636). Some say it starts at puberty, usually between the age of 9 and 11 (Crone & Dahl, 2012), and others say it starts at the age of 13. Girls normally start puberty one to two years before boys (Crone & Dahl, 2012), where some transition earlier than what is normal, and some transition into puberty later. There is some disagreement on when adolescence start. This can be explained in a historic view where the expected age for taking up mature social roles has increased. Sawyer et al. (2012) argued that the nature of adolescence today is changing because of the higher age in which young people are expected to take up mature social roles such as; employment, financial independence and formation of life partnerships (Patton et al., 2016). Previously adolescence was seen to end when passing 20 years, and where it today is often seen to continue into the early twenties (Coleman, 2011; Patton et al., 2016).

Adolescence is a period characterized by rapid individual changes both physically, mentally, socially and cognitively, together with increasing demands from, and influences of, peers, school and the wider society. The brain is still in a developmental phase during

adolescence where new sets of behaviours, gender roles and identity are established (Viner et al., 2012) and new skills develop, but is also a time where the social life becomes more complex and differentiated (Coleman, 2011).

Santrock (2008) explained Hall's concept of storm and stress, which refers to adolescence as a turbulent time with conflict and mood swings, where adolescents show unpredictable behaviour, and can switch from being nasty to kind from one moment to the next (Santrock, 2008). This concept is not valid in describing today's adolescents, as Hall understood adolescents' development only as controlled by genetically determined physiological factors and thought of environmental factors as playing a minimal role (Santrock, 2008). Further, Graham (2004) presented that three out of four 13 to 15-year-olds report that they over the past year have never or only occasionally been unhappy, which contradicts the belief that adolescents are moodier or more depressed than young adults.

Health

Health, and especially what is recognized as "good" health, can be difficult to define, and depends on a subjective individual assessment. World Health Organisation [WHO] (2017) defines health as; "… a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." (WHO, 2017). This means that health is not only achieved where one is healthy in medical terms.

Lindström and Eriksson (2005) presented how health according to Antonovsky can be viewed as a continuum, where well-being is seen as positive health and illness as negative health. It shows how individuals always experience some level of illness or well-being, and an important focus is what makes individuals move to either negative or positive health (Coleman, 2011). This continuum is embedded in the understanding of Antonovsky's theory *salutogenesis* (Vinje, Langeland & Bull, 2017), which was presented in 1979, as a counterweight to pathogenesis (Becker, Glascoff & Felts, 2010; Espnes & Smedslund, 2014).

Salutogenesis explains how health is created, and the process of creating, promoting and improving the overall health in people. It is the understanding of the development and maintenance of health (Suominen & Lindström, 2008) where the focus is on optimizing peoples' potential for health (Becker et al., 2010; Lindström & Eriksson, 2015). Antonovsky searched for an answer to what the origins of health was (Lindström & Eriksson, 2015; Vinje et al., 2017), and his answer was explained by *sense of coherence*, which is developed in the relation with the coherence between the individual, the group and the environment (Suominen & Lindström, 2008).

There has been an increase in mental health problems in adolescents (FHI, 2018). Girls tend to internalize problems (Demmer et al., 2015) which can be viewed as sadness, reduced appetite, lack of joy or withdrawal, and others externalize problems which can be viewed as hyperactivity, norm breaking behaviour or impulsiveness (FHI, 2018). Bor, Dean, Najman and Hayatbakhsh (2014) argued that one in five children worldwide experience mental health problems. Bakken's (2017) report on the mental health of adolescents in Norway showed that depressive symptoms and anxiety were the most common problems. The report also presented that it is a negative development in adolescents' mental health, where especially girls show an increase in self-reports of depressive symptoms, but that girls also seek help more often than boys (Bakken, 2017). FHI (2018) reported that the occurrence of depression and mood disorders increases during puberty. Depression during adolescence is a predictive factor for the risk of depression in adulthood, and it is shown to increase, especially among girls, and occurs twice as frequently among girls than boys during adolescence (FHI, 2018).

Self-rated health. SRH can be understood as based on feedback about the individuals state of wellness or illness or the individual's prior beliefs of being a healthy or unhealthy individual (Breidablik, Meland & Lydersen, 2008). Especially in adolescence SRH

does not only include disease or disability, it also refers to a general understanding of self (WHO, 2016). WHO (2016) presented SRH as an independent predictor of future morbidity and mortality. There are also other factors; poor health in early childhood, influences towards adolescents' SRH and wide social contextual factors (e.g. family, peers, school and cultural status). Poor health in early childhood may predict long time negative health, not only throughout adolescence into adulthood but also in influencing the use of health services (WHO, 2016). In addition to varying in age, the SRH can also vary between different situations in life. Breidablik et al. (2008) indicated that SRH is mainly shaped during the individual's childhood and argued that it can be explained by the parental influence, where it is stronger than in older ages.

Studies report that girls seem to evaluate their health more negatively than boys (Breidablik et al., 2008; Moksnes & Espnes, 2017), and especially girls have a more negative evaluation during early adolescence (Breidablik et al., 2008). However, results also show that the sex and age differences, in the multivariate models, become insignificant, indicating that the differences were explained by other variables (Breidablik et al., 2008). Research shows that if SRH is mainly found to be established before adolescence, public health actions directed towards children and families are of great importance (Breidablik et al., 2008).

Subjective health complaints. SHC refer to individual's self-reported complaints and symptoms (Ihlebæk, Eriksen & Ursin, 2002) with or without a defined diagnosis, and is therefore a term referring to "unexplained symptoms" (Eriksen & Ursin, 2004). Symptoms can be experienced as both emotional and physical, where some of the most common complaints are head- and backache and nervousness (Haugland, Wold, Stevenson, Aaroe & Woynarowska, 2001), and are often related to stress (Ravens-Sieberer et al., 2009; Torsheim et al., 2006; Wiklund, Malmgren-Olsson, Öhman, Bergström & Fjellman-Wiklund, 2012).

Hetland, Torsheim and Aarø (2002) and Haugland et al. (2001) presented a perception theory that showed sex differences in how individuals notice, define and react to symptoms. Girls tend to be more sensitive to stress and to develop multiple complaints as a result of psychosocial stressors in the environment than boys. The contexts where children and adolescents live and spend their time is therefore of importance as it affect the development of somatic and psychological complaints (Hetland et al., 2002). The phenomenon of SHC increases in the beginning phase of adolescence and further into adulthood, especially amongst girls and women (FHI, 2018; Haugland et al., 2001; Moksnes & Espnes, 2017). Many adolescents' report SHC and other health concerns, where studies show an increase in reports of SHC, even if it earlier has been low rates of serious medical illness in adolescents (Breidablik et al., 2008). Further, the average score for SHC in adolescence in Norway have remained stable for boys but is increasing amongst girls with a steady increase over time (FHI, 2018).

Self-Esteem

Self-esteem (SE), by Rosenberg's (1965) definition, refers to the individual's overall set of thoughts and feelings about own worth and importance. This understanding of SE is global and not directed towards specific situations or areas. After Rosenberg's study on SE in adolescents in 1965 there has been conducted several studies on SE in adolescence, and SE is shown to vary during the individuals' life span (Santrock, 2008), and change significantly during adolescence (Baldwin & Hoffmann, 2002). Coleman (2011) explained SE as a concept which is multi-dimensional, where individuals can have high SE in some situations and low in others. Robins and Trzesniewski (2005) reported that SE continues to decrease during adolescence, and that body image and problems associated with puberty are some of the reasons for the decrease. Baldwin and Hoffmann (2002) presented differences between sexes,

where girls' SE declines at the age of 13 and boys' around the age of 15. Further, the research showed that the sex differences is equalised when the adolescents reach young adulthood (Baldwin & Hoffmann, 2002).

Adolescents tends to be very concerned with self-image, especially in the years from ages 15 to 18 (Rosenberg, 1965), and during adolescence the attention towards own worth and self-evaluation become more important (Bolognini, Plancherel, Bettschart & Halfon, 1996). Many of the adolescents' concerns and awarenesses comes from all the changes and transitions happening socially and physically. Adolescents often ask themselves questions like; How good am I? What am I like?, which reflect a life phase filled with rapid changes and insecurity (Rosenberg, 1965). SE is dynamic and can change in line with the individuals' expectations and successes. These highs and lows in individual evaluations of the self and SE is mostly during adolescence (Baldwin & Hoffmann, 2002). Individuals can therefore have high SE in one field and lower in others. When a person has high SE, it does not indicate that he considers himself better than, or superior to others. Individuals with low SE, on the other hand, have an absent of respect for the observed self. This implies dissatisfaction and rejection of the self and self-contempt and it is also likely that these individuals wish their self-image were different (Rosenberg, 1965). These different fields and situations can be viewed as domain-specific evaluations, which the self-concept is referring to, and can further have an impact on the individuals' SE as well as global self-evaluations (Santrock, 2008).

Self-esteem and health. Research on the relation between SE and health tend to focus on how low SE impacts and contributes to health and health behaviour later in life. Having low SE does not only affect the individual temporary with emotional discomfort but can develop into problems later in life (Santrock, 2008). Research indicate that low SE during adolescence can be a result of more conflicting self-concept, physical appearance (Santrock, 2008), increase in self-consciousness (Baldwin & Hoffmann, 2002), and more behavioural

problems (Martín-Albo, Núñez, Navarro & Grijalvo, 2007). McGee and Williams (2002) presented that problem eating, suicidal thoughts and health compromising behaviours in adolescents traced back to SE in pre-adolescence. Trzesniewski et al. (2006) longitudinal investigation on individuals from the ages 5 to 26 showed that individuals with low SE in adolescence experienced more mental health problems during adulthood than individuals with high SE. Further, the study indicated that individuals with low SE during adolescence were more likely to develop anxiety disorders and serious depressive disorders later in life (Trzeniewski et al., 2006). Although low SE is viewed as a risk factor for mental illness, especially depression (Orth, Robins, Trzesniewski, Maes & Schmitt, 2009) and anxiety, it is also a cause of different negative outcomes later in life such as; substance use, dissatisfaction with relationship and dissatisfaction with life in general (Boden, Fergusson & Horwood, 2008).

Sense of Coherence

Sense of coherence (SOC) is a concept from the theory of salutogenesis established by Aaron Antonovsky (Lindström & Eriksson, 2015), who viewed SOC as an individual life orientation (Eriksson, 2017) where the individual perceives life as comprehensible, manageable and meaningful (Antonovsky, 1993), the three key dimensions of SOC. An individual's *comprehensibility* is the core of the SOC and refers to how the individuals perceive the stimuli, derived from internal and external environments, that he is confronted with. Secondly, *manageability*, is defined by how individuals perceive that their resources are adequate in facing the stimuli they are exposed to. Thirdly, *meaningfulness* refers to the emotional component in life, and if the individuals feel life makes sense emotionally (Antonovsky, 1987), and is connected to the individuals' motivation (Lindström and Eriksson, 2015). Antonovsky (1993) defined SOC as;

> *… a global orientation that expresses the extent to which one has a pervasive, enduring though dynamic feeling of confidence that (1) the stimuli deriving from one's internal and external environments in the course of living are structured, predictable, and explicable; (2) the resources are available to one to meet the demands posed by these stimuli; and (3) these demands are challenges, worthy of investment and engagement. (Antonovsky, 1993, p. 725)*

The life orientation SOC is a way of seeing individuals' *general resistance resources* (GRRs), which helps the individual to cope with complex stressors confronted with in everyday life (Antonovsky, 1993). It is also a way of seeing individuals' ability to identify these resources (Eriksson, 2017), which is a necessity in the development of SOC. GRRs can be internal and external resources within the individuals close and distant environment that is helpful in coping with stressors, resolve tension and strengthening SOC. Garcia-Moya, Rivera and Moreno (2013) suggested that closely related context in which adolescents' lives take place play an important role in the development of SOC. SOC is a tool to show how people view life and the capacity to respond to stressful situations (Eriksson, 2017), and explain why some people break down and fall ill under stress, and some do not (Geyer, 1997). Having a strong SOC contributes to perceiving life as comprehensive, manageable and meaningful, and further reduce tension (Souminen & Lindström, 2008).

There are disagreements considering the time span individuals develops SOC. Research show that SOC is always in development during individuals' life and increases with age, which contradicts Antonovsky in his argument that SOC develops until the age of 30 and remains relatively stable until retirement and then decrease. There are also disagreements in research on SOC and adolescents, where some state that SOC should be strengthened during adolescence, and others state that it varies because of developmental changes, transitions and challenges (Eriksson & Mittelmark, 2017).

Sense of coherence and health. Research investigating adolescence and SOC has focused on SOC as a predictor or moderator for mental health, health promoting behaviours and health outcomes (Moksnes, Rannestad, Byrne & Espnes, 2011; Switaj, et al., 2017), with results proving SOC can be considered as a resilient factor. Strong SOC contributes to reduce stress and decrease internalizing and/or externalizing problems (Braun-Lewensohn, Idan, Lindström & Margalit, 2016). Moksnes and Lazarewicz (2016) cross-sectional study on the role of sex and age differences in adolescents aged 13 to 18 years showed that boys scored higher on SE, SOC and subjective health than girls, and that girls scored higher than boys on SHC and stress. Braun-Lewensohn et al., (2016) refers to chronic states of stress, which showed that adolescents experiencing this state had a weaker SOC that was stable over time. Kivimäki, Feldt, Vahtera and Nurmi (2000) reported that individuals with a strong SOC tend to perceive demands as challenges, worthy of engagement, rather than as threats or stressors.

Antonovsky (1987) argued that SOC does not remove stress but can contribute to reducing the probability of tension evolving into stress. On this basis, individuals with a strong SOC will strive for health promoting behaviours unlike individuals with a weak SOC (Antonovsky, 1987). Individuals with a strong SOC are viewed as more competent regarding health choices and the identification and use of GRRs, which contributes to understanding situations as comprehensible, manageable and meaningful, and have greater opportunities in coping which further impacts the health. In addition to reducing tension, a strong SOC also prevent anxiety, depression, hopelessness and burnout, and is therefore strongly and positively associated with optimism, control, capability and robustness, indicating less mental health problems and illnesses (Eriksson & Lindström, 2006). Garcia-Moya et al. (2013) investigated the role of school variables and SOC in the explanation of health in adolescents from Spain, aged 13 to 18 years. The results showed that SOC had the largest effect on health,

and that SOC seemed to affect the adolescents' perception of the stressors related to the school and further had a double impact on health.

Eriksson and Lindström's (2006) review of cross-sectional studies on Finnish, Swedish, English, French and Canadian students, employees, health social workers, patients with rheumatic disease or depressive disorders and immigrants showed that it was an indirect or direct relation between positive evaluation of SRH and strong SOC, where a strong SOC correlated with low levels of SHC and symptoms of illness. Moksnes et al.'s (2011) research on the association between stress, SOC and subjective health in adolescents, with attention directed on SOC as a potential moderator showed that promoting salutogenic factors had positive implications on the adolescents' subjective health. Moksnes and Espnes' (2017) cross-sectional study on stress, SOC and subjective health in adolescents aged 13 to 18 years in Norway showed that SOC is a relevant resource for adolescents' perception of SHC and SRH, and that positive mental health and subjective well-being is associated with a strong SOC. Moksnes et al.'s (2011) and Moksnes and Espnes' (2017) research indicated that the strength of the individuals' SOC had an impact on the SHC and the SRH.

Discussion

The aims of this review of literature were to investigate the theoretical understanding of sense of coherence (SOC) and self-esteem (SE), and to investigate the empirical relationship between SOC, SE and the outcome of self-rated health (SRH) and subjective health complaints (SHC) in adolescents.

Adolescence in a historical perspective has shifted from being viewed as a period of storm and stress (Hall, 1904) to focusing on individual differences (Santrock, 2008). It is a demanding phase with multiple challenges, where individuals have an opportunity to establish

a healthy ground for physical, mental and social health. In order to establish and develop a good foundation for SE and SOC in adolescence it is important to have stable relations, settings, GRRs and being able to identify and use them. For the family, society and policies to provide support, it is important to identify and understand the youth based on the present understanding of adolescents as a period recognized with individual variability and heterogeneity, unlike Hall's (1904) perspective of storm and stress. There has been reported an increase of mental health symptoms and illness from the start of puberty, where depression and anxiety stand out as the most common mental health problems (Bakken, 2017; FHI, 2018).

Self-Esteem and Health

Self-esteem (SE) is an abstract issue during adolescence and Coleman (2011) argued that SE is multi-dimensional, as it may vary from situation to situation. Trzesniewski et al. (2006) viewed SE as a biproduct of socially significant outcomes, that it is based on life events, and related to different contexts. Girls tend to report a higher SE in areas such as school, relationships and behaviour, and boys report higher SE in athletic areas (McGee & Williams, 2000). Boys report an overall higher SE than girls (Graham, 2004), where it is argued that boys are more optimistic and well-adjusted, and girls having a more realistic view of themselves (Graham, 2004). Another explanation may be the changes in early adolescence where the attention towards own worth and self-evaluation become more important and prominent (Bolognini et al., 1996).

Low SE, depression and suicidal ideas is found to increase during the early years of adolescence and then remain stable from the age of 14 and through the rest of young adulthood and middle age (Graham, 2004; Santrock, 2008). Depression can be impacted by an individual's low SE, but an individual's low SE can also result in a misinterpretation of the

external signals where others assume the individual is depressed without being so (Rosenberg, 1965).

Geyer (1997) presented that individuals with high SE have advantages in that they are more able to make realistic judgements of opportunities, to set appropriate goals and to perform successfully. Graham (2004) on the other hand argued that girls have lower SE due to the realistic view of themselves but also a more negative self-perception. Geyer (1997) further argued that if an individuals' high SE is threatened, it can lead to the individuals setting unrealistic goals and further exceeding own capabilities beyond what is manageable. In such situations individuals with low SE choose another route and tend to choose protective coping strategies (Geyer, 1997). Individuals with low SE can become less resistant to challenges where girls are more vulnerable than boys. Girls also tend to internalize problems (Demmer et al., 2015), which can contribute to the level of SE, the increase of SHC and the negative evaluation of SRH. This tendency can contribute to the sex differences where girls stand out in having lower SE, report more SHC and more negative SRH than boys. Low SE can result in experiences of lower confidence, lower trust in own worth and capabilities and can further result in challenges in individuals' abilities to identify and use GRRs (Moksnes & Lazarewizc, 2016). Further, it can potentially impact the experience of mastery where individuals with low SE tend to have lower assessments of own mastering. Poorer mastering can have an impact on stress and strain, and it is shown that SHC often are related to stress experience (Moksnes & Espnes, 2017). In periods with an increase of stressful life events, research show that adolescents' SE decreases (Baldwin & Hoffmann, 2002). These stressful events can have an impact on other health areas and can result in individuals experiencing anger, frustration, nervousness, more deviant activities, depression and anxiety (Baldwin & Hoffmann, 2002).

Research show an increase in mental illness, where SE is one important risk factor for developing mental illnesses or adverse health behaviour later in life (Orth et al., 2009; Santrock, 2008; Trzeniewski et al., 2006). Low SE is in addition a cause of different outcomes in adulthood, such as substance use, dissatisfaction with relationships and dissatisfaction with life in general (Boden et al., 2008). These negative outcomes can impact the mental, physical and social health. On the other hand, individuals with high SE, may have more coping resources, and be better equipped to make good decisions and strengthen the mental, physical and social health. Individuals' health behaviours can be impacted by being less resistant to challenges and having low SE, and some problems (e.g. problem eating, suicidal thoughts) and health compromising behaviours in adolescence can be traced back to SE in pre-adolescence (McGee and Williams, 2002). Further, low SE in adolescence predicted a higher level of health compromising behaviour later in life (McGee & Williams, 2000).

Sense of Coherence and Health

Moksnes and Espnes (2017) showed that girls especially had a positive association between a strong SOC and positive SRH, and negative associations between strong SOC and SHC. There are some sex differences, where boys have a more positive evaluation of health than girls, and girls report more SHC than boys (Moksnes & Espnes, 2017). Moksnes and Espnes (2017) reported that girls' relation between SOC, SRH and SHC was especially strong, and findings showed that age was not significant in association with SHC or SRH when controlled for other variables. Moksnes and Lazarewicz (2016) showed that boys reported a stronger SOC than girls, and that age had significant main effects on SOC. The youngest group of participants, 13 to 14 years old, reported a stronger SOC than the older adolescents (Moksnes & Lazarewicz, 2016). A potential explanation may be the maturity level, where older adolescents faces more significant changes and difficult choices which can

contribute to a more realistic understanding on health and feeling and understanding of situations.

Research argue that there is an association between a strong SOC and positive mental health and subjective well-being, and further that SOC and mental health correlates with anxiety and depression (Braun-Lewensohn et al., 2016; Eriksson & Lindström, 2006), and that there is an indirect or direct relation between positive evaluation of SRH and strong SOC (Eriksson and Lindström, 2006). Eriksson and Linström (2006) showed that a strong SOC correlated with low levels of SHC and symptoms of illness and that the relation between SOC and positive health was especially prominent among individuals with strong SOC. Further, the association between SOC and level of mental and physical health differed, where the association between SOC and physical health was found to be weaker than the association between SOC and mental health.

Eriksson and Mittelmark (2017) reported that strong SOC was related to a more positive evaluation of SRH and weak SOC was related to more use of medication. Adolescents with strong SOC report a healthier life style, a better quality of life and well-being (Eriksson & Mittelmark, 2017). A strong SOC promotes perceiving demands as challenges, worthy of engagement, rather than as threats or stressors (Kivimäki et al., 2000) promoting a better management of challenges that individuals face in everyday life and a better use of GRRs. Further, strengthening the potential for better health and health behaviour. Johnson (2004) showed that SOC is of importance for good health, which supports Moksnes and Espnes' (2017) study. SOC is not only found to be related to health, but also found to partly explain health, and is then an important resource for health. It is therefore important to view the separations between SOC and health, that SOC is not the same as health, but that it is an important disposition for the development and maintenance of health (Eriksson & Lindström, 2006).

Eriksson and Mittelmark (2017), Garcia-Moya et al. (2013) and Patton et al. (2016) argued that SOC is established and in a developing stage during adolescence and can have an impact on the individuals' health later in life. SOC is therefore of importance in establishing and maintaining a stable mental and physical health both during adolescence and later in life. Eriksson and Lindström (2006) showed the relevance of a strong SOC in early adult life and later into adulthood and employment, where it was argued that the relation between health and SOC was the same in children and young people as in the adult population.

SOC is related to positive health behaviour (Lindström & Eriksson, 2015) and also a resource that influences the aetiology of, and recovery from, disease through effective coping. Coping mechanisms such as; eat healthier, quit smoking and quit excessive drinking are examples of avoidance of habits that harm the individual's health, which are mechanisms related to positive health behaviour (Lindström & Eriksson, 2015). Other coping mechanisms are directed towards lessening the severity of the illness and are for example; seeking early treatment and agreements with health professionals. SOC is not only a resource for physical disease or issues but can also be a resource in relation to stress and for health in general. By decreasing the likelihood of perceiving the social environment as stressful, it lowers the risk of damaging effects of chronic stress (Antonovsky, 1987).

The Relation Between Sense of Coherence and Self-esteem

Moksnes and Lazarewicz (2016) found that SE was a potential GRR in association with SOC in adolescents, when controlled for relevant covariates, and argued that the strength of the relationship between SOC and SE did not differ substantially between sexes or across age groups. The level of SE may be related to the strength of SOC, where individuals with low SE are more likely to find it challenging to identify and use GRRs, which may weaken the SOC. On the other hand, individuals with high SE may be more likely to seek and receive

more social support and in a better sense identify and use GRRs which contributes to strengthen the SOC (Moksnes & Lazarewizc, 2016). Johnson's (2004) research supports that high SE predicts a strong SOC, which can indicate that girls have weaker SOC than boys, based on the SE level. This can be explained by girls being more likely to internalize problems (Demmer et al., 2015), where the normal behaviour is to withdraw from situations and loose the sense of joy (FHI, 2018). Further, there are differences between the sexes in response to stress, where girls are more likely to contemplate, eat more and decrease physical activity and boys are more likely to participate in activities and become more aggressive (Demmer et al., 2015).

Conclusion

The main aims of the present review of literature were to investigate the theoretical understanding of SOC and SE, and to investigate the empirical relationship between SOC, SE and the outcome of SRH and SHC.

Studies show that there are some age and sex differences in relation to health. Girls tend to evaluate their health more negatively than boys and report more SHC. The level of SE can affect adolescents SRH and SHC due to the of the impact on the belief in own mastery and abilities, which further impacts the health behaviour and the identification and usage of GRRs. Individuals with high SE are more likely to seek and receive more social support and further identify and use other GRRs which contributes to strengthen the SOC (Moksnes & Lazarewizc, 2016). A strong SOC indicates a better ability to identify and use the GRRs and is shown to be related to positive mental health and well-being (Lindström & Eriksson, 2015; Moksnes et al, 2011) and work as a resilient factor for health promoting behaviours (Switaj et al., 2017).

Research investigating the relation between SOC and SE and the outcome of SRH and SHC in adolescence are limited. For future research it would therefore be interesting to investigate the relation between SOC and SE and the outcome of SRH and SHC, due to the importance of both SOC and SE during adolescence in establishing and developing a strong ground for health and health behaviour later in life.

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Article II

The impact of self-esteem and sense of coherence on adolescents' self-rated health and subjective health complaints

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Abstract

The present cross-sectional study investigated the relation between sense of coherence (SOC) and self-esteem (SE) and the outcome of self-rated health (SRH) and subjective health complaints (SHC) in adolescents. The study was based on responses from 1233 adolescents aged 13 to 19 years. The initial results showed that girls, interestingly, had a more positive evaluation of SRH than boys but reported higher symptom levels of SHC, lower SE and weaker SOC than boys. Results from the hierarchical multiple regression analysis showed significant positive relations between SRH and the independent variables SOC and SE, significant negative relation between SHC and SOC, and significant negative relations between emotional SHC and the independent variables SOC and SE. The results support that both SOC and SE had relations to the outcome of SRH and SHC, further the results support the importance of SE and SOC, and the relation with SRH and SHC in adolescents' health. No causal conclusion was possible, but the results can be viewed as a basis for future research on the relation between SE and SOC and the outcome of SRH and SHC.

Keywords: *adolescence, sense of coherence, self-esteem, self-rated health, subjective health complaints.*

Adolescence is a life phase filled with positive development and opportunities for good health (Sawyer et al., 2012) where individuals develops into adults and is defined as "… the transition phase between childhood and adulthood" (Crone & Dahl, 2012:636). The transition includes physical, mental, cognitive and social developments. The view of adolescence has shifted from a traditional view of storm and stress (Santrock, 2008) to understanding adolescence as a phase of individuality and positive development. Some argue that adolescence starts at puberty, between the age of 9 and 11, while others argue that it does not start until the age of 13, where girls usually transition 1 to 2 years earlier than boys (Crone & Dahl, 2012). Adolescence was previously viewed as a phase ending at the age of 20 but is now viewed as a phase continuing into the early twenties (Coleman, 2011; Patton et al., 2016). Sawyer et al. (2012) explained that youth achieve mature social roles at an older age than earlier, which has led to the age increase in the explanation of adolescence.

Adolescence is an important phase in establishing health, which has impact on the health later in life. According to World Health Organisation [WHO], health is defined as; "… a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity." (WHO, 2017). This indicates that good health is not only achieved by being healthy in a medical view, but also by viewing health in a salutogenic view. *Salutogenesis* is the counterweight to pathogenesis (Becker, Glascoff & Felts, 2010; Espnes & Smedslund, 2014), and explains how health is created, and how the overall health in individuals can be promoted and improved. In this sense, salutogenesis focuses on how to develop and maintain health (Suominen & Lindström, 2008).

Bor, Dean, Najman & Hayatbakhsh (2014) argued that there has been an increase in mental health problems in adolescents and that one in five children worldwide experience mental health problems, where some of the prominent problem areas are psychosocial problems, depressive disorders and suicidality. Bor et al. (2014) arguments are supported by

Bakken's (2017) report on the mental health of adolescents in Norway, where depressive symptoms and anxiety were the most common problem areas. Sex differences were evident, where girls have had an increase in self-reports of depressive symptoms compared to boys, but that girls also seek more help (Bakken, 2017). Studies also show an increase in reports of subjective health complaints (SHC) (Breidablik, Melan & Lydersen, 2008), correlating with age, especially among girls (Moksnes & Espnes, 2017). SHC are understood as self-reported complaints without objective findings (Ihlebæk, Eriksen & Ursin, 2002), but it does not invalidate the individuals' complaints because it emphasizes personal experiences of symptoms with or without a defined diagnosis. Especially in adolescence, individuals' self-rated health (SRH) is a general subjective understanding of health (WHO, 2016). Breidablik et al. (2008) indicated that SRH is mainly shaped during the childhood and impacts how adolescents perceive their health. Research indicate that personal factors such as self-esteem (SE) and sense of coherence (SOC) has relations to the outcome of individuals' health (Breidablik et al., 2008; Moksnes & Espnes, 2017; Moksnes & Lazarewizc, 2016; Trzeniewski et al., 2006; Orth, Robins, Trzesniewski, Maes & Schmitt, 2009).

Rosenberg (1965) defined SE as an individual's set of thoughts and feelings about own worth and importance, and SE changes and varies during an individual's life span (Santrock, 2008). Research show that SE changes significantly during adolescence (Baldwin & Hoffmann, 2002). Robins and Trzesniewski (2005) presented results from individual studies which showed that SE decreases during adolescence, and that it can be related to body image and problems associated with puberty. Girls seem to experience a decrease in SE at the age of 13 and boys around the age of 15 (Baldwin & Hoffmann, 2002). Baldwin and Hoffmann (2002) reported, unlike Robins and Trzesniewski (2005), that individuals experience an increase in SE during adolescence, and further that girls maintain a SE which is lower than boys'.

Sense of coherence (SOC) is a concept in Antonovsky's theory of salutogenesis (Lindström & Eriksson, 2015), and is viewed as an individual life orientation (Eriksson, 2017), based on three key dimensions; *comprehensibility, manageability, meaningfulness*. Further, SOC is a way of seeing individuals' *general resistance resources* (GRRs), which are resources helping individuals to cope with complex stressors (Antonovsky, 1993). The SOC-concept is a tool used to show how people view life where the individuals' capacity to respond to stressful situations is central (Eriksson, 2017), and helps to explain the difference between individuals who break down and fall ill under stressful stimuli, and individuals who manage to stay healthy (Geyer, 1997). A strong SOC contributes to perceiving life as comprehensive, manageable and meaningful and reducing tension in life (Souminen & Lindström, 2008).

The differences between SE and SOC is that SE is based on the individuals experience of own self (Rosenberg, 1965), and SOC is a life orientation (Eriksson, 2017) where the experiences reflects what is happening in the environments surrounding the individuals. Girls seem to have a more negative evaluation of their health than boys, but boys report a stronger SOC than girls (Breidablik et al., 2008; Moksnes & Espnes, 2017; Moksnes & Lazarewizc, 2016). Further, girls show a stronger relation between SOC, SRH and SHC than boys (Moksnes & Espnes, 2017). The strength of SOC and SE impacts the individuals' SRH and SHC. A strong SOC decreases the likelihood of perceiving the environment as stressful and contributes to coping with difficult situations (Antonovsky, 1987), and is a resource in coping and mastering. High SE contributes a higher assessment of one's own mastering and prevent experiences of stress and strain, which is shown to be related to SHC (Moksnes & Espnes, 2017), but high SE can also be a product of the individual evaluation of own worth and importance (Rosenberg, 1965), and therefore not only influenced by external impact or feedback.

Main aims

The aims of the present article are to (1) investigate the distribution and significant means of sex on subjective health complaints, self-rated health, self-esteem and sense of coherence, and to (2) investigate the relationship between sense of coherence, self-esteem and the outcome of self-rated health and subjective health complaints, controlled for age, sex, socioeconomic status and stress.

Method

Participants

The data material used for the analyses was extracted from the survey "Oppvekst i bygder" from 2016, which is a cross-sectional study among adolescents from five rural municipalities in Sør-Trøndelag, Norway, conducted every fifth year since 1996. The questionnaire was sent out to 1906 pupils based on the sizes of 12 lower and upper secondary schools in the rural areas, where 67 % (1282) answered the questionnaire. The analyses was undertaken for 580 girls (47,3 %) and 644 boys (52,7 %) (missing = 9) showing an equal proportion of both sexes. The participants (N=1233) included in the present study were adolescents between the ages 13 and 19 years (49 excluded), which is the most common age group in Norwegian lower and upper secondary schools.

The mean age of the sample (N=1233) was 16 years (SD ± 1.6), with an equal variance. Further the t-test showed no significant age differences, where the mean age for both girls (SD ± 1.6), and for boys (SD ± 1.6) was 16 years (p = .163). Univariate analyses on socioeconomic status and stress showed diversification in terms of family economy, where 29.6 % reported bad economy and 48.3 % reported having mostly good economy or good economy all the time. The participants reported that 59.4 % had parents with an education from college/university up to 4 years or more than 4 years and only 2.7 % of the participants'

parents had only completed an education of lower secondary school. Almost every single adolescent (92.7 %) had parents in part-time or full-time employment. The mean score on stress was 1.9 (SD ± 0.71), which leans towards an understanding of the adolescents' experience as a bit stressful.

Procedure

The survey "Oppvekst i bygder", and the present study has been approved by Norwegian Social Science Data Service (NSD) and Regional Committees for Medical and Health Research Ethics (REK) (approval number 2016/1165). Written information about the study, anonymity, non-traceability and confidentiality was given in advance to all pupils in the lower and upper secondary schools. It was voluntary to contribute in the study, and participants were free to withdraw until the questionnaire was delivered. Adolescents aged 16 or older gave consent by answering the questionnaire, but for the adolescents younger than the age of 16 it was, according to research ethical guidelines, required parental written consent. With help from teachers, the questionnaire administration was conducted in whole class groups during a regular school session of 45 minutes.

Measurements

Self-rated health (SRH) was measured by the single item 'How has your health been the last year?', with five values; (1) *very bad*, (2) *bad*, (3) *neither good or bad*, (4) *good* and (5) *very good*. A high response value indicated more positive SRH the last year. The item is a valid and reliable measure of individuals' own perspective of their health status (Burström & Fredlund, 2001; Jylhä, 2009; Lundberg & Manderbacka, 1996) as it provides an accurate self-perception of the individuals' overall health status (Fylkesnes & Førde, 1991; Lundberg & Manderbacka, 1996).

Subjective health complaints (SHC) were measured by a scale consisting of 12 items. The items consisted of both physical and emotional symptoms, and all items were related to the question 'Have you experienced some of these problems during the last four weeks?'. Each item was valued; (1) *not bothered*, (2) *a bit bothered*, (3) *quite bothered*, (4) *very bothered*, including a fifth value 'not applicable'. 'Colds or flue' is an example of an item measuring physical health, and 'Felt lonely' an example of an item measuring mental health. The first scale with all the 12 items measuring SHC had a satisfactory internal consistency (Chronbach's α coefficient) (α = .86). All 12 items had factor loadings over 0.44; KMO showing 0.89, $p < 0.001$, and loaded on two components, emotional and physical symptoms. The item 'Abdominal pain/stomach ache' loaded on both components and was therefore excluded. The first component referring to emotional symptoms with six items had factor loadings which were appropriate for further analysis. The internal consistency was acceptable (α = .81). The six items were transformed into the second scale, *Emotional symptoms*. The second component referring to physical symptoms with five items had factor loadings within the accepted values. Further, the internal consistency was acceptable (α = .76) except two items (α = 0.68, 0.67). Due to the small deviation from the lower limit for satisfactory reliability (α = .70) (Ringdal, 2014), the two items were included further. The five items were transformed into the third scale, *Physical symptoms*.

Self-esteem (SE) was measured using Rosenberg Self-Esteem scale which assess global SE as an important dimension included in the self-construct and is developed from a phenomenological conception of SE (Martín-Albo et al., 2007). The scale consisted of ten items valued (1) *strongly disagree*, (2) *disagree*, (3) *agree* and (4) *strongly agree* and is found to be reliable and valid for measuring children and adolescents' SE (Martín-Albo et al., 2007; Orth et al., 2009; Robins, Hendin & Trezsniewski, 2001). The scale capture both positive and

negative attitudes of the individual's evaluation of self-worth and had an internal consistency within the accepted values (α = .90).

Sense of coherence (SOC) was measured using the short form of the Orientation of Life Scale, SOC-13, containing 13 items (Pallant & Lae, 2002). All items had values ranging from 1 (negative) to 7 (positive), where higher score indicated stronger SOC. Because of the close connection between the dimensions comprehensibility, manageability and meaningfulness it is assumed that the scale SOC-13 measures one factor, where the three dimensions are included (Lindström & Eriksson, 2005). The SOC-13 scale is shown to be a multidimensional construct where the predictive validity is seen to be relatively good, but the consensual validity is somewhat weak (Eriksson & Mittelmark, 2017). The scale has also been criticized of being unable to measure health in physical terms (Eriksson & Mittelmark, 2017). The internal consistency was acceptable (α = .86).

The *demographics* included in the present study was age, sex and socioeconomic status. The socioeconomic status was measured by three items; *Parental education* valued (1) *lower secondary school*, (2) *upper secondary school*, (3) *college/university up to 4 years* to (4) *college/university more than 4 years*. *Parental job status* valued (1) *in employment* and (2) *non-employed*. *Family economy* valued (1) *we have bad economy all the time*, (2) *we have mostly bad economy*, (3) *we have neither had bad or good economy*, (4) *we mostly have good economy* to (5) *we have had good economy all the time.*

Stress was included as a co-variate in the hierarchical regression analyses because of its known relation to SHC and SRH (Moksnes & Espnes, 2017), and was measured using the Norwegian version of the Adolescent Stress Questionnaire (ASQ-N). ASQ-N contained 30 items valued (1) *not stressful* (2) *a bit stressful*, (3) *moderately stressful*, (4) *quite stressful* to (5) *very stressful* and had a strong internal consistency (α = .94). Moksnes and Espnes (2011) indicated that the 30-item scale including seven factors is a valid instrument in measuring

stressor experience, where the stress dimensions are related to measuring emotional distress and self-perceptions.

Statistical Analysis

The analyses in the present study were conducted using SPSS, version 25.0. Descriptive statistics of frequencies, including percentages, means and standard deviation were calculated for all the variables included. An independent samples-t-test was conducted to investigate if there were any significant sex mean differences in the included scales. Bivariate correlations between the variables age, parental education, family economy, stress, SRH, SHC, $SHC_{Emotional}$, $SHC_{Physical}$, SE and SOC were tested using Pearson's product-moment correlation. Hierarchical multiple regression was conducted to investigate the relations between sex, age, family economy, stress, SE and SOC, and the outcome of SRH and SHC. In addition to investigating the contribution on SHC as one complete scale, it was conducted regression analyses on both emotional and physical SHC. Parental education and job status were excluded from the regression analyses after showing no significant bivariate relation to either of the dependent variables. The independent variables were included in four steps in the four regression models investigated: (1) sex and age; (2) family economy; (3) stress; and (4) SE and SOC. Statistical significance was defined by $p \leq 0.05$. To ensure that most of the selection was included in the analyses it was conducted using pairwise deletion.

Results

Descriptive Analysis

Table 1 shows descriptive statistics from the independent sample-t-test on sex, SRH, SHC, $SHC_{Emotional}$, $SHC_{Physical}$, SE and SOC. The results were significant on all domains and showed that the adolescents had relatively high means on SRH, SE and SOC, and relatively low means on both SHC, emotional and physical SHC. Girls reported higher SRH than boys, but girls had higher symptom levels of SHC, emotional and physical SHC. Further, boys reported significantly higher SE and stronger SOC than girls.

Table 1

Bivariate Analysis of the Variables with Means and Standard Deviation.

	N	*Range*	*M (SD)*	*Girls (SD)*	*Boys (SD)*	*t-value*
SRH	1204	1 - 5	3.3 (1.7)	3.5 (1.9)	3.1 (1.4)	3.420***
SHC	757	1 - 5	1.9 (0.7)	1.9 (0.6)	1.7 (0.8)	4.892***
$SHC_{Emotional}$	755	1 - 5	2.0 (0.8)	2.1 (0.7)	1.8 (0.8)	4.741***
$SHC_{Physical}$	756	1 - 5	1.7 (0.8)	1.8 (0.8)	1.6 (0.8)	3.438***
SE	717	1 - 4	3.0 (0.6)	2.8 (0.6)	3.1 (0.5)	-7.761***
SOC	714	1 - 7	4.8 (1.0)	4.5 (1.0)	5.0 (1.0)	-6.643***

Note. ***$p \leq 0.001$

Correlation Analysis

Table 2 shows the relation between age, parental education, family economy, SRH, SHC, $SHC_{Emotional}$, $SHC_{Physical}$, stress, SE and SOC which was investigated using Pearson product-moment correlation coefficient.

SRH had a significant moderate positive correlation with both SE and SOC, and weak negative correlation with parental education, and significant weak negative correlation with family economy, SHC, emotional and physical SHC and stress. Further, stress had significant weak positive correlation with SHC, emotional and physical SHC, significant weak negative correlation with family economy and significant moderate negative correlation with SE and SOC. Both SE and SOC had significant moderate negative correlation with emotional SHC

and significant weak negative correlation with physical SHC. The correlation between SE and SOC was significantly strong.

Table 2

Correlation Analysis with Presentation of Pearsons R (r) for Each Variable.

	Age	*Edu.*	*Eco*	*SRH*	*SHC*	*SHC_E*	*SHC_P*	*Stress*	*SE*	*SOC*
Age		-0.06	-0.19**	-0.20**	0.10**	0.12**	0.05	0.13**	-0.09*	-0.12**
Edu.			-0.05	-0.01	-0.09	-0.09	-0.05	-0.10	0.17**	0.15**
Econ				0.53**	-0.14**	-0.18**	-0.06	-0.09*	0.25**	0.26**
SRH					-0.25**	-0.26**	-0.18**	-0.17**	0.37**	0.38**
SHC						0.90**	0.87**	0.32**	-0.32**	-0.38**
SHC_E							0.57**	0.35**	-0.39**	-0.46**
SHC_P								0.20**	-0.15**	-0.19**
Stress									-0.40**	-0.50**
SE										0.70**
SOC										

*Note. *p≤ 0.05; **p≤0.01. Edu.= Parental education, Econ.= Family economy, SHC_E= Subjective health complaints$_{Emotional}$, SHC_P= Subjective health complaints$_{Physical}$.*

Hierarchical Multiple Regression Analysis for Variables

Table 3 presents the results of the hierarchical multiple regression analyses investigating the relation between sex, age, family economy, stress, SE, SOC and the dependent variables SHC and SRH.

The relevant results from step 4 showed that sex had a significant negative relation with both SHC (β=-0.07) and SRH (β=-0.16), and age a non-significant positive relation with SHC (β=0.04) and a significant negative relation with SRH (β=-0.08). Family economy had a non-significant negative relation with SHC (β=-0.05) and a significant positive relation with SRH (β=0.42). Stress had significant positive relation with SHC (β=0.17), but a non-significant no relation with SRH when controlled for all other variables. SOC was significantly negatively related with SHC (β=-0.21) and significantly positively related with SRH (β=0.16) controlled for sex, age, family economy and stress. The relation between SE and SHC was non-significantly negatively related (β=-0.06) and significantly positively related with SRH (β=0.21) when controlled for all other variables.

Table 3

Summary of the Hierarchical Multiple Regression Analysis for Variables Associated with SHC and SRH.

Step		Subjective Health Complaints					Self-rated Health				
		B	*SE(B)*	*β*	*F*	R^2	*B*	*SE(B)*	*β*	*F*	R^2
	Constant	2.33	0.32				0.20	0.65			
1	Sex	-0.26	0.05	-0.18***	15.60***	0.04	-0.30	0.12	-0.09*	17.63***	0.05
	Age	0.05	0.02	0.11**			-0.02	0.04	-0.20***		
2	Sex	-0.27	0.05	-0.19***	14.93***	0.06	-0.19	0.11	-0.06	98.34***	0.30
	Age	0.04	0.02	0.08*			-0.10	0.03	-0.10**		
	Econ.	-0.07	0.02	-0.14***			0.65	0.04	0.51***		
3	Sex	-0.17	0.05	-0.12**	26.63***	0.13	-0.30	0.11	-0.09**	79.54***	0.31
	Age	0.02	0.02	0.05			-0.09	0.03	-0.08*		
	Econ.	-0.06	0.02	-0.11**			0.63	0.04	0.50***		
	Stress	0.28	0.04	0.28***			-0.31	0.08	-0.13***		
4	Sex	-0.10	0.05	-0.07*	25.27***	0.18	-0.53	0.11	-0.16***	72.78***	0.38
	Age	0.02	0.02	0.04			-0.08	0.03	-0.08*		
	Econ.	-0.03	0.02	-0.05			0.53	0.04	0.42***		
	Stress	0.16	0.04	0.17***			-0.00	0.08	-0.00		
	SE	-0.08	0.06	-0.07			0.57	0.12	0.20***		
	SOC	-0.15	0.04	-0.21***			0.26	0.07	0.16***		

*Note. *p≤0.05; **p≤0.01; ***p≤0.001. Sex: value O, girls; value 1, boys. Econ. = family economy.*

Table 4 presents the result of the hierarchical multiple regression analyses investigating the relation between sex, age, family economy, stress, SE, SOC and the dependent variables $SHC_{Emotioanl}$ and $SHC_{Physical}$.

The results from step 4 showed sex had non-significant negative relation with both emotional (β=-0.05) and physical (β =-0.07) SHC, and age had non-significant positive relation with emotional (β=0.05) and physical (β=0.02) SHC. Family economy had non-significant negative relation with emotional (β=-0.06) and physical (β=-0.02) SHC. Stress had significant positive relation with emotional SHC (β=0.15) and significant positive relation with physical SHC (β=0.13). SE was significantly negatively related with emotional SHC (β=0.11) and had no significant relation (β=0.00) with physical SHC. SOC was significantly negatively related with emotional SHC (β=-0.27) and non-significantly negatively related with physical SHC (β=-0.10) controlled for sex, age, family economy and stress.

Table 4

Summary of the Hierarchical Multiple Regression Analysis for Variables Associated with $SHC_{Emotional}$ and $SHC_{Physical}$.

Step		Subjective health complaints$_{Emotional}$					Subjective health complaints$_{Physical}$				
		B	*SE(B)*	*β*	*F*	R^2	*B*	*SE(B)*	*β*	*F*	R^2
	Constant	2.81	0.33				1.75	0.39			
1	Sex	-0.27	0.06	-0.18***	17.01***	0.05	-0.21	0.06	-0.13***	6.80***	0.02
	Age	0.06	0.02	0.13***			0.03	0.02	0.06		
2	Sex	-0.29	0.06	-0.19***	19.07***	0.08	-0.22	0.06	-0.13***	5.36***	0.02
	Age	0.05	0.02	0.10**			0.03	0.02	0.05		
	Econ.	-0.10	0.02	-0.17***			-0.04	0.02	-0.06		
3	Sex	-0.18	0.06	-0.11**	33.61***	0.16	-0.14	0.06	-0.09*	9.47***	0.05
	Age	0.03	0.02	0.06			0.01	0.02	0.03		
	Eco.	-0.09	0.02	-0.15***			-0.03	0.02	-0.05		
	Stress	0.33	0.04	0.31***			0.20	0.04	0.18***		
4	Sex	-0.07	0.05	-0.05	37.61***	0.24	-0.12	0.06	-0.07	7.24***	0.06
	Age	0.03	0.02	0.05			0.01	0.02	0.02		
	Econ.	-0.04	0.02	-0.06			-0.01	0.03	-0.02		
	Stress	0.17	0.04	0.15***			0.15	0.05	0.13**		
	SE	-0.15	0.06	-0.11*			-0.00	0.07	-0.00		
	SOC	-0.21	0.04	-0.27***			-0.08	0.05	-0.10		

*Note. *p≤0.05; **p≤0.01; ***p≤0.001. Sex: value O, girls; value 1, boys. Econ. = family economy.*

Discussion

This study explored the association between SRH and SOC and the outcome of SHC and SRH in Norwegian adolescents aged 13 to 19 years. The main findings were that both SE and SOC had significant relations to the outcome of SHC and SRH in adolescents.

The first aim of the present article was to investigate the distribution and test means and differences of sex on SHC, SRH, SE and SOC. In contradiction to previous studies (Breidablik et al., 2008; Moksnes & Espnes, 2017) the results showed that girls had a more positive evaluation of SRH than boys, but both sexes had average scores on the scale in the reference area of neither good or bad. The sex differences in mean scores on SHC were minimal where both sexes almost reached the reference values of being “a bit bothered”. Unlike boys, girls experienced having more SHC, lower SE and weaker SOC, which supports previous studies (Moksnes & Espnes, 2017; Moksnes & Lazarewizc, 2016). The result

showing girls evaluating the SRH more positive was surprising when they also report higher symptom levels of SHC, lower SE and weaker SOC. These results contradict Graham (2004) in arguing that girls, based on their lower SE, have a more realistic view on health than boys, and therefore have more a negative evaluation of SRH.

Previous studies indicate that SE varies through the life span (Santrock, 2008), but that it decreases during adolescence (Baldwin & Hoffmann, 2002). The level of maturity and the starting point of puberty can be factors in explaining why girls report lower SE than boys, and also that girls' SE tends to decrease earlier than boys'. It can also be a result of the difference in expressing and coping with different stressors, where girls tend to internalize problems (e.g. sadness, lack of joy, withdrawal, reduced appetite) and boys tend to externalize problems (e.g. hyperactivity, impulsiveness or norm breaking behaviour) (FHI, 2018). Girls' level of SE can contribute in understanding girls' lower mean scores on SOC and higher symptom levels of SHC. This may be explained by the challenge of identifying and usage of *general resistance resources* (GRRs), which may lead to weaken their SOC. Individuals with higher SE, may more likely seek and receive more social support and in a better sense identify and use GRRs which further contributes to strengthen the SOC (Moksnes & Lazarewizc, 2016).

The second aim was to investigate the relationship between SOC, SE and the outcome of SRH and SHC, controlled for age, sex, socioeconomic status and stress. No background variables (sex, age, family economy) showed significant relation with emotional and physical SHC when controlled for all other variables. The sex differences on the total score of SHC confirmed the results from the descriptive analyses where girls reported higher symptom levels of SHC than boys, however the role of sex was weak. The sex differences in relation with SRH were more prominent, where girls had a more positive evaluation of health than boys. The age differences in SRH were weak, but significant, showing more negative evaluation in older adolescents. Breidablik et al. (2008) presented that the SRH deteriorates

during early adolescence and contributes to SHC and health concerns. Further, variations in health behaviour, social factor, physical health, mental health status, demographics and structural environment was found to predict SRH among adolescents, which may contribute in the understanding of the minor age differences in the evaluation of SRH. Family economy had the strongest significant relation with SRH when controlled for all other variables indicating that a good family economy impacted the adolescents' positive evaluation of SRH. Another explanation could be the questions' time frame asked in the questions where SHC referred to the last four weeks and SRH to the last year. These differences could be a source of different understandings and evaluations.

Interestingly, when adding SE and SOC, the beta weights for stress were reduced and lost its significant association with SRH which is in line with previous research (Moksnes & Espnes, 2017; Moksens, Rannestad, Byrne & Espnes, 2011). SOC can contribute to reducing the probability of tension evolving into stress (Antonovsky, 1987), and can be a coping resource to individuals' health when experiencing stress and tension (Moksnes et al., 2011). Thus, despite an experience of stress, research show that SOC is a positive factor and a potential moderative factor for stress (Moksnes and Espnes, 2017), and the result from the present study showed that SOC had an association with SRH when controlled for stress. An individual with strong SOC potentially is less likely to perceive a situation as stressful, and further not experience the same level of stress and tension (Moksens et al., 2011). The results also showed that SOC was significantly negatively related to SHC, indicating that individuals with a weak SOC report more SHC, which support previous research (Moksnes & Espnes, 2017) where girls report weaker SOC and more SHC. Individuals reporting weaker SOC can experience to find it more challenging to identify and use GRRs and therefore fail to conquer and cope with difficult situations and tension. Moksnes and Lazarewicz (2016) found that

individuals' SOC could be strengthened by the level of SE, due to being more likely to seek and receive more social support.

The results indicated that both SOC and SE contributed in explaining SHC and SRH but on different levels where SOC had a stronger relation with SHC and SE a stronger relation with SRH. There was a strong relation between weak SOC and higher symptom levels of SHC, but interestingly a non-significant relation between low SE and higher symptom levels of SHC, which indicate that only SOC impacts the outcome of adolescents SHC. Stress on the other hand had a greater impact than SE in association with SHC, and slightly weaker impact than SOC where high levels of stress had strong relation with higher levels of SHC. SE had strong significant relations with SRH indicating that high SE impacted the adolescents' positive evaluation of SRH. SOC had weaker, but still strong, relation with SRH. This can be explained by the difference between SE and SOC. SE is based on the evaluation and experience of the individual's perception of own worth and importance (Rosenberg, 1965), whereas SOC is understood as a life orientation (Eriksson, 2017) where individuals to different extents experience life as comprehensible, manageable and meaningful. SRH is an individual evaluation and experience of own health (WHO, 2016) and may therefore have stronger relation with SE than SOC, as it is a subjective evaluation of the internal emotions and experiences.

As previous research indicated (Eriksson & Lindström, 2006), the association between SOC and level of emotional SHC and physical SHC differs: the relation between SOC and physical SHC was found to be weaker than the relation between SOC and emotional SHC. SE and stress also had significant strong relations with emotional SHC compared with physical SHC, where lower levels of SE had relation with higher levels of complaints, and higher levels of stress had relation with higher symptom levels of SHC. The relation between low SE and higher symptom levels can result in developing anxiety disorders and serious depressive

disorders (Trzeniewski et al., 2006), and the level of SE during adolescence is also viewed as a risk factor for mental illness, especially depression (Orth, et al., 2009), in all phases of the adult life. The strongest impacting factor on physical SHC was stress: a high stress level had the strongest impact on the outcome of physical complaints.

By having both weaker SOC and lower SE, girls may be more vulnerable when it comes to using GRRs and can therefore fall into a bad cycle of thoughts and behaviours which can contribute to higher symptom levels of SHC and evaluate SRH more negatively. Boys, on the other hand, based on the results, could potentially have a better outlook for health during adulthood due to the strength of SE and SOC. If both SE and SOC are improved and strengthened during adolescence it could influence the evaluation of SRH and symptom levels of SHC, which potentially could impact the overall health during adolescence but also in adulthood. No conclusions can be drawn on the causality of the relations, but the results can be used as a basis for future research questions.

Strengths and limitations

The present study has several strengths that should be mentioned. First, the large sample size, and response rate (67 %) which ensure both the reliability and validity (Bowling, 2005). Secondly, there has been limited research on the relation between SE and SOC and the outcome of SRH and SHC. Thirdly, good reliability and validity is maintained on the constructs of SE and SOC by using former validated scales.

However, the data are based on self-reports from adolescents and has therefore a potential for biased response (Levin, 2006). The response can also be impacted by the question wording or order, and some participants can have had difficulties in understanding the questions (Bowling, 2005). The cross-sectional design does not allow us to draw conclusions regarding the causality of the findings, and it cannot be concluded that the trends in the results will be identical in repeated studies (Levin, 2006). Furthermore, the variables

not included (e.g. well-being, social support and mental health) could be equally important in explaining SRH and SHC in adolescents.

Conclusion and Implications for Further Research

This study showed that girls had significantly more positive evaluation of SRH, higher symptom levels of SHC, lower SE and weaker SOC than boys. A significant positive relation between SRH and both SE and SOC was found, whereas a negative significant relation was found between SHC and SOC when controlled for sex, age, family economy and stress.

The presented results indicate that both SE and SOC are important factors for adolescent health and the potential for positive health development in a life course perspective. Research on the relation between SOC and SE and its impact on adolescents' SHC and SRH is limited, and future research should conduct longitudinal studies to draw conclusions about variables predicting the outcome of SRH and SHC. The results of the current research can also be viewed as a basis for future qualitative research. The results presented in this article encourage further research on the relation between SE and SOC and the outcome of SRH and SHC in adolescents, due to the importance of establishing and developing the health and health behaviour of young age to further contribute to a stronger and better health later in life. Furthermore, it can be used to understand the necessity of public health work and motivate the promotion of both SE and SOC in adolescents to strengthen the coping resources.

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Main Conclusion

This master thesis has intended to view how adolescents' health, self-rated health (SRH) and subjective health complaints (SHC) is impacted by self-esteem (SE) and sense of coherence (SOC) and it is shown in previous research to be true.

Adolescents health is of great importance due to the impact it has on the health later in life and should therefore be prioritized greatly. Adolescence is a complex phase filled with challenges and positive development, and the shift in view from Hall's storm and stress concept to viewing individual differences has been important to understand both positive and negative sides of the important life phase. Based on the theoretical and empirical background there are some sex differences where girls report lower SE, weaker SOC and report higher symptom levels of SHC. Research show that individuals reporting low SE during adolescence are more exposed for mental illness later in life, where depressive symptoms, anxiety and other negative outcomes like substance use and dissatisfaction with life in general and relationships are the most prominent problems.

The tendency of girls reporting lower SE, weaker SOC and higher symptom levels of SHC is supported by the results from the present study. Interestingly, the results showed that girls reported a more positive evaluation of health, which contradicts previous research. Girls may be more vulnerable in making decisions and identifying GRRs when faced with challenging situations and emotions than boys, based on the weaker SOC and SE. Due to the important impact both SOC and SE has on adolescents' SRH and SHC it is important that the network (e.g. family, school, society and policies) surrounding the adolescents contribute and reinforce the establishment and development of these factors and further secure greater opportunities for positive SRH and fewer SHC during adolescence and in adulthood. To ensure adolescents getting the opportunity and help to strengthen GRRs, it will influence the health mentally, physically and socially during adolescence and in adulthood.

Appendix A: Approval by REK

REK
REGIONALE KOMITEER FOR MEDISINSK OG HELSEFAGLIG FORSKNINGSETIKK

Region:	Saksbehandler:	Telefon:	Vår dato:	Vår referanse:
REK midt	Øystein Lundestad	73597507	11.04.2017	2016/1165/REK midt
			Deres dato:	Deres referanse:
			01.03.2017	

Vår referanse må oppgis ved alle henvendelser

Geir Arild Espnes
NTNU

2016/1165 Oppvekst i bygder 2016

Forskningsansvarlig: NTNU
Prosjektleder: Geir Arild Espnes

Vi viser til søknad om prosjektendring datert 01.03.2017 for ovennevnte forskningsprosjekt. Søknaden om prosjektendring er behandlet på fullmakt av REK midts sekretariat, med hjemmel i helseforskningsloven § 11 og forskrift om behandling av etikk og redelighet i forskning § 10.

Opprinnelig prosjektomtale
Målet med undersøkelsen" Oppvekst i bygder 2016» er å følge opp tidligere datainnsamlinger fra 1996, 2001, 2006 og 2011 om oppvekst,- aktivitet- og helsevariabler blant ungdom 13-19 år i seks bygdekommuner i Sør-Trøndelag. Det er viktig for planlegging og implementering av forebyggende – og helsefremmende arbeid blant ungdom å vite mer om status og utvikling på disse atferds-og helsevariablene. Målet med undersøkelsen er å vitenskapelig å framskaffe kunnskap om ungdoms helse, oppvekst og trivsel.

Søknad om prosjektendring
Det vises til innsending av søknad om prosjektendring 1. mars. Ettersendte dokumenter (reviderte informasjonsskriv og protokoll) ble mottatt på mail 30. mars (vår ref. 2016/1165-5). Det søkes her om følgende endringer:

1. Endring av kontaktperson for forskningsansvarlig institusjon som følge av instituttsammenslåing;
2. Tre masteroppgaver basert på materialet.

Vurdering
REK midt har vurdert søknad om prosjektendring. Komiteen har mottatt reviderte informasjonsskriv og endret prosjektbeskrivelse for én av studentoppgavene hvor det var usikkert om framstillinga ville være personidentifiserende. Det oppgis nå at materialet kun vil bli sammenstilt og presentert på gruppenivå. Komiteen har ingen innvendinger mot denne prosedyren, som bidrar til å ivareta deltakernes anonymitet.

Komiteen har ingen forskningsetiske innvendinger mot endringene av prosjektet. Oppgavenes formål vurderes som klart innenfor hovedprosjektets formål og det samtykke som er gitt til bruk av opplysningene. Under forutsetning av at vilkårene nedenfor tas til følge, er hensynet til deltakernes velferd og integritet fremdeles godt ivaretatt.

Vilkår for godkjenning

1. Godkjenninga er gitt under forutsetning av at prosjektet gjennomføres slik det er beskrevet i søknaden, protokollen og prosjektendringene datert 1. mars 2017. Prosjektet må også gjennomføres

Besøksadresse:
Det medisinske fakultet
Medisinsk teknisk forskningssenter 7489
Trondheim

Telefon: 73597511
E-post: rek-midt@ntnu.no
Web: http://helseforskning.etikkom.no/

All post og e-post som inngår i saksbehandlingen, bes adressert til REK midt og ikke til enkelte personer

Kindly address all mail and e-mails to the Regional Ethics Committee, REK midt, not to individual staff

iht. tidligere vedtak i saken og de bestemmelser som følger av helseforskningsloven (hfl.) med forskrifter.

2. Komiteen forutsetter at ingen personidentifiserbare opplysninger kan framkomme ved publisering eller annen offentliggjøring.

Vedtak
Regional komité for medisinsk og helsefaglig forskningsetikk Midt-Norge godkjenner søknad om prosjektendring med de vilkår som er gitt.

Klageadgang
Du kan klage på komiteens vedtak, jf. forvaltningsloven § 28 flg. Klagen sendes til REK midt. Klagefristen er tre uker fra du mottar dette brevet. Dersom vedtaket opprettholdes av REK midt, sendes klagen videre til Den nasjonale forskningsetiske komité for medisin og helsefag for endelig vurdering.

Med vennlig hilsen

Hilde Eikemo
Sekretariatsleder, REK midt

Øystein Lundestad
Rådgiver

Kopi til: *postmottak@svt.ntnu.no; rek-ism@mh.ntnu.no; rek-midt@mh.ntnu.no*

Appendix B: "Oppvekst i bygder" Questionnaire

SPØRREUNDERSØKELSE OM OPPVEKST I BYGDER

Bakgrunn: Med dette inviterer vi deg til å delta i spørreundersøkelsen «Oppvekst i bygder». Undersøkelsen gjennomføres blant ungdommer i ungdomsskole og videregående skole i seks bygdekommuner i Sør-Trøndelag. Undersøkelsen gjennomføres ved NTNU Senter for helsefremmende forskning og Institutt for sosiologi og statsvitenskap, NTNU

Hva innebærer undersøkelsen? Vi ber deg om å svare på spørsmålene i spørreskjemaet individuelt i løpet av en skoletime Spørsmålene handler om hvordan du opplever helsa di, om bruk av rusmidler, deltakelse i idrett og fysisk aktivitet, trivsel i nærmiljøet og fritidsaktiviteter. Alle som deltar i undersøkelsen er anonyme, og alle opplysninger behandles konfidensielt.

Mulige fordeler og ulemper: Å svare på spørreskjemaet har ingen kjente negative konsekvenser. Bidraget ditt som deltaker kan gi viktig kunnskap om ungdoms opplevelse av hverdagsliv, helse og trivsel i bygdekommuner. Har du likevel behov for å prate med noen om spørsmålene i undersøkelsen, kan du ta kontakt med helsesøster ved din skole.

Frivillig deltakelse: Det er frivillig å delta i undersøkelsen, og det er ikke en del av skolens undervisning. Hvis du ikke vil delta, har det ingen konsekvenser for deg, og du kan i stedet jobbe med skolearbeid og levere blankt spørreskjema. Elever over 16 år sier ja til å være med ved å levere utfylt spørreskjema. Elever under 16 år må ha skriftlig tillatelse fra foresatte for å være med. Siden deltakerne i denne undersøkelsen er anonyme, er det ikke mulig å trekke seg etter at skjemaet er levert inn.

Prosjektet er godkjent av Regional komité for medisinsk og helsefaglig forskningsetikk, Midt-Norge (REK). Av kontrollhensyn vil prosjektdata bli oppbevart i 5 år etter at sluttmelding er sendt til REK.

Takk for at du er villig til å delta i undersøkelsen!

Jan Erik Ingebrigtsen
Institutt for sosiologi og statsvitenskap / NTNU Samfunnsforskning AS, Senter for skole og idrettsfag, tlf. 73 59 17 67.

Geir Arild Espnes
Institutt for sosialt arbeid og helsevitenskap / NTNU Senter for helsefremmende forskning, tlf. 73 41 21 52.

NTNU
Kunnskap for en bedre verden

LES DETTE FØR DU STARTER!	Skjemaet skal leses maskinelt. Vennligst følg disse reglene: • *Bruk svart/blå kulepenn. Skriv tydelig, og ikke utenfor feltene.* ***Kryss av slik:*** ☒. • *Feilkryssinger kan strykes ved å fylle hele feltet. Kryss så i rett felt.* • *Sett bare ett kryss på hvert spørsmål om ikke annet er oppgitt.*

A. BAKGRUNNSINFORMASJON

1. Er du jente eller gutt?: ⇨ Jente..... ☐1 Gutt..... ☐2

2. Hvilken klasse går du i? ⇨ 8. kl.... ☐8 9. kl.... ☐9 10. kl..... ☐10 VGS1.... ☐11 VGS2.... ☐12 VGS3.... ☐13

3. I hvilken *måned* er du født, ⇨ og i hvilket *år*? ☐☐☐☐

Januar ..... ☐1 Februar..... ☐2 Mars ..... ☐3 April ..... ☐4 Mai ..... ☐5 Juni ..... ☐6 Juli..... ☐7 August..... ☐8 September..... ☐9 Oktober..... ☐10 November..... ☐11 Desember..... ☐12

4. I hvilken kommune bor du? ⇨

Oppdal .... ☐1 Melhus .... ☐2 Midtre Gauldal..... ☐3 Orkdal ..... ☐4 Osen..... ☐5 Roan..... ☐6

5. Hvor lenge har du bodd i denne kommunen? ⇨

Hele livet ..... ☐1 Over 10 år ..... ☐2 5 – 10 år ..... ☐3 Under 5 år..... ☐4

Før du fortsetter: Kontroller at du ikke har glemt noe på denne sida.

Husk: Bare ett kryss på hvert spørsmål.

6. Hvor mange km unna skolen bor du? *Vennligst oppgi avstanden i antall km med ett desimal. Vær nøye med å plassere tallene riktig før/etter komma!* ⇨ ☐☐,☐

7. Hvor bor du? ⇨ På garsdsbruk ☐1 I enebolig ☐2 I rekkehus ☐3 I leilighet ☐4

8. Har du eget rom? ⇨ Ja ☐1 Nei ☐2

9. Hva er dine foreldres/foresattes *høyeste* fullførte utdanning? ⇨

NB: Sett ett kryss for mor / kvinnelig foresatt, og ett for far / mannlig foresatt.

	Mor ⇩	Far ⇩
Grunnskole	☐1	☐1
Videregående skole	☐2	☐2
Høgskole/universitet, opptil 4 år	☐3	☐3
Høgskole/universitet, mer enn 4 år	☐4	☐4
Vet ikke	☐5	☐5

10. Hva er dine foreldres/foresattes yrkesmessige status? ⇨

NB: Sett ett kryss for mor / kvinnelig foresatt, og ett for far / mannlig foresatt.

	Mor ⇩	Far ⇩
I arbeid på heltid	☐1	☐1
I arbeid på deltid	☐2	☐2
Permittert/arbeidsløs	☐3	☐3
Hjemmeværende	☐4	☐4
Annet	☐5	☐5

11 Hvordan har familiens økonomi vært *de siste to årene*? ⇨

NB: Her setter du bare ett kryss.

- Vi har hatt dårlig råd hele tida ☐1
- Vi har stort sett hatt dårlig råd ☐2
- Vi har verken hatt dårlig råd eller god råd ☐3
- Vi har stort sett hatt god råd ☐4
- Vi har hatt god råd hele tida ☐5

B. FRITIDSAKTIVITETER

Her er en del aktiviteter som unge mennesker driver med i fritiden. Hvor ofte gjør du hver av disse tingene? *Ett kryss på hver linje.*

	Aldri 1	Sjelden 2	Ca. én dag i uka 3	2 - 3 dager i uka 4	4 - 7 dager i uka 5
1. Spiller musikkinstrument	☐	☐	☐	☐	☐
2. Hører på musikk	☐	☐	☐	☐	☐
3. Leser bøker, magasiner eller aviser	☐	☐	☐	☐	☐
4. Har venner på besøk	☐	☐	☐	☐	☐
5. Røyker	☐	☐	☐	☐	☐
6. Gjør husarbeid eller annet arbeid hjemme	☐	☐	☐	☐	☐
7. Sitter med familien og snakker om ting	☐	☐	☐	☐	☐
8. Er sammen med venner utendørs (på gata, veien e.l.)	☐	☐	☐	☐	☐
9. Er på besøk hos venner	☐	☐	☐	☐	☐
10. Spiser «ute» med venner (på kafé e.l.)	☐	☐	☐	☐	☐
11. Drar til sentrum for å kikke i butikker	☐	☐	☐	☐	☐
12. Går på kino, konserter eller fester	☐	☐	☐	☐	☐
13. Er ute for å danse (f.eks. på diskotek)	☐	☐	☐	☐	☐
14. Drikker alkohol	☐	☐	☐	☐	☐
15. Snuser	☐	☐	☐	☐	☐

Husk: Bare ett kryss på hvert spørsmål.

Hvor ofte gjør du hver av disse tingene? *Ett kryss på hver linje.*

	Aldri 1	Sjelden 2	Ca. én dag i uka 3	2 - 3 dager i uka 4	4 - 7 dager i uka 5
16. Deltar i organisert fritidsaktivitet	☐	☐	☐	☐	☐
17. Spiller dataspill/mobilspill	☐	☐	☐	☐	☐
18. Er på sosiale medier (f.eks. Instagram, Snapchat)	☐	☐	☐	☐	☐
19. Er «på nett» for øvrig (f.eks. surfing, streaming, Youtube, e-post, blogger)	☐	☐	☐	☐	☐

C. FYSISK AKTIVITET OG IDRETT

	Aldri 1	Sjelden 2	Ca. én dag i uka 3	2-3 dager i uka 4	4-7 dager i uka 5
1. Hvor mange av dagene i *en vanlig uke* er du så aktiv at du blir andpusten eller svett?	☐	☐	☐	☐	☐
2. I løpet av *de fire siste ukene*, hvor ofte deltok du i idrett/ sport eller fysisk aktivitet hardt nok til at du *pustet fort*, *svettet* eller at *hjertet banket fort* i 20 minutter?	☐	☐	☐	☐	☐

3. Hvor ofte trener du i hver av disse sammenhengene? ⇨

	Aldri 1	Sjelden 2	Ca. én dag i uka 3	2-3 dager i uka 4	4-7 dager i uka 5
1. Trener/konkurrerer i idrettslag	☐	☐	☐	☐	☐
2. Trener utenom idrettslag	☐	☐	☐	☐	☐
3. Trener i treningsstudio	☐	☐	☐	☐	☐

4. Hvor ofte trener du på følgende måter (i sesongen)? ⇨

	Aldri 1	Sjelden 2	Ca. én dag i uka 3	2-3 dager i uka 4	4-7 dager i uka 5
1. Dansetrening	☐	☐	☐	☐	☐
2. Går på ski (langrenn)	☐	☐	☐	☐	☐
3. Alpinski/snowboard	☐	☐	☐	☐	☐
4. Fotball	☐	☐	☐	☐	☐
5. Håndball	☐	☐	☐	☐	☐
6. Sykler	☐	☐	☐	☐	☐
7. Jogger	☐	☐	☐	☐	☐
8. Fotturer	☐	☐	☐	☐	☐
9. Trener på andre måter	☐	☐	☐	☐	☐

5. Hvor enig eller uenig er du i hvert av disse utsagnene om din egen trening og fysiske aktivitet? ⇨

	Svært enig 1	Enig 2	Uenig 3	Svært uenig 4
1. Jeg er i svært god form	☐	☐	☐	☐
2. Jeg trener ikke	☐	☐	☐	☐
3. Jeg trener for å holde meg i god form	☐	☐	☐	☐
4. Jeg trener for å være sammen med venner	☐	☐	☐	☐
5. Jeg trener for å bli flink i idrett	☐	☐	☐	☐
6. Jeg trener når jeg ikke har annet å gjøre	☐	☐	☐	☐
7. Jeg er i dårlig form	☐	☐	☐	☐
8. Fysisk aktivitet er viktig for helsa mi som voksen	☐	☐	☐	☐
9. Vennskap er viktigere enn å vinne i idrett	☐	☐	☐	☐
10. Jeg er flink i idrett	☐	☐	☐	☐
11. Jeg trener fordi utseendet er viktig for meg	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne side.

Husk: Bare ett kryss på hvert spørsmål.

6. Deltar du, eller har du deltatt tidligere i disse idrettene *i idrettslag*? ⇨

	Deltar nå (1)	Deltok før, men har sluttet (2)	Har aldri deltatt (3)
1. Håndball	☐	☐	☐
2. Fotball	☐	☐	☐
3. Ski (langrenn og/eller alpint)	☐	☐	☐
4. Annen idrett i idrettslag	☐	☐	☐

D. OM HJEMSTEDET DITT

Hvor enig eller uenig er du i disse utsagnene om hjemstedet ditt?
NB: Hvis du bor på hybel: Tenk på området rundt skolen.

	Svært enig (1)	Enig (2)	Uenig (3)	Svært uenig (4)
1. Dette er et fint sted for barn å vokse opp	☐	☐	☐	☐
2. Fritidstilbudet er viktig for min trivsel	☐	☐	☐	☐
3. Dette er et fint sted å bo for unge mennesker som meg	☐	☐	☐	☐
4. Det er for få møtesteder for unge mennesker her	☐	☐	☐	☐
5. Her sladrer folk om alt mulig	☐	☐	☐	☐
6. Det er ikke nok å gjøre for unge mennesker her	☐	☐	☐	☐
7. Dette stedet mangler transport for å komme dit jeg ønsker	☐	☐	☐	☐
8. Det er ingen ting å gjøre her for unge mennesker	☐	☐	☐	☐
9. Det er for lite frihet her på stedet til å være slik en ønsker	☐	☐	☐	☐
10. Unge mennesker utsettes for mobbing og angrep her	☐	☐	☐	☐
11. Det er vanskelig å være seg selv her	☐	☐	☐	☐
12. Ungdomsgjenger er et problem her	☐	☐	☐	☐
13. Det er ikke trygt å gå ut om kvelden her	☐	☐	☐	☐
14. Mange av mine venner her på stedet drikker alkohol	☐	☐	☐	☐
15. Unge mennesker drikker for mye her på stedet	☐	☐	☐	☐
16. Jeg har følt press om å bruke narkotika her på stedet	☐	☐	☐	☐
17. Jeg har vært nødt til å velge bort fritidsaktiviteter her på stedet av økonomiske grunner	☐	☐	☐	☐

E. OM SKOLEN

Hvor enig eller uenig er du generelt i disse utsagnene om skolen?
Husk: Bare ett kryss på hver linje.

	Svært enig (1)	Enig (2)	Uenig (3)	Svært uenig (4)
1. Jeg trives på skolen	☐	☐	☐	☐
2. Jeg jobber hardt på skolen	☐	☐	☐	☐
3. Jeg lærer interessante og nyttige ting på skolen	☐	☐	☐	☐
4. Lærerne er interesserte og hjelpsomme	☐	☐	☐	☐
5. Jeg er glad når jeg kan være borte fra skolen	☐	☐	☐	☐
6. Jeg blir lei av lærere som forteller hva jeg skal gjøre	☐	☐	☐	☐
7. Jeg syns skolearbeidet er lett	☐	☐	☐	☐
8. Jeg har blitt plaget/mobbet av andre elever på skolen	☐	☐	☐	☐

Husk: Bare ett kryss på hvert spørsmål.

F. TRIVSEL

		Svært godt 1	Godt 2	Middels 3	Dårlig 4	Svært dårlig 5
1.	Hvor godt trives du på trening?	☐	☐	☐	☐	☐
2.	Hvor godt trives du i idrettskonkurranser?	☐	☐	☐	☐	☐
3.	Hvor godt trives du når du trener hardt fysisk?	☐	☐	☐	☐	☐
4.	Hvor godt trives du når du er hjemme?	☐	☐	☐	☐	☐
5.	Hvor godt trives du i teoritimer på skolen?	☐	☐	☐	☐	☐
6.	Hvor godt trives du i kroppsøvingstimer på skolen?	☐	☐	☐	☐	☐
7.	Hvor godt trives du i friminuttene på skolen?	☐	☐	☐	☐	☐
8.	Hvor godt trives du i løpet av en vanlig dag?	☐	☐	☐	☐	☐

G. DINE TANKER OM FRAMTIDEN

Hvor enig eller uenig er du i disse utsagnene om tiden etter at du er ferdig på skolen?

		Svært enig 1	Enig 2	Uenig 3	Svært uenig 4
1.	Jeg ønsker å bo i dette området i framtiden	☐	☐	☐	☐
2.	Jeg ønsker å flytte herfra for noen år, og så flytte tilbake hit	☐	☐	☐	☐
3.	Jeg ønsker å flytte herfra, og aldri flytte tilbake	☐	☐	☐	☐
4.	Jeg ønsker å ta vare på miljøet	☐	☐	☐	☐
5.	Jeg ønsker å studere etter videregående skole	☐	☐	☐	☐
6.	Jeg ønsker å være med på å forbedre miljøet der jeg bor	☐	☐	☐	☐
7.	Framtiden ser bra ut for unge mennesker her på stedet	☐	☐	☐	☐
8.	Jeg vil begynne å jobbe så fort jeg kan etter skolen	☐	☐	☐	☐
9.	Det vil bli vanskelig for meg å finne en passende jobb her	☐	☐	☐	☐

H. DU OG HELSA DI

		Svært dårlig 1	Dårlig 2	Verken god eller dårlig 3	God 4	Svært god 5
1.	Hvordan har helsa di vært *det siste året*? ⇨	☐	☐	☐	☐	☐

2. Hvor får du viktig informasjon om helse? ⇨ *NB: Her kan du sette flere kryss!*

1. Helsesøster ☐	4. Foresatte ☐	7. TV ☐
2. Lege ☐	5. Venner ☐	8. Ukeblader ☐
3. Lærere ☐	6. Internett ☐	9. Annet ☐

3. Hvor ofte gjør du følgende? ⇨

	Aldri 1	Sjelden 2	Én dag i uka 3	2-4 dager i uka 4	5-7 dager i uka 5
1. Røyker	☐	☐	☐	☐	☐
2. Bruker snus	☐	☐	☐	☐	☐
3. Drikker alkohol	☐	☐	☐	☐	☐
4. Spiser frokost	☐	☐	☐	☐	☐
5. Spiser skolemåltid	☐	☐	☐	☐	☐
6. Spiser middag	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne side.

Husk: Bare ett kryss på hvert spørsmål.

4. Her er fem utsagn om tilfredshet med livet som helhet. Hvor godt eller dårlig stemmer hvert utsagn for deg og ditt liv?

	Stemmer dårlig 1	2	3	4	5	6	*Stemmer perfekt* 7
1. På de fleste måter er livet mitt nær idealet mitt	☐	☐	☐	☐	☐	☐	☐
2. Forholdene i livet mitt er utmerket	☐	☐	☐	☐	☐	☐	☐
3. Jeg er fornøyd med livet mitt	☐	☐	☐	☐	☐	☐	☐
4. Så langt har jeg oppnådd de viktige tingene jeg ønsker i livet	☐	☐	☐	☐	☐	☐	☐
5. Hvis jeg kunne leve livet på nytt, ville jeg nesten ikke forandret noe	☐	☐	☐	☐	☐	☐	☐

I. «LYKKETERMOMETERET»

Hvor lykkelig/glad eller ulykkelig har du vært i løpet av den siste uken?

Kryss av i bare én av boksene.

Ekstremt lykkelig (Følelse av begeistring)	☐ 10
Veldig lykkelig (Føler meg virkelig bra og oppstemt)	☐ 9
Ganske lykkelig (Føler meg bra)	☐ 8
Nokså lykkelig (Føler meg rimelig bra og munter)	☐ 7
Litt lykkelig (Akkurat litt mere enn nøytral)	☐ 6
Nøytral/midt i mellom	☐ 5
Litt ulykkelig (Akkurat litt mere enn nøytral)	☐ 4
Nokså ulykkelig (Føler meg litt «nedfor»)	☐ 3
Ganske ulykkelig (Føler meg ganske deprimert)	☐ 2
Veldig ulykkelig (Føler meg veldig deprimert)	☐ 1
Ekstremt ulykkelig (Totalt deprimert og «nedfor»)	☐ 0

J. HELSEPLAGER

Har du hatt noen av disse plagene i løpet av *de 4 siste ukene*?

	Ikke plaget 1	*Litt plaget* 2	*Nokså plaget* 3	*Svært plaget* 4	*Ikke aktuelt* 5
1. Astma eller pipende bryst	☐	☐	☐	☐	☐
2. Forkjølelse eller influensa	☐	☐	☐	☐	☐
3. Følt deg nervøs, bekymret eller redd	☐	☐	☐	☐	☐
4. Hodepine eller migrene	☐	☐	☐	☐	☐
5. Smerter i armene, beina eller ryggen	☐	☐	☐	☐	☐
6. Følt deg ensom	☐	☐	☐	☐	☐
7. Svimmelhetsanfall eller har besvimt	☐	☐	☐	☐	☐
8. Magesmerter/vondt i magen	☐	☐	☐	☐	☐
9. Følt deg trist, ulykkelig eller nedfor	☐	☐	☐	☐	☐
10. Allergi	☐	☐	☐	☐	☐
11. Vært irritabel eller i dårlig humør	☐	☐	☐	☐	☐
12. Kviser, utslett eller andre hudproblemer	☐	☐	☐	☐	☐

Husk: Bare ett kryss på hvert spørsmål.

K. STRESS

1. Her er en liste med ting eller situasjoner du kanskje opplever som stressende. Hvor stressende har hver av disse tingene eller situasjonene vært for deg i løpet av det siste året?
NB: Hvis det er noe du ikke har opplevd, krysser du i rute nr. 1 (Ikke stressende).

Hvor stressende er (det)…	*Ikke stressende* 1	*Litt stressende* 2	*Moderat stressende* 3	*Ganske stressende* 4	*Svært stressende* 5
1. … uenigheter mellom deg og faren din?	☐	☐	☐	☐	☐
2. … å stå opp tidlig om morgenen?	☐	☐	☐	☐	☐
3. … å være nødt til å lære ting du ikke forstår?	☐	☐	☐	☐	☐
4. … å ha lærere som forventer for mye av deg?	☐	☐	☐	☐	☐
5. … å bli ertet?	☐	☐	☐	☐	☐
6. … å ha vanskeligheter med noen skolefag?	☐	☐	☐	☐	☐
7. … å følge regler du er uenig i hjemme?	☐	☐	☐	☐	☐
8. … å måtte lese ting du ikke er interessert i?	☐	☐	☐	☐	☐
9. … å bli oversett eller avvist av en person du er interessert i?	☐	☐	☐	☐	☐
10. … å ikke ha nok tid til å ha det gøy?	☐	☐	☐	☐	☐
11. … uenigheter med søsknene dine?	☐	☐	☐	☐	☐
12. … å ikke ha nok tid til å drive med fritidsaktiviteter?	☐	☐	☐	☐	☐
13. … å ha for mye hjemmelekser?	☐	☐	☐	☐	☐
14. … å ikke få nok tilbakemelding på skolearbeidet tidsnok til at det er hjelp i det?	☐	☐	☐	☐	☐
15. … å få forholdet til kjæresten til å fungere?	☐	☐	☐	☐	☐
16. … å bli nedvurdert av vennene dine?	☐	☐	☐	☐	☐
17. … uenigheter mellom foreldrene dine?	☐	☐	☐	☐	☐
18. … å ha for mye fravær fra skolen?	☐	☐	☐	☐	☐
19. … hvordan du ser ut?	☐	☐	☐	☐	☐
20. … uenigheter mellom deg og mora di?	☐	☐	☐	☐	☐
21. … å gå på skolen?	☐	☐	☐	☐	☐
22. … å ikke ha nok tid til kjæresten din?	☐	☐	☐	☐	☐
23. … lærere som erter deg?	☐	☐	☐	☐	☐
24. … å adlyde regler du er uenig i på skolen?	☐	☐	☐	☐	☐
25. … å ikke bli hørt på av lærere?	☐	☐	☐	☐	☐
26. … å ikke komme overens med kjæresten din?	☐	☐	☐	☐	☐
27. … mangel på respekt fra lærere?	☐	☐	☐	☐	☐
28. … uenigheter mellom deg og dine venner?	☐	☐	☐	☐	☐
29. … å ikke komme overens med lærerne dine?	☐	☐	☐	☐	☐
30. … å slå opp med kjæresten?	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne side.

Husk: Bare ett kryss på hvert spørsmål.

L. PSYKISK VELVÆRE

Her er noen utsagn om følelser og tanker. Vennligst kryss av for det som best beskriver din opplevelse *de siste 2 ukene*.

		Ikke i det hele tatt 1	*Sjelden* 2	*En del av tiden* 3	*Ofte* 4	*Hele tiden* 5
1.	Jeg har vært optimistisk med hensyn til fremtiden	☐	☐	☐	☐	☐
2.	Jeg har følt meg nyttig	☐	☐	☐	☐	☐
3.	Jeg har følt meg avslappet	☐	☐	☐	☐	☐
4.	Jeg har følt interesse for andre mennesker	☐	☐	☐	☐	☐
5.	Jeg har hatt masse energi	☐	☐	☐	☐	☐
6.	Jeg har håndtert problemer godt	☐	☐	☐	☐	☐
7.	Jeg har tenkt klart	☐	☐	☐	☐	☐
8.	Jeg har vært fornøyd med meg selv	☐	☐	☐	☐	☐
9.	Jeg har følt nærhet til andre mennesker	☐	☐	☐	☐	☐
10.	Jeg har følt meg selvsikker	☐	☐	☐	☐	☐
11.	Jeg har vært i stand til å ta beslutninger	☐	☐	☐	☐	☐
12.	Jeg har følt meg elsket	☐	☐	☐	☐	☐
13.	Jeg har vært interessert i nye ting	☐	☐	☐	☐	☐
14.	Jeg har vært i godt humør	☐	☐	☐	☐	☐

M. DINE FØLELSER AKKURAT NÅ

Vennligst kryss av for det som best beskriver hvordan du føler deg *akkurat nå, i dette øyeblikket.*

		Ikke i det hele tatt 1	*Sjelden* 2	*En del av tiden* 3	*Ofte* 4	*Hele tiden* 5
1.	Jeg føler meg rolig	☐	☐	☐	☐	☐
2.	Jeg føler meg trygg	☐	☐	☐	☐	☐
3.	Jeg er anspent	☐	☐	☐	☐	☐
4.	Jeg føler at jeg er under press	☐	☐	☐	☐	☐
5.	Jeg føler meg vel	☐	☐	☐	☐	☐
6.	Jeg føler meg oppskaket	☐	☐	☐	☐	☐
7.	Jeg er bekymret for at noe uheldig kan skje	☐	☐	☐	☐	☐
8.	Jeg er fornøyd	☐	☐	☐	☐	☐
9.	Jeg føler meg skremt	☐	☐	☐	☐	☐
10.	Jeg føler meg bra	☐	☐	☐	☐	☐

Husk: Bare ett kryss på hvert spørsmål.

	Ikke i det hele tatt 1	Sjelden 2	En del av tiden 3	Ofte 4	Hele tiden 5
11 Jeg har selvtillit	☐	☐	☐	☐	☐
12. Jeg føler meg nervøs	☐	☐	☐	☐	☐
13. Jeg er skvetten	☐	☐	☐	☐	☐
14. Jeg føler meg ubesluttsom	☐	☐	☐	☐	☐
15. Jeg er avslappet	☐	☐	☐	☐	☐
16. Jeg føler meg tilfreds	☐	☐	☐	☐	☐
17. Jeg er bekymret	☐	☐	☐	☐	☐
18. Jeg føler meg forvirret	☐	☐	☐	☐	☐
19. Jeg føler meg stabil	☐	☐	☐	☐	☐
20. Jeg føler at jeg har det behagelig	☐	☐	☐	☐	☐

N. DINE FØLELSER DEN SISTE UKA

Vennligst kryss av for det som best beskriver hvordan du har følt deg *den siste uka, inkludert i dag.*

	Aldri 1	Nesten aldri 2	Noen ganger 3	Veldig ofte 4	Alltid 5
1. Jeg har følt meg trist eller ulykkelig	☐	☐	☐	☐	☐
2. Jeg har følt meg på gråten	☐	☐	☐	☐	☐
3. Jeg har følt skyld uten å vite hvorfor	☐	☐	☐	☐	☐
4. Jeg har mistet interessen for ting som har vært viktige for meg før	☐	☐	☐	☐	☐
5. Jeg har ikke likt aktiviteter som jeg gjorde før	☐	☐	☐	☐	☐
6. Jeg har følt meg engstelig, rastløs eller irritabel	☐	☐	☐	☐	☐
7. Jeg har mistet troen på meg selv eller undervurderer meg selv	☐	☐	☐	☐	☐
8. Jeg har hatt konsentrasjonsvansker	☐	☐	☐	☐	☐
9. Jeg har hatt vanskelig for å ta avgjørelser	☐	☐	☐	☐	☐
10. Jeg har følt det som om jeg har mislykkes	☐	☐	☐	☐	☐
11. Jeg har følt at ting alltid går galt, uansett hvor hardt jeg prøver	☐	☐	☐	☐	☐
12. Jeg har hatt søvnforstyrrelser – sovet mer eller mindre enn vanlig, eller hatt avbrudd i søvnen	☐	☐	☐	☐	☐
13. Appetitten min har vært unormal – jeg har spist mer eller mindre	☐	☐	☐	☐	☐
14. Jeg har følt at det krever større innsats å gjøre ting	☐	☐	☐	☐	☐
15. Jeg har følt meg trøtt eller har hatt veldig lite energi	☐	☐	☐	☐	☐

Før du fortsetter: Kontroller at du ikke har glemt noe på denne side.

Husk: Bare ett kryss på hvert spørsmål.

O. DIN SELVFØLELSE

Hvor enig eller uenig er du i hvert av disse utsagnene om din egen selvfølelse?

		Sterkt uenig 1	*Uenig* 2	*Enig* 3	*Sterkt enig* 4
1.	I det store og hele er jeg fornøyd med meg selv	☐	☐	☐	☐
2.	Av og til synes jeg ikke at jeg er god i noe i det hele tatt	☐	☐	☐	☐
3.	Jeg føler jeg har flere gode egenskaper	☐	☐	☐	☐
4.	Jeg er i stand til å gjøre ting like bra som de fleste andre folk	☐	☐	☐	☐
5.	Jeg føler at jeg ikke har mye å være stolt av	☐	☐	☐	☐
6.	Til tider føler jeg meg absolutt ubrukelig	☐	☐	☐	☐
7.	Jeg føler at jeg er en person som er verdt noe, i alle fall på lik linje med andre	☐	☐	☐	☐
8.	Jeg skulle ønske jeg hadde mer selvrespekt	☐	☐	☐	☐
9.	Alt i alt har jeg en tendens til å føle meg mislykket	☐	☐	☐	☐
10.	Jeg har en positiv holdning til meg selv	☐	☐	☐	☐

P. OPPLEVELSE AV SAMMENHENG

Her er en serie med spørsmål som omhandler ulike sider ved livet vårt. Vennligst kryss av for det tallet som best uttrykker det som passer for deg.

1. Opplever du at du ikke bryr deg om det som skjer i omgivelsene dine?

	1	2	3	4	5	6	7	
Veldig sjelden eller aldri	☐	☐	☐	☐	☐	☐	☐	Veldig ofte

2. Har du opplevd at du er blitt overrasket over oppførselen til personer du trodde du kjente godt?

	1	2	3	4	5	6	7	
Det har aldri hendt	☐	☐	☐	☐	☐	☐	☐	Det hender alltid

3. Har det hendt at personer du stoler på har skuffet deg?

	1	2	3	4	5	6	7	
Det har aldri hendt	☐	☐	☐	☐	☐	☐	☐	Det hender alltid

4. Inntil nå har livet mitt …

	1	2	3	4	5	6	7	
vært helt uten mål og mening	☐	☐	☐	☐	☐	☐	☐	hatt mål og mening

5. Føler du deg urettferdig behandlet?

	1	2	3	4	5	6	7	
Veldig ofte	☐	☐	☐	☐	☐	☐	☐	Veldig sjelden eller aldri

6. Opplever du ofte at du er i en uvant situasjon og at du er usikker på hva du skal gjøre?

	1	2	3	4	5	6	7	
Veldig ofte	☐	☐	☐	☐	☐	☐	☐	Veldig sjelden eller aldri

7. Er dine dagligdagse aktiviteter en kilde til …

	1	2	3	4	5	6	7	
glede og tilfredsstillelse?	☐	☐	☐	☐	☐	☐	☐	smerte og kjedsomhet?

Før du fortsetter: Kontroller at du ikke har glemt noe på denne side.

8. Har du veldig motstridende tanker og følelser?

	1	2	3	4	5	6	7	
Veldig ofte	☐	☐	☐	☐	☐	☐	☐	Veldig sjelden eller aldri

9. Skjer det at du har følelser som du helst ikke vil føle?

	1	2	3	4	5	6	7	
Veldig ofte	☐	☐	☐	☐	☐	☐	☐	Veldig sjelden eller aldri

10. Alle mennesker vil kunne føle seg som tapere iblant. Hvor ofte føler du deg slik?

	1	2	3	4	5	6	7	
Aldri	☐	☐	☐	☐	☐	☐	☐	Veldig ofte

11. Hvor ofte opplever du at du over- eller undervurderer betydningen av noe som skjer?

	1	2	3	4	5	6	7	
Du over- eller undervurderer det som skjer	☐	☐	☐	☐	☐	☐	☐	Du ser saken i rett sammenheng

12. Hvor ofte føler du at de tingene du gjør i hverdagen er meningsløse?

	1	2	3	4	5	6	7	
Veldig ofte	☐	☐	☐	☐	☐	☐	☐	Veldig sjelden eller aldri

13. Hvor ofte har du følelser du ikke er sikker på at du kan kontrollere?

	1	2	3	4	5	6	7	
Veldig ofte	☐	☐	☐	☐	☐	☐	☐	Veldig sjelden eller aldri

Q. RESSURSER OG MESTRING

Hvor enig eller uenig er du i hvert av disse utsagnene om hvordan du har hatt det *den siste måneden*, og om hvordan du har tenkt og følt om deg selv og om mennesker omkring deg som er viktige for deg.

	Helt enig 1	*Litt enig* 2	*Middels* 3	*Litt uenig* 4	*Helt uenig* 5
1. Jeg kommer i mål dersom jeg står på	☐	☐	☐	☐	☐
2. Jeg fungerer best når jeg lager meg klare mål	☐	☐	☐	☐	☐
3. Jeg har noen venner/familiemedlemmer som pleier å oppmuntre meg	☐	☐	☐	☐	☐
4. Jeg er fornøyd med livet mitt til nå	☐	☐	☐	☐	☐
5. I familien min er vi enige om hva som er viktig i livet	☐	☐	☐	☐	☐
6. Jeg får lett andre til å trives sammen med meg	☐	☐	☐	☐	☐
7. Jeg vet hvordan jeg skal nå målene mine	☐	☐	☐	☐	☐
8. Jeg legger alltid en plan før jeg begynner med noe nytt	☐	☐	☐	☐	☐
9. Vennene mine holder alltid sammen	☐	☐	☐	☐	☐
10. Jeg trives godt i familien min	☐	☐	☐	☐	☐
11. Jeg har lett for å finne nye venner	☐	☐	☐	☐	☐
12. Når det er umulig for meg å forandre på ting, slutter jeg å gruble på dem	☐	☐	☐	☐	☐

Husk: Bare ett kryss på hvert spørsmål.

	Helt enig 1	Litt enig 2	Middels 3	Litt uenig 4	Helt uenig 5
13. Jeg er flink til å organisere tiden min	☐	☐	☐	☐	☐
14. Jeg har noen nære venner/familiemedlemmer som virkelig bryr seg om meg	☐	☐	☐	☐	☐
15. I familien min er vi enig om det meste	☐	☐	☐	☐	☐
16. Jeg er flink til å snakke med nye folk	☐	☐	☐	☐	☐
17. Jeg føler jeg er dyktig	☐	☐	☐	☐	☐
18. I familien min har vi regler som forenkler hverdagen	☐	☐	☐	☐	☐
19. Jeg har alltid noen som kan hjelpe meg når jeg trenger det	☐	☐	☐	☐	☐
20. Når jeg skal velge noe vet jeg oftest hva som blir riktig for meg	☐	☐	☐	☐	☐
21. Familien min ser positivt på tiden framover selv om det skjer noe veldig leit	☐	☐	☐	☐	☐
22. Jeg finner alltid noe artig å snakke om	☐	☐	☐	☐	☐
23. Min tro på meg selv får meg gjennom vanskelige perioder	☐	☐	☐	☐	☐
24. I familien min støtter vi opp om hverandre	☐	☐	☐	☐	☐
25. Jeg finner alltid på noe trøstende å si til andre som er lei seg	☐	☐	☐	☐	☐
26. I motgang har jeg en tendens til å finne noe bra jeg kan vokse på	☐	☐	☐	☐	☐
27. I familien min liker vi å finne på ting sammen	☐	☐	☐	☐	☐
28. Jeg har noen nære venner/familiemedlemmer som setter pris på egenskapene mine	☐	☐	☐	☐	☐

R. MESTRINGSTRO

	Helt galt 1	Nokså galt 2	Nokså riktig 3	Helt riktig 4
1. Jeg klarer alltid å løse vanskelige problemer hvis jeg prøver hardt nok	☐	☐	☐	☐
2. Hvis noen motarbeider meg, så kan jeg finne måter og veier for å få det som jeg vil	☐	☐	☐	☐
3. Det er lett for meg å holde fast på planene mine og nå målene mine	☐	☐	☐	☐
4. Jeg føler meg trygg på at jeg ville kunne takle uventede hendelser på en effektiv måte	☐	☐	☐	☐
5. Takket være ressursene mine så vet jeg hvordan jeg skal takle uventede situasjoner	☐	☐	☐	☐
6. Jeg kan løse de fleste problemer hvis jeg går tilstrekkelig inn for det	☐	☐	☐	☐
7. Jeg beholder roen når jeg møter vanskeligheter fordi jeg stoler på mestringsevnen min	☐	☐	☐	☐
8. Når jeg møter et problem, så finner jeg vanligvis flere løsninger på det	☐	☐	☐	☐
9. Hvis jeg er i knipe, så finner jeg vanligvis en løsning	☐	☐	☐	☐
10. Samme hva som hender, så er jeg vanligvis i stand til å takle det	☐	☐	☐	☐

Takk for at du ville svare på spørsmålene!