LIFE CIRCUMSTANCES AND ADOLESCENT MENTAL HEALTH
Perceptions, associations and a gender analysis

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ISSN 1652-893X
Mid Sweden University Doctoral Thesis 93

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Printed by Kopieringen Mid Sweden University, Sundsvall, Sweden, 2010
To my brother Niklas
ABSTRACT

Evelina Landstedt (2010)
Life circumstances and adolescent mental health: perceptions, associations and a gender analysis
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Despite a well-documented gender pattern of adolescent mental health, public health research investigating possible influencing factors from a gender-theoretical approach is scarce. This study aimed to explore what factors and circumstances are related to adolescent mental health and to apply a gender analysis to the findings in order to improve the understanding of the relationships between life circumstances and the gendered patterning of mental health among young people.

The study population was 16-19-year-old Swedish students and data was collected by means of focus groups (N=29) and self-administered questionnaires (N=1,663, 78.3% response rate) in school settings. Mental health problems were defined in a broad sense including the adolescents’ own understandings, perceived stress, psychological distress and deliberate self-harm.

The mental health problems of perceived stress, psychological distress and deliberate self-harm were twice as common among girls as boys. The findings suggest that adolescent mental health is associated with the life circumstances of social relationships, demands and responsibility taking and experiences of violence and harassment. Supportive relationships with friends, family and teachers were found to be of importance to positive mental health, whereas poor social relationships, loneliness and lack of influence were associated with mental health problems. Perceived demands and responsibility taking regarding school work, relationships, future plans, appearance and financial issues were strongly related to mental health problems, particularly among girls regardless of social class. The results indicate that physical violence, sexual assault, bullying and sexual harassment are severe risk factors for mental health problems in young people. Boys and girls experienced different types of violence, and the victim-perpetrator relationships of physical violence differed. These diverging experiences appeared to influence the associations with mental health problems in boys and girls.

A gender analysis provides the tools to gain knowledge about the ways that boys’ and girls’ lives are shaped by gender relations and constructions at different levels.
in society and how these life circumstances represent risk- or protective factors for mental health. For example, unequal power structures and the ways girls are expected to ‘do’ femininity likely influence their life circumstances in ways that place them at greater risk of mental health problems. Hegemonic constructions of masculinity and advantaged positions likely contribute to life circumstances that are positive for mental health but are also implying risk factors for poor mental health among boys, e.g., violence. It is also important to recognise how the intertwined cultural and structural aspects of gender and social class influence the lives and mental health of boys and girls. In conclusion, gendered and class-related mechanisms at the different levels in society influence the distribution of risk factors unevenly among boys and girls, which could be a possible explanation for the gender differences in reports of perceived stress, psychological distress and deliberate self-harm.

The likelihood of gender and socioeconomic differences in mental health problems should be taken into account in prevention and health promotion strategies at all levels in society. A greater awareness about gender relations and the gendered social circumstances under which young people live is required. The school environment is an important arena with respect to prevention and health promotion. There is also a need for a joint action against violence and harassment at all levels in society. Implications do not only concern young people; social policy and legislation should focus on reducing gender and class inequalities in general.

**Key words:** Stress; Psychological distress; Deliberate self-harm; Students; masculinity, femininity; social determinants; social relationships; demands; responsibility taking; violence and harassment; school.
SAMMANFATTNING

Svensk titel: Livsvillkor och ungdomars psykiska hälsa: uppfattningar, associationer och en genusanalys.

Trots ett väldokumenterat genusmönster i ungdomars psykiska hälsa finns det en kunskapslucka i den folkhälsovetenskapliga forskningen avseende genusteoretiska analyser av sambanden mellan ungas livsvillkor och psykisk hälsa. Föreliggande studie syftade till att undersöka vilka faktorer och omständigheter som är relaterade till psykiska problem, samt att analysera fynden ur ett genusperspektiv för att fördjupa förståelsen av relationerna mellan ungas livsvillkor och genusmönster i psykiska hälsa.

Studiepopulationen var gymnasielever i åldern 16-19 år. Studien genomfördes i skolmiljö och data insamlades genom fokusgrupper (N=29) och en enkätstudie (N=1,663, 78.3% svarsfrekvens). En bred definition av psykisk ohälsa tillämpades vilken representerades av ungdomarnas egen förståelse, samt de psykiska problemen upplevd stress, psykiska besvär samt självskadebeteende.

Resultaten visade att stress, psykiska besvär och självskadebeteende var dubbelt så vanligt bland flickor som bland pojkar. Psykiska problem var relaterade till livsvillkoren sociala relationer, krav och ansvarstagande samt utsatthet för våld och trakasserier. Stödjande relationer med vänner, familj och lärare var av stor betydelse för psykisk hälsa medan dåliga relationer, ensamhet och brist på inflytande var relatert till psykiska problem. Psykiska problem var starkt kopplade till erfarenheter av höga krav och ansvarstagande avseende skolarbete, relationer, framtidssplaner, utseende och ekonomi, i synnerhet bland flickor oavsett socioekonomisk bakgrund. Resultaten indikerar att olika former av våld och trakasserier är allvarliga riskfaktorer för psykiska problem och att flickors och pojkars skiljda erfarenheter av olika former av våld samt relationen till förövaren, kan vara relaterade till skillnader i psykiska problem.

Genusanalysen av resultaten föreslår att flickors livsvillkor påverkas av ojämlika maktstrukturer och konstruktioner av femininitet och att dessa livsvillkor bidrar till en ökad risk för psykisk ohälsa bland flickor. Livsvillkor kopplade till manlig överordning och hegemonska konstruktioner av maskulinitet influerar sannolikt pojkars psykiska hälsa positivt. Dessa villkor kan dock också innebära risk faktorer för psykiska problem, t.ex. i fråga om våld. Studien uppmärksammar även hur kulturella och strukturella aspekter av både genus och social klass kan påverka
livsvillkor och psykisk hälsa för pojkar och flickor. Studiens slutsats är att genusifierade och klassrelaterade mekanismer på olika nivåer i samhället bidrar till en skev fördelning av riskfaktorer för psykiska problem vilket kan vara en möjlig förklaring till skillnaderna mellan pojkar och flickor i fråga om upplevd stress, psykiska besvär och självskadebeteende.


**Nyckelord:** Stress; psykiska besvär; självskadebeteende; gymnasieelever; maskulinitet; femininitet; sociala determinanter; sociala relationer; krav; ansvarstagande; våld och trakasserier; skola.
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The thesis is based on the following papers, which are referred to in the text by their Roman numerals:


II. Landstedt E, Gillander Gådin K. Seventeen and stressed – do gender and class matter? Submitted manuscript.

III. Landstedt E, Gillander Gådin K. Experiences of violence and reported psychological distress in 17-year-old students: a gender analysis. Resubmitted manuscript.


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PREFACE

“Child and adolescent mental health is a necessary priority for the healthy development of societies.” (WHO 2010).

This thesis investigates what factors and circumstances are related to adolescent mental health and how a gender analysis can contribute to a deeper understanding of the links between life circumstances and the mental health of boys and girls in late adolescence. This research is inspired by my strong beliefs in equality, change and young people’s rights to well-being as well as and an endless curiosity, which has made and is still making me ask ‘why?’

From an early age, I have had deeply rooted beliefs in equality. In addition to leading me into the social and political arenas, these beliefs have inspired me to pursue university studies in philosophy, sociology and gender studies. Later on, these social, political and theoretical paths merged into the study of public health sciences. I became more aware of inequalities in health and the social and gendered distribution of determinants of health. Around year 2001, alarming reports about the deterioration of young people’s mental health, particularly among girls, became increasingly frequent. Adolescent mental health was on the public health agenda, and in my view, young people’s rights to health and well-being were under threat. I believe in the rights of young people, and I strongly object to circumstances that jeopardise their rights and well-being, such as drugs, marginalisation, violence, inequality and mental ill health.

I have not only been driven by a commitment to political and social issues, but I am also and have always been driven by a curiosity that I have had the chance to develop in academia. Through questions like “how is knowledge created and how does knowledge lead to change?”, research became tremendously interesting and appealing. An undergraduate thesis in sociology gave me the opportunity to start exploring the field of adolescent mental health. The key insights I gained from this work include the tendency in research to acknowledge the persistent gender patterning of mental health but to not ask the question of why it exists or apply a critical gender analysis. These issues were further developed in an empirical master’s thesis in public health sciences and, currently, in a Ph.D. project. Not only is it social injustice in itself that a generation of young people report elevated levels of mental health problems, but the prevalent gender pattern raises gender-equality issues both in terms of the need to acknowledge the existing gap between boys and girls, but also and foremost to better understand what is creating this inequality. Such knowledge is needed in order to prevent mental ill-health, and more importantly, to promote good mental health. This thesis, I hope, is one way of making advances towards those goals.
BACKGROUND

Adolescence represents a complex transition from childhood to adulthood, which inevitably implies new challenges for boys and girls. These challenges include aspects related to mental well-being that not only stem from changes in relationships and demands related to the emergence into adulthood in a globalised world, but also from existential thoughts and developmental changes (Rutter and Smith 1995; Zubrick et al. 2000). That is to say, one could neither expect nor strive for the total absence of mental distress in young people; it is a part of being young (Michaud and Fombonne 2005). Nevertheless, there are many reasons to be worried about the mental health of adolescents, of which some are outlined below. First and foremost, mental ill-health (including mental disorders) represents a major global health problem that affects young people (Kolip and Schmidt 1999; Patel et al. 2007). Apart from the individual suffering, the burden of mental ill-health can be quantified by the measure of disability-adjusted life years (DALY). According to a review of research on adolescent mental health, mental disorders in young people contribute to up to 70 percent of the total DALY (Patel et al. 2007). Poor mental health during adolescence is also a risk factor for mental illness in adulthood (Aalto-Setälä et al. 2002; Fergusson and Woodward 2002).

In addition, over the past decades, there has been an increase in the rates of self-reported mental health problems among young people in Western countries, but there has been no comparable rise in those rates in older age groups (Rutter and Smith 1995). This trend has also been shown in a Nordic context (Berntsson and Köhler 2001; Hagquist 2009) as well as in other European countries (Collishaw et al. 2004; Fombonne 1998; Gunnell et al. 2000; West and Sweeting 2003). It has also been found that this increase is particularly prevalent among 15-year-old girls (Hagquist 2010, Hagquist 2009, Sweeting et al. 2009). Less is known about the trends among girls and boys in late adolescence. Although the trends in the occurrence of mental ill-health in young people are alarming and deserve attention, they are not the main focus of this thesis.

Taken together, mental health problems represent a significant burden to both adolescents and societies and are public health issues of high priority (Kolip and Schmidt 1999; Patel et al. 2007; Sawyer et al. 2007; Zubrick et al. 2000).
Central concepts in the thesis

Adolescence
Adolescence is a fluid, culturally sensitive concept that can be defined as a phase in life between the ages of 10-19 years (WHO 2005). Others prefer using the notion of ‘young people’ when referring to individuals aged between 12 and 24 years (Rutter and Smith 1995). This thesis focuses on people of ages 16-19 years, which is a period described as ‘late adolescence’ and the individuals who are the subject of this thesis are referred to as ‘adolescents’, ‘students’ and ‘young people’.

Mental health
The field of research on adolescent mental health encompasses a wide range of disciplines, such as psychology, psychiatry, sociology, education and the public health sciences. Consequently, the list of definitions of mental health is endless, although it is likely that most scholars within these fields would agree that mental health refers to an individual’s emotional and psychological well-being as well as the presence or absence of a mental disorder. The World Health Organisation argues that mental health is more than the absence of a disorder and defines it as follows: “Mental health can be conceptualized as a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community” (WHO 2007). In this thesis, a broad empirical conceptualisation of mental health, or more precisely, mental health problems, is asserted. Rather than targeting specific disorders (e.g., diagnosed depression or anxiety syndrome) several self-reported mental health problems are in focus: perceived stress, psychological distress (mainly depressive and anxiety-related problems) and deliberate self-harm. These problems are considered to represent different aspects of mental health, which although not investigated in detail here, are assumed to be interrelated. This interrelationship is exemplified in Figure 1, which also illustrates the three mental health problems on a continuum where perceived stress represents the least severe state and deliberate self-harm the most severe state.

![Figure 1. Schematic illustration of the mental health problems examined and the relationships between them.](image-url)
Life circumstances

The concept of ‘life circumstances’ refers to the material as well as cultural and psychosocial conditions under which people live. Other terms used in this thesis are ‘contextual’ or ‘environmental’ factors. Life circumstances relate to the social determinants of health, which are considered in more detail and with examples in the section on the public health approach and the review of the literature on factors associated with adolescent mental health.

Gender

Gender refers to the cultural and social constructions of what it means to be a man/boy or a woman/girl in a given society and how that is enacted in social practice. Gender also refers to a fundamental organisational principle in society as well as social relations and hierarchies. The concept of gender is used throughout the thesis. However, in the statistical analysis, gender was operationalised as a binary category (boy/girl), and the adolescents were ascribed to each category based on their own indication in the questionnaire. Given that the focus groups were single sex and self selected, the participants chose their gender identity/position for themselves. All non-mixed groups were, however, constituted by biologically defined boys and girls. No transgender persons took part in the study. Because gender is the social structure that is central to this thesis, the concept is elaborated upon in more detail below.

Social class/Socioeconomic status

The terms social class and socioeconomic status (SES) are conceptualisations of the locations of people and groups of people within a social structure. There is a vast amount of theoretical and empirical work on the matter, for example, the Marxian, Weberian and Bourdieuan schools of thought, which are unfortunately beyond the scope of this thesis. Despite the risk of mixing theoretical understandings and definitions by using two concepts, social class and socioeconomic status (and in some occasions also socioeconomic position) both refer to the material (e.g., access to resources) as well as cultural and psychosocial aspects (e.g., education, values and ‘social capital’) of social stratification (Lynch and Kaplan 2000, Skeggs 1997). It is notable that most existing conceptualisations and measures regard adults and there is an ongoing discussion as to whether adolescents’ socioeconomic status can or should be defined and measured according to their parents’ class/SES (e.g., household income or education level) and to what extent young people’s own perception or indication of their socioeconomic status should be taken into account (Goodman et al. 2007; Hagquist 2007; West and Sweeting 2004). In the present thesis, this is of particular interest because the adolescents of interest (16-19-year-olds) are in the transition to adulthood. Details on the indicators of social class/SES used are found in the methods section.
Mental health problems - prevalence and understandings

Stress
Stress can be regarded as both an exposure (stimulus) and a response (outcome) (Ollfors and Andersson 2007). In the present thesis, perceived stress is seen as an outcome and a dimension of general mental health. Stressors, on the other hand, are considered sources of stress. As illustrated in Figure 1, it is likely that there is overlap between stress and psychological distress. Several studies suggest that stress is a mediator between, for example, an individual’s environment and mental health problems (Bovier et al. 2004; Hazel et al. 2008; Wagner and Compas 1990). There is also a large body of evidence showing associations between stress and various mental health problems (Adkins et al. 2008; Byrne et al. 2007; Compas et al. 1993; Hankin et al. 2007, McLaughlin and Hatzenbuehler 2009, Meadows et al. 2006; Rudolph 2002; Torsheim and Wold 2001).

There is consistent evidence of girls reporting higher levels of general stress than boys (Gillander Gådin 2002; Rudolph 2002; Ystgaard 1997). Swedish data from the Health of School Children Study (HBSC) show that girls in grade nine (approximately 15-16-year-olds) report significantly higher levels of perceived stress than boys (Danielson 2006), a result also shown by a report on upper secondary school students from the Swedish Agency of Education (2007). Less scientific evidence is available on stress levels in older Swedish adolescents. However, Ollfors and Andersson (2007) concluded that, relative to boys, 16-19-year-old girls reported higher levels of stress on the majority of the stressor investigated, for example stress related to school work, demands and the physical environment.

Depression, anxiety and psychological distress
The rate of mental health problems linked to depression and/or anxiety is approximately 15-25 percent in the general adolescent population in Western countries (Hankin et al. 1998; Patel et al. 2007, Sawyer et al. 2007, Zubrick et al. 2000). Overall, there is a substantial gender pattern where girls and young women are 1.5 to 3 times more likely than boys/young men to report depressive and anxiety symptoms (Aalto-Setälä et al. 2002; Ge et al. 1994; Hankin et al. 1998; Lewinsohn et al. 1998; Nolen-Hoeksema and Girdus 1994; Patel et al. 2007). With respect to a broader notion of self-reported psychological distress, a large body of evidence shows the same trends. For example, in a Scottish sample of 15-year-old students, psychological distress (measured by the General Health Questionnaire GHQ-12) was reported by 44.1 percent of the girls and 21.5 percent of the boys (Sweeting et al. 2009). The corresponding GHQ-rates among young adults in Sweden (18-24-year-olds) has been found to be 32.9 percent among young women and 17.3 percent among young men (Nilsson et al. 2010). Similarly, according to a
Swedish study, psychosomatic symptoms were nearly three times as common among 15-16-year-old girls (19.8 percent) as boys (7.4 percent) (Hagquist 2009). Results from the cross-national study Health Behaviour among School Children (HBSC) showed that approximately 25 percent of European and North American girls (15-year-olds), compared to 16 percent of boys, reported having symptoms of psychological distress several times a week (Torsheim et al. 2006). In addition to showing the salient gender differences in adolescent mental health, this short review highlights the lack of studies of young people in their late adolescence.

Deliberate self-harm

Deliberate self-harm has been referred to as an act with a non-fatal outcome in which an individual deliberately initiates specific behaviours (e.g., self-cutting) or ingests a substance, drug or object with the intention of causing self-harm (Hawton et al. 2002; Ystgaard et al. 2009). Some researchers also include in the definition that the self-injury is not life-threatening and is without suicidal intent (Laye-Gindhu and Schonert-Reichl 2005). Evidence from population- or community-based American, Australian and European studies in young people report a lifetime DSH prevalence of 7-15 percent (8-24 percent among girls and 4-10 percent among boys) (De Leo and Heller 2004; Hawton et al. 2002; Laye-Gindhu and Schonert-Reichl 2005; Madge et al. 2008; Nixon et al. 2008; Young et al. 2007; Zøllner and Jensen 2010). Overall, most research on DSH is conducted on in-patients (Fliege et al. 2009; Lowenstein 2005). To my knowledge, there is only one Swedish, community-based peer reviewed study in which 40.2 percent of 14-year-old students (girls: 47.6 percent, boys: 33.3 percent) reported a lifetime history of self-harm related behaviour (Bjärehed and Lundh 2008). The high prevalence found in this study might be due to their broad definition of self-harm behaviours, namely, at least one act of DSH out of nine suggested by the Deliberate Self-Harm Inventory. For instance, if a girl or a boy had indicated ‘yes’ on the item ‘Carving words, pictures, etc. into skin’, he or she was classified as a DSH case.

How young people understand mental health

According to qualitative research, young people understand mental health as an emotional experience (Johansson et al. 2007) and adherence to normality (Armstrong et al. 2000; Secker et al. 1999). Young people’s perceptions of mental health tend to be associated with negative feelings such as sadness, worry, depression, loneliness, anger, or fear (Armstrong et al. 2000). With regard to young peoples’ understandings of depression, a Canadian study indicated that depression was mainly perceived as a withdrawal from others (Hetherington and Stoppard 2002).
**Theoretical framework**

**A public health approach**

Within the field of psychology and psychiatry, mental ill-health has historically been conceptualised as individual problems for which the sources are to be found within or in close attachment to the individual (Horwitz and Scheid 1999). Such individual sources of mental ill-health are, for example, hormones or genetics, (Angold et al. 1998; Costello et al. 2006; Zubrick et al. 2000), psychological characteristics (personality traits, rumination style) (Nolen-Hoeksema et al. 1999), and co-morbidity (other types of mental health problems) (Costello et al. 2006; Fliege et al. 2009; Patel et al. 2007). However, the underlying assumption of this thesis is that the main sources of adolescent mental health are to be found in the life circumstances of young people. This does not mean that individual-oriented approaches are irrelevant. As noted by a range of authors, the most likely explanatory model includes a combination of biological, psychological and environmental factors (Nolen-Hoeksema and Girgus 1994; Patel et al. 2007; Piccinelli and Wilkinson 2000; Zubrick et al. 2000). Nevertheless, this thesis is situated in the fields of public health sciences and medical sociology. Within these disciplines, it is argued that inequalities in health arise from the structural and organisational aspects of social inequalities, for example, how the unequal distribution of power and resources affect peoples’ lives and influence their risk of poor health (Baum 2003; Horwitz and Scheid 1999; Marmot 2007; Pickett and Wilkinson 2009). Given this perspective, mental well-being is assumed to deteriorate with declining social status and poor life circumstances (Aneshensel et al. 1991; Brown and Harris 1978; Kemper 1991; Pickett and Wilkinson 2009). A central component of this approach is to acknowledge the health promotion potential in identifying factors and circumstances that are possible to change and can be subjected to political influence and other influences (Dahlgren and Whitehead 2006). Hence, a public health approach focuses on social determinants of health: factors at different levels of society that influence or may influence health positively or negatively (Dahlgren and Whitehead 2006; Marmot 2007). Although somewhat simplified, these levels of social determinants are illustrated in Figure 2.

Dahlgren and Whitehead (2006) underline the interaction between the levels:

“‘This model for describing health determinants emphasizes interactions: individual lifestyles are embedded in social norms and networks, and in living and working conditions, which in turn are related to the wider socioeconomic and cultural environment.’” (Dahlgren and Whitehead 2006, p. 19).
Figure 2. Model of social determinants of health. The model is derived from Dahlgren and Whitehead (2006).

Although this model pedagogically illustrates the determinants of health, one central social structure is neglected, namely, that of gender relations. In the original Dahlgren and Whitehead model of the social determinants of health, ‘sex’ is referred to as an example of the biological characteristics of individuals “that influence their health and that are largely fixed” (Dahlgren and Whitehead 2006, p. 19-20). As will be outlined below, it is important to acknowledge more aspects than biological sex in relation to mental health, such as what it means to be a man/boy or a woman/girl. Given the public health recognitions of the social and structural determinants of health, it is striking how questions of gender as a social structure and the experiences of being a boy or a girl have received so little attention in research on adolescent mental health. As shown in Figure 2, gender has been added to the model in order to highlight its relevance as a social determinant of health on various levels in society.

A gender theoretical approach

The theoretical framework employed is based on a social constructionist gender theory that recognises gender as a fundamental, although complex, organisational principle in society. As illustrated in Figure 2, gender deals with gendered aspects of social structure (e.g., distribution of power and resources), culture (e.g., language, ideologies, sports, fashion, media), organisations (e.g., work-life, institutions, schools) and personality (e.g., identification, behaviour, sexuality) (Connell 2009; Kimmel 2008). Importantly, in contrast to the biological
category of sex, gender is not something we have - it is something we do, or perform, in social practice (Butler 1990; West and Zimmerman 1987). Such social practice is guided by discourses of masculinities and femininities, and is shaped by and reshapes structures in society. Moreover, as gender is ‘performative’, boys and girls are not passively socialised into static sex roles; young people learn to ‘do’ gender and many find these practices joyful (Connell 2009; Paechter 2007). There are, however, numerous examples of the restraining effects of practices of gender. Despite the existence of multiple representations of femininity and masculinity, girls and boys relate to, and are encouraged to adopt, dominant constructions and norms in terms of gendered beliefs and behaviours. That is, they are encouraged to adopt what is considered in Western society to be an acceptable performance of male or female gender within a heterosexual norm (Paechter 2006). Peachter (2006) argues that the ‘dominant’ versions of femininity and masculinity are ideal types rather than examples of how real people act and live their lives. Such dominant ‘ideal types’ of gender have been conceptualised as ‘hegemonic’ masculinity (Connell 2005) and ‘emphasised’ femininity (Connell 1987) or ‘hyperfemininity’ (Paechter 2006).

According to Kenway and Fitzclarence (1997), hegemonic versions of masculinity represent “dominant and dominating forms of masculinity, which claim the highest status and exercise the greatest influence and authority and which represent the standard-bearer of what it means to be a ‘real’ man or boy” (Kenway & Fitzclarence, 1997, pp. 119–120). ‘Doing boy/man’ according to hegemonic masculinity involves, for instance, heterosexuality, sporting prowess, being capable of violence, toughness, inhabiting or aiming for power positions, competitiveness, strength and risk-taking. Another conceptualisation is that ‘doing boy’ is centred on not ‘doing girl’ (Connell 2005, 2009).

Although there is a range of ways in which girls construct and enact collective femininity and their individual femininities, there are femininities that are more highly valued in contemporary culture (Paechter 2006). It has been argued that such ‘emphasised femininity’ or ‘hyper femininity’ are represented by, for instance, compliance, passiveness, dependence, beauty, empathy, sexually attractiveness and nurturance (Connell 1987; Paechter 2007). Femininities, or ways of ‘doing girl/woman’, do not confer power in the same ways as constructions of masculinity (Connell 1987). Instead, most femininities are constructed as various negations of the masculine; “the practice masculinity becomes ‘what men and boys do’, and femininity, ‘the Other of that’” (Paechter 2006, p.254).

This illustrates that gender is a social relation, that is, ways that people, groups and organisations are connected and divided. Enduring or widespread patterns among such social relations constitute organisational specific arrangements (gender
regimes) as well as the overarching structure, gender order (or patriarchy), of a society (Connell 2009; Walby 1990). There are also power relations embedded in how individuals relate to and practice dominant ideals of masculinity and femininity (Connell 2009). Although structural arrangements are dynamic, the gender order is characterised by the inequality of men and boys collectively possessing higher status, more resources and greater power than women and girls. Power relations are maintained via cultural discourses as well through overt acts of dominance, such as violence (Connell 1987; Walby 1990). Being a boy or a girl is thus constrained by the opportunities and resources available. With regard to gender as a social determinant of health, a recent WHO report stated:

“Gender relations of power constitute the root causes of gender inequality and are among the most influential of the social determinants of health.” (Sen and Östlin 2007, p. xii)

Gender is not only about differences between men and women, but also about constructions and relations within the groups of boys and girls. Gender is intersecting with other relations and structures such as social class, ethnicity/race, age, disability, sexual orientations (Shields 2008; Walby 1990; Walkerdine et al. 2001). The intersectional approach employed in this thesis implies acknowledging the ways young people’s lives and experiences are influenced by the complex interplay of gender and social class, more precisely, how mental health problems can be responses to the ways the interplay of gender and class inequalities shapes young people’s lives.
Social determinants of adolescent mental health

This brief literature review focuses on mental health correlates on three different levels: family and peer relationships, school and structure (society) (see Figure 2). Because violence cuts across all these levels, this dimension is presented under the structural level. The literature review also covers some suggested hypotheses of the root causes of gender differences in mental health.

Family and peers

An extensive body of literature suggests that peer and family relationships are both risk and protective factors with respect to mental health problems among adolescents. There is, for example, strong evidence of the protective contribution of stable and supportive relationships (Armstrong et al. 2000; Haraldsson et al. 2010; Johansson et al. 2007; Patel et al. 2007; Rudolph 2002). With respect to risk factors, relational problems in the family and with peers, as well as in romantic relationships, have been found to be related to increased levels of stress in young people, especially among girls (Byrne et al. 2007; Rudolph 2002; Wagner and Compas 1990; Ystgaard 1997). Similarly, loneliness and relational problems (e.g., peer and parental conflicts, lack of social support) have been identified as risk factors for depression, anxiety and emotional problems (Brage and Meredith 1994; Brolin Låftman and Östberg 2006; Hankin et al. 2007; Heinrich and Gullone 2006; Kapi et al. 2007a; Kraaij et al. 2003; Wisdom et al. 2007). Prior research has also indicated that young people who self-harm report a history of poor social relationships and boyfriend/girlfriend problems (Bjärehed and Lundh 2008; De Leo and Heller 2004; Fliege et al. 2009).

School

The mental health associations of school-related factors are mainly centred around two dimensions: the school context as well as the content of school work. Both dimensions are highly relevant because young people spend a great deal of their time in school and doing school work.

With respect to the school context, prior research suggests that adolescent mental health is influenced by the academic context of the school classroom, the socioeconomic standing of the school and the psychosocial work environment (Gillander Gådin and Hammarström 2003; Goodman et al. 2003a; Saab and Klinger 2010; Torsheim and Wold 2001). Other contextual factors related to mental health are student influence, student-teacher relationships and safety (Ellonen et al. 2008; Konu and Lintonen 2006; Modin and Östberg 2009; Simovska 2004). In their studies on health in 9-15-year-old pupils, Gillander Gådin and Hammarström (2003) recognise schools as gendered institutions and argue that gender relations in school settings may influence children’s health. With regard to safety, there is
strong support for negative mental health consequences of various forms of harassment in school. These aspects will be outlined in the section on mental health correlates of violence.

Studies on the mental health influence of the content of school work (e.g., exams, marks, pressure) tend to be centred on two main paths. First, there is evidence of academic ability and success as being associated with positive mental health (Kaplan and Maehr 1999). Secondly, numerous studies show that academic stressors as well as pressure and worries about academic performance are risk factors for stress, psychological symptoms as well as DSH (Byrne et al. 2007; Hjern et al. 2008; Mahadevan et al. 2010; Murberg and Bru 2004; West and Sweeting 2003).

**Structure**

As noted above, the social structure in focus in this thesis is mainly gender, and to some extent, social class/socioeconomic status. A review of gender patterns in mental health problems was provided in the previous section on mental health problems - prevalence and understandings.

**Socioeconomic patterning**

The evidence on socioeconomic patterning is somewhat inconsistent. Many studies show associations between disadvantaged social status and mental health problems. For example, young people of low socioeconomic status report elevated rates of stress, depressive symptoms and psychological distress, as well as deliberate self-harm (Goodman et al. 2005; Hawton et al. 2001; West and Sweeting 2003; Wight et al. 2006; Young et al. 2007). At the same time, there is evidence of weak support for SES associations (West and Sweeting 2004), especially if social class is indicated by parental SES (Hagquist 2007). It appears that the subjective perception of social class/SES, as opposed to family income or parental education level, better predict mental health in young people (Goodman et al. 2007; Hagquist 2007).

**Culture and media – Body image**

One aspect at the societal level is the strong influence of cultural and media messages on young peoples’ perception of themselves and others (Aubrey 2007). Such messages and the hegemonic ideals of bodily shapes, beauty, trends and attributes, inevitably shape how young people relate to their bodies (Bengs 2000), which in turn, affects mental health (Siegel et al. 1999; Wisdom et al. 2007). A negative body image has been identified as a strong risk factor for low self-esteem and depression in both girls and boys (Allgood-Merten et al. 1990; Siegel et al. 1999). Others suggest that girls are more dissatisfied with their looks and bodies
than are boys, which potentially causes more mental health problems among girls (Polce-Lynch et al. 2001; Tolman et al. 2006; West and Sweeting 2003; Wisdom et al. 2007).

**Violence and harassment**

There is consistent evidence that experiencing bullying and sexual harassment is related to mental health outcomes such as depression, psychological distress and DSH (Abada et al. 2008; Gruber and Fineran 2008; Nansel et al. 2004; Portzky et al. 2008). Several researchers argue that girls respond to sexual harassment more negatively than boys in terms of mental health (Gillander Gådin and Hammarström 2005; Gruber and Fineran 2008). It is also well established that experiences of physical and sexual violence/abuse are risk factors for depression, psychological distress and DSH in young people (Ackard and Neumark-Sztainer 2003; Fredland et al. 2008; Hawton et al. 2002; Schraedley et al. 1999; Thompson et al. 2004). Sexual and physical abuse have been found to be particularly detrimental for mental health among girls and young women (Fergusson et al. 2002; Hand and Sanchez 2000; Romito and Grassi 2007; Sundaram et al. 2004), whereas others identified stronger associations between sexual abuse and mental health problems among boys than girls (Haavet et al. 2004; Schraedley et al. 1999). Studies on violence within romantic intimate partner relationships (dating violence), suggest strong associations with mental health problems, especially among girls (Banister et al. 2003; Glass et al. 2003; Hanson 2002; Molidor and Tolman 1998).

**Prevalent hypotheses of gender differences in mental health**

Attempts to explain gender differences in mental health problems target various levels, including biological factors, psychological traits, psychosocial factors and structural circumstances (Nolen-Hoeksema and Girdius 1994; Piccinelli and Wilkinson 2000; Stoppard 2000). With respect to gender differences in depression, reviews of existing evidence show inconsistent or weak support for biological explanations (Nolen-Hoeksema and Girdius 1994; Piccinelli and Wilkinson 2000). According to Nolen-Hoeksema and Girdius (1994), gender differences in depression in adolescents may arise because girls, compared to boys, have more pre-existing risk factors for depression before adolescence (e.g., a ruminative coping style and low levels of aggression and dominance in peer-interactions), and these risk factors cause depression when they interact with gender-specific biological (e.g., dissatisfaction with bodily changes) and social challenges that emerge in adolescence (e.g., sexual abuse and restraining feminine sex role).

According to the gender intensification theory, many gender differences in mental distress are due to girls’ experiences of pressure to conform their behaviour to
gender expectations when they reach puberty (Priess et al. 2009; Wichström 1999). Similarly, gender conflict theory postulates that gender roles may result in personal restriction, devaluation or the violation of the self or others, which in turn may have negative consequences on mental well-being (Watts and Borders 2005). Pollack (2006), for instance, argues that a ‘boy code’ (e.g., shaming of emotional expressions) in society and the ways boys are socialised have negative effects on their mental health (Pollack 2006).

**Why this study?**

Despite a well-documented, consistent gender pattern in adolescent mental health and a growing body of knowledge on the mental health importance of life circumstances, there are several gaps in the research. Overall, the general picture that emerges from the research reviewed is that the individual-focused approach is pervasive, and there is a profound lack of studies employing a gender analysis. For example, with respect to peer and family relationships, more knowledge is needed on the character of such relationships in girls and boys from different social backgrounds. In addition, research applying a gender analysis (and not a sex-role approach) is scarce. As noted, several aspects of the school environment have been shown to influence adolescent mental health. However, there is a gap with respect to the mental health associations of gender and the meaning of academic demands and success, including responsibility-taking. More research is also needed on gender and the school context in late adolescence. With regard to the structural level, few studies have jointly explored social and gender patterns in adolescent mental health. Mendelson et al. (2008) argue that the interaction between several sources of social disadvantage may cause ‘double jeopardy’ in terms of mental health influence. Despite some initial strong evidence, more research is needed regarding how different types of violence are related to mental health in adolescent boys and girls as well as whether patterns in victimisation are related to the rates of mental health problems. In addition, little is known about mental health associations of the victim-perpetrator relationship. In Sweden, this omission is particularly apparent in the case of dating violence. In addition, research within this field is often lacking a gender perspective and most work has focused on younger adolescents or on young adults and not the age group included in the present study. The currently prevalent explanations of gender differences in mental health distress are characterised by a deterministic perspective of gender role socialisation and a failure to acknowledge structural power relations. Great emphasis appears to be placed on individualistic perspectives of gender regarding ‘style’, traits and sex roles. Ideas of socialisation into sex roles have been critiqued for being dualistically deterministic and for assuming young people to be passive victims of society (Connell 2009; Hammarström 2002). Sex role theory also fails to
grasp the relational and power aspects of gender, such as the structural factors that restrain or directly affect girls and boys differently (Connell 2009; Hammarström and Ripper 1999).

To summarise, in order to better understand, predict and prevent mental health problems and promote positive mental health among young people, advanced knowledge is needed on the relationships between mental health and the circumstances under which young people live. In addition, a gender analysis may provide new understandings of the links between such life circumstances and mental health. Another reason for this study is the sparse knowledge about life circumstances and mental health in late adolescence.
The study – aims and research questions

The aim of the study was twofold. First, it aimed to explore understandings and prevalence of mental health problems and to investigate what factors and circumstances are related to adolescent mental health. The specific research questions were as follows:

1. How is mental health understood by young people?
2. What is the prevalence and patterning of the mental health problems
   - Perceived stress
   - Psychological distress
   - Deliberate self-harm
3. How are social relationships related to mental health?
4. How are perceived demands and responsibility taking related to mental health?
5. How are experiences of violence and harassment related to mental health?

Secondly, the study aimed to apply a gender analysis to the findings in order to improve the understanding of the relationships between life circumstances and the gendered patterning of mental health among young people.

Figure 3. Overview of how the aims and research questions are covered in the included papers. Q = research question.
METHODS

Multi-method approach

The thesis comprises four papers based on two sets of data generated by both qualitative and quantitative methods. One part originates from a focus group study with 16-19-year-old upper secondary school students. The other set of data is based on a questionnaire study of 17-year-old upper-secondary school students. Hence, the data were generated by a multi-method approach (Cowman 1993). The use of several methods improves the possibilities to produce rich data from which new understandings and knowledge could be generated. The project started with a qualitative study (grounded theory; see details below) that aimed to study experiences and perceptions related to mental health that are difficult to illuminate and capture in a quantitative study. These qualitative results guided the paths taken for the other three quantitative studies by inspiring the construction of the questionnaire. The quantitative approach provided tools to investigate prevalence, distributions, correlations and associations.

Table 1. Overview of design and methods used in the thesis.

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<tr>
<th>Paper</th>
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<th>Data collection</th>
<th>Method of analysis</th>
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<td>Qualitative</td>
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<td>Constant comparative analysis</td>
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<td></td>
<td>Grounded theory</td>
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<td>II</td>
<td>Cross-sectional</td>
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<td>Factor analysis</td>
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<td>III</td>
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<td>IV</td>
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Context

The research project was carried out in upper-secondary schools in the County of Västernorrland, Sweden. This region has seven municipalities in both urban and rural areas and has approximately 250,000 inhabitants. The two largest municipalities have 95,000 and 55,000 inhabitants, respectively. Historically, the region has had an industrial socio-economic base supported by the forest industry. Over the past few decades, however, it has shifted towards a more post-industrial service economy. Approximately 38 percent of young people (males 32 percent; females 44 percent) who complete upper secondary education begin university studies within three years (The County Administrative Board of Västernorrland 2009). The unemployment rate among young people (15-24 year-olds) in the region is 29.5 percent compared to the national average of 25 percent (Statistics Sweden 2009).

The study was school based. By the time data collection was conducted, there were 18 upper-secondary schools in the region, ranging in size from approximately 100 to 1,500 students. Most schools were public, although the number of independent schools has been increasing, particularly in the largest municipality. However, by law, no tuition fees are allowed in independent schools. The Swedish upper secondary school education is three years, normally starting when students are at the age of 16. It is not mandatory, although 98 percent of those who finish compulsory school (year 9) start upper secondary school. Of those, approximately 25 percent disrupt their education (The Swedish National Agency for Education 2008). The school system is organised into 17 educational programmes of different orientations, which can be broadly classified into ‘higher education preparing’ programmes (academic) and ‘occupational training’ programmes (vocational). The academically oriented education includes programmes on the social sciences, natural sciences, economics, languages, information technologies and art. The vocationally oriented programmes focus on, for example, child and recreation; construction; electrical engineering; vehicle engineering; business and administration; handicrafts; hotel, restaurant and catering services; industry; media production and health care. The vocational programmes are strongly gender-segregated (The Swedish National Agency for Education 2008). Existing data indicate that young people with working-class backgrounds and low parental education level are overrepresented in vocational programmes, whereas those with middle-class background and high parental educational levels to a greater extent choose academic programmes (The Swedish National Agency for Education; Hagquist 2007).
The qualitative study (Paper I)

Grounded Theory

The qualitative study relies on principles of constructivist grounded theory (Charmaz 2005, 2006). This approach was chosen because of the explorative aim of the study. The suggested flexible guidelines, principles and practises for sampling, data collection and analyses (Charmaz 2006) were also suitable for the study. Generally, grounded theory is used as a method to construct theories grounded in data (Strauss and Corbin 1998). However, this study neither aimed for, nor claimed to, develop a comprehensive new theory. Instead, through the recognition of social processes, the focus was to elaborate upon existing theories and evidence within the field (Charmaz 2006). Charmaz (2006) argues that rather than ‘neutrally discovering’ features in the data, constructivist grounded theory acknowledges that the analyses are social constructions and that they are contextually and theoretically situated and emerge from the researcher’s interactions within the field and interpretations of the data. One aspect of the constructivist grounded theory approach is to be theoretically sensitive and acknowledge how power relations should be recognised in research, for not only the power relation between the researcher and the participants but also the potential hierarchies within the context where the study is undertaken (Charmaz 2005).

Focus groups

The choice of focus groups was motivated by the method’s potential to generate rich data and capture cultural norms and shared experiences in a social context (Kitzinger 1994; Morgan 1996). Hence, group discussions can help the participants to explore, share and clarify their views in their own vocabulary (Kitzinger 1995). This was particularly important because the focus of interest was the dominant discourses to which the adolescents relate regarding mental health and the life circumstances that they believe influence mental health. Furthermore, focus groups may generate a feeling of confidence among the participants and reduce the power asymmetry in relation to the researcher, especially given the age difference between the students and the researcher (Gillander Gådin 2002; Kitzinger 1994).

Participants

Participants were recruited from schools in six municipalities. In order to obtain broad variation in experiences, focus groups were recruited with the goal of obtaining a sample with maximum variation (Patton 2002). This was mainly obtained through a selection of first-, second- and third-year school-classes representing different educational programmes (academic, vocational, male-dominated and female-dominated). All students in each school class approached were asked to participate and the groups were self-selected, as discussed by Kitzinger (1994). At first, six focus groups were recruited. After the initial analysis
of the data, a theoretical sampling (see Charmaz 2006) was used, and the recruitment of another three groups was carried out due to perceived gaps in the data or identified issues we intended to further explore. Additional groups were recruited from theoretical educational programs and female-dominated school classes. Seven of the nine groups were then interviewed a second time. Of the two groups that were not interviewed a second time, participants in one group declined further participation and the participants in the second group declined for practical reasons. In order to broaden the background of the participants and further enrich the data, another 13 focus groups were carried out, predominately in the more rural areas of the region. The focus groups comprised three to eight students. As described above, the total sample varied by age and socioeconomic and demographic characteristics. Specific personal data were not collected at the individual level.

The choice of single-sex groups was based on two main arguments. First, as Morgan (1996) argues, homogenous groups are preferable because they facilitate a context for confident discussions. Second, it was assumed that the impact of asymmetric gender-based power relations would be less prevalent in single-sex groups than in mixed-gender groups, as previously suggested (Gillander Gådin 2002). The students were asked to form single-sex groups. There was no intention of excluding anyone who wanted to participate; therefore, four mixed groups were included according to the students’ requests. Twelve of the focus groups were conducted with male groups, 13 were conducted with female groups and four groups were gender mixed.

**Procedure**

The focus groups were conducted in the participants’ schools. They lasted 60-120 minutes and were tape-recorded and transcribed. In order to generate a common point of departure for the following discussion, the participants were asked to reflect upon what they thought about and associated with the concept of “mental health” [In Swedish: psykisk hälsa]. Following this, the question “what do you think is important for adolescent mental health?” was asked. The discussions were intended to be broad and centred on the topics raised by the participants. The interviewer was guided by different themes such as friends, school, family, future plans and relationships (see Appendix 1.). According to the principles of constructivist grounded theory (Charmaz 2006), the content of the discussions was adjusted as the study proceeded to some extent and new insights regarding the processes influencing mental health were gained. Nevertheless, the main structure of the discussions was consistent throughout the study.
Analysis

The analysis was conducted in a stepwise procedure. Initially, the material was read through several times in order to obtain a comprehensive picture of what the data were saying. Line-by-line coding was then carried out to conceptualise ideas, codes and expressions for what the participants described. Identified patterns or similarities influenced the direction of the discussion in the forthcoming focus groups as well as the coding process. Consequently, a constant comparative method was developed early in the analysis process to facilitate simultaneous involvement in data collection and analysis (Charmaz 2006). Preliminary broad categories were constructed by selecting relevant codes using a process of focused coding, followed by a process in which the properties of the categories were specified. The relations between the categories (social interaction, performance and responsibility) were further scrutinised and specified by theoretical coding (Charmaz 2006). Through a deductive analysis, the categories were revised and confirmed against the data. Workshops were also held with student groups not included in the actual focus groups. These discussions shed new light on the results as they emphasised slightly different aspects such as the importance of supportive family relations and financial issues. However, the outcome of these workshops generally confirmed the results.

The quantitative studies (Papers II, III, IV)

Data collection and procedure

The data were collected by means of a self-administered questionnaire during school hours and included 17 upper secondary schools in the region. Data collection took place during two weeks in April 2007 (mid-term) and was carried out with the assistance of teachers. The questionnaires were personally distributed to the teachers and collected by the same person (E.L). Answering the questionnaire took approximately 20-30 minutes.

Participants

The study population consisted of all students enrolled in year two of upper secondary school across all municipalities in the region. In five out of seven municipalities, students in all classes were invited to participate. In the other two municipalities (the largest municipalities), 50 percent of the school classes were randomly sampled. This method was developed mainly for practical reasons (primarily time limits). The total sample was 2,123 students. In the analyses, the random sampling was accounted for by a weight variable to make it possible to generalise the findings to an estimated full population sample of second year students in the region (approximately 3,195). In total, 1,688 students (79.5 percent) completed the questionnaire. After excluding those with missing data on gender,
the sample on which the analyses were based was 1,663 students (78.3 percent). Fifty-one percent (n=826) of the respondents were girls, and 49 percent (n=837) were boys. Forty-five percent of the students (n=709) attended academic educational programmes and 55 percent attended vocational educational programmes (n=861). Ninety-three students (5.6 percent) did not indicate the educational programme.

Of the 455 students who did not complete the questionnaire, 12 percent (n=55) were whole school classes under vocational training at work places. Other plausible reasons were absence due to illness or absenteeism. In some school classes, the non-response rate was approximately 50 percent, which might be due to data collection being carried out during a lesson in which the school class was divided into two groups. According to the notes from teachers, only two individuals openly declared that they did not want to participate.

The questionnaire
The content of the questionnaire was inspired by the findings of the qualitative study, such as the sections on stress, violence and psycho-social school environment. The content was also inspired by other questionnaires such as the WHO Health Behaviour of School Children study (HBSC) (Currie et al. 2008), ‘Young in Värmland’ (Hagquist and Forsberg 2007), and Statistics Sweden surveys (Jonsson et al. 2001; Statistics Sweden 2010). For further details on the measures of mental health problems, see the section on measures. Questions were discussed in focus groups and can thus be considered validated by a “think-aloud method” (Presser et al. 2004). Data collection was carried out over a short period of time, which did not make a pilot study possible. In total, the questionnaire comprised 61 questions, of which many were instruments consisting of several items.

Measures

Dependent variables – mental health outcomes

Stress and stressors
In order to assess the perceived level of stress, respondents were asked to indicate how often during the past three months he/she had felt stressed. This way of assessing stress is similar to the methods used in other studies (Byrne et al. 2007; Ollfors and Andersson 2007; Torsheim and Wold 2001), although most research on adolescent stress has used checklists of stressful events to assess levels of stress (e.g., Compas et al. 1987). Response alternatives were on a scale from ‘always’ to ‘never’. Subsequently, perceived stress was categorised into three levels: ‘Any level of stress’ (always; often; sometimes; seldom); ‘High level of stress’ (always or often) and ‘Very high level of stress’ (always). Those who indicated any level of stress were asked to rate to what degree they experienced various factors as
stressful: ‘school marks’, ‘demands on oneself’, ‘future plans’, ‘lack of money’, ‘taking responsibility for others’, ‘looks’ (to look and dress in a specific way), ‘relationships with friends’, ‘home situation’ and ‘leisure-time activities’. These stressors were categorised into ‘yes’ (always/often) and ‘no’ (sometimes, seldom, never).

As a means of exploring the dimensions of stressors, principle component analysis was employed and produced two factors with eigenvalues of 3.50 and 1.05 that explained 50.54 percent of the variation. Varimax rotation showed that the major component comprised social and relational stressors (lack of money, responsibility taking for others, looks, friends, home, leisure time) and the second factor comprised stressors related to achievements (marks, own demands and future plans).

**Psychological distress**

Psychological distress was measured using an index of six items. Respondents were asked: “How often during the past three months have you felt: nervous, anxious/worried, depressed/low, irritable, worthless or resigned”. The instrument has similarities with other measures of psychological distress: the HBSC symptom check list, the Psychosomatic problem scale, GHQ-12 and Kessler scale (Andrews and Slade 2001; Dao et al. 2006; Hagquist 2009; Sweeting et al. 2009; Torsheim et al. 2006). The response alternatives were: 0. Never; 1. Seldom; 2. Sometimes; 3. Often; and 4. Always. A summed score for the six items ranging from 0-24 was calculated for each respondent (the higher the score, the worse the psychological distress). Similar to other studies (Griffin et al. 2002; Hagquist 2007) quartiles were used to classify individuals into cases and non cases. That is, individuals who scored 12 or higher (upper quartile) were considered to be cases of ‘psychological distress’. This cut-off is similar to the one suggested for the Kessler-6 scale (Kessler et al. 2002). The reliability of the scale was estimated using the Cronbach alpha coefficients resulting in a value of 0.83, which exceeded 0.70 and was thus acceptable (Kline 2000).

The psychometric properties of the scale were evaluated by factor analysis as well as by the Rasch latent trait analysis and were found to meet the requirements of unidimensionality. The dimensionality of the scale was evaluated by exploratory factor analysis using Kaiser’s criterion (eigenvalue >1) and Principal Component analysis and estimated by the maximum-likelihood method. The six items all loaded on one component, which explained 54.93 percent of the variance. The loadings for each item were: ‘Low’: 0.83; ‘Worried/anxious’: 0.81, ‘Worthless’: 0.79; ‘Resigned’: 0.70; ‘Irritable’, 0.67; ‘Nervous’: 0.62. The Kaiser-Meyer-Olkin value was 0.83, which exceeded the recommended value of 0.6, and the Bartletts Test of Sphericity reached statistical significance.
Based on concurrently approximations of item difficulty and person ability, the Rasch model focuses on the operating characteristics of a latent trait (Bond and Fox 2007). With respect to the goodness of fit (i.e., whether the items form a unidimensional construct and all items work in the same direction) the Rasch Infit MSQ ranged from 0.77 (worried/anxious) to 1.26 (worthless), which indicated a good fit to the Rasch model (Bond and Fox 2007). Different item functioning analysis (DIF) showed no difference in the systematic patterning of responses between boys and girls (DIF contrast 0.11 – 0.37). The item location analysis, i.e., a comparison of the distribution of item difficulty (severity) and person measures (‘ability’) along the latent trait, indicated that the items seem to function well to discriminate on the upper part of the scale (worse psychological distress) whereas items did not tap the lower end of the scale. This result is perhaps not a weakness since the measure of psychological distress (the latent trait) was aimed to identify those with the most severe psychological distress.

**Deliberate self-harm (DSH)**
A lifetime experience of deliberate self-harm was indicated by affirmation of one or both of these questions: ‘Have you ever deliberately inflicted harm to yourself (e.g., cut or burn yourself)?’ and/or ‘Have you ever deliberately taken overdoses of medicine in order to harm yourself? The response alternatives were ‘no’; ‘yes, once’; ‘yes a few times’; ‘yes, several times’. Those indicating any ‘yes’ were categorised as having a lifetime experience of DSH. The measure employed in the present study is similar to that of Hawton et al. (2002) and Ystgaard et al. (2009), which enabled comparisons of DSH-prevalence between countries.

**Independent variables**
The independent variables (i.e., potential risk factors) are summarised in Table 3.

**Control variables**
Controlling for confounding variables is crucial in research on health in order to reduce the risk that the effect of the exposure on the outcome is mixed up by factors associated with both the exposure and the outcome, such as demographic variables (Rothman 2002). Selected demographic variables are presented in Table 2. Educational programme and parental employment status were used as control variables in Papers III, IV and in the additional analyses presented in Table 6 and 7. In Paper IV, foreign extraction and family structure (the family structure the participant is currently living with) were also included as control variables.
Table 2. Demographic control variables used in analyses.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Questions/items</th>
<th>Scale/Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Educational program</td>
<td>'Which educational programme do you attend?'</td>
<td>Academic, Vocational, Indication of social class/SES</td>
</tr>
<tr>
<td>Parental employment status</td>
<td>'What do your parents do/work with?'</td>
<td>Employed (both parents having a full or part time work or running own business). Not employed (one or both parents not having a full-time or part time job or running own business). The non-employed category comprised those who were unemployed, retired, on sick leave, on parental leave, students, housewives/men, other and do not know. Indicator of financial standard in the family and SES.</td>
</tr>
<tr>
<td>Foreign extraction</td>
<td>'Where were your parents born?'</td>
<td>Both parents born in Sweden, One or both parents were born outside of Sweden</td>
</tr>
<tr>
<td>Living situation</td>
<td>'Who do you live with, most of the time?'</td>
<td>Two adults (both parents or parent with new partner), Single parent or other (one adult, alone, own partner, relative, other)</td>
</tr>
</tbody>
</table>

Analyses

Statistical analyses were performed using SPSS version 17 and Winsteps for the Rasch analysis. Factor analysis and Rasch analysis were used to evaluate composite measures. Between group differences were tested using Pearson chi-squared statistics. Logistic regressions were used to examine the associations between potential risk factors and the mental health outcomes (very high level of stress, psychological distress and deliberate self-harm). All independent variables were categorical. First, unadjusted odds ratios were calculated for each independent variable in univariate logistic regressions. Secondly, each independent variable was adjusted for demographic control variables. All logistic regressions were performed separately for boys and girls, and 95 percent confidence intervals were calculated. The alpha-level of $p<0.05$ was set for statistical significance.
Table 3. Independent variables used in analyses.

<table>
<thead>
<tr>
<th>Variable</th>
<th>Questions/items</th>
<th>Scale/Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Social and school-related factors</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hostile school environment</td>
<td>‘Do you perceive sexual harassment, bullying and/or racism to be problems in your school?’</td>
<td>No (never/seldom) Yes (sometimes, often or always)</td>
</tr>
<tr>
<td>Teacher support</td>
<td>‘Teachers care about me as a person’</td>
<td>Yes (always, often or sometimes) No (never/seldom)</td>
</tr>
<tr>
<td>Influence in school</td>
<td>‘I can influence the content and structure of teaching’</td>
<td>Yes (always, often or sometimes) No (never/seldom)</td>
</tr>
<tr>
<td>Satisfaction with school achievements</td>
<td>‘I am satisfied with my achievements in school’</td>
<td>Yes (always, often or sometimes) No (never/seldom)</td>
</tr>
<tr>
<td>Perceived heavy work-load in school</td>
<td>‘There is a heavy work-load in school’</td>
<td>No (never, seldom or sometimes) Yes (always/often)</td>
</tr>
<tr>
<td>Friends in school</td>
<td>‘I have friends in school’</td>
<td>No (never, seldom or sometimes) Yes (always/often)</td>
</tr>
<tr>
<td><strong>Exposure to violence</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullying in school a</td>
<td>During the past 12 months, experienced one or several of the following acts in school: ‘Been socially excluded’; ‘Experienced somebody spreading false rumours about you’ and/or ‘Been exposed to racist comments or actions’</td>
<td>Not exposed Exposed to one act Exposed to two or three acts</td>
</tr>
<tr>
<td>Sexual harassment in school b</td>
<td>During the past 12 months, experienced one or several of the following acts in school: ‘Received unwelcomed comments on body or appearance’; Been called ‘whore’, ‘fag’, ‘cunt’ or other ‘four-letter words’; ‘Been pawed or forced to touch somebody in a sexual way’; ‘Received degrading comments about your gender or sexuality’ and/or ‘Been grabbed or Shouldered/cornered’</td>
<td>Not exposed Exposed to one act Exposed to two acts Exposed to three or more acts</td>
</tr>
<tr>
<td>Physical violence</td>
<td>‘Have you been exposed to physical violence during the past twelve months?’</td>
<td>Not exposed Exposed</td>
</tr>
<tr>
<td></td>
<td>‘Have you been exposed to physical violence earlier in your life?’</td>
<td>Not exposed Exposed</td>
</tr>
<tr>
<td>Perpetrator of violence (past 12 months) a</td>
<td>If you have been exposed to violence – who did it to you? ‘Unknown male’, ‘Unknown female’, ‘Known male’, ‘Known female’, ‘Teacher’, ‘Mother’, ‘Father’, ‘Boyfriend’, ‘Girlfriend’ and ‘Other person’</td>
<td>Not exposed Unknown person; Known person; Parent; Partner; Other</td>
</tr>
<tr>
<td>Sexual assault</td>
<td>‘Have you ever felt that you were forced to have sex?’</td>
<td>Not exposed Exposed</td>
</tr>
</tbody>
</table>

* Categorical indicator variables including more than two categories.
Ethical considerations

The study was reviewed by the ethical research committee at Mid Sweden University and was found to be in accordance with ethical standards (Dnr MIUN 2005/1126). Although participating students were under the age of 18, parental consent was not judged to be necessary. This is supported by the Swedish law on ethics in research which state that parental consent is not necessary if the research subject is 15-18-years-old and realises what the research means to him or her.

The qualitative study

All participants in the focus groups were given verbal and written information about the aim of the study, the persons were responsible for conducting it, the contact information of the researcher and also contact information to relevant services in case they felt the need for professional support. They were also informed how the results were to be presented and that their identities would not be revealed. However, focus groups are accompanied with an ethical dilemma because of the lack of confidentiality and the fact that the researcher has no control over how the discussions might affect the participants after the actual data collection. Participants were kindly reminded to only reveal what they desired to disclose in the discussions and to treat each other respectfully.

The quantitative study

Respondents were given written information (on the first page of the questionnaire and in an additional cover letter) about the aim of the study, the persons were conducting it, the contact information of the researcher as well as of relevant services in case they felt the need for professional support. Information about the anonymity of responses and participation being voluntary was emphasised. The teachers who helped out with the data collection received additional information on the ethical aspects as well as practical instructions and guidelines of how to, for example, arrange the classroom when the students were to fill in the questionnaires. The questionnaires were labelled with a code that made it possible for the responsible researcher (E.L.) to keep track of the response rate on a school-class level. Individual respondents could not be identified either in the questionnaire or in the data file. Responses were registered by mechanical scanning of the questionnaires. Given the sensitive nature of some of the questions, for example, those on sexual assault and deliberate self-harm, discussions on specific ethical issues were held with colleagues prior to data collection. There is, however, evidence that asking young people about sensitive issues is not unethical per se (Helweg-Larsen et al. 2004). In addition, school nurses at all participating schools were contacted and given information about the study. Moreover, as noted above, the students were given information about services to which they could turn in case they felt the need for professional support.
FINDINGS

How is mental health understood by young people? (Paper I)

According to the focus groups (I), mental health was understood as an emotional experience and described as “how you feel” in terms of self-esteem, stress and confidence. Mental health was mainly associated with negative aspects, distress or illness. With regard to influencing factors, the participants emphasised the importance of social and psychosocial circumstances in relation to adolescent mental health.

What is the prevalence of mental health problems and how are mental health problems patterned? (Papers II, III, IV)

The correlations between the mental health problems investigated in Papers II, III and IV ranged from 0.175 (perceived stress always – DSH) to 0.309 (psychological distress – DSH). According to Paper IV, there was a strong association between psychological distress and deliberate self-harm. High levels of stress (II) (always or often the past three months) were reported by 54.9 percent of the students, and 10 percent reported that they always felt stressed. Given the predefined cut-off, the three month prevalence of psychological distress was 25 percent (III). A lifetime experience of deliberate self-harm was indicated by 17.1 percent of the sample (IV). Gender-specific prevalence of mental health problems are presented in Figure 4. All mental health problems were significantly more common among girls than among boys. A more detailed presentation of the responses is displayed in Appendix 3. In addition, girls reported multiple experiences of mental health problems to a higher degree than boys. For example, 16 percent of the girls indicated two mental health problems compared to 3.5 percent of the boys ($p<0.001$). Analyses of the associations between background variables (educational programme, parental employment status, foreign extraction and whether they are currently living with two adults) and mental health outcomes (Table 5) show that educational programme and parental employment were most strongly associated with mental health outcomes. This is also shown in Table 4, which indicates that perceived stress, psychological distress and DSH were generally higher among girls and boys attending vocational programmes and among those who reported that one or both of their parents were not employed.
Figure 4. Prevalence of mental health problems (percentage) in boys and girls. Gender differences indicated by Chi-Square test. ***p<0.001.

Table 4. Prevalence (percentage) of mental health problems in boys and girls by social class background (educational programme and parental employment status). Group differences indicated by Chi-Square test.

<table>
<thead>
<tr>
<th>Mental health problems</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>By educational programme</td>
<td>By parental employment status&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>Perceived stress</td>
<td>Aca</td>
<td>Voc</td>
</tr>
<tr>
<td>Always/often</td>
<td>26.4</td>
<td>31.5</td>
</tr>
<tr>
<td>Perceived stress</td>
<td>4.8</td>
<td>6.4</td>
</tr>
<tr>
<td>Always</td>
<td>12.3</td>
<td>17.0&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Psychological distress</td>
<td>14.3&lt;sup&gt;***&lt;/sup&gt;</td>
<td>5.6</td>
</tr>
<tr>
<td>Cases (&gt;75%)</td>
<td>12.3</td>
<td>17.0&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Deliberate self-harm</td>
<td>14.3</td>
<td>17.0&lt;sup&gt;*&lt;/sup&gt;</td>
</tr>
<tr>
<td>Lifetime experience</td>
<td>5.4</td>
<td>14.6&lt;sup&gt;***&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>*</sup>p<0.05;  **p<0.01;  ***p<0.001.

<sup>a</sup>2 par. empl. = both parents currently employed or running their own business. 1-2 par. not empl. = one or two parents not currently employed or running their own business.
Table 5: Demographic factors, prevalence (percentage) and associations with mental health problems (Odds ratios, 95% CI).

<table>
<thead>
<tr>
<th>Prevalence</th>
<th>N*</th>
<th>Boys</th>
<th>Girls</th>
<th>N*</th>
<th>Boys</th>
<th>Girls</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Perceived stress (always)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Psychological distress</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deliberate self-harm</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Edu. programme</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Vocational</td>
<td>1570</td>
<td>45.4</td>
<td>54.6</td>
<td>134(0.79–2.24)</td>
<td>125(0.91–1.73)</td>
<td>1.46(1.03–2.06)</td>
</tr>
<tr>
<td>Ref.</td>
<td>1.34(0.79–2.24)</td>
<td>1.25(0.91–1.73)</td>
<td>1.46(1.03–2.06)</td>
<td>1.56(1.21–2.01)</td>
<td>2.52(1.49–3.37)</td>
<td></td>
</tr>
<tr>
<td>Par. employment status</td>
<td>1623</td>
<td>78.6</td>
<td>73.7</td>
<td>0.79(1.04–3.59)</td>
<td>1.67(1.34–6.41)</td>
<td>1.60(1.10–2.32)</td>
</tr>
<tr>
<td>Both employed</td>
<td>21.4</td>
<td>26.3</td>
<td>0.79(1.04–3.59)</td>
<td>1.67(1.34–6.41)</td>
<td>1.60(1.10–2.32)</td>
<td>1.29(0.98–1.69)</td>
</tr>
<tr>
<td>Not both employed</td>
<td>87.1</td>
<td>86.9</td>
<td>1.58(0.81–3.11)</td>
<td>1.37(0.89–2.12)</td>
<td>1.26(0.79–2.03)</td>
<td>0.84(0.56–1.21)</td>
</tr>
<tr>
<td>Foreign extraction</td>
<td>1568</td>
<td>87.9</td>
<td>86.9</td>
<td>1.35(0.81–3.41)</td>
<td>1.37(0.89–2.12)</td>
<td>1.26(0.79–2.03)</td>
</tr>
<tr>
<td>One or both parents not Swedish</td>
<td>12.9</td>
<td>13.1</td>
<td>1.35(0.81–3.41)</td>
<td>1.37(0.89–2.12)</td>
<td>1.26(0.79–2.03)</td>
<td>0.84(0.56–1.21)</td>
</tr>
<tr>
<td>Living with</td>
<td>1579</td>
<td>66.8</td>
<td>57.6</td>
<td>2.46(1.15–5.31)</td>
<td>2.00(1.22–3.25)</td>
<td>1.85(1.22–2.79)</td>
</tr>
<tr>
<td>Not living with</td>
<td>33.2</td>
<td>42.4</td>
<td>2.46(1.15–5.31)</td>
<td>2.00(1.22–3.25)</td>
<td>1.85(1.22–2.79)</td>
<td>1.53(1.08–2.12)</td>
</tr>
</tbody>
</table>

Chi-Square test: *p<0.05; **p<0.01; ***p<0.001

* Number of respondents answering the question.

** Reference category.
How are social relationships related to mental health? (Papers I, II, IV)

Results of the qualitative (I) and the quantitative studies (II and IV) showed that social relationships were related to mental health. With respect to positive aspects, the focus group study (I) indicated that being respected and having supportive relations with friends, school mates, teachers, family and partner is fundamental for good mental health. The participants underscored how mental well-being to a large extent depends on perceived respect, being well-treated and having someone to trust. The positive mental health outcomes of good relations with others were exemplified as happiness, self-confidence and joy. Negative aspects were also brought forward. Participants expressed how poor support, loneliness and disrespectful treatment were likely to influence mental health negatively in terms of, for example, worry, insecurity, stress and sadness. Relationships in school and the overall social climate in school, such as different forms of harassment, were also emphasised as important factors in relation to mental health.

According to Paper II, 8.1 percent of the boys and 11.4 percent of the girls who reported any degree of stress reported relationships with friends as always or often stressful ($p=0.009$). Relationships with friends was more stressful to students in vocational programmes (12.8 percent) than their counterparts in academic programmes (6.4 percent; $p<0.001$). A similar gender and class pattern was found with regard to stress due to responsibility-taking for others (see Figure 5). With respect to social relationships and influence in school, Paper IV showed that deliberate self-harm (DSH) was associated with ‘having no friends in school’, ‘experiences of poor teacher support’ and ‘experiences of a hostile school environment’1. ‘Poor influence in school’ was only significantly related to DSH in girls. In the present results section, a comprehensive analysis (Table 6) showed that these negative aspects of social relationships were also associated with perceived stress and psychological distress. Poor teacher support appears to be strongly associated with perceived stress among boys. The comprehensive analysis also revealed a high odds ratio for the association between ‘hostile school environment’ and DSH among boys.

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1Perception of sexual harassment, bullying or racism as problems in school. This phenomenon will also be presented in the results section on violence and harassment.
Table 6. Social relationship factors. Prevalence (percentage) and associations with mental health problems (Odds ratios, 95% CI).

<table>
<thead>
<tr>
<th></th>
<th>Prevalence</th>
<th>Associations with mental health problems (adjusted odds ratios)a</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Nº</td>
<td>Perceived stress (always)</td>
</tr>
<tr>
<td></td>
<td>Boys (%)</td>
<td>Girls (%)</td>
</tr>
<tr>
<td>Hostile school environment</td>
<td>1,606</td>
<td>30.9</td>
</tr>
<tr>
<td>Yes</td>
<td>1,634</td>
<td>15.6</td>
</tr>
<tr>
<td>Teacher support</td>
<td>1,639</td>
<td>7.6</td>
</tr>
<tr>
<td>Poor</td>
<td>1,627</td>
<td>29.2***</td>
</tr>
</tbody>
</table>

Chi-Square test. *p<0.05; **p<0.01***p<0.001

Numbers of respondents answering the question.

a Adjusted for educational programme (vocational) and parental employment status (one or both parents not having a part-time or full-time job or running their own business).
How are experiences of demands and responsibility related to mental health? (Papers I, II, IV)

According to the findings (I, II, IV), demands and responsibility-related factors are particularly important factors and circumstances related to mental health among adolescents. Demands and responsibility refer to achievements related to school and leisure time activities as well as to relational and economic demands and gendered expectations.

Demands and responsibility – achievements

The presence and scope of demands and expectations were found to be highly relevant factors for mental health. With respect to positive influence, the focus group study (I) showed that reaching goals, receiving compliments, or gaining appreciation and recognition for their achievements contributed to self-esteem, self-worth, confidence and happiness. However, the results (I, II, IV) mainly displayed negative outcomes of demands and responsibility taking. Focus group participants (I) explained that high demands, pressure, fear of failing and burdensome responsibilities could cause stress, shame, low self-worth and anxiety. Both boys and girls recognised that girls experienced greater pressure. One explanation offered for this difference was that girls thought that they constantly had to prove that they are good enough. They seemed to doubt their own capacity and expressed dissatisfaction with their accomplishments, which both boys and girls recognised as negative for mental health. Some girls expressed that they could not ‘take the risk’ of not prioritising school work. The participants linked less perceived demands and responsibility taking among boys to boys being more prone to feeling confident and that they have learnt that they are good enough. This may contribute to boys feeling more relaxed in relation to demands, expectations and responsibility taking. However, it is worth noting that although girls appeared to experience particularly heavy pressure, boys also expressed negative outcomes of high pressure and demands. Moreover, worries and perceived demands about the future could also produce feelings of anxiety, guilt and inadequacy. Mainly girls expressed feelings of stress and pressure regarding their education, professional careers, family and economy-related issues. It was also expressed that expected gender differences in wages in the labour market could be a reason for boys being more reluctant to put efforts into studies. They referred to the fact that boys, as adults, are likely to get higher incomes than girls, which might influence them to not study as much as the girls do to reach their goals.

The quantitative findings point in the same direction. In Paper II, for example, achievement-related stressors (‘marks’, ‘demands on oneself’ and ‘future plans’) were found to be more stressful to girls than boys, regardless of educational
programme (indicator of social class). With respect to class patterns, academic
programme students reported stress from ‘marks’ and ‘demands on oneself’ to a
higher degree than their peers in vocational programmes. In addition, Paper IV
shows that dissatisfaction with school achievements was significantly associated
with DSH in both boys and girls, although the association was stronger among
girls. Moreover, being a girl attending a vocational programme who is dissatisfied
with her school achievements was associated with a particularly increased risk for
DSH. Perception of a high work load in school was significantly associated with
DSH in the adjusted model among girls. In a comprehensive analysis (not shown in
table) these two achievement variables were strongly related to stress and
psychological distress (odds ratios ranging from 1.45 to 10.25), which was
particularly strong among the girls (odds ratios around 4 compared to
approximately 2 among boys).

Demands and responsibility – gender performance, social relationships and
financial issues
The findings (I, II) showed that pressures to look and behave according to
gendered expectations were linked to negative mental health, predominately
among girls. Many female focus group participants (I) expressed experiences of
exhaustion by the practice, as well as perceived expectations, of being pretty, nice,
happy and sweet. Boys also identified the great pressure on the appearance and
behaviour among girls as potential factors contributing to elevated levels of mental
health problems in girls. Most boys neither expressed experiences of nor reflected
on gender performance-related pressures as negatively affecting mental health.
Similarly, according to Paper II, stress due to the pressure to look and dress in a
particular way was more common among girls than boys, and particularly among
girls attending vocational programmes. However, both boys and girls in the focus
groups (I) noted the societal pressures on boys that might contribute to their
mental distress as a consequence of being harassed if not adhering to the male
norm of being ‘macho’ by, for instance, openly expressing emotions in school. Boys
did, however, state that they had no problems sharing their feelings with their
partner or a close friend.

As noted in the previous section on social relationships, demands and
responsibility to maintain good relationships with their family, partner and friends
were described as possible sources of stress, guilt and anxiety (I). In particular,
girls expressed how they took responsibility for the feelings of others. For example,
according to Paper I, many girls did not express how they feel with concern for the
feelings of others because they did not want to be a problem for others. Paper II is
pointing in the same direction; stress due to ‘responsibility for others’ was more
frequently reported by girls than boys.
With respect to demands and responsibilities related to economic issues, stress due to ‘lack of money’ (II) was strongly patterned by both gender (girls) and class (vocational programme students); stress due to lack of money was especially frequent among girls in vocational programmes.

**Figure 5.** Reports on stressors (percentage) among boys and girls attending academic and vocational programmes.

**How are experiences of violence and harassment related to mental health? (Papers I, III, IV)**

It was found that experiences of violence and harassment, as well as the exposure of observing others being harassed appeared to be a part of young peoples’ everyday life and potential risk factors for mental health problems. The qualitative study (I) highlighted an elusive form of verbal harassment as potentially affecting mental health negatively, namely the phenomenon of ‘joking’. That is, rough language or jargon and actions that would be considered rude or insulting outside of the context of a peer group. Although ‘joking’ was perceived as a way of bonding within a peer group, jokes were often mean and insulting and thus referred to as humiliation through humour. Both boys and girls described joking as mainly practiced by dominant boys targeting more submissive peers.
As shown in Table 7, reports of bullying and sexual harassment in school were common (III, IV). Experiences of bullying were more common among girls than among boys and experiences of sexual harassment were slightly more common among boys. The qualitative study (I) suggest that sexualised name-calling was experienced by both boys and girls, although the most commonly expressed scenario was that of boys harassing girls or other boys. Physical violence during the past year was more frequently reported by boys than by girls, whereas girls were nearly three times more likely to report a lifetime experience (ever occurrence) of sexual assault (III, IV). In the focus groups (I), both girls and boys perceived that girls were more exposed to sexual harassment and sexualised violence than boys. Experiences of sexual harassment and fear of sexualised violence were viewed as restricting the girls’ space of action, as they avoided perceived risky situations or areas (I).

According to the focus groups (I), violence and harassment were associated with mental health in terms of humiliation, worry, anxiety, fear, loss of self-worth, stress and insecurity. Importantly, it was brought forward that violence and harassment can influence students’ mental health regardless of whether they directly experienced it or not. This relates to the concept of a ‘hostile school environment’ previously presented in the results section on social relationships. The results from Paper III and IV (as well as the additional analysis displayed in Table 7) showed that experiences of all types of violence (bullying, sexual harassment, physical violence and sexual assault,) were associated with an increased risk of reporting stress, psychological distress and DSH in both boys and girls. However, in comparison with the results among boys, lower levels of bullying and sexual harassment were required to generate significant associations with stress and psychological distress as well as DSH (lower level of sexual harassment only) among girls. There were also some interaction effects, mainly among girls, indicating that being a girl attending vocational programmes or not having both parents currently employed, when combined with experiences of violence, increased the odds of reporting mental health problems (see Appendix 4 for an overview).
Table 7. Experiences of violence and harassment. Prevalence (percentage) and associations with mental health problems (Odds ratios, 95% CI).

<table>
<thead>
<tr>
<th>Type of violence</th>
<th>N</th>
<th>Boys</th>
<th>Girls</th>
<th>Perceived stress (always)</th>
<th>Psychological distress</th>
<th>Deliberate self-harm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>%</td>
<td>%</td>
<td>OR (CI)</td>
<td>OR (CI)</td>
<td>OR (CI)</td>
</tr>
<tr>
<td>Past 12 months</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Bullying</td>
<td>1,602</td>
<td>23.1</td>
<td>31.4</td>
<td>1.24 (0.62 – 2.48)</td>
<td>1.86 (1.24 – 2.78)</td>
<td>1.59 (1.00 – 2.51)</td>
</tr>
<tr>
<td>Experienced 1 act</td>
<td></td>
<td>16.6</td>
<td>20.3</td>
<td>3.31 (1.83 – 6.02)</td>
<td>3.50 (2.32 – 5.26)</td>
<td>5.46 (3.56 – 8.36)</td>
</tr>
<tr>
<td>Sexual harassment</td>
<td>1,588</td>
<td>22.5</td>
<td>21.3</td>
<td>1.12 (0.47 – 2.65)</td>
<td>1.51 (0.80 – 2.89)</td>
<td>1.60 (1.16 – 2.12)</td>
</tr>
<tr>
<td>Experienced 1 act</td>
<td></td>
<td>12.5</td>
<td>9.8</td>
<td>3.12 (1.69 – 5.92)</td>
<td>3.32 (2.13 – 5.19)</td>
<td>5.60 (3.55 – 8.82)</td>
</tr>
<tr>
<td>Physical violence</td>
<td>1,611</td>
<td>24.8</td>
<td>15.0</td>
<td>1.35 (0.77 – 2.37)</td>
<td>2.33 (1.57 – 3.46)</td>
<td>1.90 (1.31 – 2.76)</td>
</tr>
<tr>
<td>Experienced</td>
<td></td>
<td>51.0***</td>
<td>33.8</td>
<td>1.84 (1.03 – 3.30)</td>
<td>2.49 (1.77 – 3.49)</td>
<td>2.64 (1.77 – 3.92)</td>
</tr>
<tr>
<td>Sexual assault</td>
<td>1,601</td>
<td>6.4</td>
<td>17.3***</td>
<td>3.27 (1.51 – 7.07)</td>
<td>1.98 (1.34 – 2.91)</td>
<td>5.11 (3.02 – 8.64)</td>
</tr>
<tr>
<td>Lifetime</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Physical violence</td>
<td>1,507</td>
<td>24.8</td>
<td>15.0</td>
<td>1.35 (0.77 – 2.37)</td>
<td>2.33 (1.57 – 3.46)</td>
<td>1.90 (1.31 – 2.76)</td>
</tr>
<tr>
<td>Experienced</td>
<td></td>
<td>6.4</td>
<td>17.3***</td>
<td>3.27 (1.51 – 7.07)</td>
<td>1.98 (1.34 – 2.91)</td>
<td>5.11 (3.02 – 8.64)</td>
</tr>
</tbody>
</table>

Chi-square test. *p<0.05; **p<0.01; ***p<0.001

a Number of respondents answering the question.
b Adjusted for educational programme (vocational) and parental employment status (one or both parents not having a part-time or full-time job or running their own business).
Victim-perpetrator relationship of physical violence

Among those who had experienced physical violence during the past 12 months, the most frequently reported perpetrator was a male. Moreover, whereas boys almost entirely reported the perpetrator of physical violence to be another male, girls appear to be offended by a range of perpetrators and were more likely than boys to report the perpetrator to be a person with whom they presumably have a close relationship (parent or partner). According to the findings, it seemed that the victim-perpetrator relationship influenced the odds of psychological distress. In focus was whether the perpetrator was unknown or known as well as a parent or a partner. The perpetrator being an unknown person was associated with psychological distress among boys, whereas the categories ‘known person’, ‘partner’ and ‘other’ significant associations with psychological distress among girls. Tendencies towards significance were observed for ‘known person’ among boys and ‘unknown person’ among girls. One of the key findings was that girls to a high degree had been offended by their boyfriends and that this victim-perpetrator relationship, compared to not having experienced violence, showed a strong association with psychological distress among girls.

**Figure 6.** Reports (percentage) of perpetrator of physical violence during the past year. Gender differences indicated by Chi-Square test. *p<0.05; **p<0.01; ***p<0.001.
Table 8. Associations between category of perpetrator of violence (during the past 12 months) and psychological distress.

<table>
<thead>
<tr>
<th>Perpetrator category</th>
<th>Boys OR</th>
<th>CI</th>
<th>Girls OR</th>
<th>CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not exposed</td>
<td>Ref.</td>
<td>Ref.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Unknown person</td>
<td>1.89</td>
<td>1.18 – 3.02</td>
<td>2.18</td>
<td>1.00 – 4.77</td>
</tr>
<tr>
<td>Known person</td>
<td>1.69</td>
<td>0.96 – 2.96</td>
<td>2.53</td>
<td>1.34 – 4.77</td>
</tr>
<tr>
<td>Parent</td>
<td>n.a.</td>
<td>1.86</td>
<td>0.83 – 4.16</td>
<td>1.38 – 6.00</td>
</tr>
<tr>
<td>Partner</td>
<td></td>
<td>2.87</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Other</td>
<td>1.12</td>
<td>0.25 – 5.09</td>
<td>3.65</td>
<td>1.79 – 7.43</td>
</tr>
</tbody>
</table>

* Adjusted for educational programme (vocational) and parental employment status (one or both parents not having a part-time or full-time job or running their own business). n.a. = not applicable due to the low number of cases.
DISCUSSION

On the results

The aim of this thesis was to explore the relationships between life circumstances and adolescent mental health. Importantly, such a focus was also emphasised by the participants in the focus groups in study I. Consistent with previous research (Wisdom et al. 2007) and in accordance with a public health approach (Baum 2003), the participants emphasised the importance of social and psychosocial circumstances as influences on adolescent mental health. Boys’ and girls’ perceptions of factors and circumstances being important for mental health were similar, but their experiences of them differed. This observation as well as the quantitative findings will be elaborated on in the forthcoming discussion.

Mental health problems

Understandings

According to Paper I, mental health was understood as an emotional experience and predominately described negatively (e.g., experiencing distress, feeling low, or stress). These findings are consistent with a Swedish study exploring how 13-16-year-old adolescents perceive the concept of mental health (Johansson et al. 2007) as well as a qualitative study in which the adolescents associated the concept of mental health with mental distress (Armstrong et al. 2000).

Prevalence and patterning

Self-reports of perceived stress, psychological distress and deliberate self-harm were common, although the prevalence was approximately twice as high among girls as boys. In general, these findings confirm the gender pattern identified in previous research (Madge et al. 2008; Ollfors and Andersson 2007; Sweeting et al. 2009; Torsheim et al. 2006). However, given the variety of measures employed within the field, specific identifications of similarities and differences with other studies is somewhat limited. Nevertheless, the high prevalence of girls reporting that they always or always/often have felt stressed during the past three months is noteworthy and should be taken seriously. With regard to psychological distress, it was predefined with a given cutoff point in the scale (upper quartile). The gender difference within this group was substantial; twice as many girls as boys fell into the category of experiencing psychological distress. The overall prevalence of lifetime experience of deliberate self-harm was slightly higher than in previous studies (except that of Bjärehed and Lundh, 2008) and also revealed a relatively high rate among boys. The high prevalence might be a reflection of particularly poor mental health and destructive behaviour among young people in the region. It is also possible that the high prevalence was due to methodological issues. The study concerned lifetime experience, which could have generated a higher
prevalence than reports of DSH during, for instance, the past year (see e.g., Madge et al. 2008). It is also possible that there was an overestimation of DSH because we could not discern the methods used, the students’ intentions, or how the students interpreted the questions. Nevertheless, given the sparse research on Swedish non-clinical young populations, this study contributes new important knowledge.

Girls were also overrepresented in the group with multiple mental health problems; having two or more mental health problems was more than four times more common among girls than among boys. This finding is central as it further highlights the heavy burden of mental ill health experienced by girls. As argued by others (Stuart 2006), the clustering of mental distress should be acknowledged in health promotion interventions.

With regard to patterning due to social class, the findings support the research showing higher rates of psychological distress and DSH among youths from low SES backgrounds (Goodman et al. 2003b; Hawton et al. 2001; West and Sweeting 2003; Wight et al. 2006). However, findings did not confirm evidence of elevated levels of stress among those of disadvantaged social status (Goodman et al. 2005; Turner and Avison 2003). Similarly to Hagquist (2007), it seems that educational programme was more strongly associated with mental health problems than parental indicators of SES.

Factors and circumstances related to mental health problems

Social relationships

Social relationships appeared to play a central role in identifying possible determinants of mental health among both boys and girls, particularly as a source of good mental health, as shown in Paper I. This observation is supported by previous research (Haraldsson et al. 2010; Johansson et al. 2007; Rudolph 2002). However, the findings showed that relationships with friends could be stressful, and that both poor social relationships and responsibility-taking regarding relationships were associated with mental health problems. These findings add to the existing qualitative and quantitative evidence linking social relationships and reports of poor mental health (Armstrong et al. 2000; Bjärehed and Lundh 2008; Gillander Gådin and Hammarström 2003; Heinrich and Gullone 2006; Johansson et al. 2007; Kraaij et al. 2003). It is also worth noting that good relationships in school seem to be of great value with respect to mental health.

The findings suggest that social relationships are more strongly related to mental health problems among girls than among boys, supporting previous findings (Rudolph 2002; Wagner and Compas 1990; Ystgaard 1997). Rudolph (2002) suggested that this is due to a female ‘relational-orientation style’ (greater female
sensibility to relational problems) and differential interpersonal stress exposures in girls and boys (Rudolph 2002). From a gender perspective, there are several questions to be addressed in relation to these arguments. Rudolph (2002) seems to presume that girls and boys are living in two parallel worlds, which ignores the relational component of gender. In addition, quite frequently there are generalisations of how girls are, for example, that relationships are more central to girls’ identity than boys’ and that girls and boys have different psychological characteristics (e.g., ‘relational orientation styles’). According to the gender theoretical framework, girls’ and boys’ experiences and self-constructions are more than expressions of socialised sex-role identities; gender is learned through ‘performance’, and it is a social relationship as well as a structure (Butler 1990; West and Zimmerman 1987). Girls are likely to relate to and practice dominant discourses of femininity in which caring and taking social responsibility is central (Connell 2009; Walkerdine et al. 2001). Such practice as well as the expectations of such practice, appears to be stressful and may contribute to mental health problems among girls. The findings also suggested that students attending vocational programmes were more stressed about peer-relationships and taking responsibility for others than their counterparts in academic programmes. Perhaps girls and boys from low-SES backgrounds need to take more responsibility for others and therefore reported it as more stressful.

The results highlighted the mental health importance of the influence of social relationships in school, student-teacher relationships and a safe school environment. In accordance with the present findings, poor teacher-student relationships and lack of opportunities to influence the structure and content of their studies were found to be correlates of stress in a recent study on adolescent girls (Haraldsson et al. 2010). However, the results from the additional analysis in this thesis (Table 6) showed that poor teacher support seemed to be particularly strongly associated with high levels of stress among boys. Social support in school and student participation have been identified as central to adolescents’ mental well-being, although most research is conducted on adolescents younger than 17 years (Ellonen et al. 2008; Gillander Gådin 2002; Konu and Lintonen 2006; Simovska 2004).

In line with prior evidence (Gillander Gådin and Hammarström 2003; Gillander Gådin and Hammarström 2000), poor influence in school appeared to be particularly salient for mental health among girls. Moreover, as will be discussed in more depth in the next section, schools are important arenas in the construction and reconstructions of gender (Mac an Ghaill 1996; Paechter 2007). While schools inherit a great potential for health promotion interventions, they are also central in advancing the understanding of gender relations and hierarchies and the links to
mental health. The discussion on safety and hostility in schools is in the section on violence.

Demands and responsibility-taking
Demands and responsibility-taking represented particularly important life circumstances in relation to adolescent mental health. The results indicate that more than boys, girls experienced great pressure and responsibilities regarding academic success, social relationships and attractiveness, which were experiences that were plausible sources of stress and mental health problems.

Achievements
The results suggest that factors and circumstances related to school performance, demands and responsibility-taking were strongly associated with mental health problems. Given the large body of research on academic pressure and problems with studies as possible predictors of mental health problems (Byrne et al. 2007; Murberg and Bru 2004; Torsheim and Wold 2001; West and Sweeting 2003; Young et al. 2007), the following discussion will focus on specific aspects of the findings: gender and class patterning, school environment effects and a gender analysis.

Achievement-related factors such as the pressure for good marks and future plans as well as dissatisfaction with school achievements were found to be of greater importance to mental health among girls than among boys, which confirms existing evidence (Murberg and Bru 2004; Ollfors and Andersson 2007; West and Sweeting 2003). With regard to class patterning, the present findings support previous research, although the classification of SES might differ. It has, for example been found that students of middle-class backgrounds report greater worries about academic achievements than those of working-class backgrounds (West and Sweeting 2003). However, in contrast to West and Sweeting (2003) who identified a strong association between such worries and psychological distress in middle-class girls, the present study suggest school achievement-related to be strongly related to mental health problems among girls regardless of educational programme. That is, socioeconomic status seems to be of less importance among girls than boys with respect to experiences of academic demands and mental health. Similarly, a recent Canadian study found that, in comparison with girls, boys' subjective health appeared to benefit more from the increasing socioeconomic status of the school area (Saab and Klinger 2010).

Against this background, it can be presumed that adolescent mental health is linked to the school-class context in terms of 'academic standing', expectations from teachers and perceptions of the meaning of school achievements, socioeconomic indicators as well as psychosocial work environment (Gillander Gådin and Hammarström 2003; Goodman et al. 2003a; Hjern et al. 2008; Modin and
The present findings indicate that a school context of academic pressure and expectations is predominately experienced by students attending academic programmes and by girls (in both academic and vocational programmes). In line with this interpretation, the lower rates of achievement-related mental distress among boys in vocational programmes may be a reflection of a school context less characterised by academic pressure. On the other hand, if the school environment does not encourage academic achievements and give limited access to such ‘capital’, those students might be at risk of stressful marginalisation in flexible labour markets, which impose high demands on individual life-management skills such as attaining high education levels (Furlong et al. 2006; Plug et al. 2003). Hence, although academic responsibility-taking and negative mental health consequences from such pressure are likely to be more prevalent among students aiming for university studies, the key finding is that the relationship between school-related demands and responsibility-taking and mental health is stronger among girls than among boys. These results should be seen in light of the constructions and practices of masculinity and femininity as well as the power dynamics embedded in the relation between such practices. Structural aspects in terms of power and resources are also central to recognise.

For example, although many boys reported being stressed by school marks, being a boy appears to imply the possibility to ‘play around’ and reject responsibility taking regarding achievements and the future. These findings are supported by the literature on boys and schooling, which suggests that academic success and being ‘studious’ are not honoured in constructions of hegemonic masculinity (Jackson 2002; Mac an Ghaill 1994; Renold 2004). Hence, ‘anti-swot’ or ‘laddish’ behaviours can be interpreted as ways of practicing hegemonic masculinity (Jackson 2002). Given the methods used by (mainly) boys in policing the boundaries of acceptable male behaviour and identity, ‘anti-swot practices’ and rowdiness might be strategies to avoid harassment (Dalley-Trim 2007; Jackson 2002). At the same time, lower rates of mental distress and rejecting responsibility-taking regarding school work are plausible consequences of perceived higher status gained from hegemonic masculinity (Courtenay 2000; Dalley-Trim 2007). For example, if boys already feel confident and recognised without the pressure of ‘proving’ their worth, it may imply fewer experiences of factors capable of eliciting negative mental health. This does not, of course, include all boys as there are multiple ways of practicing masculinity. Possibly, prioritising school work is more socially acceptable among boys from middle-class backgrounds (Mac an Ghaill 1994; Renold 2004). However, it is possible that boys find the negotiation between academic demands/responsibility-taking and maintaining a position in the male hierarchy to be stressful and negative for mental health, especially in a highly competitive society placing great value in successful achievements (Jackson 2002).
With regard to the findings in girls, academic demands as well as pressures about responsibility-taking and future plans are reflecting discourses of a (predominately middle-class and neo-liberal) ‘good girl’ femininity in which being studious and responsibility-taking is emphasised (Renold and Allan 2006; Skeggs 1997; Walkerdine et al. 2001). Adhering to this type of femininity appears to place great pressure on girls regardless of social class and, thus, represents a potential risk factor for mental health problems. At the same time, Paper I suggested that there was a negotiation in which crossing the boundaries of achievement-focused femininity was perceived as a potential risk of losing advantages gained from good marks.

Moreover, relational and structural class and gender inequalities should also be taken into account; boys’ and girls’ practices (within as well as between gender categories) constitute positions that interact with each other. That is, if somebody does not take responsibility, somebody else has to. The dimensions of power are embedded in these practices and the relations between them. For example, if boys can relax, whereas girls cannot, it may contribute a reconstruction of male dominance over girls. Girls experienced demands to perform well in order to be recognised and respected. However, while doing so they experienced stress, feelings of inadequacy and anxiety, which are also risk factors of further subordination. An interpretation would be that if they do not take school seriously, they risk to remain in positions of low status. That is to say, responsibility taking may also be strategic for girls. Responsibility-taking and aiming for good marks might be a means for girls to gain success and respect and possibly, overcome gendered obstacles in an unequal society in which boys and men, on a collective level, benefit from greater economic, political and personal resources and power (Connell 2005; Kimmel 2008). Having responsibility has, for instance, been identified as a source of social power among young people (Powers and Reiser 2005). Another interpretation is that responsibility-taking represents a means of ‘becoming an adult’ and gaining better status from the benefits of adulthood (Westberg 2004). Understanding responsibility as being a gendered phenomenon does not imply that all boys practice limited responsibility-taking and that all girls perceive it as burdensome. However, the gender analysis suggests that such responsibility can be a disadvantage for girls and an advantage for boys in terms of mental health.

**Doing girl – doing boy**

It was found that factors related to pressure on how to look and dress were more strongly associated with mental health problems among girls than among boys. These findings, alongside a considerable amount of prior research, indicate a strong pressure on girls to perform bodily constructions of femininity, such as
beauty, sexiness and thinness, which in turn are plausible sources of mental distress (Frost 2003; Paechter 2007; Tolman et al. 2006; Walkerdine et al. 2001). Girls appeared to experience a complex balance between a desire and a resistance to the practice of widely-accepted notions of femininity, and it was mainly experienced as demanding, controlling and stressful. This finding is consistent with an interview study on depressed adolescents where both girls and boys identified high expectations for girls to achieve cultural ideals of beauty and associated a failure to do so with feeling hopeless and depressed (Wisdom et al. 2007). The wish to ‘pass’ as attractive might also be motivated by potentially negative experiences associated with crossing norms. For example, Polce-Lynch and co-workers (2001) identified lower self-esteem among girls who did not adhere to stereotypical feminine ideals regarding body image. In contrast to research identifying negative body image as a risk factor for low self-esteem and depression in both girls and boys (Allgood-Merten et al. 1990; Siegel et al. 1999), boys in the present study appeared to experience fewer demands and less pressure regarding attractiveness and gendered expectations than did girls and were less inclined to considered such pressure as a risk factor for mental health problems. However, it is likely that boys may also suffer from mental health problems as a consequence of meeting bodily demands such as being fit, strong and tall (Bengs 2000; Connell 2005; Frosh et al. 2002). Although the findings mainly highlighted the negative influences of factors related to appearance and body shape, it is notable that ‘doing’ femininity and masculinity via physical display could also be joyful (Connell 2009).

Moreover, negotiating hegemonic ‘macho’ masculinity may be stressful to boys and potentially linked to other types of poor mental health. It has, for example, been argued that adhering to hegemonic masculinity, such as avoiding the sharing of their feelings in fear of being harassed for not being manly, may have emotional costs (Connell 1996; Courtenay 2000). Crossing such boundaries may imply giving up of their power and jeopardise their position in a male hierarchy, which might be a risk for mental health (e.g., through harassment). Boys in this study did, however, state that they had no problems sharing their feelings; they just needed to feel safe in doing so (e.g., talking to a partner or close friend). This finding illustrates that gender is dynamic and relational. A broader repertoire of practices seems to be possible if they perceive low or no risk of being harassed. Further reflections on demands related to femininity and ‘doing’ girl are found in the previous section on social relationships.

Financial issues
With regard to demands and responsibility-taking about financial issues, the findings revealed a picture strongly patterned by gender and class. The results on stress due to lack of money correspond to research suggesting greater financial strain in low SES youth (Fröjd et al. 2006) and oppose the research suggesting no
gender differences in economic stress (Byrne et al. 2007). It is worth considering, however, that low SES adolescents do not necessarily have less disposable income than their wealthier peers (West et al. 2006). Stress due to ‘lack of money’ was particularly prevalent among female vocational students, which indicated experiences of multiple disadvantages. According to the intersectional analysis and what Mendelson et al. (2008) call ‘double jeopardy’, elevated financial stress among girls in vocational programmes is potentially linked to the interaction between female gender and a disadvantaged position in the social structure.

**Violence and harassment**
In contrast to most research on violence and adolescent mental health, the present study examined several types of violence and emphasised the importance of recognising the victim-perpetrator relationship as well as the context of violence when researching the links between victimisation and psychological distress in youth. Experiences of violence and harassment were found to be frequently reported by both boys and girls. The findings also suggest that experiences of verbal, physical and sexual abuse are risk factors for mental health problems in both girls and boys, particularly among students of low SES background (mostly girls). Although the findings confirm existing evidence (Fliege et al. 2009; Gillander Gådin and Hammarström 2005; Gratz et al. 2002; Hawton et al. 2002; Kaltiala-Heino et al. 2000; Schraedley et al. 1999; Sundaram et al. 2004), the present study offers new insights regarding joking, gender patterning, associations with mental health and, importantly, a gender analysis.

**Joking**
Although ‘joking’ was not perceived entirely negatively, such ‘jargon’ was identified as potentially harmful. Moreover, joking was identified as a being ‘done’ mainly by boys. It is relevant to draw upon the existing literature on joking as a way of constructing masculinity and maintain hierarchies among boys (Connell 2000; Frosh et al. 2002). Frosh (2002) argues, for example, that joking is a gendered practice of the tougher over the less tough who easily can be ‘accused’ of not being able to handle ‘joking banter’. Hence, consistent with previous research (Eliasson 2007), joking can be seen as a type of (predominately male) verbal abuse/aggression likely to influence adolescent mental health negatively.

**Gender patterning, associations and a gender analysis**
Some key findings were the high rates of school-based bullying and sexual harassment among both boys and girls as well as the associations with psychological problems. In accordance with previous findings (Craig et al. 2009; Petersen and Hyde 2009; Solberg and Olweus 2003), the gender differences were small with respect to bullying and sexual harassment. Bullying was more
frequently reported by girls, and sexual harassment was slightly more common among boys.

Against the background of previously found greater likelihood of girls reporting experiences of sexual harassment (Gillander Gådin and Hammarström 2005; Gruber and Fineran 2008; Hand and Sanchez 2000; American Association of University Women 2001), the high prevalence among boys was somewhat unexpected. At the same time, there is evidence of name-calling (mainly homophobic) being particularly prevalent among boys (McMaster et al. 2002; American Association of University Women 2001). As shown in Appendix 3, this was also the case in the present study which might explain the high prevalence of male experiences of sexual harassment among boys. Furthermore, previous research indicates that there is a fine line between bullying and sexual harassment with regard to understandings, conceptualisations and responses. That is, sexual harassment might be perceived as bullying and acts of bullying might be perceived as sexual harassment, by both adolescents and researchers. For example, in an American study (Swearer et al. 2008), the homophobic name-calling of boys was regarded as bullying and not sexual harassment. Moreover, it has been found that male bullying of girls is predominately sexual in nature (Shute et al. 2008).

The mental health associations with bullying and sexual harassment confirm prior research on younger adolescents (Gillander Gådin and Hammarström 2005; Gobina et al. 2008; Gruber and Fineran 2008; Nansel et al. 2004). As expected, there was a dose-response effect where the odds of reporting mental health problems increased with the number of bullying and sexual harassment acts, especially among girls and particularly among those attending vocational programmes. These results are supported by prior research of more negative mental health consequences of sexual harassment for girls than boys (Gillander Gådin and Hammarström 2005; Gruber and Fineran 2008).

From a gender perspective, sexual harassment has been viewed as a crude way of deploying gender, an exercise of power directed at the body and the sexuality of the target, and it has been found to be mainly perpetrated by boys against girls and other boys (Connell 2009; Fineran and Bennett 1999; McMaster et al. 2002). Hand and Sanchez (2000) argue that, because of the structural, social and power-related mechanisms of the asymmetric gender order, adolescent girls experience more sexual harassment, particularly the most physical and intrusive forms, and report greater negative behavioural, emotional and educational outcomes than boys (Hand and Sanchez 2000). It is possible that this was also the case in the present study because the associations between sexual harassment and mental health problems were stronger among girls than boys. Nevertheless, although the character of harassment may differ for girls and boys, bullying and sexual
harassment is controlling to boys as well. The results indicate, for instance, that the perception of bullying, sexual harassment or racism as problems in school was strongly associated with mental health problems among boys. Overall, this study suggests that a hostile environment in school should be seen as a risk factor for mental health problems in both boys and girls. This recognition of the contextual aspects of violence is supported by an American study in which the perception of possible victimisation was highly important in predicting psychological distress (Dao et al. 2006). Moreover, to further understand the links between harassment and mental health, it is of interest to explore by whom the girls and boys are bullied and sexually harassed, for what purpose and in which context. The findings call for a critical analysis of schools as potentially highly sexualised sites in which gender hierarchies are being constructed and reconstructed through bullying and sexual harassment (Dalley-Trim 2007). In addition, the processes of normalisation of violence in school have to be recognised and challenged (Berman et al. 2000). Name-calling is, for instance, not something that should be taken for granted as a part of ‘being a boy’ and a means of constructing masculinity (see also Eliasson 2007). Sexual harassment and bullying violate young peoples’ rights to a safe school environment and their right to wellbeing (Witkowska and Menckel 2005).

The identified gender patterning of experiences of physical violence (overrepresentation of boys) is consistent with previous research (Lawyer et al. 2006; Leonard et al. 2002). In accordance with existing evidence (Fredland et al. 2008; Hawton et al. 2002; Schraedley et al. 1999), the findings indicate that physical violence should be considered a risk factor for various forms of mental health problems in both boys and girls. However, there seems to be a tendency towards stronger detrimental mental health associations of physical abuse in girls than in boys, findings that are consistent with those from Thompson et al. (2004) and Sundaram et al. (2004). One possible explanation of this could be that girls, to a high degree, were offended by someone with whom they had a close relationship and/or is potentially dependent upon, which has been found to be particularly negative for mental health (Lawyer et al. 2006).

Apart from displaying prevalent gender differences in reports of perpetrator of physical violence during the past 12 months, the findings also suggest that the odds of reporting psychological distress differ among boys and girls depending on the reported victim-perpetrator relationship of physical violence. No clear conclusions on gender differences regarding whether the offender was known or unknown to the victim could be drawn. The findings do, however, indicate that the perpetrator being an unknown person increased the odds of reporting psychological distress among boys, and the same for the category ‘known person’ among girls. According to Lawyer et al. (2006) more negative mental health
outcomes are likely to be reported by those who have been offended by a ‘non-stranger’. Although the present study partly confirm their findings, a full comparison is unfeasible because Lawyer et al. did not conduct the analysis separately for boys and girls. Nevertheless, one of the key findings was that girls reported being exposed to violence by their boyfriends and that it was strongly associated with psychological distress. In addition to contributing new knowledge on teen dating/intimate partner violence in Sweden, the present findings add to the international research that suggest that partner violence within heterosexual dating relationships is particularly negatively experienced by young females (Jackson et al. 2000; Molidor and Tolman 1998). One possible explanation addressed is that girls experience more severe partner violence than boys (Banister et al. 2003, Molidor and Tolman 1998, Tolman et al. 2003). From a gender perspective, intimate partner violence can be considered a means of dominance and control and, according to research on the matter, there seems to exist a cultural acceptance for a boy/man to use violence toward his girlfriend (Fredrickson and Roberts 1997; Johnson et al. 2005). This highlights the need for an analysis in which gendered power hierarchies (i.e., girls being collectively subordinated to boys as well as power hierarchies among boys) are taken into account, especially given the likelihood of more severe mental health consequences if the target is subordinate to the offender (Banister et al. 2003). Moreover, another interpretation of the results is that boys and girls experience violence and different environments. Exposure by an unknown person is likely to occur in non-private arenas, whereas exposure by a known person, especially family member or partner, plausibly takes place within private home environment. Such circumstances might perhaps have an influence on the psychological distress associations.

Overall, the findings suggest that being a boy implies a risk of experiencing physical violence as well as a risk of being a perpetrator. These observations should be interpreted in relation to theories on violence and the construction and practice of hegemonic masculinity, i.e., how physical aggression and risk-taking appears to play a central role in doing masculinity and how violent behaviour is used to demonstrate power and to maintain hierarchies in male groups and over girls (Connell 2002, 2005; Kenway and Fitzclarence 1997). Hence, if violence plays a role in being ‘manly’, it likely contributes to boys both exercising and experiencing physical violence to a greater extent than girls, which in turn imposes risk for mental health problems among boys and girls. With regard to masculinity, violence and health, Courtenay (2000) has recognised the emotional and psychological costs of the stress and violence needed to maintain male hierarchies among men. Apart from the mental health consequences of the insult that victimisation implies, boys might also experience stressful pressure to adjust to violent practices as well as fear of being targets of homophobic bullying if they do
not comply with such practices (Dalley-Trim 2007; Kenway and Fitzclarence 1997; Phoenix et al. 2003).

However, although the most frequently reported perpetrators of physical violence were male, it is worth noting that violence is not only perpetrated by men. Reports of female perpetrators were not common but were, by no means absent, particularly for girls. Research on the meaning of violence in constructions of femininity is, however, scarce although it has been suggested that violent girls are constructed as ‘bad girls’ crossing the boundaries of traditional notions of femininity (Laidler and Hunt 2001). More research is needed to deepen the understanding of the links between femininity, violence and mental health.

The gender patterning of experiences of sexual assault (overrepresentation of girls) is consistent with past observations (Edgardh and Ormstad 2000; Fergusson et al. 2002; Romito and Grassi 2007). So are the associations with mental health problems in both girls and boys (Ackard and Neumark-Sztainer 2003; Schraedley et al. 1999). The high odds ratio among boys confirms the reports of Schraedley et al. (1999) and (Haavet et al. 2004), which highlights the need to acknowledge sexual assault against boys as an important risk factor for mental health problems. Schraedley et al. (1999) argue that the weaker association between sexual assault and depression among girls is due to better coping strategies because girls experience more sexualised violence than boys. By their reasoning, they assume that the more violence an individual is exposed to, the less consequences it might have. In opposition to this argument, there is a vast amount of research confirming profound negative mental health consequences of sexual assault in girls and women (Fergusson et al. 2002; Jackson et al. 2000). Against this background, it was somewhat unexpected that the association was weaker among girls than boys. This might be due to the high prevalence of psychological distress also found in the non-exposed group. Similar results were found by Schraedley (1999). However, this does not diminish the severity of sexual abuse towards boys. As the findings clearly displayed: the boys who reported experiences of being forced to have sex reported worse mental health than the boys who had not.

Nevertheless, one should also keep in mind the considerable gender differences in the experiences of sexual assault; girls were almost three times as likely to have been forced to have sex as boys. Drawing on gender theory, sexualised violence against girls can be seen as a consequence of objectifying attitudes toward girls, which communicates that the bodies and sexuality of girls and women are objects for the pleasure of men (Connell 2009; Fredrickson and Roberts 1997; Hand and Sanchez 2000). Such a perspective is rarely employed in research on violence and adolescent mental health. For example, in a recent qualitative study, both girls and boys expressed awareness of increased sexual threats imposed on girls and how it
was likely to contribute to depression in girls (Wisdom et al. 2007). However, rather than to discuss this in relation to demeaning values, male power, or the objectification of girls, the authors argue that sexualised abuse is linked to the bodily changes that girls undergo during puberty and that girls should learn how to cope with sexualised harassment from boys. Through such reasoning, the context, including gendered power dimensions, of violence is ignored and the responsibility is placed on the girls. This example illustrates the need for a gender analysis to better understand sexualised violence and the mental health consequences of it.

The SES/social class patterning of experiences of violence as well as the gender-SES interaction in associations with mental health problems are other important observations. This has not has not been discussed in detail here but deserves great attention in future research as well as in interventions.

**Summary of the gender analysis**

In this thesis, a gender analysis has been the main aspect of a public health approach. The findings indicate that gender, in complex ways, could impart both benefits and disadvantages in relation to mental health. The gender analysis suggests that constructions and practices of gender as well as gendered power structures influence the life circumstances of girls and boys and, thus, the kinds of risk factors they encounter in their everyday life as well as the ways girls and boys may react to such circumstances with respect to mental health. There seems to be a mental health cost of distancing oneself from the dominant constructions of masculinity and femininity, and there is a cost of adhering to them. Such ambivalence and negotiations appear to be particularly negative for the mental health of girls, for example by negotiating being both “bright” (i.e., succeeding academically) and “beautiful” (succeeding in “doing girl”) (Lucey et al. 2003; Renold and Allan 2006). It is also important to recognise how the structural aspects (e.g., the distribution of power, resources and values) influence the lives of boys and girls of different socioeconomic status and, potentially, their mental health. In contrast to the explanatory models based on sex-role and socialisation theory, the present analysis has taken into account the constructions (or the ‘doing’) of gender, gender as a social relation and a power structure. Such an approach is more fruitful in providing the tools to understand the links between life circumstances and mental health among both girls and boys. In sum, at the risk of oversimplifying, the findings and the gender theoretical analysis suggest that gendered mechanisms at the different levels in society influence the distribution of risk factors unevenly among boys and girls, which could be a possible explanation for the gender differences in reports of perceived stress, psychological distress and deliberate self-harm.
Critical reflections on applying a gender analysis

Gender theories were intended to be used as tools to better understand the links between life circumstances and adolescent mental health. Generally, researching how boys and girls construct gender and how gendered and class-related power relations frame the lives of young people is tremendously interesting in itself. To then link this to the complex field of the social determinants of mental health has been a challenge, especially with regard to the limited space provided in each paper. It is, for example, difficult to grasp and illustrate the complexity of gender relations, which may generate a tendency towards oversimplifications and the focus on differences between boys and girls. Although the intention has been the opposite, there is a risk of reproducing stereotypical images and positions. Moreover, despite the strong arguments for structural influences and limitations in the practice of gender, the emphasis on young peoples’ agency in practicing gender might lead to an individualist ‘victim-blaming’ perspective. I strongly oppose such an approach; as argued above, one must take into account the structural influences on young peoples’ possibilities and life chances. Finally, and perhaps against what one might expect, most research on gender and health is on constructions of masculinity. The literature on femininity/ies and (mental) health is scarce, particularly with respect to young people.

Methodological considerations

Multi-methods

The main focus of this thesis has been to explore which factors and circumstances that are related to the mental health of adolescent boys and girls. This was achieved by a combination of qualitative and quantitative methods. Employing quantitative methods in addition to the qualitative approach enabled analyses of prevalence, distribution, correlations and associations, which was a general strength of using multi-methods. Although the qualitative and questionnaire study fruitfully complemented each other, there are several methodological issues that may have affected the results.

The qualitative study

The systematic yet reflexive process of gathering rich data and performing the analysis served the study well. The proposed model (see Paper I) of factors and circumstances related to adolescent mental health was constructed through a rich material, interaction with the participants, closeness to data, conceptualisations of ‘what’s going on’, as well as theoretical interpretations.

With regard to scientific rigour, the overall criterion of credibility refers to the trustworthiness of the collection as well as the analysis of data (Hamberg et al.
Aspects to be taken into account are, for example, the constitution of and interaction within the focus groups. In accordance with the suggestions from the literature (Morgan 1996; Renold and Allan 2006), self-selected, single-sex focus groups facilitated open discussions. It was also observed that the discussions in the gender-mixed groups were less relaxed than those in the single sex groups. Focus groups also allowed for people to share their reflections without referring to themselves and placing themselves in vulnerable positions. Nevertheless, power relations and hierarchies within the groups could have restrained some participants from sharing their experiences. Another possible limitation associated with self-selected and single sex groups is a potential feeling of familiarity that may ‘filter out’ issues that are either taken for granted or perceived as too sensitive to discuss.

With respect to the size of the groups, the experience was in line with the reasoning of Morgan (1996); small groups were appropriate given the somewhat sensitive topics discussed. In comparison with groups of four or five participants, the largest groups of eight individuals showed greater difficulties in the interactions and in allowing all members to participate.

Actions were taken in data collection as well as in the analysis to reduce potential researcher bias. First, the theoretical framework used in the interpretation of the data has been clearly stated as was the structure of the stepwise analysis. Secondly, I believe that my awareness of the ‘jargon’ and ability to adapt my language as well as my experience of working with young people may have contributed to a trustful atmosphere. Thirdly, the use of focus groups in itself probably reduced the direct researcher-participant power imbalance. Taken together, the use of focus groups served the study well. Individual interviews are an alternative way of accessing deeper and more personal experiences (Morgan 1996), whereas observations in schools may allow for studying the students’ practices, the interactions between students, as well as the interactions between students and teachers (see e.g., Ambjörnsson 2003).

The main strength of the qualitative study with respect to dependability is the grounded theory design in which adaption to new inputs obtained during data collection and analysis, is a central component (Hamberg et al. 1994). In addition, meeting several of the groups a second time gave the participants and the researcher the opportunity to follow up on the contents of the previous session as well as to address additional topics. A strategy to further enhance the confirmability of the study would have been to have had an observer present during the focus groups and to use more of ‘cross reading’ between researchers in the analysis process.
The criterion of transferability was taken into account when describing the settings and methods used as well as in the presentation of the results. There are reasons to believe that the findings could be transferrable to young people in similar contexts given the variation in the sample. One issue to be considered is whether the results and conclusions would be applicable in other settings, for example, a bigger city or a society with a different school system.

**The quantitative studies**

The main strengths of the studies based on the quantitative material are the large sample size and the relatively low drop-out rate which involves a high statistical power with a low risk of the results being random findings. Another strength is the link between the results of the focus groups and the content of the questionnaire. However, there are some aspects to discuss with respect to design, procedure and measures. For example, although the study is relying only on self-reports, this should not be seen as a major limitation; the accuracy and reliability of self-reports among adolescents have been confirmed in previous research (Riley 2004).

Despite the relatively high response rate there are some issues to be raised regarding the sample and the response rate. The sample consisted only of students. Probably, the findings would differ if the sample included young people who do not attend school. There is, for example, a class pattern in upper secondary school attendance. A majority of those, approximately 25 percent, who do not complete upper secondary school, are of working-class backgrounds (The Swedish National Agency for Education 2008). It has been found that both adverse life experiences and mental health problems might be higher in non-attendees (Bridge et al. 2006; Edgardh and Ormstad 2000). Thus, the findings might have underestimated mental health problems as well as social-relationships problems, demands and experiences of violence in the general young population. Moreover, with regards to the possibilities of generalisation, there are good reasons to believe that the findings are representative of, and can be generalised to, students in upper secondary school/senior high school in areas outside of the big city regions in Western countries.

Because of the anonymity of respondents, no detailed analysis of drop-outs was possible due to the. However, the drop-outs consisted mainly of whole school classes, and in some cases, approximately 50 percent of a school class, which might be due to students filling in the questionnaire during half-class lessons. In only a few occasions was it explicitly declared that respondents declined participation. The response rate was also likely to have been affected by the short data-collection period (approximately 2 weeks). It is possible that missing data arising from students misunderstanding questions could have been reduced if research
assistants had been present in the classroom to answer questions and provide clarifications.

Given the cross-sectional design, one limitation of the three quantitative studies is the question of cause and effect and the uncertainty in directions of relationships. A student who is psychologically distressed is, for example, more likely to be lonely or targets of bullying (Sweeting et al. 2006). The time frame of potential predictors and identified outcomes are also problematic when examining associations in cross-sectional data as one cannot discern when exposure and outcome occurred. Nevertheless, cross-sectional results can be useful in inferring pathways for causal relationships.

Aspects related to the questionnaire and specific measures may have affected the results. Although efforts were made to keep the questionnaire short, missing data might have occurred due to the length of the questionnaire (61 questions, of which many were scales including a set of items).

The broad question on perceived stress might have rendered an overestimation of perceived stress. On the other hand, in contrast to studies that measure stress by a checklist of stressful events, the choice of a broad open-ended question on perceived stress was deliberate in order for the respondents to specify what they found stressful. Nevertheless, those items might not tap the full relevant range of stressors or problems experienced by young people. The study did not, for example, include specific questions on body image, financial opportunities and anticipated plans about future studies and/or employment.

Although the measure of psychological distress is not a widely used validated scale, it has similarities to other scales and was found to cover an underlying construct in the factor and Rasch analyses. An alternative categorisation would have been to compare the upper and lowest quartile of the sum score (see e.g., Hagquist 2007). Unfortunately, the sample size did not allow for such analysis.

Along the course of the study, questions have been raised by fellow researchers and others as to whether measures of psychological distress and/or depressive- or anxiety-related symptoms adequately reflect boys and girls perceptions and experiences. It is often argued that these examples of distress are appealing more to girls’ lives and interpretations than boys’. As a consequence, it is argued, the use of such outcomes would underestimate the problems experienced by boys, e.g., externalising symptoms (or an overestimation of girls’ problems). There are two main arguments against this reasoning. Firstly, to my knowledge there is no unequivocal scientific evidence that girls and boys interpret questions on psychological distress/depression/anxiety differently. In addition, with few
exceptions, validations and evaluations of scales and measures of internalising as well as externalising problems include both boys and girls. Secondly, the evidence on gender patterns in internalising/externalising problems is inconsistent. Generally, internalising problems such as psychological distress, depression and anxiety, are more common in girls, whereas boys are said to be overrepresented with regard to externalising problems, (e.g., anger, antisocial behaviour, or attention problems) (Angold et al. 2002; Hankin et al. 1998; Rescorla et al. 2007). However, research has also reported no gender difference in externalising symptoms (Broberg et al. 2001), as well as the occurrence of more externalising among girls than boys (Kapi et al. 2007b). The debate on the matter seems to mirror stereotypical discourses and perceptions about gender among lay persons as well as professionals and researchers. Furthermore, the questionnaire used in the present study was validated through a ‘think aloud’ method in focus groups in which both boys and girls declared that they would respond sincerely to questions given that they were ensured anonymity.

As previously noted, the measure of deliberate self-harm concerned lifetime experience, which perhaps was a too broad time span. There is, for example, a risk of recall bias. Furthermore, apart from information about DSH during the past year, it would have been of interest to have data on the methods used in self-harming in order to more specifically discern acts of self-harm.

With respect to sexual harassment and bullying, the qualitative and quantitative studies revealed somewhat different pictures. The measures of bullying and sexual harassment can be problematic in terms of conceptualisations and definitions why a combination of qualitative and quantitative understandings is valuable. More research is needed on the topic. With regard to the bullying measure employed in the present study, it did not cover overt physical aggression as in, for instance the Olweus scale (Solberg and Olweus 2003). The comparability with other studies on bullying may therefore be somewhat reduced.

Some considerations need to be made with respect to using the educational programme as an indicator of socioeconomic status. Not all individuals attending vocational programmes will necessarily be of a different socio-economic background to all those attending academic programmes and vice versa. However, at an aggregate level, and as a first step towards exploring social class patterning of mental health problems, these educational programmes are, nevertheless, considered to be suggestive indicators of social class (Hagquist 2007).

Finally, in the questionnaire as well as in the analysis of quantitative data, gender was indicated by a binary variable which limited explorations of the heterogeneity within the group of boys and girls. Given the theoretical framework in which
gender is considered social construction, relations and as being ‘done’ rather than being in fixed categories, more diverse options for respondents to indicate gender would have been preferred. Conducting analyses based on educational programme within each gender category was one way of overcoming simplistic generalisations of gender. Importantly, however, the use of focus groups contributed to a deeper understanding of what gender and gendered life circumstances can mean.

**Implications and future research**

The knowledge generated from this research can be applied on different levels. Given the public health approach applied, possible implications of the findings are presented in accordance with the three levels of social determinants of health outlined in the background section (Figure 2). However, the likelihood of gender and SES differences in mental health problems should be taken into account in prevention and health promotion strategies at all levels. So should the call for a greater awareness about gender relations and the gendered social circumstances under which young people live. This includes challenging normative ideals and attitudes at all levels as well as creating and implementing policies aimed at reducing gender and class inequalities.

With respect to the levels of social networks and institutions, the findings highlight the importance of the school environment in various ways. School-based interventions should prioritise supportive peer and student-teacher relationships, the prevention of bullying and sexual harassment and improved student-centred influence and participation. Interventions targeted at academic pressure need to acknowledge gender inequalities as well as constructions of masculinity, femininity and schooling. A gender analysis is also important in the prevention of sexual harassment and bullying. According to Swedish government legislation and the national curriculum, all Swedish schools are required to work towards gender equality through, for example, action plans against discrimination and harassment. This work needs to be improved and a gender perspective is a necessity. Furthermore, more effort is required to understand and counteract the processes in which violence and harassment are normalised in school as well as in other contexts (Berman et al. 2000). The high prevalence of psychological distress and DSH among students in vocational programmes should also be recognised and acted on.

Generally, health promotion programmes in schools need to be comprehensive; the whole school should be involved and, importantly, the work must be sanctioned by the head principal and be a part of the general school policy. Furthermore,
interventions should include staff education on gender issues and mental health, a review of teaching material and a general overview of the curriculum from a critical gender and class lens. Changes in the divisions of labour and distribution of resources and power are also likely to be necessary. Throughout the process, student participation is a key component; both school staff and students need to be empowered in challenging harmful practices as well as in planning policies and implementing actions. The extensive work within the ‘health-promoting schools’ has emphasised the health benefits of advanced possibilities for pupils to participate in decision making (Clift and Brunn Jensen 2005). However, this work has mainly focused on younger children than the age group covered in the present study. More work is, thus, required for students in their late adolescence.

School-related interventions also include the improvement of the teacher training programmes with respect to gender, class and mental health. Other potential actions are the promotion of school counselling services and school-staff education on adolescent mental health problems.

The strong associations between mental health problems and experiences of different forms of violence highlight the need for joint action against violence and harassment at all levels in society. For example, actions must be taken to fight the normalisation of violence in youth and interventions need to acknowledge the gendered experiences and responses to violence. Issues on dating violence should, for instance, be recognised in relevant school subjects such as sex education and social studies. In addition, school nurses and social workers should ask young people about their experiences of violence and harassment. Furthermore, schools, sport clubs and other institutions need to implement action plans against all types of violence and harassment. On a structural level, the media a central role; there is a strong cultural message that violence, aggression and risky behaviour is a part of being manly. The legal system is also important to target. With regard to sexual assault and rape, the Swedish laws should be changed. Instead of proving that the victim did not consent to sex; an explicit consent should be in focus. Media and the fashion industry have also a responsibility with regard to young peoples’ experiences of pressure to conform to ideals of body shapes and appearance.

Implications should not only concern young people. As noted by others (Wight et al. 2006), interventions targeting only individual- or family-levels may be inadequate. Hence, social policy and legislation should focus on reducing gender and class inequalities in general. This includes, for example, reducing income differences, ensuring more equitable distributions of recourses and power, promoting better working conditions as well as reforms of the labour market.
Future research is needed to further explore the mental health implications of responsibility taking, ‘joking’ and violence. It is also important to study what can be done in school to reduce the pressures experienced. More research is needed on dating violence in general and specifically on the links between sexual harassment and dating violence and their consequences for mental health.

Future studies would benefit from a longitudinal design, or at least repeated measures, to further understand the ways gendered life circumstances impact adolescent mental health. Qualitative studies are also needed to gain a deeper understanding of such processes. Importantly, intervention studies should be prioritised. Furthermore, a salutogenic perspective would be of interest, that is, to identify supportive factors and circumstances that influence mental health positively.

With regard to statistical methods, multilevel analyses could be an option to explore school and school class effects, whereas person-oriented approaches (e.g., latent class analysis and cluster analyses) could be used to study patterns in groups of individuals on the basis of their related characteristics. Such analyses would be useful in classifications based on characteristics other than sex as a way of avoiding the dichotomous static perceptions of boys and girls.

A future challenge is to identify the mechanism of how the interaction of different social structures (e.g., gender, class, ethnic background and sexual orientation) influences adolescent mental health. Theoretically, models and conceptualisations should be developed in order to bridge the gap between disciplines and to further understand the ways that complex structural, organisational and individual circumstances influence the mental health of young boys and girls.
CONCLUSIONS

Conclusions from the research questions and the gender analysis:

1. Young people understand mental health as an emotional, mainly negative, experience.
2. Perceived stress, psychological distress and deliberate self-harm are approximately twice as common among girls as boys. Reports of mental health problems are generally more common among students attending vocational educational programmes and among those whose both parents do not have a full- or part-time job.
3. Supportive relationships with friends, family and teachers are of great importance to positive mental health, whereas poor social relationships, loneliness and lack of influence are potential risk factors for mental health problems.
4. Perceived demands and responsibility taking regarding school work, relationships, future plans, appearance and financial issues show strong associations with mental health problems, particularly among girls, regardless of social class.
5. Violence and harassment of different types are strongly related with mental health problems. There are gendered patterns in experiences of different types of violence and harassment as well as the victim-perpetrator of physical violence. These diverging experiences appear to influence the associations with mental health problems in boys and girls.

A gender analysis provides the tools to gain knowledge about the ways that boys’ and girls’ lives are shaped by gender relations at different levels in society. For example, unequal power structures and the ways girls are expected to ‘do’ gender, appear to place girls at greater risk of mental health problems. Hegemonic constructions of masculinity and advantaged positions likely contribute to positive mental health among boys but are also implying risk factors for poor mental health, e.g., in terms of violence. A gender theoretical approach that takes social class into account has the potential to contribute to a better understanding of the relationships between life circumstances and the gender patterning of mental health among adolescents.
ACKNOWLEDGEMENTS

First and foremost – All students, thank you! You and the school staff, particularly Nancy Kostet, made this project possible and I owe you immense gratitude.

Warm and special thanks go to my supervisor Katja Gillander Gådin. Thank you for your intense encouragement, your critical questions, your inspiration and your trust in me. I am deeply grateful for having you as my supervisor and friend. Please send my thanks to your family too.

Kenneth Asplund, co-supervisor, your calmness, positive mind and experience has brought me down to earth many times. Thank you for your guidance and for the intensity you have placed in convincing me to believe in my work.

Åsa Audulv, thank you for being my Ph.D. buddy from day one, the most clever and supportive Ph.D. buddy ever. Thank you for all discussions during hours and hours on trains, for being harsh when I have needed it and for giving me a shoulder to lean on. This thesis and the time as a Ph.D. student would not have been the same without you.

I am grateful to all fellow Ph.D. students at the Department of Health Sciences, and especially Heidi Carlerby, for the care with which they have reviewed and discussed my work and for being great colleagues and friends. A special thanks is dedicated to Marianne Svedlund for her commitment in the Ph.D. seminars. I would also like to acknowledge my friends and colleagues in the Health Care Sciences Postgraduate School, in particular Malin Lövgren, Annmarie Wesley and Emma Fransson. A number of other friends and colleagues have been with me through this journey, thanks to Bodil Formark, Klara Svalin, Elisabet Ljungberg, Johanna Sefyrin and colleagues in Sociology, Forum for Gender Studies and the Challenging Gender project. Ann Öhman Umeå University, thank you for valuable advice and helpful comments half way through this Ph.D. I would also like to show my gratitude to Robert Young at MRC, Glasgow.

I am honored for being a part of the Public Health Sciences group at the Department of Health Sciences; you are tremendously ambitious, knowledgeable and optimistic people. Many thanks go to all colleagues at the Department of Health Sciences, especially Annette Höglund for your warm heart and for refusing to listen to my doubts. Thanks for pushing me. The same gratitude goes to Susanne Strand and Lisbeth Kristiansen. I would like to acknowledge a special group of colleagues: the ‘stats-people’. Azzam Khalaf, my teacher in biostatistics and epidemiology at Malmö, thank you for still encouraging and assisting me. Anders Knutsson, thank you for providing straightforward advice. I am indebted to Erling
Englund and Annika Tillander for always being willing to help out. Thank you for sharing your competence and friendship. To all the above individuals, and to several colleagues whose names I cannot continue listing and who have supported and assisted me one way or another, I feel very much indebted.

To all friends and colleagues at the University of York, my deepest gratitude for your hospitality, inspiring discussions and exciting adventures. I dedicate a special thanks to Gabriele Griffin. You all made my stay unforgettable.

Emma Uprichard, I am deeply thankful for your endless trust in me and my beautiful data. Your friendship and professional support has meant a great deal to me, for that I am enormously grateful.

I am indebted to Raewyn Connell, The University of Sydney, for hosting me as a visiting scholar, what an experience!

My beloved sisters Lilleanne, Pernilla and Matilda and your wonderful children, thank you for broadening my horizons and reminding me of the valuable things in life, laughs for example. Niklas, my brother, you are not with me but your spirit is. You inspire me to never give up. Mum and dad, this is what came out of all university years; no doctoral hat but a book, a book accomplished by the stubbornness you have taught me. For that I am profoundly thankful.

All dear friends, thank you for enriching my life with love, joy, support and inspiration during these years; Malin L, Sara H, Maria B, Marlene J, Elin T, Emma F, Mattias A, Markus E, Karin L, Anna L, Niklas B, Janna W, Tony J, Jörgen P, Henke L, Susanne L, Anna I, the ‘Ljusdal girls’ and many others. To a special friend: Jessika Rylle Svensson, you make me believe I can do anything.

I am heartily thankful to The County Council and County Administrative Board of Västernorrland for professional and financial support. I would also like to show my gratitude to the foundations that have supported my work financially: Mid Sweden University foundation for internationalisation, Zonta, Fredrika Bremerförbundet, Land- och sjöfonden, Forum for Gender Studies, the Student Union at Mid Sweden University and, especially, Health Care Sciences Postgraduate School.

Most importantly, my partner Ann-Marie, thank you for being you. Thank you for understanding my passion for research and for helping me to appreciate the beautiful things in life. I deeply respect you for standing by my side; your support has been invaluable, your love gives me strength. You were not in my life when I started this journey. Now, we can go anywhere.
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APPENDICES

Appendix 1. Interview guide – an example

In **bold**: main structure of the focus group discussions.
In *italics*: examples of probes and topics introduced by the interviewer when needed.

What do you think of when you hear the word ‘Mental health’? What words would you use?

...please explain more...

What do you think is important for mental health and mental ill health among young people?

Leisure time?

Future?

For girls?

For boys?

Partner?

School?

Friends?

How?

For girls?
Appendix 2. Examples of questions in the questionnaire

Psychological distress (items 2, 3, 4, 6, 8, 10)

36. Hur ofta har du under de tre senaste månaderna känt dig:

<table>
<thead>
<tr>
<th>Sätt ett kryss på varje rad!</th>
<th>Alltid</th>
<th>Ofta</th>
<th>Iblånd</th>
<th>Sällan</th>
<th>Aldrig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Glad och upptåt</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Nervös</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Ängslig/orolig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Nedstämd/deppig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Pigg</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Irriterad eller på dåligt humör</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Avslappnad och lugn</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Värbelös</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Att du har haft kontroll över ditt liv</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Uppgiven</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Slutkord</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Betydelsefull</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

Deliberate self-harm (items 2 and 4)

Här kommer några frågor om att skada sig själv.
Det handlar alltså INTE om skador som du råkat ut för genom en olyckshändelse.

44. Har du någon gång:

<table>
<thead>
<tr>
<th>Sätt ett kryss på varje rad!</th>
<th>Ja, flera gånger</th>
<th>Ja, några gånger</th>
<th>Ja, någon gång</th>
<th>Nej, aldrig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tänkt på att du skulle vilja skada dig själv genom att t.ex. skära, rispa, bräna eller sticka dig?</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>

47. Har något av detta hänt dig under de senaste tolv månaderna i skolan?

<table>
<thead>
<tr>
<th>Sätt ett kryss på varje rad!</th>
<th>Ja, flera gånger</th>
<th>Ja, några gånger</th>
<th>Ja, någon gång</th>
<th>Nej, aldrig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Att andra personer har frusit ut dig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Att någon gett dig ovälvomekomma kommentarer om ditt utseende eller kropp</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Att någon kallat dig “hora”, “bög”, “fitta” eller andra former av könsord</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Att någon hållit fast eller trängt dig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Att andra personer har ljutit eller spridit falska ryken om dig</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Att någon tafsat på dig eller tvingat dig att ta på honom/henne på ett sexuellt sätt</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Att någon har utsatt dig för rasistiska ord eller handlingar</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
<tr>
<td>Att någon sagt nedsättande saker om ditt kön eller sexualitet</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
<td>☐</td>
</tr>
</tbody>
</table>
Appendix 3. Examples of responses on specific questions

Reports (percentage) of items included in the measure of psychological distress (always or often during the past 3 months).

<table>
<thead>
<tr>
<th>Items in measure of psychological distress</th>
<th>Boys (%)</th>
<th>Girls (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nervous</td>
<td>14.2</td>
<td>20.3***</td>
</tr>
<tr>
<td>Irritable</td>
<td>18.5</td>
<td>28.4***</td>
</tr>
<tr>
<td>Worthless</td>
<td>9.4</td>
<td>19.2***</td>
</tr>
<tr>
<td>Resigned</td>
<td>11.0</td>
<td>14.4*</td>
</tr>
<tr>
<td>Depressed/low</td>
<td>16.7</td>
<td>29.1***</td>
</tr>
<tr>
<td>Worried/anxious</td>
<td>13.5</td>
<td>27.1***</td>
</tr>
</tbody>
</table>

Chi-Square test. *p<0.05; **p<0.01***p<0.001

Reports (percentage) of items included in measure of deliberate self-harm (DSH), (ever in life).

<table>
<thead>
<tr>
<th>Items in measure of deliberate self-harm</th>
<th>Boys (%)</th>
<th>Girls (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSH by cutting, scratching, burning</td>
<td>9.7</td>
<td>21.6***</td>
</tr>
<tr>
<td>DSH by overdose of medicine</td>
<td>4.7</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Chi-Square test. *p<0.05; **p<0.01***p<0.001

Reports (percentage) of items included in the measure of bullying.

<table>
<thead>
<tr>
<th>Items in measure of bullying</th>
<th>Boys (%)</th>
<th>Girls (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Been socially excluded</td>
<td>22.4</td>
<td>31.2***</td>
</tr>
<tr>
<td>Experienced somebody spreading false rumours about you</td>
<td>28.4</td>
<td>39.2***</td>
</tr>
<tr>
<td>Been exposed to racist comments or actions</td>
<td>12.0***</td>
<td>4.8</td>
</tr>
</tbody>
</table>

Chi-Square test. *p<0.05; **p<0.01***p<0.001

Reports (percentage) of items included in the measure of sexual harassment.

<table>
<thead>
<tr>
<th>Items in measure of bullying</th>
<th>Boys (%)</th>
<th>Girls (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Received unwelcomed comments on body or appearance</td>
<td>28.5</td>
<td>29.2</td>
</tr>
<tr>
<td>Been called ‘whore’, ‘fag’, ‘cunt’ or other ‘four-letter’ words</td>
<td>36.5***</td>
<td>23.5</td>
</tr>
<tr>
<td>Been pawed or forced to touch somebody in a sexual way</td>
<td>8.5</td>
<td>9.0</td>
</tr>
<tr>
<td>Received degrading comments about your gender or sexuality</td>
<td>9.0</td>
<td>14.1***</td>
</tr>
<tr>
<td>Been grabbed or shouldered/shouldered/cornered</td>
<td>20.3***</td>
<td>13.4</td>
</tr>
</tbody>
</table>

Chi-Square test. *p<0.05; **p<0.01***p<0.001
Appendix 4. Overview of interaction effects

Overview of interaction effects between violence variables and educational programme (vocational) and parental employment status (one or both parents not employed). Significant interaction effects are indicated by asterisks.

<table>
<thead>
<tr>
<th></th>
<th>Stress</th>
<th>Boys</th>
<th></th>
<th>Girls</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Vo(^a)</td>
<td>PnE(^b)</td>
<td>Vo</td>
<td>PnE</td>
<td>Vo</td>
</tr>
<tr>
<td>Bullying</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sexual harassment</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Physical violence past</td>
<td>***</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>12 months</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Physical violence ever</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td>Sexual assault</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

\(^a\)p<0.05; \(^b\)p<0.01; \(^*\)p<0.001
\(^a\) Vocational educational programme
\(^b\) One or both parents not currently employed