Eva C. Lyngstad-Alderfer

Depression and social capital in Norwegian adolescents

A quantitative study

Abstract

The aim of this master thesis was to examine the relationship between micro level social capital aspects (i.e. parental and peer relations), meso level aspects (i.e. neighborhood quality and organization membership) and depression symptoms in middle school-aged adolescents. This is important in the light of reports that depression rates in this population are increasing. Furthermore, there is a lack of research regarding this development, and a need to expand the knowledge on how adolescents relate to social resources that affect mental health.

The comprehensive scientific literature on health and social capital shows that social capital, through a variety of definitions, is psychologically and emotionally beneficial, but a focus on adolescents and their agency in social capital creation is limited. The present study utilizes quantitative data from the 2015 Young in Oslo cross-sectional survey (N=12449) by the Norwegian Institute for Research on Childhood, Welfare and Aging (NOVA). The survey is designed to map the health and welfare of Oslo adolescents, as well as to gain insight into certain aspects of their everyday lives.

The relationship between the dependent variable, *self-reported depressed mood,* and the independent social capital variables was analyzed through multiple linear regression. The independent variables include *Parent-adolescent relationship quality, Peer network quality, Emotional support from parents, Emotional support from peers, Neighborhood satisfaction,* and *Organization membership.*

The results showed that these factors, along with gender and socioeconomic status, account for 25.5 % of the variation in subjective depressed mood in the sample. When accounting for gender and socioeconomic status, the most important single correlate was *neighborhood satisfaction*, showing a significant negative association with *depressed mood*. Parent-related social capital also displayed a significant negative association, as did peer-related social capital, albeit with half the effect of the parent factors. *Organizational membership* showed a significant positive association with *depressed mood.*

The thesis addresses methodological imitations, as well as practical implications for social work. Suggestions for further research are discussed, and include the need to examine the mechanisms underneath these correlations.

Sammendrag

Formålet med denne masteroppgaven var å undersøke sammenhengen mellom faktorer på mikro-nivå (personlige relasjoner til foreldre og jevnaldrende), faktorer på meso-nivå (organisasjonsmedlemskap og fornøydhet med nærmiljø) og symptomer på depresjon hos tenåringer i ungdomsskolealder. Viktigheten med dette sees i sammenheng med forsknings-rapporter som viser at psykiske plager blant ungdom er økende. Foreløpig foreligger det ikke nok forskning angående denne utviklingen.

Den eksisterende forskningslitteraturen rundt sosial kapital og helse viser at sosial kapital, igjennom varierende definisjoner, er psykologisk og emosjonelt helsefremmende. Det er likevel et behov for fokus på ungdom og hvordan de aktivt skaper og utnytter sitt eget sosial kapital. Denne studien tar utgangspunkt i kvantitative data fra spørreundersøkelsen Ung i Oslo 2015 (N=12449), i regi av Norsk institutt for forskning om oppvekst, velferd og aldring (NOVA). Tverrsnitt-undersøkelsen har til hensikt å kartlegge helse og velferd blant ungdom i Oslo, samt å oppnå økt innsikt i unges hverdagsliv.

Forholdet mellom utfallsvariabelen *Depressivt stemningsleie* og de uavhengige variablene som representerer sosial kapital, ble undersøkt ved hjelp av multippel lineær regresjonsanalyse. Sosial kapital er operasjonalisert gjennom *Kvalitet på foreldrerelasjoner*, *Kvalitet på jevnalder-nettverk*, *Emosjonell støtte fra foreldre*, *Emosjonell støtte fra jevnaldrende*, *Fornøydhet med nærmiljø* og *Organisasjonsmedlemskap*.

Resultatene viste at disse faktorene, i tillegg til kjønn og sosioøkonomisk status, står for 25,5% av variasjonen i *Depressivt stemningsleie*. Den viktigste enkeltvariabelen var *Fornøydhet med nærmiljø* når effektene fra kjønn og sosioøkonomisk status kontrolleres for, og viste en statistisk signifikant negativ sammenheng med *Depressivt stemningsleie*. Resultatene viser også en signifikant negativ assosiasjon mellom foreldre-relatert sosial kapital og utfallsvariabelen. Det samme forholdet gjelder for jevnalder-relatert sosial kapital, men effekten er bare halvparten så stort som for foreldre-relatert sosial kapital. Resultatene viste en signifikant positiv sammenheng mellom *Depressivt stemningsleie* og *Organisasjonsmedlemskap*.

Oppgaven tar for seg metodiske begrensninger, samt praktiske implikasjoner for sosialt arbeid. Forslag til videre forskning blir diskutert, inkludert behovet for å undersøke mekanismene under sammenhengene som ble funnet i denne studien.

Acknowledgements

The direction of this thesis was inspired by the book *Hold on to your kids: why parents need to matter more than peers* (Neufeld and Maté 2011). In the book, the authors make the case that children and adolescents need, for healthy adjustment and development, to stay emotionally attached to their parents, and that peer attachment should happen within the context of adult networks. Reading this made me curious about the empirical research on this assertion, and a thesis idea took shape. Upon reading the Ungdata reports on declining mental health in the Norwegian adolescent population, my psychology background quickly convinced me to use depression as the outcome variable of peer, parent, and community social correlates.

First, I give my humble gratitude to JJ Lyngstad-Alderfer, my patient son, and to Josh Alderfer, my accommodating husband, for their understanding and teamwork. Although I am the one to receive the MA, my dear family facilitated this and made it possible for me to be a full-time student and stay at home mother. At the master's program orientation session, I listened to the program director relay gloomy statistics about students who deviate from the standard progression track. Being as that I was pregnant at the time, and knowing I would be one of those deviators, I began to feel foolish about my choice to start a family and graduate studies simultaneously. Fortunately, it turned out to be the perfect choice for us, and, though challenging at times, this master thesis has been a positive journey, and definitely a satisfying accomplishment.

My thesis advisor, Professor Ira Malmberg-Heimonen, has been a great rock of support in this process. In the way of high-quality advice, impressive availability and good sense of humor, she has nudged me along every time I felt stuck. Thank you for taking the time to part some of your expertise onto me, I am grateful for your help.

I wish to thank NOVA for granting me access to the Young in Oslo data material, and Mira Aaboen Sletten for taking care of the administrative side of the data request. I also had the pleasure of attending her quantitative methods workshop for master students, which was a helpful resource in the data analysis process. Mira's straightforward feedback has helped me stay focused.

Finally, I want to express my appreciation for the lecturers and administrative staff in the HiOA faculty of Social Sciences, as well as our wonderful guest lecturers.

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1. Introduction

Mental disorders are really the chronic diseases of the young ((NIMH) 2005).

This master thesis is concerned with the association between adolescents' mental health and social environment. Specifically, it examines the relationship between community factors, interpersonal relations to peers, interpersonal relations to parents, and self-reported symptoms of depression.

Sickness and long-term disability associated with mental illness is a growing problem in Norway today, fueling welfare policy efforts to improve public mental health ((NIPH) 2010; (HOD) 2014). Mental illness leads to serious consequences, not only for the individual but for the welfare state, manifested in increased work absence, disability, mortality and direct cost of care (Knudsen, Mathiesen, and Mykletun 2009). About a third of Norwegian disability pensions are attributed to psychological disorders. Among these, depression is one of the most common afflictions, mainly because of its early onset and chronic tendencies (Major 2011).

Norwegian studies report a decline in delinquent behavior among adolescents[1], as this population is increasingly well adjusted (Andersen and Bakken 2015). The same studies, however, show a rise of depression symptoms in adolescents over the last decade, and official records on the use of anti-depressive prescription drugs mirror this development (Andersen and Bakken 2015; Stoltenberg 2015). Hansen (2008) points out that half of all life long illnesses start in childhood; something that the U.S. National Institute of Mental Health also alludes to in the quote at the beginning of the chapter.

Given these developments, there is an increasing need for research on risk factors and onset of depression in children and adolescents (Backe-Hansen 2010; Andersen and Bakken 2015). Various risk factors are involved in this mental health decline, and these likely interact and influence each other. Biological aspects receive increasing attention as the fields of neuroscience and genetics experience new breakthroughs (Steinberg 2005; Casey, Jones, and

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[1] World Health Organization defines adolescence as a critical period of development occurring between ages 10 and 19. http://www.who.int/maternal_child_adolescent/topics/adolescence/dev/en/ (10. Apr. 2016).

Hare 2008; Paus, Keshavan, and Giedd 2008). In the psychology literature, adolescent depression in the family context is extensively studied, supporting the established notion that attachment to parents are important to mental health and adjustment (Armsden et al. 1990; Lamborn et al. 1991; Markiewicz et al. 2006; Keskin and Cam 2009; Branje et al. 2010; Agerup et al. 2015). Environmental factors outside the family, including aspects of peer relations, school and community involvement, have also been addressed in research (Åslund, Starrin, and Nilsson 2010; McPherson et al. 2013; Smokowski et al. 2014).

There is a lack of knowledge about the ways in which adolescents experience and build these social resources, or *social capital* (Korkiamäki and Ellonen 2008; Backe-Hansen 2010). Some of the literature on social capital does take a mental health focus, but scholars have argued that children and adolescents must be brought into this discourse to a larger extent (Morrow 1999; Weiss 2012).

In order to increase the knowledge on adolescent depression in the context of passive and self-created social capital, the aim of this study is to examine the relationship between micro level social capital aspects (i.e. parental and peer relations), meso level aspects (i.e. neighborhood quality and organization membership) and depression symptoms in middle school-aged adolescents. To better understand the developmental and social complexities that surround a maturing adolescent, psychological and sociological literature is reviewed, so as to explore both interpersonal relationships and community factors. By approaching the topic using social capital as a theoretical perspective, I will selectively draw on the works of Robert Putnam, James Coleman and Nan Lin to frame the quantitative data analysis on how adolescents experience certain domains of their lives.

The data material in this thesis is pulled from the Young in Oslo 2015 survey for the middle school level. Thus, the data reflect experiences and perspectives of the adolescents, in contrast to those of their parents, teachers, coaches and health care providers. This provides an opportunity to gain insight into how adolescents perceive their mental health, their communities, and their relationships to peers and adults.

This thesis starts with a brief review of the scientific literature on mental health and adolescents. Chapter 3 elaborates on social capital as a theoretical perspective for the study. In Chapter 4, formal aim and hypotheses are presented, while Chapter 5 outlines the

applied statistical tests and relays the origin and creation of the variables. Results of univariate, bivariate and multivariate statistical analyses are presented in Chapter 6. Tests include factor analysis, correlation analysis and multiple linear regression. Chapter 7 interprets and discusses the results, implications and limitations.

2. Depression in adolescents: protective factors and vulnerabilities

Norwegian health authorities report a mental health decline in the adolescent demographic (Stoltenberg 2015). A research report conducted by The Norwegian Institute for Research on Childhood, Welfare and Aging (NOVA) shows that over the past 20 years, Norwegian adolescents have become increasingly well-adjusted, less involved with crime, and less likely to abuse illegal drugs (Andersen and Bakken 2015). Still, mental health problems are on the rise. Specifically, symptoms of depression have almost doubled since 1996 (ibid.).

The NOVA report emphasizes a need for prioritizing adolescent mental health research and policy development (ibid.). Furthermore, in the most recent national health report, The Norwegian Institute of Public Health (NIPH) suggests that universal, group-centered, family-focused and individualized efforts to prevent mental health problems should be launched in the public school system, childcare centers and community health centers (Stoltenberg 2015).

The increase in symptoms of depression among adolescents, as relayed by e.g. NOVA and NIPH, could be attributed to a range of identified risk factors. A number of other studies have found that victims of abuse (Molnar, Buka, and Kessler 2001) and neglect (De Bellis 2005) are more likely to suffer from depression. Furthermore, adolescents whose parents struggle with mental illness (McCarty and McMahon 2003; Essau 2004) or drug abuse (Lauritzen et al. 1997) are particularly vulnerable to mental health problems. Other established risk factors include marginalization or traumatization (Oppedal, Ysamb, and Sam 2004), as well as high levels of interparental conflict and lack of parenting skills (Yap et al. 2014). Studies on individual risk factors conclude that inherent vulnerable temperament and biological factors such as exposure to alcohol, tobacco or other environmental toxins decreases the chances of long-term healthy development and increases the likelihood of developing behavioral disorders (Moe and Slinning 2002; Banaschewski et al. 2010).

On the other hand, the presence of certain influences has been found to protect the young from developing (or experiencing an increase in) depressive symptoms. Family environment is important; research shows that children who grow up with resourceful, supportive, consistent, and nurturing parents are less likely to develop mental illness (Lamborn et al. 1991; Masten et al. 1999; Branje et al. 2010). Furthermore, social support from family, friends, and other adult caregivers has been found to increase developmental resiliency in children and adolescents (Rutter 1979; Torsheim and Wold 2001; Wille, Bettge, and Ravens-Sieberer 2008). There is also a correlation between mental health in children and the degree of social support the family unit receives from neighbors, extended family, friends, and institutions (Mathiesen and Prior 2006).

The following sections will elaborate on some risk- and protective factors associated with mental health in children and adolescents. Insight from the psychology literature sheds a light on the possible explanatory factors involved in the rise of depression symptoms among adolescents. Notably, it shows which relational factors reduce the risk of mental illness; an important part of the work to promote mental health.

2.1. Why are adolescents so vulnerable to mental illness?

Adolescence is a volatile stage of development for several reasons. First, brain development enters a dramatic phase during adolescence. Studies indicate that hormonal changes associated with the onset of puberty produce a series of reorganization-processes within several important areas of the brain (Steinberg 2005; Casey, Jones, and Hare 2008; Paus, Keshavan, and Giedd 2008). Both growth and reduction is involved with this restructuring, affecting the adolescent's motivation and reward systems, as well as the ability to plan and perceive consequences, make decisions, and control emotions (ibid.). Particularly interesting is the increased emotional response to social stimuli that has been found to accompany adolescence (Paus, Keshavan, and Giedd 2008). In a review on adolescent development, Casey, Jones, and Hare (2008) present a neurobiological model that illustrates the poorly synchronized developmental tracks of higher-level control systems relative to bottom-up, emotion-processing regions, and conclude that this intensified affective responsiveness during a time of limited impulse control can lead to a susceptibility to depression and other affective disorders.

Second, as theorized some time ago by Erik Erikson (1968), one of the general hallmarks of adolescence is the *identity formation process*, in which adolescents explore independence from their parents; an early step in the journey toward becoming autonomous and self-sustaining members of society. This can be an unsettling time, as they can no longer take for granted where they belong and what they should be defined by (Meilman 1979). Research has since documented that the relationship between adolescents and parent changes toward a more egalitarian dynamic, as the adolescent increasingly asserts his- or herself against the authority of the parent (Collins and Laursen 2004; De Goede, Branje, and Meeus 2009). Furthermore, friends become an important source of guidance and support as the adolescent explores independence from parents (Collins and Laursen 2004; Markiewicz et al. 2006; De Goede, Branje, and Meeus 2009).

2.2. The protective bond: peers and parents

Although the present thesis does not attempt to measure attachment to parents and peers, this aspect of adolescent development deserves some attention, because the individuation and maturation processes of puberty and adolescence affect the individual's dispositions with regards to social relations (Keskin and Cam 2009). *Attachment theory* is a branch of psychology pioneered by the British psychiatrist John Bowlby. According to his theory, close relationships governed by strong and affectionate bonds are biologically developed through evolution and contribute to our survival (Bowlby 1988). Bowlby argued that the healthiest form of attachment is *secure attachment*, referring to a relationship in which the child seeks proximity to the attachment object (usually a sensitive and responsive parent) and actively explores the environment using the object as a "safe haven" (ibid.).

Attachment to parents holds an important role through the adolescent period (Markiewicz et al. 2006; Keskin and Cam 2009). Mental illness and maladjustment during adolescence are considerably less likely if the child-parent attachment is being maintained, granted that the parents are supportive, present, and asserting moderate levels of power and control in the relationship (Lamborn et al. 1991; Essau 2004). What also needs to be considered is that this stage of life comes with increasing attachment to peers. As part of emerging independence and autonomy, peer attachment is a natural transitional phenomenon, as the relationship to caregivers become less essential for survival (Erikson 1968). Consequently, the adolescent period exhibits high levels of peer association and conformity (Fuligni et al. 2001). Generally

speaking, this is not a concern; in fact, it is adaptive and expected. Li, Albert, and Dwelle (2014) found that the healthiest scenario is one in which the adolescent balances his relationships with parents and peers in such a way that he remains securely attached to his parents while simultaneously exploring other attachments through periods of separation.

A considerable amount of research exists on the dynamic between adolescents, peers and parents. Balancing these changing relationships is no straightforward task. The value and effect of peer relations on adolescent health and behavior is typically viewed as contingent on the type of peer group. Research supports the view that an association with peer groups who engage in risky- or problem behavior is harmful to adjustment and mental health (Berndt and Murphy 2002; Gardner and Steinberg 2012).

When it comes to depression specifically, findings converge on the high importance of parents relative to peers (Armsden et al. 1990). That is, adolescents who report high attachment to parents and low attachment to peers are less depressed than those who have weak attachments to parents but strong attachment to peers. Nada Raja, McGee, and Stanton (1992) found that, of the four peer-parent attachment combinations possible[2] in their study, low attachment to parents and high attachment to peers showed the strongest association with depression. Furthermore, in a recent study on correlates of depression in Norwegian 15-year olds, a low quality adolescent-parent relationship was associated with the persistence of depressive symptoms. The same study did not find this effect for peer relationships (Agerup et al. 2015). Another study investigated the protective factors for depression in victims of early adolescent bullying, and found that high attachment to peers was a risk factor for developing depression, subsequent to such victimization (Vassallo et al. 2014). On the other end of the spectrum we find results from a U.S. study on the relationship between attachment and adjustment (herein levels of depression), which found that higher levels of attachment to peers were associated with higher levels of adjustment, suggesting that peers are more influential than parents when it comes to adolescent adjustment and mental health (Laible, Carlo, and Raffaelli 2000).

Although the majority of the literature seems to be clear on the conclusion that strong peer relations cannot substitute a supportive, strong and secure relationship to parents, it is

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[2] Low attachment (ATC) to parents and low ATC to peers; low ATC to parents and high ATC to peers; high ATC to parents and low ATC to peers; high ATC to parents and high ATC to peers.

important to note that the combination of secure attachments with both parents and friends has been found the most advantageous situation (Armsden et al. 1990; Laible, Carlo, and Raffaelli 2000; Li, Albert, and Dwelle 2014). In a meta-analysis of 44 studies on the relationship between peer and parent attachment, Gorrese and Ruggieri (2012) concluded that bonds to peers and family can and should coexist during adolescence.

In summary, adolescents need to develop autonomy and independence from their parents, but they are vulnerable to socio-emotional stimuli during this process. They pursue activities and priorities outside the known structures of their families, without yet being appropriately equipped to handle their world of emotions and impulses. Moreover, the attachment bond between adolescents and parents supports the maintenance of harmony during the individuation process, while new bonds simultaneously pull the adolescent toward peers.

As mentioned at the beginning of the chapter, Norwegian health and research authorities emphasize the need for proactive efforts to reduce mental illness in adolescents (Andersen and Bakken 2015; Stoltenberg 2015). The aim of prevention encourages a social approach that can be incorporated into public and community health efforts. Taking into consideration both the vulnerabilities and protective factors for depression in adolescents, it is further apparent that the social environment plays a key role in the facilitation of mental health. In order to systematize and understand this relationship between social environment and depression, it is useful to apply a structured theoretical approach. Chapter 3 will introduce *social capital theory*, and discuss how assigning social factors to various subcategories of social capital will serve to provide a useful framework for analysis of depression in adolescents.

3. Social capital as a theoretical framework

Social capital theory is used in this study to approach and categorize the independent variables, so that the relationship between depression and social factors can be understood through the lens of social capital, or *access to resources through social networks*. This chapter presents literature on social capital as it relates specifically to adolescent mental health. Moreover, the chapter highlights relevant analytic tools rooted in social capital discourse, and explains how these can be applied in the methodology of the thesis.

Over the past two decades *social capital* has grown to become a widely studied and discussed subject across many disciplines, including economics, political science, sociology and psychology[3]. Efforts have been made to define this seemingly ambiguous construct, yielding numerous, and often complex, interpretations and applications (Portes 1998; OECD 2001; Fulkerson and Thompson 2008). This thesis gravitates towards a definition put forth by the social capital researcher Nan Lin, referring to the concept as "resources embedded in social relations and social networks" (Lin 2001; Lin and Erickson 2008). This is a simple, yet inclusive description of the concept, and one that fits this study well, given the focus on personal relationships and network quality as opposed to social trust. Lin's definition shows the great capacity of social capital, as it is *any resource*, implicit or explicit, that originates in relations or networks. Thus it includes individual, group, and nation level resources that can be exchanged in a number of ways. I will come back to Lin after considering other popular social capital definitions, namely those of James Coleman, Pierre Bourdieu and Robert Putnam; three scholars associated with the popularization of social capital as an analytical construct.

During the 1980s and 90s, Coleman, Bourdieu, and Putnam launched the term *social capital* into the academic discourse. Bourdieu, who started publishing work on social capital in the mid 1980s, is occupied with the tacit and symbolic perpetuations of social capital through societal structures and governmental policies. He describes social capital as "the aggregate of the actual or potential resources which are linked to possession of a durable network of more or less institutionalized relationships of mutual acquaintance and recognition" (Bourdieu 1986, 21). In Bourdieu's view, social capital is related to the size of networks surrounding an individual, which is maintained by material, symbolic and social exchanges between agents and groups (1986). He treats social capital as an instrument with which people can build connections for the purpose of increasing various forms of capital, whether it be material, cultural, or economic (Portes 1998).

Coleman, who writes about social capital contemporary with Bourdieu, defines the term by its function; as different entities that have "two elements in common: they all consist of some type of social structures, and they facilitate certain action of actors within that structure"

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[3] See for example Portes (1998); Eliacin (2013); Valdivieso and Villena-Roldan (2014); Von Otter and Stenberg (2015).

(Coleman 1988). Coleman emphasizes the significance of relations between people as the essence of social capital, describing it as a "public good" that affects both community and the particular individuals who invest in it. Coleman gives attention to social capital as bound by cohesive family relationships, polarized with social capital outside of the family. According to him, *norms* and *trust* are essential in the creation of social capital, and adolescents must be surrounded by networks of people who know, control, and trust each other. This type of intra-familial cohesion, in which parents from different families know each other and form a community, he calls *intergenerational closure*. Coleman asserts that intergenerational closure is necessary for adolescents to optimally grow and thrive (ibid.).

Robert Putnam is perhaps the most influential, albeit controversial, contributor to the social capital discourse. In the years following the printing of *Making democracy work* in 1993, the number of academic articles on social capital abruptly increased, as pointed out by Halpern (2005, 9). His book documents a study investigating the association between government effectiveness and a number of independent factors. The strongest predictor was found to be *the level of trust between strangers* (Putnam 1993). This type of general trust, or *social trust*, has been regarded as one of the most reliable measures of overall social capital in a given population (Knack and Keefer 1997; Putnam 2000; Whiteley 2000; Halpern 2001).

Putnam's work exemplifies the importance of social capital as an analytical tool. The level of social capital in a nation or community is related to its functioning in such a way that even Norwegian scholars have gone so far as to call it the "oil in the machine"; a play on words alluding that the importance of social capital in Norway is greater than that of the North Sea oil reservoirs, at least with regards to the prosperity of this welfare state (Segaard and Wollebæk 2011, 45). Studies reliably show that Norway holds one of the highest levels of generalized social capital (social trust) in the world (Wollebæk 2011, 58). Furthermore, married and cohabiting couples exhibit higher levels of social capital than singles, people with higher education have better access to social capital than people with less education, and people who are members of organizations show higher levels of social capital than those who are not (Hvinden 2005).

While research by scholars such as Putnam focuses on outcomes of social capital, Lin cautions about the use of trust to measure the construct (Lin and Erickson 2008). Instead, Lin concentrates on the sources of social capital, supporting the well-established view that social

capital is a network-based resource, while assigning equal importance to social relations (Lin and Erickson 2008). Furthermore, he sees social capital as both individual and collective resources that can be cultivated for success. However, *trust* and *norms* may not receive this classification because these are collective effects only (Lin 2001, 26).

3.1. Applicable subcategories of social capital

Coleman, Bourdieu, and Putnam initially did a lot to pave the road for social capital to become a part of academic discourse, and later research has gone beneath the broad concept to further deconstruct it. Three subcategories have been elaborated on and gained substantial foothold: Bonding, bridging and linking social capital – embedded in micro, meso, and macro perspectives on human networks and relations (Halpern 2005, 27). The bonding-bridging dichotomy is readily associated with Putnam and has become an integrated part of social capital discourse.

Macro perspectives on social capital refer to networks and relations between people who don't know each other. An example of social capital on a macro level is the overall trust between strangers in a nation or community, as previously mentioned in context with Putnam (1993, 2000). There has been some disagreement about the inclusion of the macro perspective in social capital research, mostly because it is feared to draw attention away from the informal networks that govern our everyday interactions, as institutional networks may also be included in the social capital definition based on the macro interpretation (Edwards and Foley 1998; Portes 1998).

The hypotheses in this study concern the relationship between family, peers, and community social capital in regard to their association with self-reported depressed mood. As such, it centers on the micro and meso level perspectives on social capital, and consequently, this thesis will not concern itself with macro level analysis. Still, I have included macro level resources in the social capital model shown in Figure 1, because it is relevant to overall social capital, and it may help the reader form a more wholesome picture of how these concepts relate to each other.

Social capital related to neighborhood and community represents the meso level perspective (Figure 1). At this level, social capital reaches below the surface and into resources affiliated

with smaller communities (Halpern 2005, 26). This study accesses data on neighborhood satisfaction and organization membership; meso level resources embedded in the interface between the adolescents and e.g. their soccer team, the family across the street, or the local church.

Figure 1. Social capital theoretical model incorporating the micro-meso-macro stratification. Adapted from Halpern's conceptual map of social capital (Halpern 2005, 27).
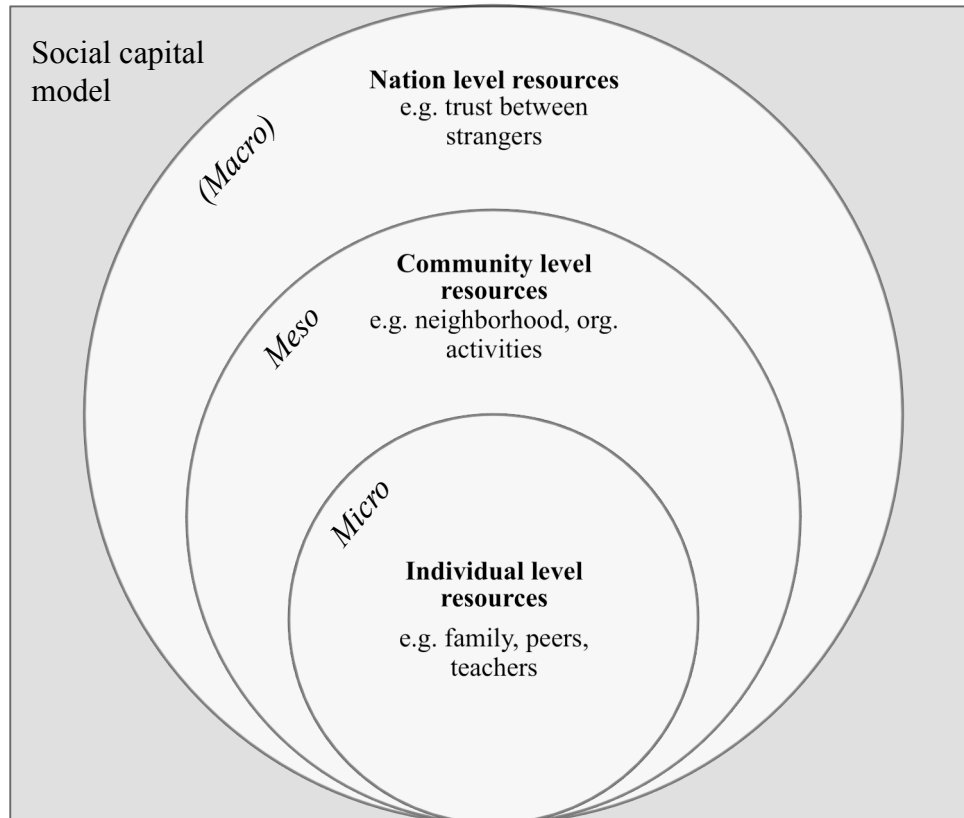
Located at the micro level are the intimate networks most of us can relate to, namely family and friends. At this level, social capital resonates with the psychological literature on adolescents and mental health, as presented in Chapter 2. Some scholars (e.g. Kawachi and Berkman 2000) have argued for leaving the micro perspective out of social capital research, being that it reflects individual-level resources that could be better described through a psychological approach. Others have contested that micro level social capital is the theoretically soundest direction to pursue (e.g. Edwards and Foley 1998; Portes 1998).

In addition to the micro-meso-macro stratification, the qualitative subcategories *bonding* and *bridging* social capital are relevant to this thesis. Although bonding and bridging

capital are more proximate to the research question, linking social capital nevertheless deserves to be mentioned, as it has gained considerable traction in the research community (Szreter 2002; Dahl and Malmberg-Heimonen 2010). Linking capital refers to connections between people or communities with unequal power and resources, introducing issues of class and status (Szreter 2002). Because the data in this study provide limited information on topics that can be quantified as linking capital, and because such issues are not a focus of this thesis, linking social capital will not receive further attention.

Putnam (2000) was among the first to bring the bonding-bridging distinction into social capital discourse. Bonding social capital is "inward looking and tend(s) to reinforce exclusive identities and homogeneous groups," while bridging capital is "outward looking and encompass people across diverse social cleavages" (Putnam 2000, 22-23). Putnam uses two simple metaphors for this dichotomy; bonding capital is the superglue that perpetuates cohesive and tight-knit groups of people, and bridging capital is the oil that greases the interaction between separate groups or individuals herein (ibid). There are some difficulties associated with the application of the bridging-bonding terminology in research methodology, and I will return to this issue in Chapter 4.

3.2. Social capital, mental health and adolescents

Among other domains, consequences of social capital in the fields of economics, education, crime and government have been studied. The links between health and social capital has been explored, in one way or another, for over a century[4]. Putnam goes so far as to say that the "importance of social connectedness" to health is the best established connection in social capital research (Putnam 2000, 326).

On the micro level, a person who has fewer intimate relationships (relationships of both emotional and physical closeness) is more likely to develop mental illness. The same is true for low quality relationships (Sarason, Sarason, and Pierce 1990)[5]. Moving up to the meso level, members of homogenous and cohesive communities are psychologically healthier than members of diverse communities (known as the group density effect). This is particularly evident in neighborhoods, as higher group density effect is associated with

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[4] The classic example here is Durkheim's research on suicide (Durkheim 1897).
[5] Review Chapter 2 for a discussion about optimal relationships.

higher neighborhood social capital (e.g. social participation and neighborhood satisfaction), which in turn is positively related to mental health and well-being (Halpern 1993; Lindström, Merlo, and Östergren 2002; Halpern 2005). Furthermore, community involvement and low levels of social isolation is associated with lower levels of depression (Sherbourne, Hays, and Wells 1995).

The need for more research on social capital as it relates to children and adolescents has previously been voiced by both Norwegian and international researchers (Morrow 1999; Hvinden 2005; Backe-Hansen 2010; Weiss 2012). My own search for literature on this subject yielded a handful of articles[6].

The most immediate information to glean from these articles is that social capital and mental health are associated, and that the social capital concept is a helpful tool in investigating the factors related to mental health in adolescents. In a review of the international literature on social capital and health risk behaviors in adolescents, McPherson et al. (2013) concludes that "The synthesised evidence demonstrates that social capital is an important construct for understanding the establishment of health risk behaviours in young people." Especially important factors of social capital were found to be positive parent–child relations, parental monitoring, religiosity and school quality (ibid).

Family dynamics are important indicators of mental health among adolescents (see Chapter 2). Studies pertaining especially to social capital show the same trend. Rothon, Goodwin, and Stansfeld (2012) found that adolescents who have a sense of family belonging and who spend time with family after school are less likely to suffer from mental illness. The characteristics of the parent-child relationship are also important. Higher-quality relationships (defined here as parents' positive interest in their adolescent), parental surveillance (parents monitoring their adolescent's activities and network) and emotional and practical support in relation to school, are all factors associated with better mental health (Rothon, Goodwin, and Stansfeld 2012; Novak and Kawachi 2015).

The role of neighborhood in adolescent mental health has received attention in the past

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[6] A quick database search (Academic Search Premier) with phrases 'social capital' and 'adolescents' and 'depression' yields 12 results. Substituting 'adjustment' or 'mental health' for 'depression' does not increase the number of outcomes.

years. A 2013 literature review of eight studies on neighborhood social capital and adolescent health concludes that neighborhood factors (described as aspects accommodating community activities with and for adolescents) mediates the relationship between socioeconomic status and health in adolescents (Vyncke et al.). Since the review was written, other studies supporting this conclusion have been published. For example, a cross-sectional study based on Swedish survey data found that neighborhood social capital, operationalized by questions concerning neighborhood safety, cohesion, and satisfaction, found that lower levels of neighborhood social capital was associated with higher levels of depression (Åslund, Starrin, and Nilsson 2010). Another European study concluded that low levels of neighborhood trust and cohesion is associated with psychological distress in adolescents (Novak and Kawachi 2015).

Community activity is another factor that has been mentioned in the literature on adolescent health and social capital. Morgan and Haglund (2009) found that low involvement in community activities was associated with poor mental health among middle school-aged adolescents in England.

Interestingly, the role of peer relationships has received little attention in the research on social capital. In a 2008 review of the social capital literature, Korkiamäki and Ellonen also noted gaps in the research on peer networks (Korkiamäki and Ellonen 2008). However, the psychology literature presented in Chapter 2 covers this topic extensively.

3.3. Measuring social capital

How to measure the level of social capital for a given individual or community is perhaps one of the greatest controversies in social capital research due to a number of factors, of which the biggest is the many operational definitions that exist among the various scholars across diverse fields of research. These differences lead to measurement inconsistencies, and consequently, comparisons between studies can be difficult (Schuller, Baron, and Field 2000). In addition, nations and regions have different social capital dynamics and types, which warrant different methodological approaches (Edwards and Foley 1998).

The Organisation for Economic Co-operation and Development (OECD) has reviewed the measurement of social capital, and reports that *personal relationships*, *civic engagement*,

social network support and *trust* are the four domains by which researchers conceptualize the term (Scrivens and Smith 2013). Of these, personal relationships, civic engagement and social network support are relevant to this thesis. Typical measures in the category of *personal relationships* include size and structure of personal relationships, nature and quality of relationships, and time investment in each relationship (ibid).

According to the OECD report, the category of *social network support* – which refers to resources provided by personal social networks – includes both sources and nature of the support, e.g. moral support from a parent, or practical support from a friend (Scrivens and Smith 2013). The quality of one's supportive network has been found a particularly stable indicator of social capital. This is usually ascertained via a questionnaire, by asking the question "if you have a problem, or something is worrying you, do you have someone you can turn to?" (Halpern 2005, 36). The present thesis includes a variation of this question, examining the emotional resources available to the adolescents through their networks. Emotional support has also been used as an indicator of social capital in Norwegian studies on health (Dahl and Malmberg-Heimonen 2010).

The third domain found in OECDs report is *civic engagement*, referring to action and networks on a community level, such as club memberships and volunteering. Associational involvement is listed as a common measure of civic engagement, and has been used as a variable in Norwegian and international studies on social capital and health (Baum et al. 2000; Veenstra 2000; Dahl and Malmberg-Heimonen 2010).

Social capital theory provides a framework for studying the social correlates of depression through structuring our environment into categories of connections that matters to our health. This chapter has presented a theoretical model of social capital, in which the micro sublevel has been outlined as corresponding to resources embedded in networks of family and peer groups, and the meso level contains resources from networks associated with neighborhood and community. The domains of social capital research can be further broken down into personal relationships, social network support, and civic engagement.

The next chapter will bring together the information on social capital, mental health and adolescents, and present a methodological approach to measuring mental health from a social perspective.

4. Aim and Hypotheses

The main aim of this master thesis is to examine the association between micro level social capital aspects, i.e. parental relations, peer relations, and mental health, in Oslo middle school adolescents. Furthermore, I wish to explore the importance of factors related to neighborhood quality and organization membership (meso level social capital) when it comes to mental health in this population. The goal is to get a sense of the dynamics between these different forms of social capital, and the different ways in which they relate to mental health.

This chapter starts with a section on operational definitions, followed by a description of the hypotheses in this study. A theoretical model on the hypothesized relationships between social capital, background factors, and mental health will be presented. Finally, the interrelatedness between mental health and social capital in terms of usefulness for the thesis subject is briefly discussed.

4.1. Operational definitions

Because there exist many definitions of social capital, its subcomponents, and even mental health, it is important to operationalize the concepts used and measured in this study. First and foremost, mental health is specified through the level of *self-reported depression symptoms*, or depressed mood (which corresponds to the measure *Depressed mood*). The thesis operates under assumption that if levels of depressed mood are high, the individual has somewhat poor mental health and well-being, and vice versa.

Second, because this study is selective in the types of social capital that is being measured, a broad definition of social capital, as "resources embedded in social relations and social networks" is appropriate (Lin 2001; Lin and Erickson 2008). This definition permits reaching below the aggregate level and investigating the subcomponents of social capital. Some researchers have expressed the need for elaborate measures such as bonding and bridging social capital, or strong and weak ties (Nuissl 2002; Harrison, Montgomery, and Bliss 2016). However, the distinction between the two is not straightforward, because peer groups, neighborhoods and community activities are not inherently heterogeneous or homogenous. For example, some 'friend-cliques' are highly cohesive and homogenous, while others are made up of individuals from diverse backgrounds and have more inclusive values. Moreover, some neighborhoods consist of families of similar demographic characteristics, values and

socioeconomic status, while other neighborhoods can be highly heterogeneous and low on social trust and cooperation. The data material in this study does not afford insight adequate enough for such classifications to be made. Instead, the focus will remain on the distinction between individual (micro level) and community (meso level). Measures concern personal relationships, social support network, and civic engagement, drawing on the OECD measurement domains introduced in Chapter 3 (Scrivens and Smith 2013).

Third, getting specifically to the micro level measures, social capital concerning the personal relationships category includes *Parent-adolescent relationship quality* and *Peer network quality*. The social support network category is comprised by the measures *Parental emotional support* and *Peer emotional support*.

The final operationalization to make pertains to the meso sublevel, where we find civic engagement, measured by *Organization membership*. *Neighborhood satisfaction* is a measure that has become increasingly common, also in Norwegian studies on social capital (Dahl and Malmberg-Heimonen 2010). The *Neighborhood satisfaction* measure spans the OECD domains, as it includes aspects of personal relationships, social networks and civic engagement.

4.2. Hypotheses of the study

As this is a quantitative study of factors associated with self-reported symptoms of depression, hypotheses will be tested through multiple regression analysis, a correlational method that examines the association strength between variables, i.e. depressed mood and aspects of social capital. Based on the psychological literature discussed in Chapter 2 and 3, on the importance of these social capital resources to mental health, I expect the independent variables to be negatively related to depressed mood:

Hypothesis 1. Higher relationship quality for friends and parents, better access to emotional support, higher neighborhood satisfaction, and organizational membership are related to lower depression scores. Specifically,

> a) *Parent-adolescent relationship quality is negatively associated with Depressed mood; the better relationship quality between adolescent and parents, the lower depression scores.*

b) *Parental emotional support and Peer emotional support is negatively associated with Depressed mood; the presence of emotional support from parents or friends is associated with lower depression scores.*

c) *Peer network quality correlates negatively with Depressed mood; the presence of a best friend relationship is associated with lower depression scores.*

d) *Organization membership correlates negatively with Depressed mood; being a member of an organization or club is associated with lower depression scores.*

e) *Neighborhood satisfaction is negatively associated with Depressed mood; the higher neighborhood satisfaction, the lower depression scores.*

The next hypothesis concerns the dynamics between the independent variables. It is informed by the psychological literature presented in Chapter 2, suggesting that parental influence is more important than peer relations when it comes to mental health in adolescents.

Hypothesis 2. Correlations between *Depressed mood* and parent-related variables (*Parent-adolescent relationship quality*, *Parental emotional support*) show larger effect sizes than correlations between *Depressed mood* and peer-related variables (*Peer emotional support*, *Peer network quality*).

These hypotheses can be understood in the context of a research model for social capital and mental health in adolescents, as shown in Figure 2. This model merges the social capital theoretical model from Chapter 3 with a causal diagram containing the variables used in this study. Social capital serves as the background in which the independent variables are embedded, such that the various forms of social capital are indirectly related to mental health through seven quantitative measures. In addition, the following background variables are accounted for: *Gender*, *Family affluence*, and *Parent education.* It is important to consider these variables because research shows that low socioeconomic status is related to poor mental health (Lorant et al. 2003; Smokowski et al. 2014). Additionally, girls are more likely to report symptoms of depression, so gender is a key variable to account for[7] (Smokowski et al. 2014).

It should be emphasized that the causal diagram is a simplified depiction of dynamics between the variables. The current study is not equipped to establish causality and direction

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[7] NIPH fact sheet: http://www.fhi.no/artikler/?id=84420 . (1. Apr. 2016).

of relationship, only association between the included factors. Thus, the directionality of the influence may go both ways, i.e. depressed mood influences the independent variables and/or the independent variables influences depressed mood.

Figure 2. Thesis research model.
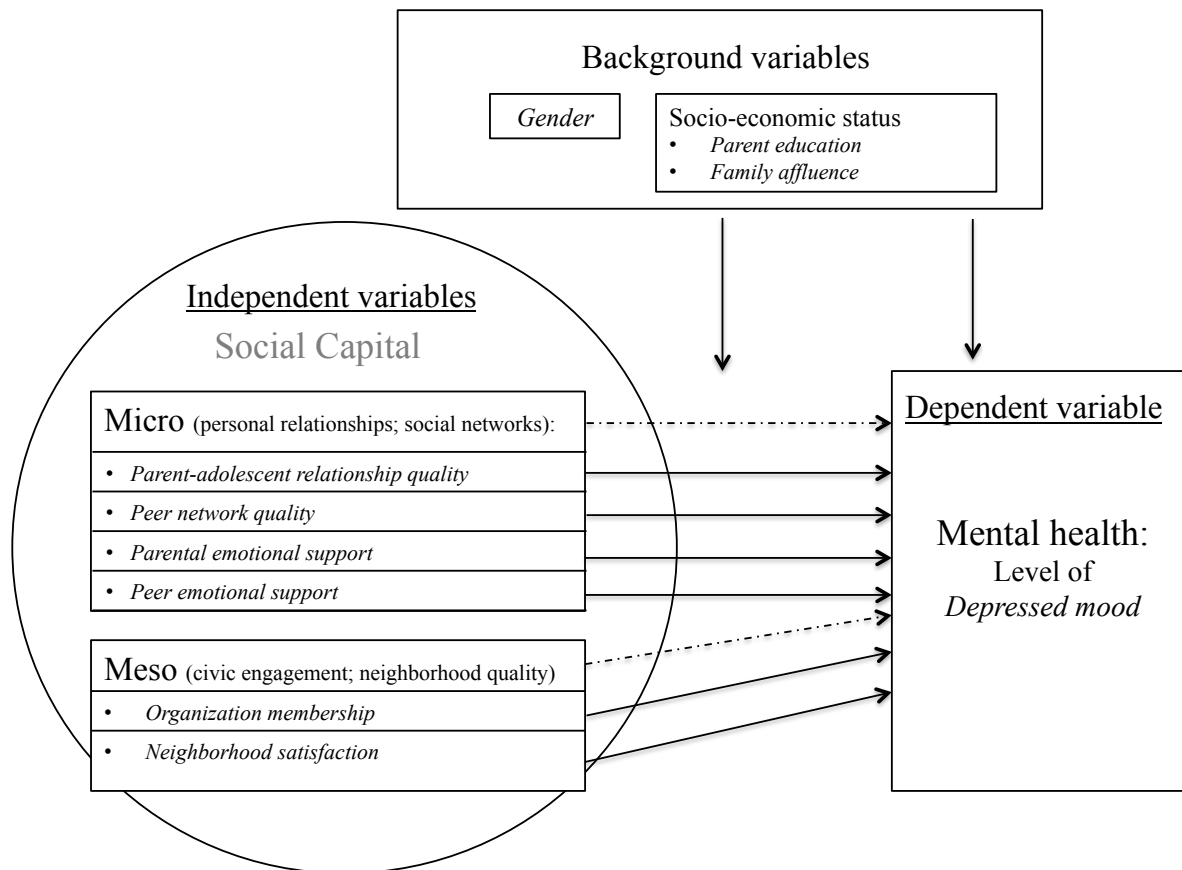
From the previous two chapters we retain the understanding that there is considerable overlap between social capital and psychology. Our social environment, including family, friends and community affects our mental health, and adolescents are particularly vulnerable to social changes. Thus, the social capital construct is useful to provide a framework for discussion and research on mental health from a perspective of societal and relational factors, as opposed to individual elements alone. This allows for easier and richer cross-regional comparisons and knowledge growth.

Another point is that the social capital approach can be useful for policymakers in that it provides a structured tool; one that can illuminate links between policies and changes at

group- or population level (Hvinden 2005, 7). The changes in depression prevalence among adolescents in Norway over the past 10 years is likely socially based, and although this is a cross-sectional study unable to explain the changes in depression rates over time, it can shed some light on the social correlates of depression and the relative importance of these factors to mental health.

5. Data and methods

This study exhibits a cross-sectional design utilizing existing survey data. The purpose of the design is to measure the association between subjective depressed mood and selected social- and background characteristics, including relationship quality with parents and friends, access to emotional support from parents and friends, organization membership, neighborhood satisfaction, gender and socioeconomic status.

In the first section of this chapter I will describe the origin of the data material, as well as the specifics of the questionnaire and data collection. Next follows a description of measures and their characteristics, including an account of the data preparation procedures. The final section will relay the selection of statistical tests and analyses for this study and discuss these choices.

5.1. Young in Oslo: an Ungdata survey

The data material for this study is based on the Young in Oslo 2015 (Ung i Oslo 2015) survey conducted by the Norwegian Institute for Research on Childhood, Welfare and Aging (NOVA) in collaboration with the Regional Drug and Alcohol Competence Centers (KoRus). The Young in Oslo survey is administered as an Ungdata questionnaire. Ungdata is a questionnaire system designed for collecting data in Norwegian municipalities, and together the data from participating regions constitute the national Ungdata database.

The present master thesis utilizes Young in Oslo data from middle schools in Oslo municipality. 51 public and 7 private middle schools participated in the Young in Oslo 2015 survey (Hvinden 2005). This reflects a purposive, or judgmental, sampling design, as NOVA and KoRus wished to obtain a representative sample of middle school teens in Oslo. With a response rate of 86 %, the Young in Oslo middle school sample size is quite large (N=12449), thus sufficient for generalization to the Oslo middle school-aged adolescent population (Cohen

1992, 58; Andersen and Bakken 2015). The purpose of Young in Oslo is to map the health and welfare of Oslo adolescents, as well as to gain insight into certain aspects of their everyday lives (Andersen and Bakken 2015). This information can be used as part of the knowledge base from which policies and preventive measures relevant to adolescents are generated.

The data set was obtained in the form of a digital file created in the data analysis program IBM SPSS Statistics. At this point the data was not entirely raw, but had been routinely subjected to a data cleanup procedure developed by NOVA. This procedure is in place to detect and eliminate unserious responses, and will be covered more closely in section 5.4.

The Young in Oslo survey was conducted in 1996, 2006, 2012 and 2015. As such, it constitutes a repeated cross-sectional study, providing insight into the lives of participants at one moment in time, with the possibility for comparison across time.

The questionnaire is developed by NOVA, whose history with large adolescent surveys goes back twenty years. The general Ungdata questionnaire is revised every third year in order to reflect current developments in culture, and to introduce novel topics or themes, which arise from collaboration with KoRus and various government agencies. Most of the contents, however, remain unchanged to allow for comparison across time and locations. The questionnaire represents a blend of custom questions and questions based on validated international scales, e.g. Hopkins Symptoms Checklist (Frøyland 2015).

The 2015 Young in Oslo survey was administered electronically in class between the third and thirteenth week of 2015. It consists of 117 closed, dichotomous or multiple choice-type questions covering six themes, including parents and friends; school and future; free time; health and wellbeing; drugs and tobacco; risky and violent behavior. These themes are structured into sections made up of questions that constitute a specific subtopic[8].

Certain topics were identified as applicable to this master thesis and subsequently selected for further analysis. Selected topics include *parents*, *peers*, *mental health*, *life satisfaction* and *leisure activities*. Background information was also selected, including *gender*, *family affluence* and *parents' education*. The next section will elaborate on the questions and scales that were included in the analysis, both as single variables and composite measures.

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[8] See Appendix B – Young in Oslo 2015 questionnaire.

5.2. Measures

The purpose of the current master thesis is to explore the relationship between depression and social capital in the form of interpersonal relations with parents and friends, as well as neighborhood quality and organization membership. With these aims in mind, the questionnaire was repeatedly reviewed to identify suitable topics.

First, certain sections were eliminated from the initial data request. These themes included dental health, medications, eating habits, media use, homework and favorite digital activity. The resulting data file was then reexamined in order to select questions that would be appropriate to incorporate as variables in the study. Any question describing the relationship between the respondent and his or her parents was selected, as was any question pertaining to the relationship between the respondent and his or her friends. Items referring to neighborhood and free-time activities and were also chosen, along with the single scale that described symptoms of depression and depressed mood. Finally, background variables, including gender and socio-economic status, were selected. The upcoming subsections will relay the origin, creation and structure of each variable.

5.2.1. Dependent variable: Depressed mood

The dependent variable for this study is a composite measure comprised by a six-item scale developed to assess depressed mood (Frøyland 2015). The scale originates in Hopkins Symptom Checklist (Derogatis et al. 1974) and Depressive Mood Inventory (Kandel and Davies 1982), and was selected for the present thesis because studies have shown that both the short and long versions of the scales exhibit good validity (Tambs and Moum 1993; Strand et al. 2003). The questionnaire includes two additional items for the depressed mood scale; however, these are not part of the validated scales and were consequently excluded from the present study.

The question corresponding to the depressed mood scale asks, "During the past week, have you been affected by any of the following issues:" followed by the six statements: "Felt that everything is a struggle"; "Had sleep problems"; "Felt unhappy, sad or depressed"; "Felt hopelessness about the future"; "Felt stiff or tense"; Worried too much about things." The response options given are "1 - Not been affected at all", "2 - Not been affected much", "3 - Been affected quite a lot", and "4 - Been affected a great deal".

As is true for the majority of questions in the questionnaire, this scale follows a Likert format; a gradual assessment of a series of statements given three to seven response options (Ringdal 2013, 202).

By adding the six items together, The *Depressed mood* composite measure was created to reflect sum scores ranging from 6 (no symptoms) to 24 (heavily affected). Cronbach's alpha for the measure is relatively high (α = .88).

5.2.2. Independent variables: relationships, social support, civic engagement and neighborhood quality

The independent variables in this study are all dichotomous, and grouped into four categories reflecting current research on social capital[9]: personal relationships, social support, civic engagement and neighborhood satisfaction (Figure 1). The relationship category is comprised of a dichotomized version of the *Parent-adolescent relationship quality* composite measure, as well as the variable *Peer network quality*. The social support grouping includes two indicators of emotional support – *Parental emotional support* and *Peer emotional support*. Civic engagement consists of the variable *Organization membership*, and the final category contains a variable measuring *Neighborhood satisfaction*. The following pages will elaborate on the background and creation of these variables.

Parent-adolescent relationship quality

The search for variables that could measure the quality of relationship between adolescents and parents yielded many potential candidates. These were scales which, at face value, seemed likely to describe this relationship, coming from a theoretically informed perspective of what constitutes a good parent-child relationship (see Chapter 2). Initial factor analysis (described in detail in section *5.3.3*) narrowed down the nine variables below. The items that constitute the *Parent-adolescent relationship quality* measure are pulled from three different scales located in the questionnaire sections *Parents*; *Parents and school* and *Intimate relationships*.

Six items are taken from the *Parents* section, and follow the question "Here are some statements about how you might describe your relationship with your parents. How true are they for you?" The statements included in the measure are listed below.

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[9] According to the OECD report on social capital measurement, discussed in section 3.3.

1 - My parents usually know where I am, and who I'm with, in my free time
2 - My parents know most of the friends I hang out with in my free time
3 - My parents know my friends´ parents
4 - I try to hide most of the things that I do in my free time from my parents
5 - I often argue with my parents
6 - My parents know the people I chat with on the Internet

For these items the response options range from "1 - Very true" to "2 - Quite true", "3 - Not very true" and "4 - Not at all true". The scores for statements 4 and 5 were reversed so as to correlate positively with the rest of the statements. Statements 1 through 4 have been used in Young in Oslo and Ungdata questionnaires since 1996, and statements 5 and 6 were added in 2013. The origin of the questions is unknown; however, they are the result of collaboration between NOVA and KoRus (Frøyland 2015).

The next three items in the *Parent-adolescent relationship quality* composite measure come from the *Parents and school* section of the questionnaire. After the question "How true are the following statements for you?" appear the items

7 - My parents are very interested in my schoolwork
8 - My parents often help me with my schoolwork
9 - My parents often praise me for my schoolwork

The response options range from "1 – Very true" to "4 – Not at all true", as for the first six items. This question has been used in Ungdata studies since the 1980s, and is inspired by the Family Learning Environment Scale (Marjoribanks 1987), which was developed to examine the moderating effect of family on the relationship between children's school performance and their attitudes toward school (Frøyland 2015).

The *Parent-adolescent relationship quality* composite measure was created in four steps, the first of which was identical to the creation of the dependent variable (adding the items). The second step was to address and replace missing values, which will be described in detail in section 5.4. Essentially, the cutoff point for replacing missing values with the mean was drawn at respondents answering at least 50% of the nine items included in the measure. The range of scores was then sorted into three groups; the lowest scoring 25% of the respondents, the middle scoring 50%, and the highest scoring 25%.

The final step of the *Parent-adolescent relationship quality* variable creation was to recode

variables to reflect the 25/50/25 division. This was achieved by creating three dummy (dichotomous) variables, named *Low parent-adolescent relationship quality*, *Medium parent-adolescent relationship quality* and *High parent-adolescent relationship quality*. Since dummy variables hold only one of two numerical values, each new variable has the value of either 1 or 0. A *High parent-adolescent relationship quality* value of 1 reflects the 25% respondents who have the lowest scores, while *Medium parent-adolescent relationship quality* value of 1 reflects the middle 50% of respondents, and *Low Parent-adolescent relationship quality* value of 1 reflects the top 25% of respondents. Scale reliability test shows a Cronbach's Alpha value of .78.

Peer network quality

The second independent variable in this study, *Peer network quality,* is qualified by the presence or absence of a best friend, or close confidant. This question operationalizes peer network quality, not in terms of values and activities within the peer group, but of cohesiveness and support, factors found to predict mental health and well-being (Brown and Harris 1978, quoted in Halpern 2005, 75-79; Sherbourne, Hays, and Wells 1995; Kawachi and Berkman 2001).

The question is, "Do you have at least one friend who you trust completely and who you can tell absolutely anything?", with the response options "1 – Yes, definitely", "2 – Yes, I think so", "3 - I don't think so", and "4 – There´s nobody I would call a friend at the moment".

The question is converted to a dichotomous variable by recoding responses 1 and 2 into 1, and 3 and 4 into 0, so that a score of 1 reflects adolescents who definitely or probably have a confidant, and 0 reflects those who probably or definitely do not have a best friend in their peer group. The origin of the question is unknown, but it was used in the 1996 and 2006 Young in Oslo survey.

Parental emotional support and Peer emotional support

These two variables are created from the question, "Imagine that you have a personal problem. You feel down and sad and need someone to talk to. Who would you talk to or ask for help?". The accompanying statements are "Parents", corresponding to the variable *Parental emotional support*, and "Friends", corresponding to *Peer emotional support*. The response options are "1 – Definitely", "2 – Maybe", and "3 – No". Both items are coded as

25

dummy variables; with a score of 1 reflecting respondents who answered they would (definitely or maybe) turn to the persons in question (parents or friends), and 0 representing those who said they would not.

The question is inspired by Sarason's social support measure (Sarason et al. 1987). This social support measure has been used in early Ungdata studies, in 1996 and 2006 Young in Oslo questionnaires, and in several other studies (Meeus 1989; Buhrmester 1990). Social support as defined by Sarason et al. ("the existence or availability of people on whom we can rely, people who let us know that they care about, value, and love us" (Sarason et al. 1983)) has been shown to moderate the relationship between mental illness and adverse life events (Sarason et al. 1985).

Organization membership

To gage the level of civic engagement among the adolescents, a single question regarding organization membership was selected. After preliminary factor analysis it became clear that a reliable composite measure of specific activities was difficult to produce, and the membership question stood out as a simple yet inclusive alternative. The question asks, "Are you currently a member of any organisations, clubs, societies or associations, or have you previously been a member of one since you were 10?" Response options include "1 -Yes, I am currently a member", "2 - I´m not a member now, but I used to be" and "3 - No, I have not been a member at any time since I was 10". The variable is dichotomized by merging scores 2 and 3 into 0, while keeping 1 the same, i.e. only respondents reporting that they are currently members achieve the score 1. Variations of this question have regularly been used in NOVA and Ungdata surveys (Frøyland 2015).

Neighborhood satisfaction

Neighborhood satisfaction functions as a subjective measure of community quality, a domain that has received increasing attention in social capital research. The question "How happy or unhappy are you with various aspects of your life?" precedes a list of items, of which "The local community where you live" is one. The responses, either "1 -Very unhappy",
"2 - Slightly unhappy", "3 - Neither happy nor unhappy", "4 - Quite happy" or "5 - Very happy", were recoded into a dummy variable (4,5 =1; 1, 2, 3 = 0), such that positive responses reflect a score of 1, while negative or indifferent responses correspond to 0.

The survey makers report the origin of this question as unknown (Frøyland 2015). As we have seen, however; neighborhood satisfaction appears as part of the operationalization of neighborhood social capital in a variety of recent social capital articles (see Chapter 3).

5.2.3. Background variables

Some information concerning respondents' demographic and socio-economic background was available through the questionnaire data. One demographic variable, *gender*, is included in this thesis, while two socio-economic components are considered. The latter include *Parent education* and *Family affluence*.

Gender is measured by the dichotomous variable *Gender*, in which the value 1 represents girls and 0 represents boys. The question "Are you a boy or a girl?" precedes the response options "1- Boy" and "2 - Girl" (Frøyland 2015), and was recoded to fit the 1-0 binary scoring structure.

The first socio-economic variable in this study, *Parent education*, is created from a measure including two items – one for each parent. The question appears in the section of the questionnaire headlined *Your parents* (Frøyland 2015)*.* The prompt reads

> Did your father and mother go to university or to a university college? Select one answer for your mother and one for your father. If you are not in touch with one or both of your parents, then skip the question about that parent.

The items are "1 – Father" and "2 – Mother", with the response options "1 – yes" and "2 – No". The composite measure adds these to form a sum score of education in both parents (range = 0 - 2, where 0 reflects no education, 1 reflects one parent and 2 reflects both parents[10]). Subsequently, this measure was dichotomized to reflect either college education in one or both parents, or no college level education[11] (1, 2 = 1; 0 = 0). This question was added to the main Ungdata questionnaire in 2013 (ibid.).

The second socio-economic background variable in this study is *Family affluence*, a dichotomous variable including four questions from the Family Affluence Scale II (FAS II)(Currie et al. 1997; Currie et al. 2008). FAS II was originally developed for use in World

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[10] Recoding was first done so as to make interpretation and summation easier.
[11] The score 0 reflects either no education or no contact with the parent(s).

Health Organization (WHO) research concerning the impact of socio-economic differences on health, a study which also involved Norway and the use of this scale in Norwegian questionnaires (Currie et al. 2008). The FAS II questions were added to the main Ungdata questionnaire in 2013 (Frøyland 2015).

Question FAS1, "Does your family have a car?" is followed by the response options "1 – No", "2 – Yes, one", and "3 –Yes, two or more". Question FAS2 asks, "Do you have your own bedroom", for which the answer is either "1 – Yes" or "2 – No". The next question, FAS3, asks, "How many times have you travelled somewhere on holiday with your family over the past year?" The response options are "1 – Never", "2 – Once", "3 – Twice", and "4 – more than twice". The last question, FAS4 "How many computers does your family have?" is followed by the options "1 – None", "2 – One", "3 – Two", and "4 – More than two".

The variables were first recoded to employ the same 0 - 3 scoring scale. FAS1 was recoded as follows: 1 = 0, 2 = 2 and 3 = 3. FAS2 values of 1 were recoded into 3, and 2 into 1. For FAS3 and FAS4, 1 = 0, 2 = 1, 3 = 2, and 4 = 3.

Before recoding into dummy-variables, FAS1 - 4 underwent the previously described four-step process for creating a composite measure (α = .51). In the first dummy-variable, *Low family affluence,* 1 was assigned to scores "lowest" through 8, while all other values were recoded to 0. Next, scores 9 through 11 were recoded into *Medium family affluence* with value 1, and all other values received the designation 0. In *High family affluence,* the third dummy-variable*,* values 12 through "highest" were recoded into 1, with all other values recoded into 0.

5.3. Data Analysis

All data analysis and preparation were conducted in IBM SPSS Statistics version 23 for Mac, with the exception of some sorting done in Microsoft Excel. Univariate, bivariate and multivariate instruments were applied to the data and variables in this study. Univariate analyses were conducted for descriptive information, while factor analyses were used in the development of the measures. Correlational analysis was used to establish the relationship between variables pairwise. The hypotheses in this master thesis were tested using multivariate linear regression analysis.

In the following sections, each statistical test used in this study will be individually elaborated on and process of analysis will be described. Background and rationale for the tests will also be addressed.

5.3.1. Univariate analysis: descriptive statistics

Univariate analysis describes one variable rather than the relationships between variables (Field 2009, 585). In other words, univariate analysis provides descriptive statistics, i.e. measures of central tendency (mean, mode, and median), dispersal (standard deviation) and distribution (frequency)(Ringdal 2013, 282). In the current thesis, descriptive statistics is obtained to examine and chart the respondents' background and characteristics (e.g proportion of girls to boys and the prevalence of depressed mood in the sample).

5.3.2. Bivariate analysis: Pearson's correlation

Bivariate analysis is used to test the relationship between two variables. T-test and correlation analysis are two common bivariate approaches used to determine this relationship. T-test determines the statistical difference between two means, while correlation analysis investigates the degree to which the continuous (or dichotomous) values co-vary. In the current study, means are not compared, so T-tests are not employed as a statistical method. Because the independent variables in the current study are dichotomous, ordinal, and continuous, and the dependent variable is continuous, the preferred method is correlational analysis.

The bivariate correlation coefficient used in this analysis is Pearson's r, which is commonly used when variables are continuous (or dichotomous). Pearson's r varies between -1 and 1, where 0 means that the variables are not related at all, -1 signifies a perfect negative relationship, and 1 reflects a perfect positive relationship.

Another important output of a statistical test, including correlational analysis, is the statistical significance, or *p*-value, of the result. Statistical significance speaks to the relationship between the sample and the population, and the *p*-value tells us the probability that the results do not accurately reflect the population. This relationship is often referred to by supporting or rejecting the null hypothesis, which states that there is no statistically significant correlation between the variables tested. *P* varies between 0 and 1, where 0 means there is absolutely no

chance of getting the results if they are *not* true for the population, and 1 means that the findings are completely due to chance. Because *p*-values of absolute 0 and 1 rarely occur, there needs to be a scientific consensus regarding the cutoff values for rejecting the null hypothesis. *P* < .05 and *p* < 0.01 are two recognized cutoffs for statistical significance, and depending on the particular field, study, or data, you either operate with .05 or the stricter .01 (or even stricter for some). If *p* < .01, there is only a 1% chance that the results are false, and the null hypothesis is consequently rejected. The significance threshold is set at .05 for this study. This means that findings showing *p*-levels below .05 will be reported as statistically significant; the correlation does in fact exist in the population and the active hypotheses are supported. As it pertains specifically to correlational analysis, the *p*-value must be below .05 for the r-value to be significant.

The bivariate correlation analysis is conducted for two reasons. First, it gives an overview of correlations with *Depressed mood* for every variable separately from the other independent variables. This can be a useful reference tool to investigate relationships that are not evident in the regression models. Second, it gives a breakdown of correlations between independent variables. This is a way to exclude multicollinearity; a high degree of correlation between independent variables in a study compromises the regression analysis (more about this in section *5.3.4*).

5.3.3. Multivariate analysis: factor analysis

To examine the variables and their validity as composite measures, a series of factor analyses were conducted. In social science research, and especially pertaining to the concept of social capital, we often wish to measure phenomena that cannot be directly measured by self-report. Examples from this study include quality of relationships, mental health, and socio-economic status. Instead, these are latent variables that are comprised by several factors, such as adolescents-parent discord, parental involvement, feelings and attitudes. The job for a researcher, then, is to determine which single factors, or measured variables, can accurately describe the latent variable. This investigation often involves conducting a factor analysis to expose the level of correlation among the selected variables (Field 2009). Factor analysis is covered more closely in section *5.3.3*.

This study applied *principal axis factoring* on several sets of variables, as previously listed in

section 5.2. Although it has been argued that factor analysis and principal component analysis yield very similar results, factor analysis was preferred in this study because of the relatively small number of variables included. In a thorough review, Stevens reports that more than 20 variables is considered necessary to eliminate differences between the methods (Stevens 2002, quoted in Halpern 2005, 638).

To make adjustments and variable additions or removals, several runs were carried out. The initial run was based on eigenvalues (eigenvalues above 1 were included). The scree plot was then analyzed to find the point of inflexion, that is, the point at which the plotted variables start to level out (Figure 5). This examination determined how many of the included variables that should be retained for subsequent use (Field 2009, 640). At this point, a new run was conducted, in which the number of extractions, or selected variables, was specified as the extraction method as opposed to eigenvalues. This time the factors were rotated orthogonally (varimax).

The choice of rotation affects the interpretation of the presented factor output, as it structures the results based on assumptions of correlation between the factors. Orthogonal rotation assumes that the factors are not related, e.g. *Parent-adolescent relationship quality* (Factor 1) is not related to *Activities with peers* (Factor 4), which makes this type a better choice for the present study (see Figure 5, Section *6.2.2*). Furthermore, the varimax orthogonal method is recommended for studies at this level because it improves the interpretation of factor clusters (Field 2009, 352, 644). To further refine the output, items loading on several factors were examined, and items with low correlation coefficients (< .4) were eliminated (although smaller coefficients could be considered significant for a large sample size like in the present study)(Field 2009, 644). Finally, items with negative correlations were reversed. Scale reliability analysis was applied to every composite measure (see section *5.5.4*).

5.3.4. Multivariate analysis: multiple linear regression

Multiple linear regression analysis was conducted to test the hypotheses that the included aspects of social capital[12] are negatively associated with depression scores (H1) and that parent-related variables (*Parent-adolescent relationship quality*, *Parental emotional support*)

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[12] Relationship quality for friends and parents, access to emotional support, neighborhood satisfaction, and organization membership.

correlate more strongly with depressed mood than do peer-related variables do (*Peer emotional support*, *Peer network quality*)(H2).

Linear regression is used to predict an outcome variable based on a predictor variable, by examining the pattern of the data and fitting to it a statistical model in the form of a regression line (Field 2009, 198). Multiple linear regression includes more than one predictor variable, so as to determine the predictive value of the independent variables as a whole.

Another important aim of the multiple linear regressions is to control for other variables than the one in question. For example, the predictive value of parent-adolescent relationship quality on mental health can be examined while gender, socioeconomic status, peer network quality, neighborhood satisfaction and civic engagement are held constant. Thus, we get a sense of what parent-adolescent relationship quality means to mental health even when accounting for the other aspects of life included in the analysis (Ringdal 2013).

Notable test parameters in multiple linear regression are β (Beta) and R^2 (R-square). The standardized coefficient β is the gradient of the regression line; a way of determining how many units of change in the outcome variable are predicted by x units of change in the predictor variable. The higher the number, the stronger the relationship (given that β is significant (p > .05)). The multiple correlation coefficient R^2 ranges from 0 to 1, and measures how much of the variance in the outcome variable can be explained by the independent variables, or more specifically, by the regression model. An R^2 value of 0 indicates that the independent variables do not predict any of the variation in the dependent variable, and a value of 1 signifies that all the change in the dependent variable can be explained by the independent variables (Field 2009; Ringdal 2013). As with Pearson´s r and coefficient β, the p-value must be below .05 for R^2 to be statistically significant.

Multiple regression is frequently used in social science research, including studies on social predictors of mental health. Both logistical and linear regression is common[13], and the choice

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[13] Examples of multiple linear regression are Coleman's article on attachment and social efficacy in adolescents, and an article by Eriksson et al. (2003) on the role of social capital in Swedish families, schools and neighborhoods. Examples of logistic regression include the recent work of Agerup and collegues (2012) on associations between parental attachment and of depression in adolescence, and a Brazilian study on social capital and self-rated health among adolescents (2015).

between these two regression types often depends on the level of measurement, especially for the dependent variable. Several factors were considered in the choice of regression type for this thesis. First, since the Likert-type scales in the Young in Oslo questionnaire are ordinal and thus scored on a numerical scale, summation of scores were possible. In a study with ordinal data (data that are ranked but does not have equal intervals between the values), it is common to conduct linear regression analyses through the use of dummy variables; binary versions of the ordinal variables (Ringdal 2013, 427). Moreover, linear regression was the preferred test because it allows for more explanatory variance in the dependent variable.

It is necessary to consider the test assumptions that must be met for multiple linear regression to produce correct results. One assumption is that the outcome variable, in this case level of depressed mood, is continuous. If the outcome variable is categorical, multiple logistic regression can be more appropriate (Ringdal 2013). Other assumptions regard homoscedasticity, normality, linearity, multicollinearity and outliers (extremely high or low values)(Almquist, Ashir, and Brännström 2015).

Homoscedasticity refers to the stability of variances for residuals along the range of an independent variable, e.g. the variance is the same for boys and girls, or for respondents who report *High parent-adolescent relationship quality* and *Low parent-adolescent relationship quality* (Ringdal 2013, 416). To assess homoscedasticity in the current study, the residuals scatter plot was evaluated visually. As can be seen in Figure 3, the distribution of residuals stays practically uniform, i.e. there is little spreading or asymmetry in the plot, indicating that homoscedasticity is maintained in the data.

The assumption of normality applies to the dependent variable in a multiple linear regression, and can be assessed by looking at a histogram of *Depressed mood* standardized residuals. A normal data distribution shows a symmetrical, rounded peak that slowly evens out in "tails". If there are considerable asymmetries or irregularities in the distribution, the assumption is not met and the regression test should not be conducted (Field 2009, 133-150). In this study, the *Depressed mood* distribution shows a slightly positive skew, negative kurtosis and some high residuals (skewness = .703, kurtosis = -.267). For a large sample such as this one, statistical tests of normality is usually not advised, because these tests (e.g. z-score tests and the Kolmogorov-Smirnov-test) are biased in favor of large samples (ibid.). Upon visual inspection, however, I found the deviation to be mild and the distribution acceptable.

Figure 3. *Depressed mood* scatterplot with standardized residuals.
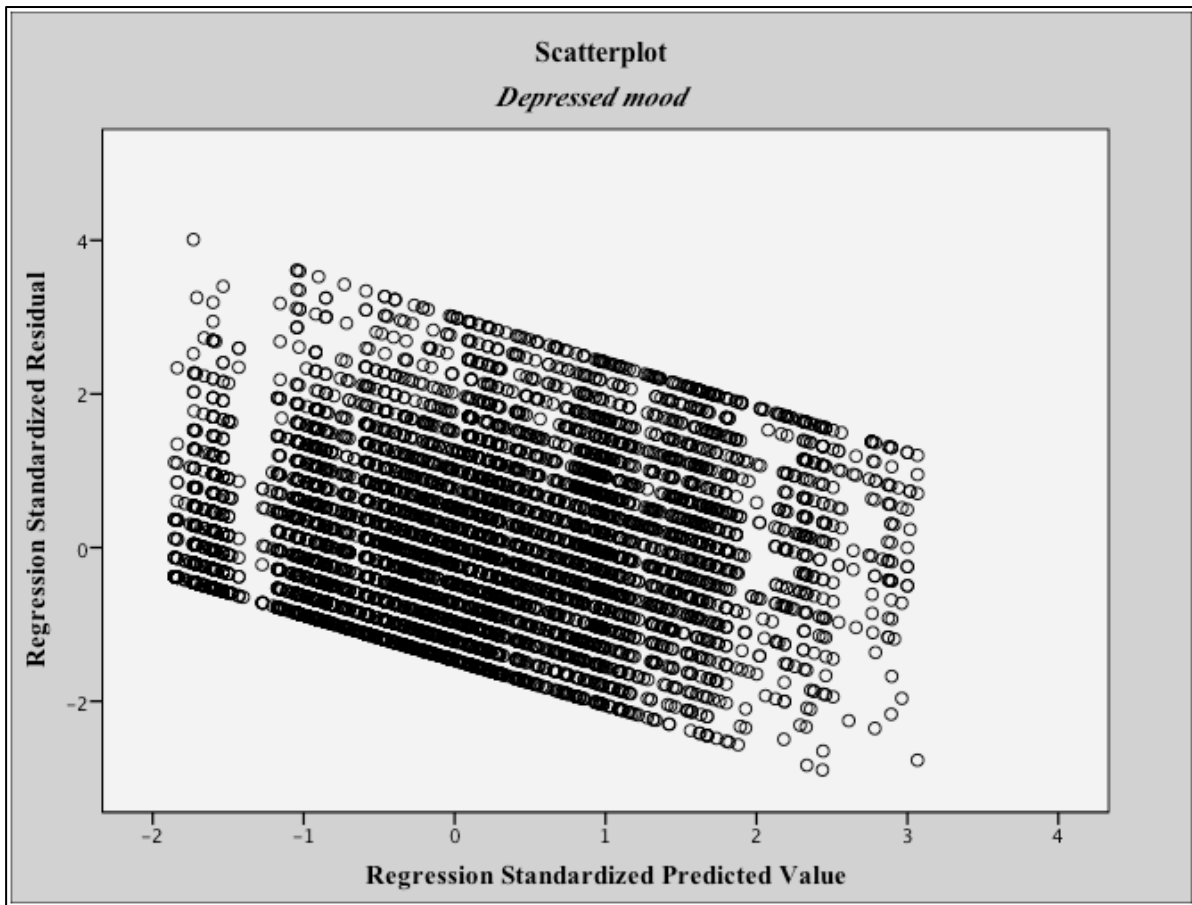
When choosing linear regression as a method of analysis for their data, researchers should be confident that the relationship between the dependent variable and the independent variables is linear. In the current study, this would translate to a linear relationship between social capital and depressed mood. In other words, low levels of social capital would be associated with high levels of depressed mood and high levels of social capital would be associated with low levels of depressed mood. If we knew this relationship to be non-linear, e.g. both low and high levels of social capital are associated with depressed mood, it would not be appropriate to use linear regression analysis. The choice of linear regression for the data in this study is supported by research literature showing support for a linear relationship between depression and social capital[14].

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[14] The majority of empirical articles cited in this thesis have established linear relationships, for example Åslund, Starrin, and Nilsson (2010) and Eriksson et al. (2012).

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Figure 4. *Depressed mood* histogram with standardized residuals.
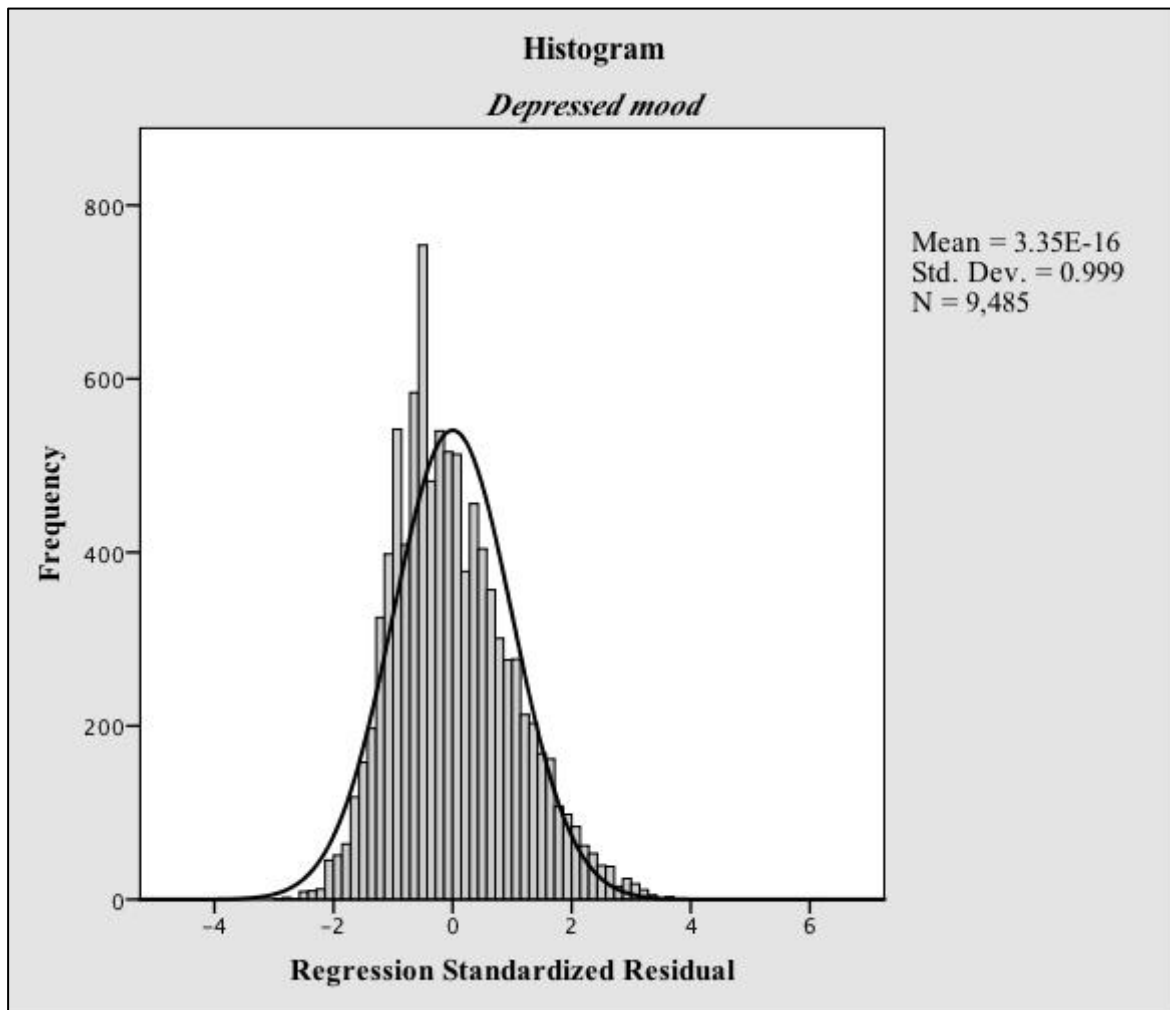
The multicollinearity assumption concerns the relationship between independent variables in the regression. Multiple linear regression assumes that these variables are not highly correlated, in other words it assumes that multicollinearity is not present. Multicollinearity can lead to problems interpreting coefficients as well as limiting R-values (Field 2009, 224). Collinearity statistics – tolerance and variance inflation factor (VIF) – can be applied to the regression analysis to test for multicollinearity. In his book on applied statistics, Field adopts the cutoff values of Myers (1990), suggesting that VIF values above 10 and tolerance values below .10 indicate a multicollinearity problem (Field 2009, 224). The collinearity statistics for this study showed no multicollinearity (see section *6.2.3*).

Because of the closed-question questionnaire format, data outliers are not an immediate

concern in the current study. Moreover, the independent variables are dichotomous, thus further limiting the range of possible values.

5.4. Missing data

When working with questionnaires, missing data is often referred to as "non-response", i.e. the data matrix contains holes where respondents have left questions blank. These non-responses are usually coded as "missing values", and thus excluded from the data analyses. For the sake of representativeness (see section *5.5.1*) it is still important to examine this attrition. It makes a difference whether the missingness is related to the variables in such a way that there exists a pattern of respondents who, for some reason, skip the question. If, for example, girls were more likely than boys to skip questions about depression, the results would be skewed such that the depression score (*Depressed mood*) for girls possibly could reflect a lower or higher value than what actually exists in the sample, and, by extension, the population. In some cases it is beneficial to conduct a structured attrition analysis to determine reasons for attrition, so that appropriate remedies can be applied (Almquist, Ashir, and Brännström 2015).

In this study, the percent of missing values were compared across all variables (including the sum score measures *Family affluence*, *Parent-adolescent relationship quality* and *Depressed mood* in place of their dichotomous successors). The rates range from 0 % to 14%, and show a clear pattern of attrition toward the end of the questionnaire[15]. Among all the variables, *Gender* (5% missing values) deviates slightly from the trend, considering it is the second question in the questionnaire. It seems as though this could be attributed to intentionality, on the adolescents' part, not to identify gender.

As far as the rest of the variables are concerned; at the beginning appear *Parent-adolescent relationship quality*1-7 (1-2%) and *Peer network quality* (3%). *Organization membership* (7%), *Parental emotional support* (7%), *Peer emotional support* (7%), and *Depressed mood* (7-8%) appear between pages 16 and 32, while *Neighborhood satisfaction* (10%), *Parent-adolescent relationship quality*7-9 (12-13%) and FAS1-4 (14%) are located between pages 42 and 59, at the end of the questionnaire. *Parent education* (0%) also appears toward the end, but requires special considerations. *Parent education* contains no missing values because of

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[15] This pattern is also noted in NOVAs report (Andersen and Bakken 2015).

the wording in the questionnaire, and the subsequent coding. The question includes an instruction at the end, "If you are not in touch with one or both of your parents, then skip the question about that parent." "System missing" was therefore recoded into 0 instead of missing, so as to reflect possible intentional non-responses (SYSMIS=0, 1=1, 2=0).

We must also consider that the data file underwent a standardized data cleanup procedure before it reached the present study, and some of the missing data were already handled at this point (see section 5.1). The cleanup is in place to identify and eliminate unserious responses, defined in the Ungdata report as either a) an improbable combination of scores on different activities within the same question (e.g. that the respondent allegedly participates "6 days or more" in all free-time activities listed in one question), or b) an improbable combination of answers to different questions (e.g. that a respondent reports high levels of depressed mood while simultaneously claiming he feels happy about all aspects of his life). The questionnaire contains a number of indicators designed to identify such unserious responses, which were deleted upon detection. In cases where two or more unseriousness indicators were present, the entire case was eliminated from the data file (Frøyland 2015).

The deletion of unserious responses is noteworthy because, in the present study, missing values in composite measures were replaced if at least 50% of the questions in each measure were answered. This means that some of the missing values could be absent as a result of deleting individual unserious responses, in which case it would be somewhat unfortunate to input values. In the event of two or more hits on the indicators this problem is not a concern, however, as the entire case would be deleted.

When handling composite measures, a simple technique is to replace missing values with the mean of the items for which values are present (Ringdal 2013, 262). In this study, values corresponding to respondents who answered 50% of the items in a given measure were replaced in such a manner. For example, if a respondent answered five out of nine items in one composite measure, the missing four items were replaced with the mean of the five given scores.

In this study, the rates of missing values for the composite measures were .8 % (*Parent-adolescent relationship quality*), 7.1 % (*Depressed mood*) and 13.1% (Family affluence). For individual variables, values ranged from 0 % for *Parent education* to 5.3 % for *Gender*.

Missing data is not an immediate concern in this study; the percentages are relatively low for all variables, single or composite.

5.5. Assessing the quality of the study

The discrepancy between the results of a study and the reality that is being described by the study is referred to as a measurement error. In other words, the measured variable is equal to the true value plus the measurement error, which can be random or systematic. Random measurement errors affect the reliability of the data (see section *5.5.4*), while systematic errors –non-random errors that researchers can control – affect the validity (Carmines 1979).

NOVA has processed the results from the Young in Oslo survey and concluded that the data quality is very good, attributed mainly to the large sample size (N=12449) and high response rate (86%) from the schools (Andersen and Bakken 2015). Still, the questionnaire makers draw our attention to the fact that individual response rates drop toward the end of the questionnaire, indicating that some of the respondents did not make it through the questionnaire during the allotted time. A positive aspect to note is that, since so many schools participated, different parts of the city are well and relatively evenly represented in the results (ibid.).

To account for and minimize measurement errors in the current study – as well as to evaluate the quality of the measures used – the properties *dimensionality*, *reliability* and *validity* are considered. Validity is addressed as *external* – including *representativeness*, and *internal* – incorporating *construct validity*, *face validity*, and *content validity*. Although these properties are related to each other, I will, for sake of order, address each of them separately as they pertain to this thesis.

5.5.1. External validity and representativeness

Broadly defined, validity refers to the extent to which a study measures what it set out to measure (Ringdal 2013). The term covers a range of research aspects, and can be further subdivided into *external* and *internal* validity. External validity refers to the *representativeness*, or generalizability, of the data (Campbell 1957). In order to discuss the results as they apply to groups of people larger than the actual sample (generalizing the results), the sample has to be representative of these larger groups. A representative sample is a sample in which the distribution of respondents across a particular variable (e.g. gender)

reflects the distribution in the population (Ringdal 2013, 219-226). In this thesis, the term population refers to all middle school-aged children in Oslo.

Representativeness is often achieved by conducting probability sampling, in which subjects are randomly selected from a previously defined population pool (Ringdal 2013, 210). The Young in Oslo questionnaire is somewhat unique in that, although it does not employ probability sampling per se, it is disseminated to nearly the entire population of interest. However, because of ever-present attrition concerns, gender distribution for the present data was compared to the gender distribution in children between 13 and 15 years old in Oslo, showing that the two distributions are similar (SSB 2015). Large studies sometimes assess the representativeness across many or all variables, disclosing discrepancies to the reader. The large sample size (N=12449) and high response rate (86%) further contributes to the representativeness of the study. According to Cohen (1992) this yields a more than adequate effect size, and allows for generalization to the population of Oslo middle school-aged adolescents.

5.5.2. Dimensionality

In a study operating with composite measures, it is necessary to examine whether the questions within each measure assess the same dimension. This is usually determined by factor analysis. If the questions load on one factor in the factor analysis, the measure can be described as one-dimensional (Ringdal 2013, 347-350). For example, *Depressed mood* is a one-dimensional scale made up of six questions regarding different symptoms of depression. It would not be advisable to use *Depressed mood* as a measure of depressed mood among adolescents if its questions loaded on several factors, e.g. symptoms of a depressive disorder *and* symptoms of an anxiety disorder (Almquist, Ashir, and Brännström 2015). If depression is the outcome variable around which the study is centered, a composite measure containing questions from both depression- and anxiety scales would yield results that could not be applied to the hypothesis, thus compromising the quality of the study.

Social capital is an example of a multi-dimensional theoretical construct in this study. Here, it has been split into to two levels, micro and meso, each containing two categories (Figure 1).

These two are also multi-dimensional, consisting of a dichotomized one-dimensional subscale, *Parent-adolescent relationship quality*; and five single item dichotomous variables, i.e. *Peer*

network quality, Parental emotional support, Peer emotional support, Organization membership and *Neighborhood satisfaction.*

Each composite measure (*Depressed mood, Family affluence, Parent-adolescent relationship quality*) in this thesis has been subjected to factor analyses and appropriate pre-tests, adhering to a standard of one-dimensionality. The pre-tests (Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of sphericity) examine whether the data support a factor analysis. In other words, if either of the tests shows an unfavorable outcome it would not be advisable to conduct a factor analysis. Kaiser (1974) suggests .5 as the lower-end limit for KMO (0-1), and since Bartlett's test rejects or supports the hypothesis of no correlation between the variables included, it needs be significant for a factor analysis to be appropriate. As can be read in Chapter 6, pre-tests in this study revealed no concerns regarding factor analysis.

The question of dimensionality ties in with reliability and validity, as will be elaborated on in the following sections[16].

5.5.3. Internal validity: construct validity

It can seem as though there exist as many types of validity as there are authors writing about it. Early literature makes a distinction between internal and external validity. Whereas external validity is understood as representativeness, internal validity concerns the methodological structure and procedures within the study, i.e. it tells us whether our instruments and analyses in fact answer our research questions. Internal validity lies at the core of research quality; a study with low internal validity yields equally invalid results or faulty conclusions (Campbell 1957).

More recent literature utilizes some typology of construct validity in place of internal validity (Byford 2013; Paiva et al. 2014)[17]. This study will discuss *construct validity* as interpreted by

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[16] For a description of procedure, review section *5.3.3.*

[17] Examples from validation studies in relevant fields include a 2014 study on the validity of social capital measures for adolescents, in which Paiva and colleagues assess and improve face validity and content validity through a series of focus groups and field expert analyses (Paiva et al. 2014). Similar subtypes are also used in the empirical mental health literature. For example, in a study to assess the validity of a quality-of-life-measure for b adolescents suffering from major depression, Byford considers face-, construct-, content- and convergent (criterion) validity (Byford 2013).

Netemeyer et.al (2003) and Ringdal (2013). This typology includes *face-, content-, criterion-,* and *nomological* validity. Together with considerations of *response bias,* these four aspects of construct validity captures the validity assessment needs within the scope of this study. *Construct validity* can be broadly defined simply as the extent to which a study measures what it is intended to measure. We can describe it as the association between the indicators and the theoretical construct we are interested in measuring (Netemeyer, Sharma, and Bearden 2003). Netemeyer and his colleagues list three categories of validity subtypes that must be assessed to achieve construct validity. The first category contains face- and content validity (which some authors use interchangeably), the second concerns criterion-related validity, and the third regards nomological validity (ibid.).

Face validity can be defined as the appearance of validity, and is most commonly referred to as a post-hoc, or post-analysis, evaluation of the final measures in a study. The aim of this assessment is to provide evidence (or expose a lack thereof) that the items in a measure accurately capture the construct in question (Netemeyer, Sharma, and Bearden 2003). For example, is the variable *Depressed mood* a good measure of depressed mood in adolescents? To answer this question we must theoretically define depressed mood and compare it to our operational definition as given by the *Depressed mood* scale.

This introduces *content validity*, defined as the level to which the measures represent the full meaning of the construct (Netemeyer, Sharma, and Bearden 2003). As such, the definition is similar to that of face validity, but the application is different. Assessing content validity is usually part of the initial research study development. It is a multi-step process that begins with a definition of the theoretical construct of interest, followed by investigation of the literature on the subject. Every dimension of the construct is identified, and established scales are noted. The items, e.g. questions in a questionnaire, are then created and ensured to reflect the construct appropriately (by using correct wording, instructions and response-formats). This process is usually completed before the questionnaire is created, so that adjustments can be made that increase the content validity of the analytical measures (Carmines 1979; Netemeyer, Sharma, and Bearden 2003, 73).

Assessing face and content validity is thus a more or less subjective process for which there are no rigorous standardized tests (Carmines 1979; Ringdal 2013). Furthermore, content validity assumes accurate and complete knowledge of the items that a construct consists of,

which is practically unattainable in social science research (Carmines 1979). These limitations should be considered when attempting to establish the validity of a measure.

Content validity in the current master thesis has not been established by following the traditional steps as described above, being that the study utilizes existing data. Instead, a similar process was carried out before the measures were finalized. First, after a survey of the literature on social capital, certain aspects of the construct were identified in terms of their established indicators. Then, the questionnaire was reviewed to identify questions that could function as social capital indicators. Finally, the measures were created, and their dimensionality and reliability ensured through factor analysis and tests for internal consistency.

There are possible weaknesses associated with content validity in this study. The composite measure *Family affluence* has been established in the field of sociology, social work, and psychology (review section *5.2.3*), but the usefulness of *Parent-adolescent relationship quality* can be questioned. For example, *Parent-adolescent relationship quality* is a measure developed for this thesis specifically, and has been validated by this author through factor analysis and scale reliability test. However, validity and reliability of *Parent-adolescent relationship quality* has not been established by other researchers in separate studies, so the usefulness of *Parent-adolescent relationship quality* in relation to social capital and mental health cannot easily be determined other that to use a face-validity approach.

Another caution relating to content validity is the question of capturing the breadth of aspects that constitute social capital. It is almost certain that this study cannot completely represent the richness of such a complex construct.

Criterion-related validity, in the strictest sense, refers to the correlation between a result and its criterion, or external true value. Another way to look at it is to say that we compare the results with another, more reliable, source (Netemeyer, Sharma, and Bearden 2003, 76; Ringdal 2013, 99). For example, we could compare answers to socio-economic questions, e.g. parents´ level of education, with college records. When utilizing social constructs, however, good criteria rarely exist, so criterion validity is not a valuable property in the context of this thesis (Ringdal 2013, 99).

The third construct validity subtype is *nomological validity*, which relates to the relationships between the measures of the constructs within the study. The question of nomological validity concerns the ways in which the predicted behavior of a theoretical construct is confirmed by also looking at how it relates to constructs other than the dependent variable (Lastovicka and Bonfield 1980; Netemeyer, Sharma, and Bearden 2003). For example, low *Family affluence* score can be expected to correlate with higher levels of depression, but also with low scores on *Parent education*. In this study, examining the result of the bivariate correlational analysis will provide insight into these relationships. Nomological validity will therefore be addressed in the discussion (Chapter 7).

Finally, one more validity concern to be aware of is that of *response bias*. In self-report studies, *socially desirable responding* is always a limitation to some extent. Socially desirable responding refers to the tendency of respondents to want to appear socially favorable, either to others or to themselves. This can lead to false results because of deceptive answers, or the respondent can be unaware that he or she is deceptive, also known as *self-deception bias*. The former aspect is reduced through anonymous questionnaires, while the latter is more problematic (Netemeyer, Sharma, and Bearden 2003). Related to self-deception bias is the tendency of depressed individuals to report all sides of their life as being more negative than if they weren't depressed. The problem, then, is that it becomes more difficult for the researcher to know whether the depressed adolescent e.g. really has no friends, or if she perceives things to be worse than they are (Halpern 2005, 75).

Thus far, as evaluated by the steps in this section, I perceive construct validity to be good. I will, however, return to the topic of validity in Chapter 7, as the results of the statistical analyses will contribute to a more complete impression of these issues.

5.5.4. Reliability

Reliability refers to the consistency of a measure. In other words, it is the extent to which repeated measurements with the same group yield the same results (Field 2009). In order to be deemed satisfactory in most research contexts, a measure must be both valid and reliable. Not only does it have to be internally sound, yielding appropriate study conclusions; it also has to be repeatable.

Ringdal (2013) identifies three ways to test for reliability. First, general source assessment familiarizes the researcher with the data and quality of the data collection. In this study, the data quality was assessed by reading the questionnaire, as well as NOVA (Ungdata) reports on collection and methods. I have found the methods to be thorough and well documented. Besides, there is credibility associated with the history of the Young in Oslo survey, as well as NOVA's long experience with regards to social research and survey development. NOVA also reports that the data quality of Young in Oslo 2015 is very good (see section 5.5 for a summary of this assessment). Missing values and data cleanup routines are also documented in depth; see section 5.4.

Another technique is to evaluate test-retest-reliability. This involves measuring the correlation between several assessments using the same measure. Although this is one of the best ways to measure reliability, it can be difficult to practically carry out. In the case of this thesis, it could mean to redistribute the same questionnaire and run correlation between, say, *Parent-adolescent relationship quality* from the first and the second questionnaire (Ringdal 2013). This is beyond the scope of this master thesis, thus test-retest reliability is not assessed.

Third, and most applicable for this study, is the evaluation of internal consistency, or average correlation, between items within a composite measure. This assessment consists of a scale reliability test, which yields a value between 0 and 1 for the test coefficient Cronbach's alpha (α). The higher the alpha value, the higher the internal consistency of the measure. There is no standardized rule regarding acceptable values of Cronbach´s alpha, and authors report different inclinations, but α = .7 is commonly regarded as the minimum acceptable value (Field 2009, 675; Ringdal 2013; Almquist, Ashir, and Brännström 2015).

For this study, scale reliability test was conducted for the three measures *Depressed mood*, *Parent-adolescent relationship quality* and *Family affluence*. Alpha values were above .7 for *Depressed mood* (α = .88) and *Parent-adolescent relationship quality* (α = .80), while below for *Family affluence* (α = .51).

When using Cronbach´s alpha, some cautions should be noted. First, the alpha value, thus the interpreted reliability, increases as the number of items in a measure increases (assuming other factors are held constant). This can be problematic for scales with few (less than five) items, but the effect dissipates as items are added. In other words, increasing a scale from two to four items will yield a bigger change in the alpha value than would increasing a scale from eight to

ten items (Carmines 1979; Field 2009, 675-6).

The measures developed in this study – *Family affluence*, *Depressed mood* and *Parent-adolescent relationship quality* – contain four, six and nine items, respectively. Inflated alpha based on the mere addition of indicators is not regarded as an issue for the six and nine-item measures, as the probability of the effect being large enough to make a considerable difference is low. For *Family affluence* (four items), the issue could be seen as more pressing. However, the Family Affluence Scale is an established measure, used by e.g. WHO and in earlier Ungdata questionnaires (Currie et al. 1997; Currie et al. 2008). Currie and colleagues (2008) found criterion validity to be good, and conclude that the Family Affluence Scale is a useful measure when more traditional socio-economic information cannot be obtained.

The second controversy attached to Cronbach's alpha is that the test does not identify multidimensionality. Thus, alpha can be satisfactory even if the measure contains more than one construct. It is therefore important to conduct necessary factor analyses (review sections *5.2.2*, *5.5.2* and *5.5.3*) before running a scale reliability test. This ensures that the scales already are one-dimensional at the point of the reliability assessment (Field 2009, 675). As this procedure was followed for all measures in this study, the multidimensionality-problem of Cronbach's alpha does not pose a threat to the measures' reliability.

A third caution regarding the interpretation of Cronbach's alpha is the presence of reversed scales, or reverse phrasing. Items with reverse phrasing will show a negative correlation in a factor analysis, but does not interfere with its results. However, in a scale reliability test, a measure containing reverse-phrased items will reduce Cronbach's alpha (Field 2009, 675-6). In the present study, measures including reverse-phrased items were manually reversed before assessing Cronbach´s alpha (for procedure details, see section *5.2.2.*).

5.6. Ethical considerations

Ethics refer to the dichotomy of right and wrong – moral and immoral. In research, ethics awareness serves a number of domains, of which I will mention two. First, ethical guidelines in research exist to protect persons from *mental and physical harm*. This involves consent and privacy, which, in social sciences, are issues more relevant than direct harm. Participants must give their informed consent before the study begins. This means that before they can agree to participate, they must be informed about the nature and purpose of the study, of possible risks,

and of their right to discontinue participation at any time. Their privacy must be protected by confidentiality practices, so that their identity cannot later be identified via the information they have provided (Ringdal 2013, 452-468).

Being that the Young in Oslo data are obtained via a digital survey, the risks to mental and physical harm are minimal. However, there is always a chance of negative emotional reactions when encountering sensitive questions such as inquiries about bullying, mental health and self-image. The students were informed of two options in place should the need arise to talk to somebody after answering the questionnaire; the school nurse was available for conversation, and the students could call the toll-free Youth Red Cross hotline (Andersen and Bakken 2015).

Regarding privacy and consent, parents were notified of the survey by mail ahead of time. The letter provided information about how to obtain a copy of the questionnaire, as well as their right to exclude their student from the study (Andersen 2015). The students were also informed about the voluntary nature of their participation, and that they could choose to skip answers or leave at any time. Students who opted out of participation joined a regular class session or were offered an alternate activity (Andersen and Bakken 2015).

To access the digitally administered questionnaire, the students were issued a random username, which was not connected to their name or other personal information. As such, the respondents in this study are anonymous and cannot be identified based on background data or other responses. In accordance with the Personal Data Act and the Personal Health Data Filing System Act, some research projects must file a notification form with the Norwegian Social Science Data Services (NSD). Because the identity of respondents in the Young in Oslo survey for the middle school level cannot be traced, the data are not considered personal, and reporting is not required for this thesis. According to NOVA, Young in Oslo 2015 has been conducted in accordance with current regulations on research ethics (NSD 2015). NOVA is not responsible for any analyses and interpretations that this author makes based on the data.

The second category of research ethics addressed here concerns less formal rules that provide researchers with guidelines for conduct and publication. *Fabricating* and *plagiarizing* data are two examples of grave misconduct in research, although the list of possible transgressions contains *exclusion of data*, *researcher favoritism*, *selective publication*, and other *publication-related issues* (Ringdal 2013, 452-468). The data processing procedures in this study have

been consistent, and exclusion of data cannot be reported, aside from the questionnaire topics that fall outside of the range constructs covered by the research question. I have no political, professional or personal interest invested in the direction of the results, nor have I received any funding for this master project. Ungdata is funded by The Norwegian directorate of health (Helsedirektoratet), the Ministry of Children, Equality and Social Inclusion (Barne-, likestillings-, og inkluderingsdepartementet), and the Ministry of Justice and Public Security (Justis- og beredskapsdepartementet). Questions of publication ethics will not be addressed as it lies beyond the scope and relevancy of this master thesis.

6. Results

This Chapter will present results from the statistical analyses in this study. First, descriptive statistics for background variables are shown. Then, descriptive statistics for independent variables (social capital) are relayed, followed by descriptives for the dependent variable *Depressed mood*. Section *6.2.1* shows results from the bivariate correlation analysis, and section *6.2.2* relays results from the factor analyses conducted in the development of composite measures. Finally, results from the multiple linear regression analysis are presented.

6.1. Descriptive statistics

6.1.1. Background variables
This section relays summary statistics for the background variables *Gender*, *Parent education*, and *Family affluence*.

As shown in Table 1, the Young in Oslo middle school sample consists of 51.2 % girls and 48.8% boys. On average, socioeconomic status is in the medium to high range, with a mean score of 9.7 for *Family affluence* (0 - 12, Table 2), and college education in 71.7% of the families (*Parent education*, Table 1).

Family affluence is a composite measure (α = .51) including four items, which are shown in Table 2. The great majority (around 80%) of families own at least one car and three computers. Furthermore, 75% of respondents have taken family vacations within the past

year, and nearly 90% have their own bedroom.

Table 1. Descriptive statistics for background variables *Gender* and *Parent education*.

		N	
Gender	Girl	6037	51.2%
	Boy	5755	48.8%
	Total	11792	100.0%
Parent Education	College education (one or both parents)	8933	71.7%
	No college education	3516	28.2%
	Total	12449	100.0%

Note: Only valid percentages and totals are included

Table 2. Descriptive statistics for *Family affluence* composite measure and individual item components.

	Mean (SD)	**α**	**Total**
***Family affluence* composite measure** (range 0-12)	9.67 (2.24)	.51	10816

***Family affluence* items (0-3)**	**Proportion of respondents (%)**			
FA1 - Does your family have a car?	0 - No	2 - Yes, one	3 - Yes, two or more	
	10.5	47.3	42.2	
FA2 - Do you have your own bedroom?	0 - No	3 - Yes		
	13.4	86.6		
FA3 - How many times have you travelled somewhere on holiday with your family over the past year?	0 -Never	1 - Once	2 - Twice	3 - More than twice
	5.9	19.1	27.5	47.5
FA4 - How many computers does your family have?	0 - None	1 - One	2 - Two	3 - More than two
	0.6	5.3	18.0	76.0

To prepare *Family affluence* for use in regression analysis, the composite measure was split into the three dummy-variables *High family affluence* (scores 0-8), *Medium family affluence* (scores 9-11) and *Low family affluence* (score 12). This process followed the 25/50/25 - approach described in sections *5.2.2* and *5.2.3*.

6.1.2. Independent variables: aspects of social capital

This section presents descriptive statistics for independent variables, i.e. the six factors

representing micro and meso level social capital (Tables 3 and 4). In the micro-level category *personal relationships* this refers to *Parent-adolescent relationship quality* and *Peer network quality*. With regards to micro level social network support, the variables include *Parental emotional support* and *Peer emotional support*. On the meso level, the category of civic engagement includes one variable – *Organization membership*. The final meso level variable is *Neighborhood satisfaction*.

Table 3. Descriptive statistics for *Parent-adolescent relationship quality* composite measure and individual item components.

	Mean	SD	α	N
Parent-adolescent relationship quality **composite measure** (Range: 9 - 36)	16.46	4.55	.78	12354

Parent-adolescent relationship quality **Items** (Range: 1. Very true - 4. Not at all true)	Mean	SD
PRQ1 - My parents usually know where I am, and who I'm with, in my free time	1.40	.63
PRQ2 - My parents know most of the friends I hang out with in my free time	1.58	.72
PRQ3 - My parents know my friends´ parents	2.14	.85
PRQ4 - I try to hide most of the things that I do in my free time from my parents (reversed)	1.63	.80
PRQ5 - I often argue with my parents (reversed)	1.84	.85
PRQ6 - My parents know the people I chat with on the Internet	2.42	1.01
PRQ7 - My parents are very interested in my schoolwork	1.56	.70
PRQ8 - My parents often help me with my schoolwork	2.02	.93
PRQ9 - My parents often praise me for my schoolwork	1.77	.82

A large majority of the respondents (89.3%) report that they have a best friend to confide in, reflecting *Peer network quality*. 10.7% of the sample feel they perhaps or definitely have no such close friend in their network.

Parental emotional support is represented by the fraction of respondents who report they would confide in a parent (83.3%), which was found to be almost equal to the results for *Peer emotional support*, the portion who would confide in a friend (86.2%). These categories are not mutually exclusive; responses reflect multiple confidants from different social groups, e.g. parents, friends, other adult or sibling.

59.7% of the sample is a member of an organized club or activity (*Organization membership*), while 40.3% have never been, or are not presently, involved with such an organization.

Table 4. Descriptive statistics for dummy-variables based on single variable aspects of social capital.

		N	
Peer network quality	Best friend confidant	10797	89.3%
	No best friend	1291	10.7%
	Total	12088	100%
Parental emotional support	Confide in parents	9668	83.3%
	Other or no confidant	1938	16.7%
	Total	11606	100%
Peer emotional support	Confide in friends	9995	86.2%
	Other or no confidant	1600	13.8%
	Total	11595	100%
Organization membership	Currently member	7215	59.7%
	Not currently member	4876	40.3%
	Total	12091	100%
Neighborhood satisfaction	Very or somewhat sat.	8177	73.2%
	Unsatisfied or indifferent	2998	26.8%
	Total	11175	100%

The composite measure *Parent-adolescent relationship quality* (α = .78) ranges from 9 to 36, for which low scores reflect high relationship quality (Table 4). The mean score for the measure is 16.46, which – when considering that 9 = best possible relationship quality score and 36 = the lowest possible score – is a relatively low value.

Parent-adolescent relationship quality is a sum score of nine single item variables, shown in Table 4. Notable items among these include *Parent-adolescent relationship quality6 – My parents know the people I chat with on the Internet* (M = 2.42), which is on the high end of the spectrum, suggesting that a good proportion of the sample feel that their parents don't know their online friends very well. Moreover, on the low end of the range is *Parent-adolescent relationship quality1 - My parents usually know where I am, and who I'm with, in my free time* (M = 1.40), indicating that the level of parental monitoring regarding free time is perceived as relatively high.

When assessing the cut-off points for three equal quintiles, low quality represents 1.5% of the respondents, medium quality reflects 20.4%, and high quality represents 64.2%. Because the distribution is so skewed, *Parent-adolescent relationship quality* was split into a three-part dichotomous variable, following the same 25/50/25 procedure as *Family affluence* (see sections *5.2.2* and *5.2.3)*. The dummy variables were created to reflect *High parent-adolescent relationship quality* (scores 9 - 13), *Medium parent-adolescent relationship quality* (scores 13.1 - 19) and *Low parent-adolescent relationship quality* (scores 19.1 - 36).

6.1.3. Dependent variable: Depressed mood

Depressed mood is a composite measure comprised by a six-item scale designed to assess symptoms of depression among adolescents. *Depressed mood* scores range form 6 to 24, reflecting an increase in number and severity of symptoms as the score increases. The mean score is 11.8, indicating that the average respondent reports few symptoms of depression (Table 5.).

The means for the included measure items range from 1.78 (*Felt stiff or tense*) to 2.23 (*Worried to much about things*), on a scale from 1 to 4 (Table 5).

Table 5. Descriptive statistics for *Depressed mood* and individual item components.

	Mean (%)	SD (%)	α (%)	N (%)
Depressed mood **composite measure (**range 6-24**)**	11.8	4.68	.88	11564

Depressed mood **items** (Range: 1. Not affected at all – 4. Affected a great deal). *During the past week, have you been affected by any of the following issues:*	Mean	SD
*DM*1 - Felt that everything is a struggle	2.15	1.02
*DM*2 - Had sleep problems	2.02	.97
*DM*3 - Felt unhappy, sad or depressed	1.81	.96
*DM*4 - Felt hopelessness about the future	1.81	.98
*DM*5 - Felt stiff or tense	1.78	.92
*DM*6 - Worried too much about things.	2.23	1.05

6.2. Statistical analyses

6.2.1. Bivariate test: Pearson's correlation

Bivariate correlation was conducted for all variables in the study. As can be read in Table 6, none of the 46 relationships show a correlation stronger than r = .45 (which represents *Parental emotional support* vs *Parent-adolescent relationship quality*) and three relationships are insignificant (Gender vs *Parent-adolescent relationship quality*; *Depressed mood* vs *Parent education*; *Depressed mood* vs *Organization membership*). Half of the correlations are weaker than r = .10, while a quarter of the correlations are weaker that r = .20. Six independent variable correlations are stronger than r = .20, and four independent-dependent correlations are stronger that r = .20.

The results show that parent-variables (*Parent-adolescent relationship quality*, *Parental emotional support*) and peer-variables (*Peer network quality*, *Peer emotional support*) are among the strongest internally related correlates. That is, *Parent-adolescent relationship quality* is positively related to *Parental emotional support* (r = .45, *p* < .01) and *Peer network quality* is positively related to *Peer emotional support* (r = .36, *p* < .01), reflecting the dyadic nature of these variables. Parent-variables in general show a positive correlation with peer-variables, suggesting that respondents who report high relationship quality and emotional support for parents are more likely to also report good relationships with peers.

Furthermore, *Parent education* is positively related to *Family affluence* (r = .27, *p* < .01), indicating that respondents who report that one or both parents have college education are more likely to report higher family affluence. *Organization membership* correlates with *Parent education* (r = -.17, *p* < .01 and *Family affluence* (r = -.23, *p* <. 01) in such a way as to indicate that adolescents who report organization affiliation are more likely to have college educated parents and more likely to be affluent.

The dependent variable (*Depressed mood*) is positively related to *Gender* (r = .27, *p* < .01), *Parent-adolescent relationship quality* (r = .34, *p* < .01), and *Parental emotional support* (r= .31, *p* < .01), and negatively related to *Neighborhood satisfaction* (r = -.32, *p* < .01). This suggests that girls are more likely to report symptoms of depressed mood. The same is true for adolescents who feel they would ask their parents for help if they had a problem. Conversely, adolescents who say they are satisfied with their neighborhood are less likely to report

depression symptoms. Moreover, as parent-adolescent relationship quality decreases, symptoms of depression increase.

Table 6. Correlation between all variables (Pearsons's r).

Correlation (Pearson's r)	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.
1. Gender (1=girl, 0=boy)	1									
2. Family Affluence[1] (Sum)	-.03**	1								
3. Parent Education[2]	.05**	.27**	1							
4. Parent rel. Qual.[3] (Sum)	-.09**	-.15**	-.12**	1						
5. Parental emo. Support[4]	.08**	-.07**	-.06**	.45**	1					
6. Peer network quality[5]	-.02[a]	-.11**	-.05**	.20**	.14**	1				
7. Peer emo. Support[4]	-.12**	-.08**	-.05**	.09**	.13**	.36**	1			
8. Neighb. Satisfaction.[6]	-.07	.14**	.08**	-.26**	-.19**	-.18**	-.11**	1		
9. Org. Membership[7]	.09**	-.23**	-.17**	.05**	.03**	.06**	.05**	-.09**	1	
10. Depr. Mood[8] (Sum)	.27**	-.07**	.00[b]	.34**	.31**	.18**	.04**	-.32**	.01[c]	1

Notes: Only true dichotomous varibales (*Gender, Parent education*) are included in dummy-form, otherwise either composite measures or original, ordinal, variables are used.
$**p < .01.$ [a]$p = .096.$ [b]$p = .973.$ [c]$p = .516.$
[1] 0 (low family affluence) – 12 (high family affluence).
[2] 1 (one or both parents have college education) – 0 (none of the parents have college education)
[3] 9 (high relationship quality) – 36 (low relationship quality).
[4] 1 (more support) – 3 (less support).
[5] 1 (good quality) – 4 (poor quality).
[6] 1 (very dissatisfied) – 5 (very satisfied).
[7] 1 (member), 2 (used to be a member), 3 (not been a member since age 10).
[8] 6 (no symptoms of depression) – 24 (strong symptoms of depression).

6.2.2. Multivariate test: factor analysis

Dimensionality and reliability were assessed before the measures *Family affluence, Parent-adolescent relationship quality* and *Depressed mood* were finalized. One-dimensionality was established through factor analysis (see sections *5.3.3* and *5.5.2*). Pre-tests were conducted to rule out any contraindications for factor analysis (Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) and Bartlett's test of sphericity).

For *Family affluence*, both pre-tests yielded acceptable results (KMO = 0.66, Bartlett's test: $X^2 = 2577$, df = 6, P < .001). Principal axis factoring with varimax rotation extracted one factor (Table 7), and scale reliability analysis (Cronbach's alpha) showed low internal consistency for the scale ($\alpha = .51$).

Pre-tests for *Parent-adolescent relationship quality* yielded great values (KMO = .85,

Bartlett's test: $X^2 = 28158$, df $= 595$, P $< .001$). Contrary to *Family affluence*, *Parent-adolescent relationship quality* factor analysis started with a higher number of items theoretically indicated as possible factors for the latent variable Parent-adolescent relationship quality[18]. Examples of these items include "How important is it for you to adjust to your parents opinion when it comes to drug use?" and "During the past week, how many times have you spent time doing an activity with your parent(s)?"

Table 7. Factor analysis inter-item correlation for measures *Parent-adolescent relationship quality, Depressed mood* and *Family affluence*

PRQ Items	Corr.	*DM* Items	Corr.	*FA* Items	Corr.
PRQ1	.587	DM	.766	FA1	.540
PRQ2	.620	DM2	.632	FA2	.392
PRQ3	.516	DM3	.798	FA3	.440
PRQ4	.532	DM4	.768	FA4	.500
PRQ5	.407	DM5	.709		
PRQ6	.533	DM6	.808		
PRQ7	.523				
PRQ8	.538				
PRQ9	.569				

In the first factor analysis run, five factors were extracted based on eigenvalue > 1. After reviewing the scree plot (Figure 5), four factors were selected for the next run, with extraction based on number of factors instead of eigenvalue, and varimax rotation was applied.

The four factors were examined and classified as: 1. Parent-adolescents relationship quality (Table 7); 2. Attitudes toward adults other that parents; 3. Attitudes affected by friends and parents; 4. Free-time activities with friends.

Of these four factors, only Factor 1 is useful in answering the research question. Factor 2 pertains to adults other than parents, and because of constraints on thesis scope as well as on the number of variables it is desirable to include in the analysis, Factor 2 was not retained for hypothesis testing. Factor 3 includes questions about the influence of peers and parents

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[18] See section *5.3.3* for a description of this procedure.

on the adolescents' attitudes toward various areas of life, e.g. school and clothing style. Because both parent and peer questions load on the same factor, it is not a useful tool in measuring the differences between parent-related and peer-related social capital.

Figure 5. Scree plot of factors in factor analysis for micro-level independent variables.
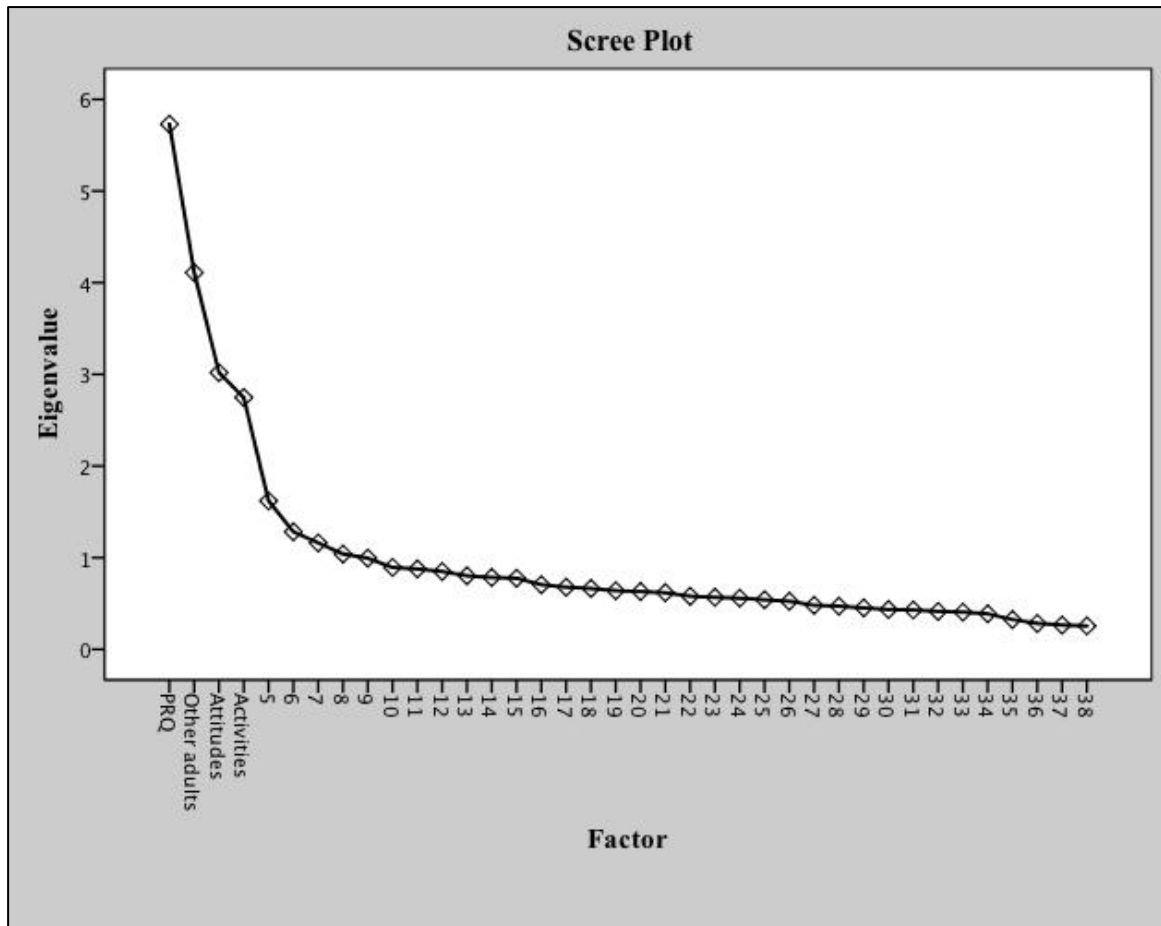
Factor 4, on free-time activities with peers, was considered for use in the hypothesis testing because it quantifies time spent with friends. However, given that there was no suitable variable to quantify time spent with parents, factor 4 was not prioritized as a useful measure. Factor 1 pertains to parent-adolescent relationship quality, which, along with emotional support from parents, is useful for comparison to peer network quality and emotional support from peers. Reliability testing for Factor 1 showed moderate internal consistency for the measure ($\alpha = .78$).

For the composite measure *Depressed mood*, pre-tests showed great values (KMO = .90, Bartlett's test: $X^2 = 32325$, df = 15, $p < .001$). Table 7 displays the factor loadings, which

show a high inter-item correlation for *Depressed mood*. Cronbach's alpha was assessed and found to indicate good internal consistency ($\alpha = .88$)

6.2.3. Multivariate test: multiple linear regression analysis

The current section presents the results form the *hierarchical multiple linear regression analysis* conducted to test the hypotheses in this study. This analysis will show the correlation between depressed mood and the six (seven) included aspects of social capital, while accounting for the background variables *Gender*, *Family affluence*, and *Parent education*. Furthermore, the importance of the particular independent variables relative to each other is also examined through this approach.

The variables were tested for multicollinearity by assessing tolerance and variance inflation factor (VIF). Values range from .79 to .99 for tolerance, and from 1.00 to 1.26 for VIF, indicating that multicollinearity is not a problem in this study.

In order to compare groups of variables and control for background variables, hierarchical regression was used, distributing the variables into four models, each with an added layer of variables (see Table 8). The first model includes background variables (*Gender, High family affluence, Low family affluence* and *Parent education*) while Model 2 adds parent-related variables (*High parent-adolescent relationship quality, Low parent-adolescent relationship quality* and *Parental emotional support*). Model 3 adds peer-related factors (*Peer network quality* and *Peer emotional support*) and, finally, Model 4 also includes community variables (*Neighborhood satisfaction* and *Organization membership*).

As shown in Table 8, Model 1 explains 8.0 % of the variance in *Depressed mood* scores, Model 2 explains 21.1%, Model 3 explains 22.0 % and Model 4 explains 25.5 % of the variance ($p < .001$).

The background variables *Low Family affluence, High family affluence* and *Parent education* are not significantly related to *Depressed mood* in most cases. The exception is *Low family affluence* in Model 1 ($p < .001$) and *Parent education* in Model 4 ($p < .01$). *Gender* is significant in all models ($p < .001$). The association between *Depressed mood* and the seven social capital variables were all significant ($p < .01$), with the exception of *Peer emotional support* in Model 4 ($p = .063$).

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Model 1 shows significant positive relationships between *Depressed mood* and the two background variables *Gender* (β = .28, *p* < .001) and *Low family affluence* (β = .05, *p* < .001), indicating that girls and adolescents from low-income families on average report more symptoms of depressed mood. Correlations for *Parent education* (β = -.01, P = .214) and *High family affluence* (β = .01, *p* = .620) were not significant in this model, suggesting that parent education level is not related to subjective levels of depression when also considering gender and income level.

Table 8. multiple regression analysis of background variables, aspects of social capital and depressed mood.

		Depressed mood			
		Model 1	Model 2	Model 3	Model 4
		β (p-value)			
Background variables	1. Gender	.28***	.30***	.30***	.29***
	2. Family affluence (High)	.01 (.620)	.01 (.218)	.01 (.177)	.01(.138)
	3. Family affluence (Low)	.05***	.02 (.134)	.01 (.262)	.00 (.692)
	4. Parent education	-.01 (.214)	.02 (.019)	.02 (.012)	.03**
Aspects of social capital	5. Parent rel. Qual. (High)		-.17***	-.17***	-.16***
	6. Parent rel. Qual. (Low)		.18***	.17***	.15***
	7. Parental emo. Support		-.15***	-.13***	-.12***
	8. Peer network quality			-.09***	-.07***
	9. Peer emo. Support			-.03**	-.02 (.063)
	10. Neighborhood satis.				-.20***
	11. Org. Membership				.03**
	Adjusted R²	.08***	.21***	.22***	.26***

Notes: ***p < .001; **p < .01.

Moving on to the social capital-related variables introduced in Model 2, *Low parent-adolescent relationship quality, High parent-adolescent relationship quality* and *Parental emotional support* are all significantly related to *Depressed mood* (*p* < .001). *Low Parent-adolescent relationship quality* and *High parent-adolescent relationship quality* have similar, but opposite, effect sizes (β = .18 and β = -.17, respectively). This indicates that the average change in *Depressed mood* score is about the same for both categories, only that adolescents in the *Low* group report more symptoms and adolescents in the *High* group report less.

Parental emotional support correlates negatively with *Depressed mood* at a beta value slightly lower than the *Parent-adolescent relationship quality* (β = -.15, *p* < .001)*,* signifying that adolescents who would seek out their parents' help when feeling down experience lower rates of depressed mood.

Regarding the background variables, *Gender* has not changed much since Model 1 (β = .30, *p* < .001), and *High family affluence* and *Parent education* are still not significant (β = .01, *p* = .218; β = .02, *p* = .019). *Low family affluence* is also no longer significant (β = .02, *p* = .134), suggesting that the previously existing effect of low family affluence is moderated by these parent-related social capital factors. When the effect of relationship to parents is accounted for, there is no longer a significant relationship between low family affluence and subjective depressed mood.

In Model 3, the background variables are virtually unchanged as far significance is concerned. The effect size for *Gender* also remains the same (β = .30, *p* < .001). *High* and *Low parent-adolescent relationship quality* are still significant (*p* <. 001), and the effects have decreased minimally (*High*: β = -.17, *Low*: β = .17).

Two new variables – regarding the relationship to peers – are introduced in this model. Both *Peer network quality* and *Peer emotional support* show significant negative associations with *Depressed mood* (*p* < .001 and *p* < .01, respectively), signifying that adolescents who perceive their peer network to hold supportive confidants on average have less symptoms of depressed mood. The effect of *Peer network quality* (β = -.09) is more than twice as large as that of *Peer emotional support* (β = -.03). The effect of *Parental emotional support* has decreased a little compared to Model 2, from β = -.15 to -.14 (*p* < .001), showing that the presence of supportive friends slightly weakens the relationship between depressed mood and perceived emotional support from parents.

In the fourth and final model, the community-related variables *Neighborhood satisfaction* and *Organization membership* are included. The effect of *Gender* is still significant (β = .29, *p* < .001), and both *High* and *Low family affluence* remain insignificant (*High*: *p* = .14, *Low*: *p* = .692). *Parent education* has now become significant; however, the relationship is positive, suggesting that adolescents whose parents have gone to college on average report

slightly higher rates of depression ($\beta = .03$, $p < .01$).

Social capital-related variables have lost some of the effect exhibited in Model 3, and almost all are still significant ($p < .001$). The exception is *Peer emotional support* ($\beta = -.02$, $p = .063$), indicating that the introduction of community-related variables results in a weaker relationship between peer emotional support and depressed mood.

Of the community-related variables, *Neighborhood satisfaction* holds a significant negative association with *Depressed mood* ($\beta = -.20$, $p < .001$), while *Organization membership* has a significant positive correlation ($\beta = .03$, $p < .01$). This means that adolescents who are satisfied with their neighborhood on average report less symptoms of depressed mood, while adolescents who are members of clubs, activities, or organizations report more symptoms.

7. Discussion

Results show that there are significant relationships between depressed mood and all aspects of social capital. In the current chapter I will discuss these results against the active hypotheses and interpret the findings. Then, study limitations and implications for social work will be considered. The final section includes suggestions for further research on social capital and mental health in adolescents.

7.1. Findings and hypotheses

Results of the statistical analyses have afforded partial support of the main hypothesis in this thesis. Specifically, hypothesis *1a)* through *1d)* is supported, but *1e)* is not supported. In other words, the results of the multiple linear regression show *a)* that adolescents who have a good relationship with their parents (*High parent-adolescent relationship quality*) are less likely to suffer from depressed mood, and those who have a poor relationship (*Low parent-adolescent relationship quality*) are more likely to experience depressed mood; *b)* both emotional support from friends (*Peer emotional support*) and parents (*Parental emotional support*) are associated with lower rates of depressed mood; *c)* adolescents who have a best friend to confide in are less likely to report depression symptoms (*Peer network quality*); *d)* adolescents who are satisfied with their neighborhood are less likely to suffer from

depressed mood (*Neighborhood satisfaction*).

However, *e)* adolescents who are members of a club or organization (*Organization membership*) are *more* likely to report depression symptoms, which is not expected based on the literature on community activity and mental health (Sherbourne, Hays, and Wells 1995; Morgan and Haglund 2009). Interestingly, a post hoc simple linear regression including *Depressed mood* and *Organization membership* only, reveals a negative correlation (i.e. membership is associated with lower depression scores. $\beta = -.03$, $p < .01$), but as soon as gender is introduced to the model, the relationship between *Organization membership* and *Depressed mood* is not significant any longer ($\beta = -.01$, $p = .574$).

Upon the addition of *Neighborhood satisfaction*, the relationship between *Organization membership* and *Depressed mood* is positive ($\beta = .02$, $p < .05$), indicating that when controlling for neighborhood satisfaction and gender, organization membership is associated with higher levels of depression. Since boys and adolescents who are happy with their neighborhood are much less likely to feel depressed, *Neighborhood satisfaction* and *Gender* moderates the relationship between *Organization membership* and *Depressed mood* to the point of entirely eliminating the effect of *Organization membership*.

For girls who are not happy with their neighborhood, organization membership is associated with higher levels of depression. I imagine that if you are not happy with your neighborhood, being member of an organization within this community is not necessarily a positive experience. Perhaps you have moved to a new area in which you are an outsider to the cohesive networks that already exist; a sort of negative social capital scenario. Or maybe, because you are a girl – again, a strong correlate of depression – and you are unhappy with your community, the organization you are affiliated with is a support program associated with a maladaptive condition for which depression is a comorbidity. Nevertheless, the results suggest that, being a member of an organization is not essentially beneficial to mental health; many outside variables confound this relationship.

The finding that parent emotional support and relationship quality are associated with lower rates of depression is in line with the well-established body of research on the association between mental health and adolescents-parent relationship quality, including parental monitoring (Lamborn et al. 1991; Rothon, Goodwin, and Stansfeld 2012; Agerup et al.

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2015). The role of peers in facilitating mental health in adolescents has not received as much attention in the literature as the role of parents (Korkiamäki and Ellonen 2008). Nonetheless, studies emphasize the importance of balance in relationships to peers and parents, and that the presence of peer networks is an important part of healthy development (Li, Albert, and Dwelle 2014).

As expected, peer relationships and emotional support do demonstrate positive relationships with mental health. The exception is *Peer emotional support* at the point of community factors being introduced to the model. Taking a moment to consider the bivariate correlation analysis, the association between *Depressed mood* and *Neighborhood satisfaction* is strong ($r = -.35$, $p < .01$) while the association between *Depressed mood* an *Organization membership* is not statistically significant ($r = .01$, $p = .516$), suggesting that *Neighborhood satisfaction* is the community variable linked to the *Peer emotional support* loss of effect size in the regression analysis. Moreover, the relationship between *Neighborhood satisfaction* and *Peer emotional support* is twice as strong as the relationship between *Organization membership* and *Peer emotional support*. These results indicate that *Neighborhood satisfaction* moderates the relationship between *Peer emotional support* and *Depressed mood*. One way to say it is that adolescents who have good neighborhood friendships like their neighborhoods better, and are less likely to be depressed.

The importance of community in the context of mental health in adolescents has increasingly become a focus area in social research. Neighborhood factors, including neighborhood satisfaction, neighborhood trust and cohesion, have been shown to correlate with mental health and adjustment (Lindström, Merlo, and Östergren 2002; Åslund, Starrin, and Nilsson 2010; Vyncke et al. 2013). The effect sizes for *Parent-adolescent relationship quality* and *Parental emotional support* decrease slightly when community factors are added to the model, suggesting that *Neighborhood satisfaction* somewhat moderates the relationship between *Depressed mood* and parent factors. However, the coefficients are relatively high for *Parent-adolescent relationship quality*, *Parental emotional support* and *Neighborhood satisfaction*, indicating that all three factors are independently important to mental health. It is still interesting to note that the effect size of neighborhood satisfaction (*Neighborhood satisfaction*: $\beta = -.20$ $p < .001$) in this study was larger than any of the parent related factors (largest is *High parent-adolescent relationship quality*: $\beta = -.16$, $p < .001$).

The importance of neighborhood can be better understood through considering Coleman's concept of *intergenerational closure* (as discussed in Chapter 3), which connects families and builds social capital for the adolescent family members (Coleman 1988). Related to this is the *group density effect* on mental health resulting from cohesion between individuals who are similar in some way, e.g. share the same ethnicity or religious beliefs (see section 3.2). If many of the participants' neighborhoods are internally homogenous, group density effect might partially explain the relationship between *Neighborhood satisfaction* and *Depressed mood*. Again, social capital propagates in these networks, and contributes to better access to social, emotional and material resources.

To draw on Putnam's work, both intergeneration closure and group density effect are good examples of bonding social capital; access to resources through the unifying bond that exists between members of a group. A direct mechanism here is arguably the reduction of stress as a result of these supportive networks. Studies have found chronic stress to be a strong predictor of depression (see for example Hammen, Shih, and Brennan 2004); thus, stress-reduction would contribute to reduction in symptoms of depression.

The second hypothesis in the present study is informed by the psychological literature presented in Chapter 2, on the high importance of parents compared to peers in the context of depression (Armsden et al. 1990; Nada Raja, McGee, and Stanton 1992; Vassallo et al. 2014; Agerup et al. 2015). The hypothesis postulates that parent variables (*Parent-adolescent relationship quality, Parental emotional support*) correlate more strongly with depressed mood than peer variables do (*Peer emotional support, Peer network quality*).

The results of the multiple regression analysis show that the effects of parent factors are two to five times larger than the effects of peer factors, providing the expected support for Hypothesis 2[19]. In terms of the operationalizations in this study, parents matter more than peers to adolescents' mental health.

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[19] In Model 4, β-values range from -.12 to -.16 ($p < .001$) for *Parent-adolescent relationship quality*, and from -.02 ($p = .063$) to -.07 ($p < .001$) for *Peer network quality*.

7.2. Social capital and social work

Social work is an applied field with the purpose of helping people solve their problems. It focuses on relations between person and environment. It must be understood as something collective – including the individual, but also the group or entity that is subject of attention. (Levin 2004, 10).[20]

This description, like many other definitions of social work, emphasizes the role of *relations* and *group context*. Scholars have noted that social capital can be a useful perspective in social work, precisely due to the common core concepts of *networks, resources* and *relations* (Nysæther 2004). In his review on social work and social capital, Nysæther concludes that because social capital is concerned with the access to resources through relations and networks, it makes for a particularly meaningful addition to social work discourse. The perspective can contribute to increased understanding of how collaboration in certain communities can produce change in attitudes and actions within social work clients (ibid.).

Furthermore, the recognition that a lack of social capital (sometimes referred to as negative social capital) can limit an individual's resources, improves the understanding of how and why some clients can be at a disadvantage in their communities. Drawing on the discussion on group density effect in section 3.2, it is clear that cohesive communities can serve to either bond people or to exclude "outsiders," and a social capital perspective can help social workers facilitate inclusion and shed light on how the client's position in the local community affects his or her resourcefulness and well-being (ibid.).

Findings in the present study suggest that neighborhood satisfaction is at least as important to mental health as having good relationships with parents. This should be considered in the context of social work because it gives an indication of how the individual fits in the community, reflecting challenges in relations, networks, and access to resources. Korkiamäki and Ellonen (2008) contend that at the core of social work with adolescents is collaboration with the adolescents in order to identify strengths and weaknesses in their local community social capital, as well as to facilitate and build social capital on the adolescents' own premises. This would mean digging deeper into the question of neighborhood satisfaction to establish what constitutes a good neighborhood to them.

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[20] Original text is Norwegian. Unofficial literal translation by Eva Lyngstad-Alderfer.

Moreover, identifying what comprises adolescents' communities and networks is important, because a community of e.g. peers can either be seen as a part of the neighborhood, as separate from the neighborhood, or both; peer networks are mobile and functional in many different arenas (online, at school, at home, in sports clubs, downtown, in the local neighborhood etc.). Instead of attempting to intervene through programs that either remove the adolescents from their communities or aim to create new resources and networks, Korkiamäki and Ellonen (2008) suggest that the efforts should focus on improving existing communities. This stems from the notion that adolescents are active participants in the creation and maintenance of their social capital, contrary to passive recipients of their parents' social capital resources (Morrow 1999). Choosing friends and participating in community activities and clubs are active behaviors, and adolescents must be considered both recipients and engineers of social capital.

Regarding relations to parents and peers, findings in this study suggest, as expected, that good relations to peers and parents are both associated with lower rates of depressed mood, although the latter is distinctly more important. More noteworthy, however, is the indication that parents and friends cannot substitute for each other in terms of resources that improve mental health. When it comes to depression, good friends do not weight up for lacking parental relationships, and parents cannot fill in for the effect from peer networks. A social worker or policy maker tasked with considering where to apply efforts to improve mental health in adolescents could benefit from being mindful of this dynamic.

Finally, and perhaps most importantly, a social capital approach to social work with adolescents is preventative, as opposed to problem-centered (Korkiamäki and Ellonen 2008). Contrary to the focus on removing a negative aspect, a social capital perspective aims to improve and facilitate positive resources in the lives of adolescents, making the approach suitable in public health programs. Arguably, a research-informed sensitivity to the different sides of social capital can only benefit adolescents, regardless of the context.

7.3. Study limitations

When considering the findings of this study, it is important to acknowledge its limitations. First, *causality* cannot be inferred from the regression results. This study has established associations between variables, not directions of relationships. In other words, the present study does not speak to the influence on one variable by another; it can only show that they,

to varying degrees, fluctuate in unison. These results cannot tell us whether aspects of social capital influence depression or depression influences social capital.

For conclusions on causality, the optimal study design is randomized controlled trial (RCT), a true experiment capable of establishing causality through the use of a control group, randomization and strictly controlled conditions that control for confounding variables (Ringdal 2013, 126-134). Experiments involving depression and social capital are uncommon, because it would be problematic, not to mention unethical, to randomly assign adolescents to groups of either low or high levels of social capital to investigate the mental health outcome.

Another study design that can afford some insight on causal relationships is longitudinal design, in which data are recorded on at least two points in time, so that change between the recordings can be examined. Because the temporal order of the variables can be established, longitudinal designs permit some cautious degree of causality inference (Ringdal 2013, 146). Although the present study encounters the causality limitation based on its cross-sectional data, it should be mentioned that other – longitudinal – studies have found that various aspects of social capital predict health outcomes in adolescents and adults[21].

Another conclusion-related issue is that the generalizability of these results are limited to Oslo middle-school adolescents – i.e. age 13-15; which is not an intrinsic problem, but it should be noted that the findings may not be generalized to e.g. adolescents on a national level, adolescents in other countries, other age-groups or rural adolescents.

Third, as mentioned in Chapter 5, weakness in content validity is possibly the greatest limitation. The questionnaire was not created to fit the research question, and consequently, the items representing the latent variables are in some cases suboptimal. For example, *Parent-adolescent relationship quality* is a measure of relationship quality between parents and adolescents. However, the variables included in the composite measure do not encompass all aspects we can imagine describe a good relationship. Furthermore, relations to parents and relations to peers are compared, but the measures *Parent-adolescent relationship quality* (parents) and *Peer network quality* (peers) are not created equally, so the basis for comparison is not ideal.

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[21] See for example Branje et al. (2010), Rothon, Goodwin, and Stansfeld (2012) and Giordano et al. (2013).

Fourth, any study based on questionnaire data will face issues of bias in responding. There is always a chance that respondents will be affected by feelings of expectation. *Socially desirable responding* may contribute to more positive answers, while *response bias* related to depressed mood can put a gloomy perspective on the questions. Arguably, these effects are more problematic when interpreting the relationships between the independent and the dependent variables, but should not affect the comparable effect sizes between independent variables. Furthermore, a classic study by Brown and Harris (now rigorously replicated) found that, generally speaking, response bias does little to inflate depression scores (Brown and Harris 1978).

Self-report data also houses inherent problems with objectivity and accuracy. This is not necessarily an issue in a social study like the present one, because we are interested in respondents' subjective views or feelings. It does, however, bring challenges to background data such as socio-economic status, because the respondents cannot be expected to have reliable knowledge about the parents' education or income. In this study, however, the use of Family Affluance Scale helps to remedy this limitation, considering its success in other studies and in validation tests (see sections *5.2.3* and *5.5.4.*).

Another topic that has received considerable attention in this thesis is missing data. Although none of the variables originally had particularly high rates of missing values, efforts were made to lower these rates for composite measures. This was done by replacing missing values with the mean of existing values, on the condition that at least half of the questions in a measure were answered. A side effect of this process is that some of the values that were intentionally deleted in the official data cleanup could have been added back in (see section 5.4.). However, considering that the values are means, not extremes, it is not a very problematic issue in such a large sample.

The last point to make about limitations is that reliability for the measure *Family affluence* is on the lower side ($\alpha = .51$). This would be a greater concern if *Family affluence* were a novel measure based on the present study only. However, as discussed in section *5.2.3*, the items that comprise *Family affluence* originate in the Family Affluence Scale – an established scale for assessing family income level in questionnaires for children and adolescents (Carmines 1979; Currie et al. 2008).

The results have provided insight into issues of validity and reliability raised in sections *5.5.3* and *5.5.4*. Particularly, *nomological validity* can be assessed from table 6, showing bivariate correlations for all variables in the study. Expected relationships are present, such as between *Family affluence* and *Parent education* (r = .27, *p* < .01), *Parent-adolescent relationship quality* and *Parental emotional support* (r = .45, *p* < .01), *Peer network quality* and *Peer emotional support* (r = .36, *p* < .01), indicating good nomological validity in the data.

In summary, reliability and validity for this study are considered good. Readers should, however, note some limitations related to causality, content validity and respondent biases.

7.4. Suggestions for further research

This study contributes to a general understanding of social capital and mental health in adolescents, and while it answers some questions, it brings out new ones concerning the mechanisms and deeper levels of the relationship between depression and social capital.

The hypotheses concern the relative contributions that parents and peers make to adolescents' mental health. Being as this study is cross-sectional, it prompts the question: which long-term mental health outcomes can be associated with poor peer-relations, poor parent-relations, or even good relations with delinquent peers? A longitudinal study to examine this dynamic would be an optimal extension of the research question in this thesis.

Furthermore, although it was expected that parent-related social capital would correlate stronger with *Depressed mood* than peer-related variables, this study did not investigate the interplay between these domains. For example, what are the effects of intra-group relations, e.g. families getting together, and parents knowing each other and knowing their children's friends – what Coleman referred to as *intergenerational closure*?

Questions like these are linked to a deeper understanding of community, including cohesiveness and neighborhood satisfaction. The latter is a relatively strong correlate of depression in this study, and warrants a deeper examination of the term and what it means to different groups of adolescents. The next step would be to investigate *what* they feel is important about their neighborhood. What do they mean when they say they are happy with

their neighborhood? Does the satisfaction depend on the relations and peer networks that exist in the community, or are other aspects (such as meeting places, activity centers, other infrastructure etc.) more important? This study supports the importance of collaboration with each individual to ascertain which parts of the community are valuable to him or her.

On the other hand, on a policy-level, it would be useful to possess some *aggregate* knowledge about what makes a neighborhood likeable and healthy, so that efforts to improve the lives of adolescents and children can be put in place as part of *proactive* public health outreach.

In light of the unexpected findings on organization membership, I would want to do a follow-up study in which variables pertaining to levels of community *activity* were included, as opposed to general membership only. It would be interesting to see whether these community variables exhibited the same relationship with *Depressed mood* or if the degree and type of activity show a considerably different relationship. The role of *Gender* was found to be an important moderator of *Organization membership*, as the bivariate correlation between *Organization membership* and *Depressed mood* was negative and relatively strong. Although gender was not a focus of this thesis, it is by far the strongest single correlate of depression (girls are more likely to report symptoms of depressed mood). Future research could benefit from taking a gender perspective, and gender should be investigated closely in context with every included variable.

Minority status is another factor that was excluded from this study, but that could be interesting to explore in future research. Studies could incorporate minority status as a background variable, and even focus on the dynamic between minority status and gender.

As was touched on in section 7.2, the ability of adolescents to build and maintain social capital is a phenomenon we need to know more about, and it would be useful to gain more insight into the extent to which adolescents – intentionally or unaware – create and exploit resources associated with mental health.

I have listed suggestions on areas that need more elaborate scrutiny to discover the mechanisms beneath the statistical correlations. In addition to this, more knowledge is needed about how social work efforts and programs can support and increase adolescents

social capital, i.e. which specific tools, strategies and approaches are most effective. It is important to not only know which areas of adolescents' lives need attention, but to also identify the methods and forums the efforts should be targeted through.

Conclusion

This study has examined several social correlates of depressed mood in urban middle-schoolers, contributing to the effort to improve the health of Norwegian adolescents through providing knowledge about the circumstances under which mental health is facilitated. This is important in the light of recent findings that depression rates in this population are increasing while the adolescents otherwise appear well-adjusted.

The results indicate that (in order of decreasing magnitude) gender, neighborhood, parents and peers are important to mental health, but that socioeconomic status and organization membership is less important. Among the social capital indicators, neighborhood satisfaction is the strongest correlate of depressed mood, suggesting that, although parents and peers provide the networks of support and relations, these factors are inextricably linked to local community.

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Appendix A. NOVA data release agreement

AVTALE OM UTLEVERING AV DATA

mellom

Eva Cathrine Lyngstad-Alderfer

(senere kalt virksomheten)

og

Høgskolen i Oslo og Akershus v/NOVA

(senere kalt NOVA)

1. Grunnlag

Masterstudentens søknad av 12. oktober 2015 om tilgang til data fra Ung i Oslo-undersøkelsen 2015 (vedlegg 1).

I forbindelse med min masteroppgave ved Høgskolen i Oslo og Akershus, søker jeg om å få tilgang til data fra Ung i Oslo 2015 til bruk i min masteroppgave. Masteroppgaven skal handle om psykisk helse og sosial kapital. Mer spesifikt: Forholdet mellom ungdoms subjektive psykiske helse og tilgang på sosial kapital i form av deltakelse i organiserte fritidsaktiviteter, tillit og holdninger til offentlige instanser, og relasjoner til venner og voksenpersoner.

Jeg ønsker å få tilgang til data fra Ung i Oslo 2015 (ungdomsskole). Variabler jeg er interessert i, er skole, foreldre, venner, status i vennegjengen, regelbrudd, mobbing, organiserte fritidsaktiviteter, fritidsaktiviteter, rusmidler, helsetjenester, nære relasjoner, fysiske helseplager, psykiske helseplager, fysisk aktivitet, selvbilde, fornøydhet med livet, foreldrene dine, foreldre og skole, data hjemme og skolekarakterer, religion, kropp, tillit og samfunn, holdninger til kulturell tilpasninger, innvandrerorganisasjoner, familien din, viktige voksenpersoner for deg, lekser, trening, grunner til at du ikke trener, grunner til å trene, tillit til samfunnet, foreldres påvirkning, venners påvirkning (og bakgrunnsdata, se detaljert liste i vedlegg 1).

2. Vilkår

a) Tillatelsen til å benytte data er gyldig fra kontrakts undertegnelse til 31.06.2016, med mulighet til forlengelse etter egen søknad om dette.

b) Data kan bare benyttes i analyser knyttet til formålet som er oppgitt i virksomhetens søknad.

c) Opplysningene må utelukkende brukes til forsknings- og utredningsformål.

d) Før utlevering av data kan finne sted, må virksomheten ta kontakt med NOVA for å bli informert om innholdet i de opplysningene som utleveres. Virksomheten er spesielt forpliktet til å gjøre seg kjent med mulige svakheter ved datamaterialet.

e) Bakveisidentifisering eller forsøk på rekonstruksjon av personidentifiserbare opplysninger på grunnlag av utlevert materiale er ikke tillatt. Resultatene må ikke offentliggjøres på en slik måte at det medfører risiko for identifisering av enkeltpersoner.

f) Virksomheten har ansvar for å påse at ikke andre personer enn de som er nevnt i søknaden får tilgang til data. Opplysningene må oppbevares på sikker måte (passordbeskyttet område, kryptert minnepenn eller lignende).

g) Eventuelle vilkår fra offentlige instanser som Personvernombudet må følges.

h) NOVA skal underrettes når arbeidet med de temaene/problemstillingene som er angitt i virksomhetens søknad er avsluttet. Det ligger en forpliktelse i at materialet faktisk blir brukt til å belyse de aktuelle temaene/problemstillingene. Hvis materialet likevel ikke blir benyttet, må NOVA underrettes snarest mulig.

i) I alle publikasjoner som helt eller delvis er basert på analyser av datamaterialet, skal følgende opplysninger framgå at:

- "Datamaterialet er basert på en Ungdata-undersøkelse, gjennomført av NOVA i samarbeid med de regionale kompetansesentrene for rusfeltet (KoRus). Ungdata er finansiert av Helsedirektoratet, Barne-, likestillings-, og inkluderingsdepartementet og Justis- og beredskapsdepartementet.

- " NOVA er ikke ansvarlig for virksomhetens analyser eller fortolkninger av resultatene."

Også ved muntlig formidling av forskningsfunn skal det oppgis at datamaterialet er basert på en Ungdata-undersøkelse som NOVA og KoRus står bak.

j) NOVA skal fortløpende gis beskjed når det blir utgitt publikasjoner eller finner sted annen formidling som helt eller delvis er basert på analyser av materialet. Alle publikasjoner fra prosjektet skal vederlagsfritt sendes til NOVA, fortrinnsvis som pdf.

k) NOVA skal underrettes fortløpende om medieoppslag som måtte komme i tilknytning til forskning basert på materialet. I den grad det er mulig, skal melding om dette sendes til ungdata@nova.hioa.no i forkant av oppslaget.

3. Ansvar

NOVA er ikke ansvarlig for konklusjoner som trekkes av virksomheten eller av andre brukere på grunnlag av de utleverte opplysningene.

4. Sletting / tilbakelevering

Ved prosjektslutt, det vil si når arbeidet med temaene/problemstillingene som er angitt i punkt 1 er avsluttet, og senest ved sluttdatoen for denne kontrakten, forplikter virksomheten seg til å slette alle mottatte opplysninger, inklusive alle utskrifter og kopier av disse. Sletting skal bekreftes på vedlagte skjema.

5. Autorisasjon

Følgende personer i virksomheten skal ha tilgang til opplysningene:

    1. Eva Cathrine Lyngstad-Alderfer

Dersom det er aktuelt å endre personer med tilgang til opplysningene, må dette søkes spesielt om i hvert enkelt tilfelle.

6. Brudd på avtalen
Ved brudd på vilkårene som er gitt i denne avtalen, kan tillatelsen til å benytte de utleverte opplys-ningene bli trukket tilbake.

7. Undertegning

Denne avtalen er utarbeidet i to eksemplarer hvorav partene beholder hvert sitt eksemplar.

Sted _____Oslo_____ Dato 9/3-16   Sted _____Oslo_____ Dato 12.10.15

For NOVA: For virksomheten: Eva Lyngstad-Alderfer

Underskrift _Anne Odegård_   Underskrift _Eva Lyngstad-Alderfer_

Helene Aarseth, forskningsleder NOVA   Representant for virksomheten

Spørreskjema- Ung i Oslo 2015
UNGDOMSTRINNET

Bydel

Hvilken bydel bor du i?
○ Vestre Aker
○ Ullern
○ Frogner
○ Nordre Aker
○ St. Hanshaugen
○ Sagene
○ Grünerløkka
○ Gamle Oslo
○ Bjerke
○ Alna
○ Stovner
○ Grorud
○ Østensjø
○ Nordstrand
○ Søndre Nordstrand
○ Jeg bor ikke i Oslo

ungdata

Bakgrunn

Er du gutt eller jente?
◯ Gutt
◯ Jente

KUN UNGDOMSSKOLEN:
Hvilket klassetrinn går du i?
◯ 8. trinn
◯ 9. trinn
◯ 10. trinn

Hvor er foreldrene dine født?
◯ Begge er født i Norge
◯ Den ene er født i Norge, den andre i utlandet
◯ Begge er født i utlandet

Skole

Hvor godt stemmer følgende utsagn om hvordan du har det på skolen?	Stemmer svært dårlig	Stemmer nokså dårlig	Stemmer nokså godt	Stemmer svært godt
Jeg trives på skolen	○	○	○	○
Lærerne mine bryr seg om meg	○	○	○	○
Jeg føler at jeg passer inn blant elevene på skolen	○	○	○	○
Jeg kjeder meg på skolen	○	○	○	○
Det er mange som forventer at jeg skal gjøre det godt på skolen	○	○	○	○
Jeg gruer meg ofte til å gå på skolen	○	○	○	○
Jeg må ofte bruke helgene til å gjøre skolearbeid	○	○	○	○

ungdata

Skole

Har du gjort eller opplevd noe av dette det siste året (de siste 12 månedene)?	Ingen ganger	1 gang	2–5 ganger	6–10 ganger	11 ganger eller mer
Hatt en voldsom krangel med en lærer	○	○	○	○	○
Skolen har kontaktet foreldrene dine for noe galt du har gjort	○	○	○	○	○
Skulka skolen	○	○	○	○	○
Blitt sendt ut av klasserommet					

Hvor lang tid bruker du gjennomsnittlig per dag på lekser og annet skolearbeid (utenom skoletida)?
○ Gjør aldri / nesten aldri lekser
○ Mindre enn en halvtime
○ ½–1 time
○ 1–2 timer
○ 2–3 timer
○ 3–4 timer
○ Mer enn 4 timer

ungdata

Foreldre

Her kommer noen utsagn om hvordan du vil beskrive forholdet ditt til foreldrene dine.	Passer svært godt	Passer ganske godt	Passer ganske dårlig	Passer svært dårlig
Foreldrene mine pleier å vite hvor jeg er, og hvem jeg er sammen med i fritida	○	○	○	○
Foreldrene mine kjenner de fleste av vennene jeg er sammen med i fritida	○	○	○	○
Jeg forsøker å holde mesteparten av fritida mi skjult for foreldrene mine	○	○	○	○
Foreldrene mine kjenner foreldrene til vennene mine	○	○	○	○
Jeg krangler ofte med foreldrene mine	○	○	○	○
Det er ofte krangling mellom de voksne i min familie	○	○	○	○
Foreldrene mine kjenner til hvem jeg har kontakt med på nettet	○	○	○	○

ungdata

Foreldre

Har du avtalte tider du må være hjemme om kvelden?
○ Nei, jeg kommer hjem når jeg selv vil
○ Noen ganger avtaler, andre ganger kommer jeg hjem når jeg vil
○ Ja, jeg har alltid avtaler om når jeg skal komme hjem

Har familien din hatt god eller dårlig råd/økonomi de siste to årene?
○ Vi har hatt god råd hele tida
○ Vi har stort sett hatt god råd
○ Vi har verken hatt god råd eller dårlig råd
○ Vi har stort sett hatt dårlig råd
○ Vi har hatt dårlig råd hele tida

ungdata

Foreldre

	Ingen bøker	Mindre enn 20 bøker	20–100 bøker	100–500 bøker	500–1000 bøker	Mer enn 1000 bøker
Hvor mange bøker tror du det er hjemme hos dere? NB! Én meter bøker tilsvarer omtrent 50 bøker	◯	◯	◯	◯	◯	◯

Venner

Når du er sammen med venner/kamerater, er du da som oftest sammen med …
○ Én eller to faste venner
○ Én eller to faste venner som ofte er med i en gruppe andre ungdommer
○ En vennegjeng som holder sammen
○ Nokså tilfeldig hvem jeg er sammen med
○ Er ikke så ofte sammen med jevnaldrende

Har du minst én venn som du kan stole fullstendig på og kan betro deg til om alt mulig?
○ Ja, helt sikkert
○ Ja, det tror jeg
○ Det tror jeg ikke
○ Har ingen jeg ville kalle venner, nå for tida

Status i vennemiljø

Hva er viktig for å få status i ditt vennemiljø?	Øker statusen mye	Øker statusen litt	Har ingen betydning	Minker statusen litt	Minker statusen mye
Å være god på skolen	○	○	○	○	○
Å være flink i idrett	○	○	○	○	○
Å ha et bra utseende	○	○	○	○	○
Å være til å stole på	○	○	○	○	○
Å drikke seg full	○	○	○	○	○
Å røyke hasj eller marihuana	○	○	○	○	○
Å ha moteriktige klær	○	○	○	○	○
Å få mange «likes» på sosiale medier	○	○	○	○	○
Å være interessert i politikk eller samfunnsspørsmål	○	○	○	○	○

Regelbrudd

Hvor mange ganger har du vært med på eller gjort noe av dette det siste året (de siste 12 månedene)?	Ingen ganger	1 gang	2–5 ganger	6–10 ganger	11 ganger eller mer
Tatt med deg varer fra butikk uten å betale	○	○	○	○	○
Vært i slåsskamp (uten våpen)	○	○	○	○	○
Vært i slåsskamp hvor du har brukt våpen (f.eks. kniv)	○	○	○	○	○
Truet til deg penger eller ting	○	○	○	○	○
Med vilje ødelagt eller knust vindusruter, busseter, postkasser eller lignende (gjort hærverk)	○	○	○	○	○
Brutt deg inn for å stjele noe	○	○	○	○	○

Regelbrudd

Hvor mange ganger har du vært med på, eller gjort noe av dette det siste året (de siste 12 månedene)?	Ingen ganger	1 gang	2–5 ganger	6–10 ganger	11 ganger eller mer
Stjålet penger eller ting fra en du kjenner	○	○	○	○	○
Sprayet eller tagget ulovlig på vegger, bygninger, tog, buss eller lignende	○	○	○	○	○
Lurt deg fra å betale kino, idrettsstevner, buss, tog eller lignende	○	○	○	○	○
Vært borte en hel natt uten at foreldrene dine visste hvor du var	○	○	○	○	○
Lastet ned eller kopiert filer ulovlig fra nettet	○	○	○	○	○
Vært i kontakt med politiet på grunn av noe galt du har gjort	○	○	○	○	○

Mobbing

Hender det at du er med på plaging, trusler eller utfrysing av andre unge på skolen eller i fritida? Sett kryss der det passer best
○ Ja, flere ganger i uka
○ Ja, omtrent én gang i uka
○ Ja, omtrent hver 14. dag
○ Ja, omtrent én gang i måneden
○ Nesten aldri
○ Aldri

Blir du selv utsatt for plaging, trusler eller utfrysing av andre unge på skolen eller i fritida? Sett kryss der det passer best
○ Ja, flere ganger i uka
○ Ja, omtrent én gang i uka
○ Ja, omtrent hver 14. dag
○ Ja, omtrent én gang i måneden
○ Nesten aldri
○ Aldri

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Digital mobbing

Hender det at du er med på plaging eller trusler mot andre unge via Internett eller mobil?
○ Ja, flere ganger i uka
○ Ja, omtrent én gang i uka
○ Ja, omtrent hver 14. dag
○ Ja, omtrent én gang i måneden
○ Nesten aldri
○ Aldri

Blir du selv utsatt for plaging eller trusler fra andre unge via Internett eller mobil?
○ Ja, flere ganger i uka
○ Ja, omtrent én gang i uka
○ Ja, omtrent hver 14. dag
○ Ja, omtrent én gang i måneden
○ Nesten aldri
○ Aldri

Vold

Har du i løpet av de siste 12 månedene blitt utsatt for noe av det følgende?	Ingen ganger	1 gang	2–5 ganger	6 ganger eller mer
Jeg har blitt utsatt for trusler om vold	○	○	○	○
Jeg har blitt slått uten å få synlige merker	○	○	○	○
Jeg har fått sår eller skade på grunn av vold uten at jeg trengte legebehandling	○	○	○	○
Jeg har blitt skadet så sterkt på grunn av vold at det krevde legebehandling	○	○	○	○

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Organiserte fritidsaktiviteter

Er du, eller har du tidligere vært, med i noen organisasjoner, klubber, lag eller foreninger etter at du fylte 10 år?
○ Ja, jeg er med nå
○ Nei, men jeg har vært med tidligere
○ Nei, jeg har aldri vært med

Organiserte fritidsaktiviteter

Hvor mange ganger den siste måneden har du vært med på aktiviteter, møter eller øvelser i følgende organisasjoner, klubber eller lag?	Ingen ganger	1–2 ganger	3–4 ganger	5 ganger eller oftere
Idrettslag	○	○	○	○
Fritidsklubb/ungdomshus/ungdomsklubb	○	○	○	○
Religiøs forening	○	○	○	○
Korps, kor, orkester	○	○	○	○
Kulturskole/musikkskole	○	○	○	○
Annen organisasjon, lag eller forening	○	○	○	○

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Fritidsaktiviteter

Her blir det nevnt en del aktiviteter som du kan bruke fritida di til. Tenk tilbake på den siste uka (de siste 7 dagene). Hvor mange ganger har du …	Ingen ganger	1 gang	2–5 ganger	6 ganger eller mer
Gått på burgersted, gatekjøkken og lignende	○	○	○	○
Gått på kafé, kaffebar og lignende	○	○	○	○
Gjort noe sammen med mor og far (drevet med hobby, spill, trening eller lignende)	○	○	○	○
Vært sammen med venner hjemme hos meg	○	○	○	○
Vært sammen med venner hos dem	○	○	○	○
Brukt størstedelen av kvelden ute sammen med venner/kamerater	○	○	○	○
Spilt onlinespill med andre størstedelen av kvelden	○	○	○	○
Vært sosial på nett eller mobil størstedelen av kvelden (snakket, chattet eller lignende)	○	○	○	○
Dratt inn til sentrum	○	○	○	○

Fritidsaktiviteter

Her er det nevnt en del aktiviteter som du kan bruke fritida di til. Tenk tilbake på den siste uka (de siste 7 dagene). Hvor mange ganger har du …	Ingen ganger	1 gang	2–5 ganger	6 ganger eller mer
Shoppet eller ruslet rundt i butikker for å se	○	○	○	○
Kjørt eller sittet på med bil, motorsykkel eller moped for moro skyld (kjørt for å kjøre en tur)	○	○	○	○
Oppholdt deg sammen med venner på et gatehjørne, utenfor en kiosk, et kjøpesenter, bensinstasjon eller lignende	○	○	○	○
Vært hjemme hele kvelden	○	○	○	○
Drevet med stell og pass av dyr	○	○	○	○
Hatt lønna ekstrajobb	○	○	○	○
Drevet med musikk (spilt instrument, i band, kor)	○	○	○	○
Spilt fotball, basket eller andre ballspill med venner (ikke i idrettslag)	○	○	○	○
Skatet, kjørt snowboard, twin-tip eller lignende	○	○	○	○
Vært på bibliotek	○	○	○	○

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Nærmiljø

Tenk på områdene rundt der du bor. Hvordan opplever du at tilbudet til ungdom er når det gjelder …	Svært bra	Nokså bra	Verken bra eller dårlig	Nokså dårlig	Svært dårlig
Lokaler for å treffe andre unge på fritida (fritidsklubb, ungdomshus eller lignende)	○	○	○	○	○
Idrettsanlegg	○	○	○	○	○
Kulturtilbudet (kino, konsertscener, bibliotek eller lignende)	○	○	○	○	○
Kollektivtilbudet (buss, tog, trikk, eller lignende)	○	○	○	○	○

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Nærmiljø

Når du er ute om kvelden, opplever du det som trygt å ferdes …	Ja, svært trygt	Ja, ganske trygt	Usikker	Nei, jeg føler meg utrygg
I nærområdet der du bor?	○	○	○	○
På gater og veier i nærmeste sentrum eller tettsted?	○	○	○	○

Kan du tenke deg å bo i kommunen din når du blir voksen?
○ Ja
○ Nei
○ Vet ikke

Rusmidler

Røyker du?
○ Har aldri røykt
○ Har røykt før, men har sluttet helt nå
○ Røyker sjeldnere enn én gang i uka
○ Røyker ukentlig, men ikke hver dag
○ Røyker daglig

Bruker du snus?
○ Har aldri brukt snus
○ Har brukt før, men har sluttet helt nå
○ Snuser sjeldnere enn én gang i uka
○ Snuser ukentlig, men ikke hver dag
○ Snuser daglig

Rusmidler

Får du lov til å drikke alkohol av foreldrene dine?
○ Ja
○ Nei
○ Vet ikke

Hender det at du drikker noen form for alkohol?
○ Aldri
○ Har bare smakt noen få ganger
○ Av og til, men ikke så ofte som månedlig
○ Nokså jevnt 1–3 ganger i måneden
○ Hver uke

Hvis du tenker spesielt på de siste seks månedene, hvor mange ganger har du drukket så mye alkohol at du tydelig har kjent deg beruset?
○ Aldri
○ 1 gang
○ 2–4 ganger
○ 5–10 ganger
○ Mer enn 10 ganger

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Rusmidler

Dersom du noen gang har drukket så mye at du følte deg tydelig beruset, hvor gammel var du første gangen dette skjedde?
○ Jeg har aldri drukket så mye
○ 10 år eller yngre
○ 11 år
○ 12 år
○ 13 år
○ 14 år
○ 15 år
○ 16 år

Rusmidler

Er det noen i dine nære omgivelser som drikker alkohol?	Ja, daglig	Flere ganger i uka	Omtrent én gang i uka	En sjelden gang	Nei, aldri
Mor	○	○	○	○	○
Far	○	○	○	○	○
Nære venner	○	○	○	○	○

Røyker noen av foreldrene dine sigaretter?	Ja, daglig	Flere ganger i uka	Omtrent én gang i uka	En sjelden gang	Nei, aldri
	○	○	○	○	○

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Rusmidler

Har du i løpet av det siste året (de siste 12 månedene) blitt tilbudt hasj eller marihuana?
◯ Ja, flere ganger
◯ Ja, én gang
◯ Nei, aldri

Hvis du ønsket å få tak i hasj eller marihuana, tror du at du ville klare å skaffe deg stoffet i løpet av to til tre dager?
◯ Ja
◯ Nei
◯ Vet ikke

RUTING:

STILLES KUN TIL DE SOM SVARER «JA» PÅ FORRIGE SPØRSMÅL

Rusmidler

Hvor fort tror du at du ville klare å skaffe hasj eller marihuana?
○ Kortere enn to timer
○ 2 – 12 timer
○ 12 – 24 timer
○ Mer enn 24 timer
○ Vet ikke

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Rusmidler

Hvor mange ganger har du gjort noe av dette det siste året (de siste 12 månedene)?	Ingen ganger	1 gang	2–5 ganger	6–10 ganger	11 ganger eller mer
Brukt dopingmidler (f.eks. anabole steroider)	○	○	○	○	○
Drukket så mye at du har følt deg tydelig beruset	○	○	○	○	○
Brukt hasj/marihuana/cannabis	○	○	○	○	○
Brukt andre narkotiske stoffer	○	○	○	○	○
Brukt sniffestoffer (for eksempel lightergass, formfett, lim)	○	○	○	○	○
Drukket smuglersprit eller hjemmebrent	○	○	○	○	○

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Helsetjenester

Hvor mange ganger har du brukt følgende helsetjenester i løpet av de siste 12 månedene?	Ingen ganger	1–2 ganger	3–5 ganger	6 ganger eller mer
Helsesøster eller skolelege	○	○	○	○
Helsestasjon for ungdom	○	○	○	○
Vanlig lege	○	○	○	○
Psykolog eller psykiater	○	○	○	○
Legevakt	○	○	○	○

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Nære relasjoner

Tenk deg at du har et personlig problem. Du føler deg utafor og trist og trenger noen å snakke med. Hvem ville du snakket med eller søkt hjelp hos?	Helt sikkert	Kanskje	Nei
Foreldre	○	○	○
Andre familiemedlemmer (søsken, besteforeldre eller lignende)	○	○	○
Venner	○	○	○
Andre voksne	○	○	○
Ingen	○	○	○

Fysiske helseplager

Har du hatt noen av disse plagene i løpet av siste måned?	Ingen ganger	Noen ganger	Mange ganger	Daglig
Hodepine	○	○	○	○
Nakke- og skuldersmerter	○	○	○	○
Ledd- og muskelsmerter	○	○	○	○
Magesmerter	○	○	○	○
Kvalme	○	○	○	○
Hjertebank	○	○	○	○

Psykiske helseplager

Har du i løpet av den siste uka vært plaget av noe av dette:	Ikke plaget i det hele tatt	Lite plaget	Ganske mye plaget	Veldig mye plaget
Følt at alt er et slit	○	○	○	○
Hatt søvnproblemer	○	○	○	○
Følt deg ulykkelig, trist eller deprimert	○	○	○	○
Følt håpløshet med tanke på framtida	○	○	○	○
Følt deg stiv eller anspent	○	○	○	○
Bekymret deg for mye om ting	○	○	○	○
Følt deg ensom	○	○	○	○
Vært sint og aggressiv	○	○	○	○

Psykiske helseplager

Har du i løpet av den siste uka vært plaget av noe av dette:	Ikke plaget i det hele tatt	Lite plaget	Ganske mye plaget	Veldig mye plaget
Plutselig redd uten grunn	○	○	○	○
Stadig redd eller engstelig	○	○	○	○
Matthet eller svimmelhet	○	○	○	○
Nervøsitet, indre uro	○	○	○	○
Lett for å gråte	○	○	○	○
Lett for å klandre deg selv	○	○	○	○

Tannhelse/medikamentbruk

Hvor ofte pusser du tennene?
○ Flere ganger om dagen
○ Én gang om dagen
○ Annenhver dag
○ Sjeldnere enn annenhver dag

Hvor ofte har du brukt reseptfrie medikamenter (Paracet, Ibux og lignende) i løpet av siste måned?
○ Ingen ganger
○ Sjeldnere enn én gang i uka
○ Minst ukentlig
○ Flere ganger i uka
○ Daglig

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Matvaner

Hvor ofte pleier du å spise følgende i løpet av en uke?	Sjelden eller aldri	1 gang i uka	2–5 ganger i uka	Hver dag
Frokost	○	○	○	○
Lunsj/formiddagsmat/niste	○	○	○	○
Middag	○	○	○	○

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Fysisk aktivitet

	Aldri	Sjelden	1–2 ganger i måneden	1–2 ganger i uka	3–4 ganger i uka	Minst 5 ganger i uka
Hvor ofte er du så fysisk aktiv at du blir andpusten eller svett?	○	○	○	○	○	○

Hvor ofte trener du eller driver du med følgende aktiviteter?	Aldri	Sjelden	1–2 ganger i måneden	1–2 ganger i uka	3–4 ganger i uka	Minst 5 ganger i uka
Trener eller konkurrerer i et idrettslag	○	○	○	○	○	○
Trener på treningsstudio eller helsestudio	○	○	○	○	○	○
Driver med annen organisert trening (dans, kampsport eller lignende)	○	○	○	○	○	○
Trener eller trimmer på egen hånd (løper, svømmer, sykler, går tur)	○	○	○	○	○	○

Fysisk aktivitet

Tenk tilbake på <u>den siste uka</u> (de siste 7 dagene). Hvor mange ganger har du …	Ingen ganger	1 gang	2–5 ganger	6 ganger eller mer
Drevet med trening i et idrettslag	○	○	○	○
Drevet med dans, jazzballett, aerobic, folkedans, dans eller liknende	○	○	○	○
Vært på treningsstudio/helsestudio	○	○	○	○
Vært på kampsport eller selvforsvarstrening (boksing, karate, kickboksing eller liknende)	○	○	○	○
Trimmet eller trent på egenhånd (løpt en tur, gått i svømmehallen etc)	○	○	○	○

Mediebruk

Tenk på en gjennomsnittsdag. Hvor lang tid bruker du på følgende:	Ikke noe tid	Under 30 minutter	30 minutter– 1 time	1–2 timer	2–3 timer	Mer enn 3 timer
Se på TV	○	○	○	○	○	○
Lese bøker (ikke skolebøker)	○	○	○	○	○	○
Se på filmer/TV-serier	○	○	○	○	○	○
Spille dataspill/TV-spill	○	○	○	○	○	○
Spille på telefon/nettbrett	○	○	○	○	○	○
Bruke datamaskin utenom skolen	○	○	○	○	○	○
Sosiale medier (Facebook, Instagram eller lignende)	○	○	○	○	○	○

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Mediebruk

Utenom skolen, hvor lang tid bruker du vanligvis på aktiviteter foran en skjerm (TV, data, nettbrett, mobil) i løpet av en dag?
◯ Ikke noe tid
◯ Mindre enn 1 time
◯ 1–2 timer
◯ 2–3 timer
◯ 3–4 timer
◯ 4–6 timer
◯ Mer enn 6 timer

Tanker om framtiden

Hvordan tror du at framtiden din vil bli? Tror du at du ...	Ja	Nei	Vet ikke
Vil komme til å ta fagbrev?	○	○	○
Vil komme til å ta utdanning på universitet eller høyskole?	○	○	○
Noen gang vil bli arbeidsledig?	○	○	○
Vil komme til å eie din egen bolig?	○	○	○
Vil komme til å få et godt og lykkelig liv?	○	○	○

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Selvbilde

Nedenfor er det noen påstander om hvor fornøyd du er med livet ditt. Kryss av i den ruta som passer best for deg.	Passer svært godt	Passer ganske godt	Passer ganske dårlig	Passer svært dårlig
Jeg er svært fornøyd med hvordan jeg er	○	○	○	○
Jeg er ofte skuffet over meg selv	○	○	○	○
Jeg liker ikke den måten jeg lever livet mitt på	○	○	○	○
Jeg er stort sett fornøyd med meg selv	○	○	○	○
Jeg liker meg selv slik jeg er	○	○	○	○

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Fornøydhet med livet

Hvor fornøyd eller misfornøyd er du med ulike sider ved livet ditt?	Svært misfornøyd	Litt misfornøyd	Verken fornøyd eller misfornøyd	Litt fornøyd	Svært fornøyd
Foreldrene dine	○	○	○	○	○
Vennene dine	○	○	○	○	○
Skolen du går på	○	○	○	○	○
Lokalmiljøet der du bor	○	○	○	○	○
Helsa di	○	○	○	○	○
Utseendet ditt	○	○	○	○	○
Det norske samfunnet	○	○	○	○	○

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Foreldrene dine

Har faren og moren din utdanning på universitet eller høyskole? Sett ett kryss for mor og ett kryss for far. Hvis du ikke har kontakt med én eller begge av foreldrene dine, hopper du over spørsmålet som gjelder denne forelderen.	Ja	Nei
Far	○	○
Mor	○	○

Hvem bor du sammen med nå?
○ Med begge foreldrene mine
○ Annet

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Data hjemme og skolekarakterer

	Ja	Nei
Har du din egen datamaskin?	○	○
Har du fri tilgang til internett hjemme?	○	○

Hvilke karakterer fikk du i følgende fag ved siste karakteroppgjør (jul eller sommer)?	1	2	3	4	5	6
Norsk skriftlig hovedmål	○	○	○	○	○	○
Matematikk	○	○	○	○	○	○
Engelsk skriftlig	○	○	○	○	○	○

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Religion

Hvor mye betyr religion for hvordan du lever livet ditt til daglig?
○ Det er svært viktig
○ Religion betyr ganske mye for hvordan jeg lever i hverdagen
○ Religion betyr lite for hvordan jeg lever i hverdagen
○ Religion har ingen betydning for hvordan jeg lever livet mitt

Kropp

Hvor godt passer følgende utsagn for deg?	Stemmer svært dårlig	Stemmer nokså dårlig	Stemmer nokså godt	Stemmer svært godt
Jeg er ikke fornøyd med utseendet mitt	○	○	○	○
Jeg ønsker at kroppen min var annerledes	○	○	○	○
Jeg ønsker at jeg så annerledes ut	○	○	○	○
Jeg synes jeg ser bra ut	○	○	○	○
Jeg liker utseendet mitt veldig godt	○	○	○	○

Kropp

Klarer du …	Ja, helt sikkert	Ja, det tror jeg	Nei
… å svømme 25 meter uten stopp?	○	○	○
… å sykle	○	○	○

Hvor mange ganger i løpet av siste måned har du …	Ingen ganger	1 gang	2–5 ganger	6–10 ganger	11 ganger eller mer
Drukket Redbull, Battery eller andre typer energidrikk	○	○	○	○	○
Brukt kosttilskudd for å øke muskelmassen	○	○	○	○	○

Foreldre og skole

Hvor godt stemmer disse utsagnene?	Stemmer svært godt	Stemmer ganske godt	Stemmer ganske dårlig	Stemmer svært dårlig
Foreldrene mine er svært interessert i skolearbeidet mitt	○	○	○	○
Foreldrene mine hjelper meg ofte med skolearbeidet	○	○	○	○
Foreldrene mine roser meg ofte for skolearbeidet mitt	○	○	○	○
Foreldrene mine snakker sjelden med meg om skolen	○	○	○	○
Foreldrene mine synes det er viktig at jeg tar videre utdanning etter fullført videregående skole	○	○	○	○
Foreldrene mine synes jeg bør være blant de beste i klassen	○	○	○	○
Foreldrene mine deltar vanligvis på foreldremøter	○	○	○	○

![ungdata]

Skolearbeidet ditt

Hvor ofte har du det slik?	Aldri	Sjelden	Av og til	Ofte	Svært ofte
Jeg trives med å gjøre skolearbeid	○	○	○	○	○
Jeg blir stresset av skolearbeidet	○	○	○	○	○
Jeg føler meg utslitt på grunn av skolearbeidet	○	○	○	○	○
Jeg har mer skolearbeid enn jeg klarer å gjøre	○	○	○	○	○
Jeg har problemer med å sove på grunn av skolearbeidet	○	○	○	○	○

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Personlig økonomi

Omtrent hvor mye penger kan du bruke som du selv vil i måneden (dvs. lommepenger og penger du har skaffet selv)?
○ Mindre enn 100 kroner
○ 100 – 499 kroner
○ 500 – 999 kroner
○ 1000 – 1999 kroner
○ 2000 – 2999 kroner
○ 3000 – 4999 kroner
○ 5000 kroner eller mer

Skylder du penger til noen utenfor familien din?
○ Nei
○ Ja, et mindre beløp
○ Ja, et større beløp
○ Ja, et svært stort beløp

Nærmiljø

Prøv å forestille deg at du en gang får barn. Kunne du tenke deg å la barna dine vokse opp i nærområdet der du selv bor?
◯ Ja, svært gjerne
◯ Ja, gjerne
◯ Verken ja eller nei
◯ Nei, helst ikke
◯ Nei, ikke i det hele tatt

Politikk og samfunn

Hvor interessert er du i politikk og samfunnsspørsmål?
○ Svært interessert
○ Ganske interessert
○ Ikke særlig interessert
○ Ikke interessert i det hele tatt
○ Vet ikke

Bruker du sosiale medier til å gi uttrykk for dine politiske meninger eller synspunkter?
○ Ja, jeg er svært aktiv
○ Ja, jeg gjør det av og til
○ Jeg har gjort det et par ganger
○ Nei, det har jeg aldri gjort

Hvor ofte snakker du med en eller begge foreldrene dine om samfunnsspørsmål eller politikk?
○ Aldri eller nesten aldri
○ Månedlig (minst en gang hver måned)
○ Ukentlig (mint en gang i uka)
○ Daglig eller nesten daglig

Er faren eller moren din aktive i frivillige organisasjoner, lag eller foreninger?
○ Ja, nå
○ Ja, tidligere
○ Nei
○ Vet ikke

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Holdninger til kulturell tilpasning

Er det viktig for dine foreldre at du lever etter deres opprinnelige hjemlands kultur og tradisjoner?
○ Svært viktig
○ Ganske viktig
○ Uviktig
○ De vil helst ikke at jeg skal leve etter deres opprinnelige hjemlands tradisjoner

Er det viktig for dine foreldre at du lever etter norsk kultur og norske tradisjoner?
○ Svært viktig
○ Ganske viktig
○ Uviktig
○ De vil helst ikke at jeg skal leve etter norske tradisjoner

RUTING:

KUN TIL UNGDOM MED INNVANDRERBAKGRUNN = BEGGE FORELDRE FØDT I UTLANDET

Holdninger til kulturell tilpasning

Er det viktig for deg å leve etter dine foreldres opprinnelige hjemlands kultur og tradisjoner?
○ Svært viktig
○ Ganske viktig
○ Uviktig
○ Jeg vil helst ikke leve etter mine foreldres opprinnelige hjemlands tradisjoner

Er det viktig for deg å leve etter norsk kultur og norske tradisjoner?
○ Svært viktig
○ Ganske viktig
○ Uviktig
○ Jeg vil helst ikke leve etter norske tradisjoner

ungdata

Innvandrerorganisasjoner

Deltar du i noe av dette?	Ja	Nei
I en religiøs organisasjon eller trossamfunn	○	○
I en annen forening eller organisasjon for personer som har samme landbakgrunn som meg	○	○

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Dersom du er med på noen aktiviteter i forbindelse med at du deltar i innvandrerorganisasjoner, hva slags typer aktiviteter deltar du i?	Ja	Nei
Morsmålsopplæring	◯	◯
Idrett	◯	◯
Dans eller musikk	◯	◯
Religions- og trosopplæring	◯	◯
Andre aktiviteter, skriv hvilke _____	◯	◯

RUTING

KUN TIL UNGDOM MED INNVANDRERBAKGRUNN = BEGGE FORELDRE FØDT I UTLANDET

Dårlige opplevelser

Hvor ofte hender dette deg?	Svært ofte	Ofte	Av og til	Sjelden	Aldri
Jeg føler meg ikke akseptert av nordmenn	○	○	○	○	○
Jeg føler at nordmenn har noe i mot meg	○	○	○	○	○
Jeg har blitt ertet/fornærmet på grunn av min innvandrerbakgrunn	○	○	○	○	○
Jeg har blitt truet/angrepet på grunn av min innvandrerbakgrunn	○	○	○	○	○
Jeg har blitt ertet/fornærmet på grunn av min religiøse tro	○	○	○	○	○
Jeg har blitt truet/angrepet på grunn av min religiøse tro	○	○	○	○	○

ungdata

Viktige voksenpersoner for deg

Dersom du trenger hjelp fra andre enn familie og venner, hvor stor betydning har voksenpersonene nedenfor for deg?	Veldig stor betydning	Ganske stor betydning	Liten betydning	Ingen betydning
En ansatt på skolen (feks lærer, sosiallærer)	○	○	○	○
En i helsetjenesten (helsesøster, lege, psykolog)	○	○	○	○
En i utekontakten eller en leder i fritidsklubben	○	○	○	○
En fra menigheten eller trossamfunnet	○	○	○	○
En voksen leder i en av fritidsaktivitetene jeg er med på	○	○	○	○
En i politiet	○	○	○	○
En i barnevernet	○	○	○	○
En annen voksen	○	○	○	○

Ungdata

Familien din

Nå kommer noen flere spørsmål om familien din og hjemmet ditt.

Hvis du bor i to hjem (både hos far og mor), skal du svare for den av foreldrene du bor mest hos. Hvis du bor like mye hos mor og far, kan du velge hvilket hjem du svarer for.

Har familien din bil?
○ Nei
○ Ja, én
○ Ja, to eller flere

Har du eget soverom?
○ Ja
○ Nei

Hvor mange ganger har du reist et sted på ferie med familien din i løpet av det siste året?
○ Ingen ganger
○ Én gang
○ To ganger
○ Mer enn to ganger

Hvor mange datamaskiner har familien din?
○ Ingen
○ Én
○ To
○ Mer enn to

RUTING:

MODUL 1 = STILLES TIL TILFELDIG 1/3 AV ALLE

Lekser

Nå følger noen spørsmål om lekser. Vi tenker da på hjemmelekser og annet skolearbeid <u>som du gjør utenom skolen</u>.

Hvor mange dager i løpet av en uke gjør du vanligvis lekser?
○ 1 dag
○ 2 dager
○ 3 dager
○ 4 dager
○ 5 dager
○ 6 dager
○ 7 dager
○ Sjeldnere enn ukentlig

Når du gjør lekser:	Ja, alltid eller nesten alltid	Ja, ganske ofte	Ja, men bare av og til	Nei, aldri
Er du sammen med venner?	○	○	○	○
Gjør du andre ting samtidig?	○	○	○	○

MODUL 1 = STILLES TIL TILFELDIG 1/3 AV ALLE

Lekser

Hvor godt stemmer utsagnene nedenfor om dine erfaringer med det å gjøre lekser?	Stemmer svært bra	Stemmer nokså bra	Stemmer nokså dårlig	Stemmer svært dårlig
Lekser er noe av det jeg liker best å drive med	○	○	○	○
Jeg snakker ofte med venner om leksene mine	○	○	○	○
Jeg forteller ofte til andre om hvordan jeg gjør leksene mine	○	○	○	○
Når jeg gjør lekser, blir jeg helt oppslukt og glemmer ofte tiden	○	○	○	○
Det er viktig for meg å gjøre mye lekser	○	○	○	○
Vennene forbinder meg gjerne med en som gjør mye lekser	○	○	○	○

ungdata

Lekser

Hva synes du selv at du lærer av å gjøre lekser?	Stemmer svært bra	Stemmer nokså bra	Stemmer nokså dårlig	Stemmer svært dårlig
Jeg lærer nye ting hele tiden	○	○	○	○
Jeg lærer mange ting som jeg får bruk for i skolen	○	○	○	○
Jeg lærer mange ting som jeg får bruk for i andre sammenhenger	○	○	○	○

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Min digitale favorittaktivitet

Du har tidligere fått spørsmål om internett, datamaskin, nettbrett, mobil, spillkonsoller og lignende. Nå er vi interessert i å vite mer om <u>hva du bruker</u> disse til i fritiden din (digitale aktiviteter). Kan du først skrive ned to-tre digitale aktiviteter som du liker godt og som du bruker en del tid på?

Aktivitet nummer 1: _____

Aktivitet nummer 2: _____

Aktivitet nummer 3: _____

Hvilken av disse aktivitetene er <u>viktigst</u> for deg å holde på med – nummer 1, 2 eller 3?
○ 1
○ 2
○ 3

RUTING:

MODUL 1 = STILLES TIL TILFELDIG 1/3 AV ALLE

Min digitale favorittaktivitet

Aktiviteten du valgte ut spesielt vil vi kalle «din digitale favorittaktivitet». Nedenfor ber vi deg svare på en del spørsmål om <u>akkurat denne aktiviteten</u>.
Hvor lang tid bruker du vanligvis på aktiviteten i løpet en dag (de dagene du holder på med dette)?
○ Mindre enn en halvtime
○ ½–1 time
○ 1–2 timer
○ 2–3 timer
○ 3–4 timer
○ 4-6 timer
○ Mer enn 6 timer

Når du driver med denne aktiviteten:	**Ja, alltid eller nesten alltid**	**Ja, ganske ofte**	**Ja, men bare av og til**	**Nei, aldri**
Er du sammen med venner?	○	○	○	○
Gjør du andre ting samtidig?	○	○	○	○

ungdata

Min digitale favorittaktivitet

Hvor godt stemmer utsagnene nedenfor om din digitale favorittaktivitet?	Stemmer svært bra	Stemmer nokså bra	Stemmer nokså dårlig	Stemmer svært dårlig
Denne aktiviteten er noe av det jeg liker best å drive med	○	○	○	○
Jeg snakker ofte med venner om denne aktiviteten	○	○	○	○
Jeg forteller ofte til andre om ting jeg opplever i forbindelse med denne aktiviteten	○	○	○	○
Når jeg driver med aktiviteten, blir jeg helt oppslukt og glemmer ofte tiden	○	○	○	○
Det er viktig for meg å drive mye med denne aktiviteten	○	○	○	○
Vennene mine forbinder meg gjerne med denne aktiviteten	○	○	○	○

MODUL 1 = STILLES TIL TILFELDIG 1/3 AV ALLE

Min digitale favorittaktivitet

Hva synes du selv at du lærer av å drive med dette?	Stemmer svært bra	Stemmer nokså bra	Stemmer nokså dårlig	Stemmer svært dårlig
Jeg lærer nye ting hele tiden	○	○	○	○
Jeg lærer mange ting som jeg får bruk for i skolen	○	○	○	○
Jeg lærer mange ting som jeg får bruk for i andre sammenhenger	○	○	○	○

RUTING:

MODUL 2 = STILLES TIL TILFELDIG 1/3 AV ALLE

Tillit til samfunnet

Hvor sterk tillit har du til følgende institusjoner eller instanser i samfunnet?	Sterk tillit	Ganske mye tillit	Ganske liten tillit	Ingen tillit i det hele tatt
Kirken	○	○	○	○
Grunnskolen	○	○	○	○
Rettsvesenet	○	○	○	○
Politiet	○	○	○	○
Stortinget	○	○	○	○
Regjeringen	○	○	○	○
Media	○	○	○	○
Fagforeninger	○	○	○	○
Helsevesenet	○	○	○	○
Firmaet Facebook	○	○	○	○
Firmaet Google	○	○	○	○

Foreldres påvirkning

Hvor viktig er det for deg å rette deg etter dine foreldres meninger og holdninger når det gjelder ditt:	Svært viktig	Litt viktig	Ikke viktig
… syn på religion?	○	○	○
… syn på hvordan jeg kler meg?	○	○	○
… syn på bruk av rusmidler?	○	○	○
… syn på politikk?	○	○	○
… syn på valg av utdanning og yrke?	○	○	○

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RUTING:

MODUL 2 = STILLES TIL TILFELDIG 1/3 AV ALLE

Vennenes påvirkning

Hvor viktig er det for deg å rette deg etter dine venners meninger og holdninger når det gjelder ditt:	Svært viktig	Litt viktig	Ikke viktig
… syn på religion?	○	○	○
… syn på hvordan jeg kler meg?	○	○	○
… syn på bruk av rusmidler?	○	○	○
… syn på politikk?	○	○	○
… syn på valg av utdanning og yrke?	○	○	○

RUTING:

MODUL 3 = STILLES TIL TILFELDIG 1/3 AV ALLE

Foreldrene dine og idrett

Har faren eller moren din vært trener eller lagleder for deg (eller dine søsken) gjennom oppveksten?
○ Ja, nå
○ Ja, tidligere
○ Nei, aldri

Hvor godt stemmer disse utsagnene?	Stemmer svært godt	Stemmer ganske godt	Stemmer ganske dårlig	Stemmer svært dårlig
Idrett og sport betyr svært mye i min familie	○	○	○	○
Faren/moren min trener som regel et par ganger i uka eller mer	○	○	○	○
Faren/moren min vil gjerne at jeg skal drive med idrett	○	○	○	○

Trening

Driver du med noen form for trening?
○ Ja
○ Nei

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Grunner til at du ikke trener

Hva er grunnen til at du ikke driver noen form for trening?	Svært viktig	Litt viktig	Ikke viktig
Jeg har andre interesser	○	○	○
Jeg har ikke tid	○	○	○
Jeg skulle gjerne trene, men kommer aldri i gang	○	○	○
Det er for dyrt å trene	○	○	○
Jeg har ikke funnet noen treningsform som passer for meg	○	○	○
Jeg får mosjon på andre måter (går, sykler og lignende)	○	○	○
Jeg er i for dårlig form	○	○	○
Foreldrene mine vil ikke at jeg skal bruke tid på trening	○	○	○
Jeg er ikke flink i sport/idrett	○	○	○
Jeg synes ikke det er noe gøy å trene	○	○	○

Grunner til å trene

HVIS JA PÅ SPØRSMÅLET OVER: Hvorfor trener du?	Svært viktig	Litt viktig	Ikke viktig
Jeg liker å konkurrere og måle krefter	○	○	○
Jeg trener for å få en sunn kropp	○	○	○
Jeg synes det er gøy å trene	○	○	○
Jeg vil holde meg i form	○	○	○
Jeg liker å være å være sammen med de andre på treningen	○	○	○
Jeg trener for å holde meg slank	○	○	○
Jeg trener for å få større eller mer markerte muskler	○	○	○

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Trening i idrettslag

Trener du i et idrettslag for tiden?
○ Ja
○ Nei, men jeg har trent i idrettslag tidligere
○ Nei, jeg har aldri trent i idrettslag

Idrett

Hvor godt stemmer disse utsagnene?	Stemmer svært godt	Stemmer ganske godt	Stemmer ganske dårlig	Stemmer svært dårlig
Faren/moren min er som oftest til stede på kamper/konkurranser jeg er med på	○	○	○	○
Jeg snakker som regel med foreldrene mine om treninger og kamper/konkurranser jeg deltar på	○	○	○	○
Faren/moren min ville blitt skuffa om jeg slutta med idrett	○	○	○	○
Faren/moren min synes det er viktig at jeg oppnår gode resultater i idretten	○	○	○	○
Faren/moren min vil at jeg skal ha det gøy med idretten	○	○	○	○

RUTING:

MODUL 3 + STILLES KUN TIL DE SOM SVARER «NEI, MEN JEG HAR TRENT I IDRETTSLAG TIDLIGERE» ELLER «NEI, JEG HAR ALDRI TRENT I IDRETTSLAG» PÅ SPØRSMÅLET OM TRENER I IDRETTSLAG

Grunner til ikke å trene i idrettslag

Hva er grunnen til at du ikke trener i et idrettslag?	Svært viktig	Litt viktig	Ikke viktig
Jeg vil ikke forplikte meg til faste treninger	◯	◯	◯
Jeg har aldri vært flink i sport	◯	◯	◯
Det er for dyrt	◯	◯	◯
Ingen av vennene mine trener i idrettslag	◯	◯	◯
Det er for mye konkurranse	◯	◯	◯
Foreldrene mine liker ikke at jeg er med i idrettslag	◯	◯	◯
Jeg har aldri vært interessert i idrett	◯	◯	◯
Jeg føler meg ikke hjemme sammen med dem som trener i idrettslag	◯	◯	◯

MODUL 3 + STILLES KUN TIL DE SOM SVARER «NEI, MEN JEG HAR TRENT I IDRETTSLAG TIDLIGERE» PÅ SPØRSMÅLET OM TRENER I IDRETTSLAG

Grunner til at jeg har sluttet å trene i idrettslag

Hva er grunnen til at du sluttet å trene i idrettslaget?	Svært viktig	Litt viktig	Ikke viktig
Det ble for mye lek og for lite seriøst	○	○	○
Det ble for strenge krav om å være flink/god	○	○	○
Det ble for dyrt	○	○	○
Venner sluttet	○	○	○
Klubben hadde ikke et godt nok tilbud lenger	○	○	○
Jeg måtte bruke mer tid på skolearbeidet	○	○	○
Foreldrene min likte ikke at jeg var med	○	○	○

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Deltakelse i organisasjoner, lag og foreninger

Er du eller har du vært med i noen av følgende foreninger, klubber eller lag?	Er med i	Har vært med i	Har aldri vært med i
Fritidsklubb	○	○	○
Idrettslag	○	○	○
Aktivitetsorganisasjon (speider, 4H, sjakklubb, rollespill, jakt- og fiske, dyrehold o.l,)	○	○	○
Politisk parti	○	○	○
Miljø- og naturvernorganisasjon	○	○	○
Andre politiske organisasjoner (elevorganisasjon, Amnesty, ruspolitisk o.l)	○	○	○
Kristne foreninger (inkl. Den norske kirke)	○	○	○
Muslimsk eller annet ikke-kristent trossamfunn	○	○	○
Musikkorps, kor, orkester	○	○	○
Humanitære organisasjoner (Røde Kors, Norsk Folkehjelp, Redd Barna o.l)	○	○	○
Innvandrerorganisasjon	○	○	○
Annen organisasjon/forening/klubb	○	○	○

Takk for at du deltok i undersøkelsen

Du har nå svart på alle spørsmålene.

Vennligst klikk på "Fullfør".

Ønsker du å snakke med en voksen etter at du har svart på spørsmålene? Ta kontakt med helsesøster på skolen din eller Helsestasjon for ungdom. Du kan også ringe Røde Kors-telefonen for barn og ungdom på 800 333 21 (åpent mandag-fredag kl. 14.00 – 20.00). Det er gratis å ringe fra mobil eller fasttelefon, og du er helt anonym. Synes du det er lettere å skrive ned tankene dine, kan du sende en melding på www.korspahalsen.no og få et personlig svar fra en voksen (som er frivillig i Røde Kors).