UiT The Arctic University of Norway

Faculty of Health Sciences

Mental Health Problems, General Health and Dropout in Upper Secondary School in Northern Norway

A prospective cohort study and a qualitative exploration of the dropout process

Charlotte Bjørnskov Goll

A dissertation for the degree of Philosophiae Doctor - July 2024

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Abbreviations

DALY	Disability-Adjusted Life Year
DSM-5	Diagnostic and statistical manual of mental disorders: DSM-5
EDS	Eating Disturbance Scale
GPA	Grade point average
HSCL-5	Hopkins Symptom checklist (short version)
ICD-10	The ICD-10 classification of mental and behavioural disorders: clinical descriptions and diagnostic guidelines
LP	Literacy problems
NIFU	Nordic Institute for Studies in Innovation, Research and Education
OECD	The Organisation for Economic Co-operation and Development
PAQ	Personal Attributes Questionnaire
PCA	Principal Component Analysis
RFQ	Regulatory Focus Questionnaire
SLE	Stressful Life Events
SOC	Sense of Coherence
SSB	Statistisk Sentralbyrå (Statistics Norway)
SWLS	Satisfaction with Life Scale
WHO	World Health Organization

List of Papers

1. Goll, C. B., Friborg, O., Ottosen, K. O. & Sørlie, T. (2024) Self-rated health and life-satisfaction among upper secondary students in Northern Norway. *Revised for re-submission*.

2. Ottosen, K. O., Goll, C. B. & Sørlie. T. (2017). “From a sense of failure to a proactive life orientation”: First year high school dropout experiences and future life expectations in Norwegian youth". *International Social Work, 62*(2) 684-698. https://doi:10.1177/0020872817746225

3. Goll, C. B., Sørlie, T., Friborg, O., Ottosen, K. O. & Sæle, R. G. (2024). Poorer self-reported mental health and general health among first year upper secondary school students do not predict school dropout: a five-year prospective study. *Frontiers in Psychology, 15,* 1304314. https:// doi:10.3389/fpsyg.2024.1304314

Abstract

Background/Aims: Health and socioeconomic inequalities are strongly connected, and especially poor mental health has a strong association with exclusion from the labour market. Education is important to equalize the socioeconomic gradient and has also been shown to be associated with good mental health and wellbeing. Completed upper secondary school is a basic prerequisite for further education and therefore school dropout is a major problem worldwide. In Norway, the dropout rate is 20 – 30%, and highest in the Northern parts of the country.

The main aim in the project "Ung vilje" («young intent») was to identify causes, predictors, and consequences of dropout in upper secondary school. The aim of this thesis has been to identify possible associations between selected baseline demographic, health- and school related variables and school dropout five years after enrolment as well as how the dropout process has been experienced by the individual.

Methods: A longitudinal prospective study was started in 2010 at the beginning of the first year in upper secondary school in Troms County with 1676 participants (response rate: 69%). The students filled in a comprehensive questionnaire (T1) with follow up after three and ten years (T2 and T3 respectively). The main focus in this thesis has been on baseline predictors for dropping out 5 years after enrolment. Data on grades from elementary school, track and completers/dropouts were collected from the school register of Troms County. In a qualitative study thirteen students were interviewed about how they had experienced their drop-out process during the first school year.

Results: After five years, one-third (33%) of the students had dropped out, with the highest rate (38%) in vocational track. Based on baseline-data, the predictors for mental health (HSCL-5), satisfaction with life (SWLS) and general health were compared (paper 1),

showing some similarities: Social support and masculine personality positively predicted all three health outcomes, while disturbed eating behaviour was a negative predictor for all the three measures. Logistic regression analyses showed that grade point average (GPA) from elementary school and track in upper secondary school were predictors for dropout after five years (paper 3). None of the health measures nor satisfaction with life were significant when adjusted for grades, though analyses of subgroups indicated that students in vocational track had poorer mental and general health than students in general track. Additionally, students who dropped out, had significantly poorer general health at baseline than the completers in vocational track. In the qualitative study (paper 2) two categories of students experiencing dropout were identified. Category A: *A sense of failure* with feelings of sadness, failure and hopelessness and with concerns for the future and category B: Proactive life orientation, having feelings of coping, self-confidence and hope for the future.

Discussion/conclusion: Mental health and general health measured at the start of upper secondary school did not predict dropout after five years. Only lower GPA and being in vocational track were associated with dropout. Mental health is influenced by situational conditions and will consequently vary during adolescence and throughout the period they are enrolled in upper secondary school. Exploring the students' experiences with dropout displayed a wide variation in their stories, but two distinctly different main categories were found. In the category: *A sense of failure*, the students had negative experiences from relations with both parents and teachers and a serious worry for their future. In the category: *Proactive life orientation*, the students had made a deliberate choice of dropping out of school for the benefit of a work-related alternative, thereby turning a difficult situation into hope for the future.

To identify students at risk for dropping out, mental health and life satisfaction should be monitored closely. Students with poor mental health should be encouraged to more frequent

conversation with health personnel and/or teachers, aiming to strengthen the teacher-student relationship and make it easier for the student to make contact whenever it is desired.

Sammendrag på norsk (abstract in Norwegian)

Bakgrunn og formål: Helse og sosioøkonomisk ulikhet er sterk forbundet og særlig er dårlig mental helse assosiert til utelukkelse fra arbeidsmarkedet. Utdannelse er viktig for å utjevne den sosio-økonomiske gradienten og er i tillegg assosiert med bedre psykisk helse og livskvalitet. Videregående skole er veien til utdannelse og derfor er frafall herfra et stort globalt problem. Frafallsraten i Norge er høyest i Nord-Norge (20-30%).

Hovedmålet med prosjekt «Ung vilje» er å identifisere årsaker og konsekvenser av frafall i videregående skole og denne avhandling har særlig fokus på mental helse, generell helse og livskvalitet i relasjon til frafallet.

Metode: I 2010 startet en langsgående prospektiv studie med deltakelse av 1676 studenter på første år i de videregående skoler i Troms fylke (respons rate: 69%). Den kvantitative delen av studien startet med et omfattende spørreskjema som studentene fylte ut like etter skolestart (T1) med oppfølging etter 3 og 10 år etter (henholdsvis T2 og T3). Opplysningene om karakterer fra grunnskolen, linje og frafall ble hentet fra fylkeskommunen. I denne avhandlingen har vi undersøkt om svarene på disse baseline variablene, spesielt demografi, helsevariabler og faktorer relatert til skole, kunne spå om frafall målt 5 år etter oppstart. Studien består også av en kvalitativ del. 13 studenter som hadde falt fra i løpet av det første skoleåret ble intervjuet om årsakene til og prosessen rundt frafallet.

Resultater: Etter 5 år var en tredjedel (33%) av studentene falt fra; flest fra yrkesfag (38%). Fra baseline-data ble prediktorer for psykisk helse (HSCL-5), tilfredshet med livet (SWLS) og generell helse sammenlignet (artikkel 1). Sosial støtte og maskulin personlighet predikerte alle 3 utfall positivt og spiseproblematikk predikerte dem negativt. En logistisk

regresjonsanalyse viste at kun karaktergjennomsnitt fra grunnskole og linje predikerte frafall (artikkel 3). Ingen av helsevariablene eller livstilfredshet var signifikante etter justering for karakterer. Imidlertid viste analyser av undergrupper at studentene på yrkesfag hadde dårligere mental og generell helse enn studentene på studieforberedende studieprogram. I tillegg hadde yrkesfagstudentene som falt fra dårligere fysisk helse enn studenter som gjennomførte. I den kvalitative studien (artikkel 2) ble studentenes erfaringer med frafall inndelt i to kategorier; A; «en følelse av mislykkethet», de følte seg triste og mislykkede, følte håpløshet og hadde bekymringer for fremtiden og B; «proaktivt livssyn» med mestringsfølelse, selvtillit og håp for fremtiden.

Diskusjon/konklusjon: Funnene viser at psykisk helse og generell helse som ble registrert ved oppstart av videregående skole ikke predikerte frafall etter fem år. Det var kun lave karakter fra grunnskolen og det å være på yrkesfaglig linje som var assosiert med frafall. Blant ungdommer forekommer dårlig psykisk helse ofte i kortere perioder og psykisk helse målt med HSCL-5 vil variere gjennom perioden i videregående skole. Ved å utforske elevenes opplevelser med frafall gjennom kvalitative intervjuer var der stor variasjon i fortellingene, men allikevel fordelte disse seg i to hovedkategorier: I kategorien: «en følelse av mislykkethet» hadde elevene negative opplevelser fra relasjonene til både lærerne og foreldrene og var alvorlig bekymret for fremtiden. I kategorien «proaktivt livssyn» hadde elevene aktivt valgt å avslutte den videregående skolegangen til fordel for et jobb-relatert alternativ. De hadde snudd en vanskelig livssituasjon til en meningsfull vei og hadde håp for fremtiden.

Psykisk helse og livskvalitet bør følges gjennom hele skolegangen for å forebygge frafall. Dette kan gjøres ved å styrke helsesøsterordningen og samtidig motivere til hyppigere samtaler mellom lære og elev og derved styrke lære-elev relasjonen.

Introduction

The impact of socioeconomic inequalities on health and mortality is well-known (Hosseinpoor et al., 2012; Mackenbach et al., 2017; OECD, 2010; Raghupathi & Raghupathi, 2020; WHO, 2013a). In particular, poor mental health has been shown to be associated with exclusion from the labour market (OECD, 2010; Ramsdal et al., 2018; WHO, 2017), and having a poor socioeconomic status have been shown to be associated with higher risk of depression and poor mental health including among adolescents (Fryers et al., 2003; Reiss, 2013; Weinberg et al., 2019). Poor mental health is a severe problem, and WHO has pointed out depression as the main cause of disability worldwide (WHO, 2017). Education is an important tool for balancing the socioeconomic inequalities, as both participation in the labour market and income increase proportionally with the level of education (Halvorsrud, 2017; Markussen, 2017; OECD, 2022; WHO, 2013a). The level of education does indeed increase – especially among women – a development that paradoxically is also making it even more difficult to get a job without an education (Markussen, 2017; OECD, 2017; Wollscheid et al., 2018). Nevertheless, 20 – 30% (varying between 10.5% in general track and up to nearly 50% in some study programmes in vocational tracks) of the young population in Norway drop out of upper secondary education (high school) (Statistics Norway, 2023a), weakening their chances of getting an education (Markussen, 2017). According to the Norwegian Directorate for Education and Training the costs for educating each student in 2022 were approximately 180.000 NOK (~17.000 USD) (Norwegian Directorate for Education and Training, 2023), corresponding to a nationwide total of 2.6 billion NOK (~$245M) per year. Each student not completing their programme represents an economical loss for the society. A range of researchers, both nationally and worldwide, are trying to illuminate the reasons and consequences of dropping out of school (e.g. (De Ridder et al., 2012; Dupéré, Dion, Leventhal, et al., 2018; Markussen et al., 2011; Ramsdal et al., 2018)). The dropout rates in

Northern Norway are even higher than in the rest of the country (Statistics Norway, 2023a) and studying the phenomenon in the population in Northern Norway may yield important knowledge of the mechanisms for school dropout.

As well as being unemployed, school dropout has been associated with poor mental health (Askeland et al., 2022; Bania et al., 2016; Dupéré, Dion, Nault-Brière, et al., 2018; Hjorth et al., 2016; von Simson et al., 2022). The association between dropout and mental health have often been investigated in retrospective studies, that is, after the students have dropped out (Dupéré, Dion, Nault-Brière, et al., 2018; Melkevik et al., 2016). Dupéré V et al. (2018) found an association with dropout and depressive symptoms 3 months before the dropout. However, the students in the study were asked retrospectively shortly after the dropout. Prospective cohort studies are therefore necessary to better illuminate this association.

In the project "Ung vilje" (in paper 2 the project is translated to "young intent"), the main aim was to identify reasons and consequences of dropping out using both a questionnaire based prospective cohort study of all consenting participants as well as a qualitative study of first year high school dropout experiences. In this thesis, issues related to mental health, general health and satisfaction with life have been the focus. By combining quantitative and qualitative methods we could get a broader understanding (Malterud, 2018) of the association between mental health and dropout.

The Norwegian Educational System

It is timely to give a short introduction to the Norwegian educational system before moving further. In Norway, education normally requires 13 - 14 years of school to be qualified for a profession or for enrolment in higher education. The first 10 years of elementary school are mandatory, while the next three/four years in upper secondary school

are voluntary. However, the current Norwegian upper secondary education is still based on changes made in “Reform 94” (Markussen et al., 2011). This reform ensured every student the right to 3 - 4 years of upper secondary education, which is free of charge (Vilbli, 2024). If the students need additional time, they may add 2 years also free of charge. Almost all Norwegian adolescents enter upper secondary school (Markussen et al., 2011).

In upper secondary school there are two main tracks: general and vocational track. General track is stipulated to three years and provides the students with a higher education entrance qualification. Vocational track consists of several study programs (e.g., health and social care, electricity and electronics, agriculture) and is stipulated to 4 years including two years of apprenticeship. Vocational track gives the students a vocational qualification, which also qualifies to higher vocational education. Some students in vocational track switch after the first two years to an additional general course which makes them qualified for entering higher education. Some choose to supplement a vocational qualification with one year in general track which also qualifies them to higher education.

Switching track or education programme or supplementing a vocational qualification generates one extra year to complete school (Vilbli, 2024).

Dropout from Upper Secondary Education

Approximately all (98%) of Norwegian adolescents enter upper secondary school after finishing lower secondary school (Norwegian Directorate for Education and Training, 2023). Although there has been special focus on dropout for many years (Markussen et al., 2011; OECD, 2017 etc.; Ramsdal et al., 2018) statistics from 2016-2022 show that more than 31% (37% in Troms) have not finished upper secondary education within the stipulated time of graduation (Statistics Norway, 2023a) and after five/six years the share of dropouts is still

19%. The dropout rate is higher in vocational education (30%) than in general education (11%) and is higher among males (23%) than among females (15%). There are rather large differences in dropout rates across the country, as in Northern Norway a substantial part has not graduated after five/six years (Nordland, 26%; Troms, 22%; Finnmark, 29% versus 16% in Akershus and 15% in Sogn and Fjordane) (Statistics Norway, 2023a). In Troms the overall dropout rate has decreased from 31% (2010-2016) to 22% (2016-2022). More students are graduating within normative length (10%) and more students in vocational education graduates (an increase from 58% to 68%) (Statistics Norway, 2023a).

Some Theoretical and Empirical Explanations for Dropout

In this section I will present some theorical and empirical explanations that have led us to a better understanding of some of the mechanisms explaining dropout and completion in upper secondary school.

Doll et al. (2013) examine and compare seven studies and defined a framework with three core factors explaining dropout; 1) *push*, 2) *pull* and 3) *falling out*. The *push* factors are factors in the school environment or school policy like poor academic performance, failing in tests or low attendance, poor relationship to teachers or peers, problems with discipline, or bad behaviour. The *pull* factors are attractive/distractive to the students from outside the school, for instance work, familial needs/changes and illness. *Falling out* is described as a more passive decision/action not caused by school nor the student where the student becomes passive or disillusioned and do not achieve academic progress. Contrary to older studies where *pull* factors were most common, Doll et al. (2013) found that in recent research, *push* factors were most frequent. The study also explores gender differences and find that males

more often reported *push* factors and females reported *pull* factors leading to dropout (Doll et al., 2013).

Antonovsky (1979) has contributed to the development of the salutogenic perspective. The salutogenic perspective focuses on factors promoting health and coping with adversity and health problems. Antonovsky (1987) describes "*a global orientation*" with feelings of confidence and predictable environments where things may turn out successfully. He describes the connection between health, stress and coping, leading to the model: Sence of coherence (SOC) in which life is understood. The theory of Antonovsky focuses on three components that are essential for coping with challenges in life: *Comprehensibility*; how internal and external stimuli are perceived and make sense. *Manageability*: To what extent one is able to cope with the demands you face with the available resources one has and *meaningfulness*; how the demands are challenging and engaging. Antonovsky (1987) finds that a weak SOC is related to poorer health which has been confirmed by several other researchers as well as the association with a higher risk of mortality (Super et al., 2014b) and poorer mental health (Carlén et al., 2020; Kouvonen et al., 2010; Moksnes, Espnes, et al., 2014) potentially leading to dropout (see the section *Mental Health and School Dropout*). According to Antonovsky (1987) passivization is leading to reduced meaning of life and hopelessness which may lead to loosing engagement in school, also associated with school dropout as described by Archambault et al. (2009).

In a combined quantitative and qualitative survey from the most Northern parts of Norway (Finnmark), Markussen et al. (2012) discuss a conceptual framework explaining what he calls early leaving (dropping out before finishing), non-completion (carry out upper secondary school but without achieving all requirements or passing all exams) and completion (having graduated and obtained qualification for higher education or vocational qualification) from upper secondary school (Markussen et al., 2011). The framework consists of background

factors which affects both earlier academic performance and engagement with school and how academic performance and engagement affect each other (Markussen et al., 2012). The authors describe seven key points affecting non-completion and dropout from upper secondary school: 1. Low academic performance from elementary school (GPA). 2. Enrolment in an undesirable study program, to avoid leaving home. 3. The students were disengaged in school 4. In vocational track, they did not find the right apprenticeship, 5. The students experienced that they could get a job without education, 6. Work matters the most and 7. They had an idea of a good life outside school. Markussen discusses this further in the book “De frafalne” (Markussen, 2016a) and finds that engagement and identification with school are important for completing school and defines three key points: 1) The school must be a place where the adolescents belong to and identify with, 2) the school must be worthy to invest in and 3) the students take part in the education and take action to learn.

In a longitudinal study, Eicher et al. (2014) found that dropout intentions were a predictor for actual dropout one year later in upper secondary school. Furthermore, they found that if the students had high levels of educational stress, they were thinking more often about dropping out of school. However, in students with an optimistic view of life, the dropout intentions were reduced.

The Importance of Good Mental Health

Health has been defined by WHO as: *"Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.*" (WHO, 2024a) and further they define: “*Mental health is a state of well-being in which every 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 her or his community”(WHO, 2024b).*

According to WHO, absence of mental health problems is crucial to maintain a state of well-being that makes the individual able to have an ideal existence (WHO, 2022). In a discussion of the definition, Galderisi et al. (2015) emphasize positive functioning, wellbeing and emotions as key factors in mental health. As Leonardi (2018) points out, health is explicitly linked to well-being, and complete well-being is nearly impossible to achieve. The definition does not take into account that people may experience many symptoms within a short period which means that health is a temporary state (Leonardi, 2018). Neither does it acknowledge that people who experiences negative events may be coping with an appropriate reaction, for instance grief, which would result in loss of well-being and thus also loss of health. Furthermore, as Galderisi (2015) also discuss, people with good mental health may also be sad or unhappy at times.

The WHO definition is not considering that living the daily life and being in development imply challenges that sometimes cause normal mental stress reactions and negative feelings, especially in youth. In a cross-sectional survey, questions of mental health and well-being is surveyed within a short period and can therefore not be interpreted in context of the broad definition by WHO.

Regardless of definitions, poor mental health is a major public health challenge (Patel et al., 2007; WHO, 2013b). Mental health disorders, including depression, anxiety, social phobia and obsessive-compulsive disorders, often debut in adolescence or young adulthood (Friborg et al., 2013; Michaud & Fombonne, 2005; Patel et al., 2007; WHO, 2021), and may remain unidentified for several years (Michaud & Fombonne, 2005; Patel et al., 2007). In Europe more than 1/3 suffers from mental health disorders, with anxiety and depression ranking highest in terms of DALYs (Disability-Adjusted Life Year) (Wittchen et al., 2011). During adolescence, 10-20% experience a mental health disorder - behavioural disorders, depression and anxiety being most common (Patel et al., 2007; WHO, 2021). Recent studies both in

Norway and internationally have found a worrying increase in self-reported poor mental health among nearly 30% of the adolescent population (Auerbach et al., 2018; Krokstad et al., 2022).

Fergusson et al. (2015) showed that mental health influences life satisfaction and vice versa. In the European Social Survey including nearly 300.000 participants, there was a strong association between satisfaction with life and self-reported general health (Kööts–Ausmees & Realo, 2015). Rask et al. (2002) also found a positive association between satisfaction with life and general good health, school satisfaction and body satisfaction.

Mental Health and School Dropout

Poor mental health is often categorized into internalizing problems, externalizing problems and other psychiatric problems (Parviainen et al., 2020). Both internalizing problems (e.g., anxiety, depression, obsessive compulsive disorder) and externalizing problems (e.g., behaviour disturbances and hyperactivity problems) are associated with poorer academic performance and higher dropout (Askeland et al., 2022; Esch et al., 2014; Fletcher, 2008; Gubbels et al., 2019; Gustafsson et al., 2010; Hjorth et al., 2016; Lindhardt et al., 2022; Parviainen et al., 2020; Sagatun et al., 2014). However, these findings are nuanced. For instance, Fletcher et al. (2008) demonstrated that depression is related to poor academic achievement, but only for females. Other studies show that the association between depression/anxiety and dropout for males mainly occurs in vocational education (Hjorth et al., 2016). A study from Finland (Parviainen et al., 2020) showed that approximately 20% of the students had symptomatic profiles, and within these students, males in vocational track had mainly externalizing problems and girls in both vocational and academic track had primarily internalizing symptoms. Both profiles were associated with dropout intensions which

according to Eicher et al. (2014) predict actual dropout. Furthermore, a large register study from Norway by von Simson et al. (2022) found, that the risk of not completing upper secondary school was higher if the students had a diagnose within the spectre of externalizing disorders (highest) or internalizing disorders.

In a systematic review on mental health problems and early school leaving, Esch et al. (2014) found that externalizing problems were a high barrier for academic attainment, while internalizing problems were reported developing *after* the dropout, as a consequence more than a cause. Contrary to this, Dupéré et al. (2018) found, a higher dropout rate in students who had depressive symptoms 3 months *before* the dropout, but not if they had recovered from an earlier depression.

Fergusson et al. (2015) made a follow up in New Zealand and they did not find direct causal association with mental health problems at the age of 30 and leaving school without qualifications when controlled for childhood adversity (e.g., low family education, low parental attachment, family violence, sexual abuse etc). They suggested that a good social family background when leaving school was protective of later mental problems.

Mental Health and Academic Performance/Learning Problems

Academic performance is highly related to dropout and studies have shown association between lower grades and dropout, both actual grades and previous grades (Allensworth & Easton, 2005; Bowers, 2010; Casillas et al., 2012; Statistics Norway, 2023a). Grades and academic performance also associate with mental health (Brännlund et al., 2017; Gustafsson et al., 2010; Riglin et al., 2013). A review of quantitative and qualitative research by Gustafsson et al. (2010) found that mental health and well-being are associated with school performance among adolescents and furthermore that there is a reciprocal relation between

mental health and academic performance. Failing in school may lead to increased internalizing and externalizing mental health problems, e.g. by losing self-esteem and generating distress. Conversely, they also found that externalizing (concentration problems, ineffective schoolwork, conflicts etc.) and internalizing (emotional distress leading to lack of concentration, nonattendance, lower expectations from family and teachers etc.) problems may lead to poorer academic performance. Academic achievement may also affect the student's well-being. When students find school meaningful and they have academic success, their well-being improves. On the other hand, when they are having feelings of failure, difficulties in school, they found no meaning within the school and the student's well-being were affected negatively, which is also in line with Antonovsky's three components for coping with challenges in life: Comprehensibility, manageability and meaningfulness (Antonovsky, 1987). Gustafsson et al. (2010) also found that interpersonal relationships and social support from peers, teachers and family were important for improving the student's well-being and for preventing poor mental health.

Students with learning disabilities are more likely to have lower educational achievements, engagement in school, and expectations for future work than students without learning disabilities (Gustafsson et al., 2010; Irvin et al., 2011; Kortering et al., 2010; Wagner et al., 2005) and they have a higher risk of dropping out (Gubbels et al., 2019; Korhonen et al., 2014). Especially students with learning disabilities and poor mental health have high dropout rates (Wagner et al., 2005).

Mental Health and Physical Health

Poor *mental* health has a strong association with poor *physical* health (Chapman et al., 2005; Momen et al., 2020; Ohrnberger et al., 2017; Richmond-Rakerd et al., 2021; WHO,

2013b). Høye et al. (2016) showed an increased mortality in patients with affective disorders in the Norwegian population. In a review of the literature, Osborn (2001) found that people with long-term mental illness have increased risk of both morbidity and mortality, often combined with an unhealthy lifestyle. Already in adolescence an unhealthy lifestyle e.g., obesity (Quek et al., 2017), drinking (Haarasilta et al., 2004; WHO, 2021) and smoking (Johnson et al., 2000) have been shown to be associated with poor mental health. Accordingly, it is common that mental health disorders are associated with somatic comorbid disorders, for instance asthma, diabetes, obesity, etc. (Chapman et al., 2005; Momen et al., 2020; Osborn, 2001), also in adolescence (Agnafors et al., 2019; WHO, 2021; Aarons et al., 2008).

Poor sleeping habits have been shown to be associated with poor mental health and less sleep influences school performance (Kansagra, 2020). Studies have also shown association between poor physical health and school performance (Huurre et al., 2006) and school dropout (De Ridder et al., 2013). Studies have shown that psychosomatic symptoms e.g. headache and stomach pain are associated with anxiety and depression (internalized mental health problems) (Grigorian et al., 2023; Gustafsson et al., 2010; Kinnunen et al., 2010). Sometimes young people also perceive stress as somatic health symptoms e.g., palpitations, tiredness, musculoskeletal or visceral sensations etc. (Eriksen & Ursin, 2004; Kirmayer, 1984) without actual physical illness present.

Satisfaction with Life

Satisfaction with life is defined as a cognitive evaluation of one's life assessed from one's own standards (Lewis et al., 2011; Pavot et al., 1993). Satisfaction with life is often used synonymously with subjective well-being (Veenhoven, 2015). Well-being is a broader

concept that includes both an emotional and a cognitive evaluation (Pavot et al., 1993) and have a positive relationship with most life domains such as marriage, friendship, income, work performance and health (Diener et al., 2002; Lyubomirsky et al., 2005). Fergusson et al. (2015) showed that mental health influences life satisfaction and vice versa and Moksnes et al. (2014) have shown an association between lower satisfaction with life and depression and anxiety in an adolescent population. In addition, an association between satisfaction with life and self-reported general health was found in a big European survey (Kööts–Ausmees & Realo, 2015), while Rask et al. (2002) also found a positive association between satisfaction with life, school satisfaction, and body satisfaction.

Liem et al. (2010) showed that students dropping out of school were more depressed than students graduating at the expected time, and they reported lower life satisfaction at the expected time of graduation, but not after 4 years. Borren et al. (2012) have demonstrated an association between psychological distress and poor subjective well-being. Suldo et al. (2011) found that subjective well-being predicted the student's academic performance, and that poor mental health combined with high well-being scores did not. As described earlier, Gustafsson et al. (2010) showed that both mental health and well-being are associated with school performance.

Sense of Coherence (SOC)

Based on the salutogenic perspective, Antonovsky (1987) developed the instrument "Sence of Coherence Scale" (SOC) (the theory is described in the section *Some Theoretical and Empirical Explanations for Dropout*"). Several studies have shown associations between SOC and mental health (Kouvonen et al., 2010; Myrin & Lagerström, 2008; Schäfer et al., 2023). Moksnes et al. (2014) found an association between SOC, stress, and emotional

symptoms during adolescence, and showed a strong and inverse association between SOC and emotional symptoms, especially for girls with anxiety. In a 19 year follow-up study, Kouvonen et al. (2010) found that a strong SOC was associated with reduced presence of psychiatric disorders. Antonovsky's finding that a weak SOC is related to poorer health (Antonovsky, 1987) has later been confirmed by other researchers who also found a higher risk of mortality (Super et al., 2014a).

Mental Health and Personality Traits

Personality traits and mental health are closely linked. For instance, higher scores on neuroticism are associated with depression and anxiety among adults (Jylhä & Isometsä, 2006; Kendler et al., 2006), whereas extraversion and conscientiousness have shown positive associations with better mental health and a more functional coping style (Watson & Hubbard, 1996).

Adolescents often identify with idols or figures in mass media expressing masculinity or femininity, which might influence their development of gender-specific traits (Arnett & Hughes, 2014). When studying personality traits in adolescents, it's important to be aware of this. Independency, being competitive and confident are usually connected to the masculine gender, while being emotional, gentle, helpful, and devoted to others, relate to the female gender (Spence & Helmreich, 1978). In the Western countries, girls display expressive/feminine traits much more than boys (Leszczynski & Strough, 2008; Spence, 1993). At the same time, they are expected to have success within academics, work, family and being attractive females ("superwomen") needing both masculine and feminine traits (Mensinger et al., 2007).

Psychological Reactions to Stressful Life-Events

Several studies have shown an association between stressful life events, chronic stress, and depression (Hammen, 2005; Haavet et al., 2010; Kessler, 1997; Liu & Alloy, 2010). Stressful life events may also play an important role in dropout, e.g., serious illness or accidents affecting themselves or family/friends, being pregnant etc. (Dupéré, Dion, Leventhal, et al., 2018). Changing from lower to upper secondary school is a vulnerable phase in adolescence (Bowers, 2010) but may also represent a positive change in life (Brissette et al., 2002; Gustafsson et al., 2010). When one's own and/or the family's expectations about the school's performance requirements are not met over time, there is every reason to believe that this creates increasing stress and challenges for mental health and quality of life. This will in turn increase the risk of even poorer coping and drop-out.

Other Factors Related to Mental Health

Poor mental health is associated with many other conditions (Nolen-Hoeksema & Hilt, 2013; WHO, 2021). Mental health disorders such as depression, may be associated with substance abuse (Burnett-Zeigler et al., 2012; WHO, 2021), a higher likelihood of negative life events (Haavet et al., 2004), and being bullied (Eyuboglu et al., 2021; Myklestad et al., 2012). Especially among female adolescents, mental health problems are associated with negative body image and a higher risk of eating disorders (Brytek-Matera & Czepczor, 2017; Smolak, 2004). Earlier studies have shown that depression and lack of social support are associated, and that support from family and friends protects against poor mental health among adolescents (Derdikman-Eiron et al., 2013; Nolen-Hoeksema & Hilt, 2013; Pettit et al., 2011; Rothon et al., 2012). In the review from Gustafsson et al. (2010) they found

interpersonal relationships and social support from peers as well as relation to teachers were important for improving the student's well-being and may prevent poor mental health.

Because of the possible negative long-term impact of poor mental health both on the individual and the society level, early identification of a negative trend in mental health and satisfaction with life should be pursued. The implementation of measures that can reverse and correct the causes of the negative development is therefore very important. As described, dropout is a complex phenomenon with both individual factors and factors from outside school. Taking the association between mental and physical health into account, we wanted to investigate the association between poor physical health and mental health, and dropout in upper secondary school. It appears that engagement, meaningfulness and belonging to school are very important for completing school. To achieve a thorough characterization of mental and physical health and dropout, it is important to focus on academic achievement and other school factors (e.g. student – teacher relation), and in addition look at sense of coherence, gender differences, stressful life events, and factors as being bullied, eating disorders, social and psychological factors. It is also valuable to get a broader understanding of the student's experiences with the school and the dropout process by interviewing students who dropped out and get a deeper insight about whether the students found the school meaningful, comprehensible, and manageable.

Aims and Hypotheses

The overall aim of the project; "Ung vilje" was to explore and identify causes and consequences of dropping out of upper secondary school and to identify possible initiatives to increase the graduation-rate. In my thesis, I have chosen to focus on health and dropout. In paper 1 we explored psychosocial and school related predictors for health and life satisfaction

as we expected these variables to associate with dropout from upper secondary school. Next, we focused directly on the dropout. First by interviewing students who had dropped out of school (paper 2) and secondly by quantitative analysis of dropout with health and life satisfaction at the start of upper secondary school as predictors (paper 3).

The study "Ung vilje" was planned as a longitudinal, 10-year project, following the students upon entering, during and after completing upper secondary school. The quantitative study was initiated with a broad self-report questionnaire (T1), which in paper 1 of this thesis served as the basis for a cross-sectional study of adolescents entering upper secondary school. A follow-up with an abbreviated questionnaire was completed after three (T2) and ten (T3) years. Dropout data was collected from the school registry of Troms County after five years (paper 3).

In our qualitative study we wanted to explore the dropout process and how it had influenced life of the individual student. By letting the students express their experiences and feelings about dropout we had the opportunity to get a deeper understanding of the phenomenon.

The specific aims, hypotheses and designs for the three papers are as follows:

Paper 1

Aim: To examine psychosocial and school related predictors of self-rated mental and physical health, as well as life-satisfaction in a North Norwegian cohort of first year students in the upper secondary school.

Hypotheses: Health would be positively predicted by social support and masculine personality and negatively by stressful life events, being bullied, disturbed eating behaviour and substance abuse.

Design: Cross-sectional quantitative study

Paper 2

Aim: To explore and describe factors related to the students' decision of dropping out.

Design: Interview based qualitative study

Paper 3

Aim: To examine health related, demographic, psychosocial and school related predictors for dropout 5 years after enrolment in upper secondary school.

Hypotheses: We expected higher dropout rates among male students, students in vocational track, students with learning problems, students with poorer grades from lower secondary education, and students with poorer general health, more internalized mental health problems and a lower sense of coherence.

Design: Prospective quantitative follow-up study

Methods

The Project "Ung vilje"

The project is a longitudinal prospective study, started in 2010 (T1) with a follow-up in 2013 (T2) and 2020 (T3). All students enrolled in the first year of upper secondary school in autumn 2010 in Troms County were invited to participate.

A collaboration was established with the county administration and with the 17 upper secondary schools that was operating at the time in the county. Before data collection, the students received written information about the study. Before handing out the questionnaires and the consent forms, the students were given a verbal summary of the aims of the study and were given opportunity to ask questions. The students filled in a consent form consisting of two parts: One for the quantitative study and one for the qualitative interviews. For students under the age of 16 we additionally collected written consent from their parents.

Participants

The study started in 2010 and of 2434 available students, 1676 (69%) consented to participate in the study, 52% were males (see paper 1 for further details). Of these students, 1538 consented to participate in an interview about their thoughts and experiences, should they drop out. The data on completers/dropouts were collected from the school register of Troms County. The students included in the qualitative study, dropping out during the first year of upper secondary school were reported successively by the county administration. This enabled us to invite the students for an interview within a relatively short time after dropping out.

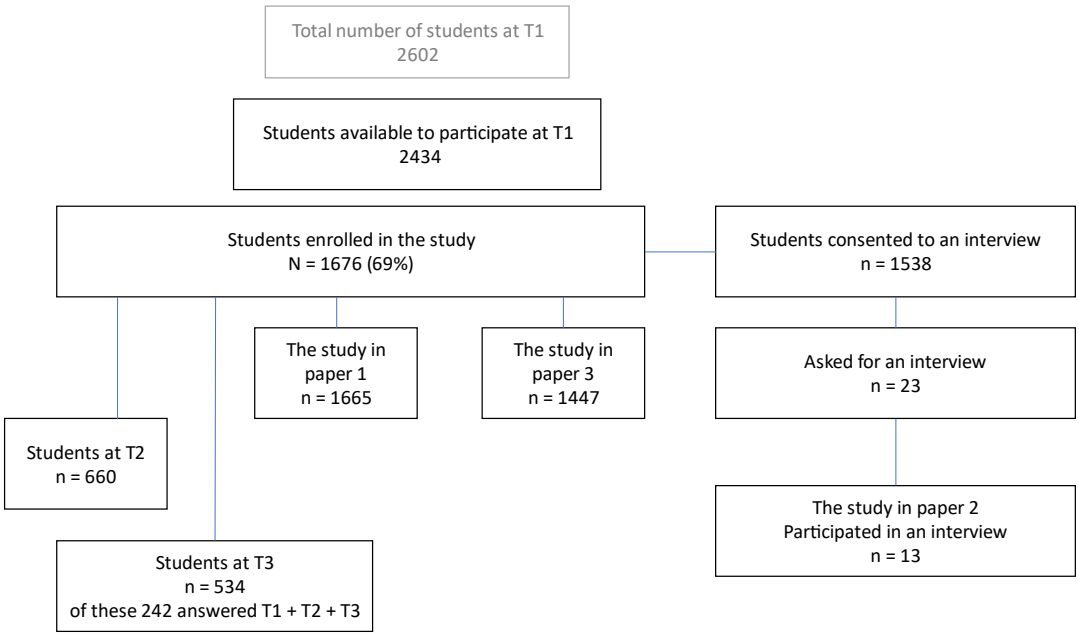


Figure 1. Participants in the project ”Ung vilje”.

The Quantitative Study

Shortly after enrolment (August – September 2010) the students who consented to participate in the study filled in a printed questionnaire (T1) in an ordinary classroom situation at school during 90 minutes of class The questionnaire contained a large number of variables (base line data) within these categories: Demographics, school-related factors, health measures (including satisfaction with life), living habits, and psychological measures, e.g., personality attributes, and resilience. The data were optically read and transferred to an SPSS file.

After 2.5 years an electronic follow-up questionnaire was distributed (T2) with a selection of the same variables from T1 supplemented with new school-related questions. After ten years the last follow up was distributed (T3) with selected variables of the questionnaire at T1 and supplemented with questions about family status, educational status, economic status and

attachment to the labour market. The response rate at T2 was 39% (N = 660) and at T3 it was 32% (N = 534) of the respondents from T1. Only 14% (N = 242) answered all three questionnaires (T1 + T2 + T3). Paper 1 is based on baseline data (cross-sectional). In paper 3 we used data collected at T1 to predict the outcome variable (completers vs. dropout) which was collected five years after enrolling in upper secondary school.

The total number of students were 2602 by the beginning of the schoolyear, according to the lists provided from each individual school. Some of these students never turned up at the school, which resulted in later removal from the official lists in the school registry of Troms County (after we had completed the data collection) and thus registered as not enrolled in upper secondary school. In addition, some students were assessed by the teachers as not being able to participate for different reasons such as mentally disabilities, major language difficulties or foreign exchange students only enrolled for a limited period. This left us with a population of 2434 eligible students who were able to participate in the study. For different reasons 1/3 of the eligible population did not participate. For some students there was not dedicated time to answer the questionnaires due to competing activities not rescheduled by the schools (e.g., national tests, sports events etc.). To these students we left a questionnaire with a return envelope. Some of the students declined to participate. When asking some of them why they declined to participate, their answers were; “did not find it interesting”, “did not have enough time”, and two students answered that “since they had not planned to drop out, participation had no meaning”. Leaving questionnaires at the school did not increase the participation significantly.

Measures

The questionnaires consisted of a range of validated self-rated instruments and general questions. The most central variables in this thesis are dropout, mental health, life satisfaction, and self-rated health status. In paper 1 we wanted to explore self-rated mental and general health, as well as life-satisfaction in a young population by looking upon concurrent predictors (se paper 1 for description). In paper 3, the only outcome was dropout five years after enrolment. We used self-rated mental and general physical health, as well as life-satisfaction as predictors together with other predictors (see paper 3 for description of the other predictors).

An overview of all instruments used in paper 1 and 3 are given in table 1. The most relevant variables for this thesis will be presented below, together with the outcome variable, educational dropout. The remaining instruments are described in detail in the papers and will not be discussed further here.

HSCL-5

HSCL-5 is a short version of HSCL-10 derived from the HSCL-25 (HSCL-90). It is a five item, self-rated scale and it has been used in studies of adolescents (Myklestad et al., 2012; Strand et al., 2003). The scale assesses internalizing problems (anxiety, stress, depression) during the past two weeks. A mean score above 2 may predict mental disorder (Strand et al., 2003). In our study a Cronbach`s α of .85 showed an internal consistency corresponding to previous studies (Strand et al., 2003; Tambs & Moum, 1993).

SWLS

Diener et al. (1985) developed the satisfaction with life scale (SWLS). The SWLS scale has five items, and it has been widely used in other studies. Satisfaction With Life Scale (SWLS) and the Hopkins Symptoms checklist (HSCL) are commonly used in surveys measuring mental health, stress and life satisfaction among adolescents and young adults (Anderssen et al., 2020; Çapri et al., 2013; Moksnes, Løhre, et al., 2014) and Moksnes et al. (2013) have shown that the SWLS-scale is appropriate to use in a population of Norwegian adolescents when measuring life-satisfaction. In our study the Cronbach's α of .89 corresponds to values in previous studies (Pavot et al., 1993).

Self-rated Health

In paper 1 we used Self-rated health by including three items assessing present health in general, physical health and mental health, with four response categories each. The questions asked was: “How do you rate your own health in general” supplied with: “How do you rate your own mental health at the moment” and “How do you rate your own physical health at the moment”.

In paper 3 we only used one single item; “How do you rate your own health in general”. This item has been used in several surveys (Breidablik et al., 2009; De Ridder et al., 2013) with the response categories; 1-very good, 2-good, 3-not so good and 4-poor. In paper 3 we dichotomized the 4 categories into two (very good/good and not so good/poor) similar to earlier studies (De Ridder et al., 2013). Breidablik et al. (2009) have shown in the HUNT-study that 59% of adolescents have unchanged self-rated health after 4 years.

Dropout and Completers

In our study, the completers are defined as having graduated within five years after they enrolled in upper secondary in 2010. Dropouts are students who left school before graduation. Some students could be defined neither as completers nor as dropouts: mostly, they had completed their studies, but without passing one or more final exams, or they remained in school after five years (in our study; 7.7%), and some of the students were not registered on any school in the county (see paper 3 for the detailed coding). Because of the missing data, the study sample was reduced from 1676 to 1447, and of these 473 (32.7%) were dropouts. The data on completers/dropouts were collected from the school registry of Troms County, as were sex, birth year and GPA.

Table 1: Measures used in paper 1 and 3

	Measures		
		Paper 1	Paper 3
Health	HSCL-5	**O**	P
	SWLS	**O**	P
	General health	**O**	P
	Eating disturbance scale (EDS)	P	P
	Substance abuse	P	
	Contact with health services	P	
	Stressful life events	P	
	Total sleep time		P
	SOC		P
Demographics	Sex	P	P
	Birth year		P
	Self-reported financial status	P	P
School-related factors	Importance of school	P	
	Track	P	P
	Literacy problems		P
	GPA		P
	Ambitions (3)		P
	Dropout/Completers		**O**
Social factors	Social support	P	P
	Being bullied	P	P
Psychological factors	PAQ	P	P
	RFQ promotion and prevention		P

Note: O = outcome, P = predictor.

Statistical Analyses

In paper 1 we used a principal component analysis (PCA) with 10 questions mapping the students' experience of the importance of school. Prior to performing regression analysis, we carried out the correlations between the predictors to determine associations between them. Then we performed three hierarchical regression analyses to examine and compare the predictors separate influences on mental health (HSCL-5), satisfaction with life (SWLS) and general health. All analyses in paper 1 were conducted in SPSS version 19. In paper 3 we investigated correlations between the predictors. We conducted chi-squared tests to show simple associations. One test between good or poor health and study track and a second test between poor or good health and dropout/completers in vocational track. A logistic regression analysis was conducted to determine predictors for dropout. All analyses in paper 3 were conducted in SPSS version 25. In both articles we performed descriptive analysis to give a presentation of the population and variables. Further details on statistics are described in the methods section of each paper.

Missing Data

Paper 1: Missing data ranged between 0 - 8.6% within all subscales. Missing data were not replaced and were handled conservatively by list-wise exclusion. An alpha level of $< .05$ was used. See Paper 1 for details.

Paper 3: Grade point averages (GPAs) were collected from the county's registries. However, due to different reasons, there were still missing data for 19.2%: Some students were enrolled with other qualifications than GPA (e.g., age), some students had a background without grades e.g., lower secondary school following the principles of Rudolf Steiner, and some students carried out alternative schooling without grades in all subjects due to learning

or behavioural difficulties. In addition, some students could not be defined as neither completers nor dropouts after five years and therefore had to be excluded from the study.

The Qualitative Study

In the qualitative study we interviewed students who dropped out during the first year of upper secondary school about their experiences at school and the process concerning dropping out. Within the first school year we contacted 23 students who dropped out and 13 (seven males) agreed to an interview, se paper 2 for a detailed description. Three interviews were done by telephone and 10 in person, lasting from 30 to 80 minutes and transcribed verbatim partly by the two researchers and partly by a research assistant. The interviews were constructed with open questions to explore their experiences and thoughts related to dropout, but with a thematic guide steering the dialogue. The interview guide was discussed between three researchers: the two interviewers and their senior supervisor.

The open questions used:

- Can you tell me why you quit school?
- How did you feel in the period before you quit?
- How are you right now?

The themes in the thematic guide included questions about (for detailed questions see appendix);

- Growing up and time in elementary school
- Time in upper secondary school, the dropout and their follow up
- The current daily life, activities and leisure time
- Health

- The future

We were two researchers carrying out the interviews; a Norwegian male nurse with a master's degree in public health, teaching in upper secondary school and me; a Danish, female psychiatrist, former general practitioner. My first encounters with adolescents who had dropped out or had thoughts of dropping out of upper secondary school, was when I worked in the primary health care for youth. They often struggled with finding their way in life and many of them had no one to turn to and seemed depressed. They did not have positive experiences and thoughts of school and they worried about what kind of future that lay ahead. At the same time, I also met self-confident, ambitious and hopeful adolescents who had a clear vision in life which included finishing school and getting an education. My preconception (Malterud, 2011) in this project were affected by these experiences and I was curious to find out more about mental health and dropout among adolescents and get a deeper insight into the students own experiences.

With different educations and working experiences, and at the same time having been brought up in different countries with different cultural backgrounds, the interviewers partly had different preconceptions of the dropout phenomenon. We had to continuously increase awareness of these preconceptions to prevent them from limiting our openness to what made sense for the participants. Partly this took place through discussions of the nature of inductive methods between the interviewers and our main supervisor (TS) and partly through the continuous discussions of the interview material between the interviewers.

When the interviewers were themselves aware of their preconceptions about what could potentially be of significance to the individual in the drop-out process this also expanded the possibilities to reach the best possible understanding of how the individual had experienced

and understood his or her own dropout process. We included participants until new interviews did not add new qualitative information about the dropout phenomenon and only confirmed existing meaningful categories based on previous interviews (data saturation) (Malterud, 2011).

The data was analysed by systematic text condensation according to the standardized method by Malterud (2011), which is inspired by Giorgi's phenomenology. The method aims to examine the participants' experiences and understanding of the phenomenon (Giorgi, 2009). The method includes four stages; 1. Reading and re-reading the text to get an overview of the material and pinpointing some categories. 2. Identifying meaning units and coding them into the categories. 3. Condensing the coded meaning units into a shorter and meaningful text. 4. Summarising and generalizing the descriptions. NVivo 10 (2014) was used in extracting meaningful units and coding into groups. Data analysis of new interviews was carried out continuously.

We used a salutogenic perspective in the analysis, which led us to two main groups A: *A sense of failure* and B: *A proactive life orientation* (described further in the section *Summery of Findings*).

Ethical Considerations

All students participating in the study provided a written consent. Some of the students were under 16 years of age (approximately 1/4 of the students), when the data at T1 were obtained. For these their parents also consented in writing. The participant's name and social-security number were replaced with a study ID for securing de-identification. The identifying key is kept in a locked safe away from other data and the files are encrypted.

In T2 we collected an updated consent to obtain GPAs from upper secondary school, in addition to the already collected GPAs from lower secondary school.

In the qualitative study, the interviews were anonymized and detailed characteristics where omitted.

The project was approved by the Regional Committee of Medical and Health Research Ethics in North Norway– REC North (REK; 2010/1503).

Results

Paper 1

Self-rated health and life-satisfaction among upper secondary students in Northern Norway.

Summary of Findings

A principal component analysis of 10 questions related to participants' thoughts about importance of school revealed one 5-item factor named; "Importance of school" including the following items: *Performance at school depends upon a good academic environment, things I am doing at school will help me realize future goals, what you learn at school will be useful for future work, education is necessary for managing life,* and *to what extent is school important for making dreams come true* (paper 1).

Description of the population showed that 17% of the population had a HSCL-5 above cut-off, indicating mental health problems (Strand et al., 2003), and the correlation

coefficients (Pearsons *r*) between the three dependent variables; HSCL-5, SWLS and general health ranged between .43 and .49.

Three hierarchical regression analyses were performed to examine the predictors of mental health (HSCL-5), satisfaction with life (SWLS) and general health (see table 4 in paper 1). Being male predicted better mental health (lower HSCL-5) and better general health. Masculine personality was positively related to all three outcomes: Highest with SWLS and general health. Feminine personality was slightly negatively related to HSCL-5. Better financial status, social support and high ratings of "importance of school" were related to better health and satisfaction with life, while vocational track was associated with poorer general health. Being bullied and stressful life-events contributed negatively to all three outcomes. Disturbed eating behaviour (EDS-5) also contributed to all outcomes; Disturbed eating habits were negatively associated with mental health, satisfaction with life and general health (the higher score on EDS-5 the higher HSCL-5 and general health and the lower SWLS). We also tested interactions (see paper 1) and the most important showed a buffering effect of social support within feminine personality.

In summary, the analyses showed that social support, masculine personality (positively) and disturbed eating behaviours (negatively) as well as self-reported financial status (negatively) were most strongly associated with health status. Social support contributed equally to HSCL-5 and SWLS but to a smaller extent to general health. Masculine personality had relation with all three outcomes, strongest with SWLS and general health. Students in vocational track reported poorer general health.

Paper 2

'From a sense of failure to a proactive life orientation': First year high school dropout experiences and future life expectations in Norwegian youth.

Summary of Findings

Thirteen adolescents described their experiences at school and important impacts on their decision of quitting school, and they told about several reasons for dropping out. Table 1 in paper 2 characterizes the 13 participants, of which some had dropped out more than once. The results were analysed with a salutogenic perspective (see above for the theoretical background) leading to two main groups A: *A sense of failure* and B: *A proactive life orientation*. In the category: *A sense of failure*, the contents were 1. Dismissive parents, 2. Uninterested teachers and one's own passivization, 3. A stressful learning climate, 4. Poorly adapted programs and teaching, 5. An unstable home environment, 6. Unsatisfactory counselling and confusing career information and 7. A gendered labour market. In the category: *Proactive life orientation*, the contents were 1. Engagement and well-functioning network, 2. Child-centred parenting, 3. Parental involvement in youth leisure time, 4. Good interlocutors (se also table 2 in paper 2).

How dropping out was experienced, varied from the feeling of failure, hopelessness and severe concern for the future (Category; *sense of failure*) to a feeling of coping and self-confidence (Category; *proactive life orientation*). In the two subgroups there were a characteristic difference when it came to network and circumstances that may affect mental health. In the sense of failure group, six participants reported they had been bullied over time, while none did so in the proactive group. Indeed, none of the participants in the proactive

group reported having few friends, being lonely or sad. One of the participants had to quit school because of illness.

In the Category A: A Sense of Failure

The main findings in this category were various descriptions of feelings of failure and lack of coping both in school and at home and worrying for the future, exemplified with this quote (Ottosen et al., 2017a):

> *"I avoid thinking about the future, because it scares me, school scares me, everything scares me … I have nothing meaningful in my life, no job, no school or anything like that to go to. It affects your self-confidence and how you feel every day. The world's outside and I'm not part of it."*

Many participants reported an unstable home environment and the experience of not being helped with schoolwork or everyday problems by their parents. Many of them had experienced frequent relocation and parental conflicts. Together with social exclusion at new places, they described few friends, isolation, unhappiness, and sadness.

Similarly, they had experienced teachers ignoring them, with corresponding negative expectations of getting help at school as well. They often experienced great difficulties at school (stressful learning climate, struggling with subjects, concentration problems, bullying, high degree of absence etc). They also reported limited participation in group work. The main part of participants described negative circumstances out of their control that led to dropout. Many of the participants also had experiences with being bullied over time. They described passivity, and they had no initiative nor motivation connected to experiencing daily rejections and lack of support both in the family and at school. They described a feeling of "being passive participants in their own lives" and negative circumstances out of their control.

The participants expected that starting in upper secondary school gave them the opportunity of a new start, to make new friends and choose interesting courses. On the contrary, they experienced a highly stressful learning environment in a school that did not suit their interests and abilities. Many were disappointed by the quality of the counselling they had been offered before entering school, and felt they got no help in choosing the schooling alternatives that would fit them best.

In the Category B: Proactive Life Orientation

This category included four participants who had solid networks, positive experiences in childhood and youth. They had confidence in themselves and had actively chosen an alternative career over continuing upper secondary education. The participants had experiences with parents that where supportive and involved in their school, their decision on dropping out and in their future. They described caring parents and a solid network. Despite a difficult school situation, the four participants found a meaningful career track (job training and full-time work) alternative to the continuation of upper secondary school. They had made changes in their lives by a reflected and deliberate choice. Contrary to the participants in Category A, they did not have feelings of loneliness and sadness and they described supportive and well-functioning networks. Two of the pro-active participants had health problems, but with help from parents and having focus on their own interest and life goals, they could utilize their remaining work capacity.

Paper 3

Poorer self-reported mental health and general health among first year upper secondary school students do not predict school dropout: a five-year prospective study.

Summary of Findings

Descriptive statistics showed that one-third (33%) of the students had status as dropouts after five years. Correlations (see table one and two in paper 3) revealed that dropout was moderately related with lower GPA (*r*=.41), higher age (*r*=.33), vocational track (*r*=.32), and literacy problems (LP) (*r*=.26). We also tested simple associations between health status and study track (Chi-square test). It showed that poor mental health (19% versus 15%) and poor general health (18% versus 6%) was significantly more prevalent in vocational track versus general track. In vocational track, there was a significant difference between dropouts and completers regarding poor general health (21% versus 14%), but not for poor mental health (20% versus 17%). In general track there was no difference between completers and dropouts regarding mental and general health.

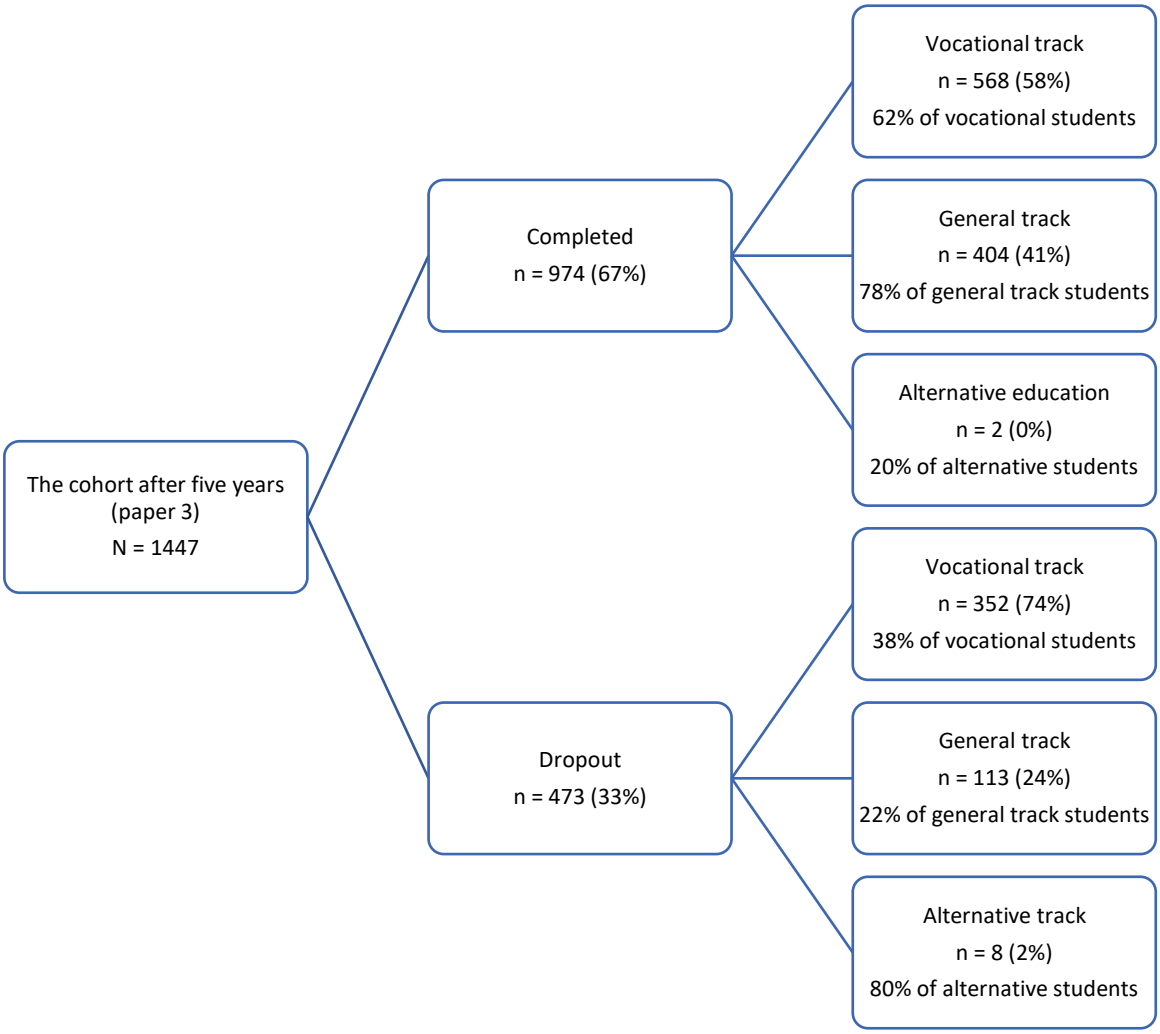
In the initial steps and before including GPA, several predictors were significant; general health, SWLS, total sleep time, EDS, sex, birth year, the regulatory focus; prevention, LP but not mental health. Regarding prediction of dropout, the logistic regression showed that only higher GPA from lower secondary and being in general track decreased the odds of dropping out (OR .31 and .66 respectively, in the last step). We also tested several interaction terms without finding significant contributions.

In paper 3 we also explored T2, but due to the poor response rate (39% of those in T1), a regression analysis including both time points would not be valid. Interestingly, though, was that the percentage of students changing their mental health status from good to poor was 22%, whereas those crossing from poor to good was 34%. This variability may explain why we did not find mental health significant as a predictor for dropout in any step of the logistic regression.

General Results of Dropout and Completion in the Study

Of the invited population, 67% completed the first questionnaire. The share of dropout students from the different tracks are shown in figure 2. Of the completers, 58% were in vocational track and 41% were in general track. 33% of the students dropped out. Of the dropouts 74% were in vocational track, and 24% were in general track. In vocational track 38% of the students dropped out and in general track it was only 22%.

Figure 2: Share of dropouts and completers in each track 5 years after entering upper secondary school



Discussion

I will now discuss my thesis displayed through the three papers. In paper 1 we studied concurrent predictors of self-rated mental health, general health and life satisfaction. In paper 3 we examined the three outcomes as predictors of dropout after five years together with some of the same predictors and other measures on health and school-related factors (see table 1). To get a broader understanding of the dropout process we interviewed 13 early leaving students by letting them explain their experiences and reasons for dropout (paper 2).

First, I will discuss some methodological considerations regarding the project before I turn to the main findings.

Methodological Considerations

Quantitative vs Qualitative Design

The design of the study includes both quantitative and qualitative methods. In the quantitative study, we used a comprehensive questionnaire based on variables described above including validated instruments, produced to acquire answers across the group level in Troms County, while the explorative qualitative study was carried out to explore the phenomenon dropout. We obtained a broader and more varied understanding of dropout by the students' experiences and views of the phenomenon (Malterud, 2011). One cannot generalize from the qualitive study, but it reveals many aspects of the dropout phenomena that may be very difficult to capture in a predefined and limited questionnaire without open questions. The qualitative study may also illuminate topics to be included in further research (see also the section *Perspectives on Future Research*). For instance, a qualitative study may serve as a basis for new variables to be tested in future quantitative studies.

The Quantitative Study:

Cross Sectional vs Prospective Follow-up

The cross-sectional study at T1 enabled us to investigate prevalence and associations between several different variables (Laake et al., 2007) (Paper 1). In the prospective study we examined the degree to which variables collected at T1 predicted completion vs. dropout five years later (Paper 3). Unfortunately, the participation rate at T2 and T3 was too limited (39%

and 32%, respectively) to run meaningful and valid statistical analyses, and the self-report variables from the follow-up were therefore not analysed.

Validated Measures/Translations to Norwegian

We used several validated measures in the study. The use of validated instruments ensure that the items and scales have been previously evaluated, and the validity of an instrument refers to it measuring what is intended. Testing the reliability of the instruments ensured that the answer patterns of the cohort corresponded to previous findings (Field, 2013), and was tested by the internal consistency coefficient; Cronbach's alpha.

Most instruments were available in validated Norwegian translations. One instrument (PAQ) was translated back and forth into Norwegian by H. Sexton (an English and Norwegian speaking former member of the psychiatry research group, at the Department of Clinical medicine) according to international guidelines (Acquadro et al., 2008).

Other Measures

In addition to the validated instruments described, we also included some self-constructed questions to elucidate aspects of school and education that we believed could have an impact on students' motivation and ability to complete schooling. We could not find examples of these questions used in existing questionnaires.

When using self-made questions there is always a risk that the validity is low because the questions are not understood the way they were intended. To reduce this risk, a pilot study of the questionnaire was carried out in a group of students in upper secondary school and among a group of young people who were very familiar with upper secondary school. Subsequently, we made improvements in wording and some new questions were added. Some of the new

questions were used to measure the component “importance of school”. By using factor analysis, we were able to extract five items to a single component with an acceptable internal reliability equal to .82 tested by Cronbach’s alpha.

The Qualitative Study

Through qualitative research, one can get a broader understanding of a concept (Kvale & Brinkmann, 2009) by exploring the students experiences and their own understanding of the reasons for dropout. When using interviews, we obtained a deeper understanding of what the students experienced in the process around the dropout and the reasons that lead to their decision. The information gathered and interpretation of qualitative interviews will always be influenced by the researchers pre-conception (Malterud, 2011), but by using researchers with different backgrounds, sex and education one can get the interpretation more nuanced. To illuminate the process and to ensure that all the themes we wanted to explore were covered, the researchers prepared and used a thematic interview guide (see under the section *Methods – The Qualitive Study*). When using systematic text condensation (Malterud, 2011), we were able to explore both the variation and common characteristics in the student’s experiences with dropout and give a description across the phenomenon. Using this method there will be a risk of not having the problem analysed deep enough within the individual as when using e.g., narrative analysis (Malterud, 2011). In our study, where the intention was to get different experiences and descriptions, we therefore found systematic text condensation to be an appropriate method.

Discussion of the Findings

In the presented papers, we have had a special focus on how dropout can be affected by mental health, general health and life satisfaction. In paper 3, we found that neither mental health, general health nor SOC or SWLS, measured at enrollment in upper secondary school, predicted dropping out. The significance of general health disappeared when adjusting for grades. Despite that, we found both poorer mental and general health among the students in vocational track than in general track. There were indications that in the vocational tracks there were a higher load of poor health, most prominent for general health (shown in table 3 and 4 in paper 3). General health was also poorer among students who dropped out. We found a significantly higher rate of poor general health in the dropout group; 21% vs 14% for completers, however, there was no significant difference in poor mental health.

In paper 2, we found at least two main categories with highly different motivations for dropout. One group was filled with hopelessness and feelings of failure. The other group had dropped out as a proactive choice and were therefore optimistic about life, rather than depressive.

One-third (33%) of the students had status as dropouts after five years, with the highest dropout rate in vocational track at 38% versus general track 22%. This roughly corresponds to national registry data, which show an overall dropout rate in Troms County in the same period of 31% (42% within vocational track and 17% in general track) (Statistics Norway, 2023a). After five years, 7.7% of the students were registered as still in school. The difference in the dropout rates by each track between our study and the full registry data may be explained by the exclusion of the students missing baseline GPA (19%) in our study. As mentioned earlier, some of these students were enrolled in upper secondary school without grades in some or all subjects due to learning or behavioural difficulties – which also increases the risk of dropout (Markussen et al., 2011; Rumberger & Lim, 2008; Sæle et al., 2016). In our study we

registered the track the students enrolled into, and not the track they graduated from, as data are registered in the national register. According to Statistics of Norway, approximately 25% of students in vocational track achieves general qualification (Statistics Norway, 2023b) and according to the Directorate of Education and Training nearly 10% of the students are changing track (described above), mostly within different vocational tracks (Norwegian Directorate for Education and Training, 2023). Before the official date of registered students (October 1st), it is permitted for the students to change track or quit without the actual year counting towards the total number of years they are allowed to spend completing. This, together with the fact that some students from vocational track graduate with a general track qualification, may have contributed to the slightly skewed dropout rates in our study with a lower dropout rate in vocational track (38% versus 42% nationally) and a higher dropout rate in general track (22% versus 17% nationally). These small differences in the dropout rates taken into account, the study is considered representative for the population in northern Norway.

The high dropout rate in Northern Norway represents an even bigger problem in a rural population. According to Statistics of Norway (2023a) there is a difference of 15% between the highest completion rates (85%) in Sogn and Fjordane County (in the South-west of Norway) and the lowest rate (70%) in Finmark County (North Norway). In Troms County the completion rate in the same period was 77%. Together with individual challenges as described below, the students also face challenges with long distances, leaving home at an early age, small schools and limited options to choose a preferred education (Bæck, 2016; Markussen et al., 2012).

When looking at the difference in the graduation rate from 2012 and 2022, the overall rate has improved from approximately 64% to 78% (Statistics Norway, 2023a) within 5/6 years in Troms County. When it comes to graduation within the normative length (3 years in general

and 4 years in vocational) it is 64%. The graduation rate in general track is 63% and in vocational track it is 46%. Within the two tracks, the total rates have increased from 83,5% to 86,5% in general track and from 58% to 68% in vocational track (Statistics Norway, 2023a). This may be due to the increased focus on dropout in upper secondary school, especially by a closer follow-up of the students in risk of dropping out. Furthermore, new interventions have been introduced in upper secondary school reducing allowed absence from 10 to 5% and extending the time to graduate in vocational track from five to six years. A large share of students, 22%, graduate within the prolonged time in vocational track (Statistics Norway, 2023a).

Health Measures

As shown in paper 1, HSCL and SWLS correlate highly, and partly overlap. We also showed that social support was the strongest predictor for both good mental health and higher life satisfaction, which correspond to earlier studies (Derdikman-Eiron et al., 2013; Pettit et al., 2011; Rask et al., 2002). Our findings that disturbed eating behaviour was negatively associated with both mental health (HSCL) and life satisfaction (SWLS) also corresponds with previous studies (Rask et al., 2002). At the same time, we found that masculine personality and "importance of school" was positively associated with general health and satisfaction with life but only slightly with mental health. As previously found by Gustafsson et al. (2010), being bullied was negatively associated with mental health in our study. Several studies show that both mental health and satisfaction with life is associated with academic achievements and school dropout (Derdikman-Eiron et al., 2013; Gustafsson et al., 2010; Liem et al., 2010). We found that "importance of school" was associated with satisfaction with life in paper 1, indicating that students who find school important, may also have a higher satisfaction with life in general. In paper 3, SWLS were significantly associated with

dropout initially, but when controlling for grades it may seem that when the students feel school is important, they are more satisfied in life and perhaps this relationship gives higher motivation and engagement for achieving in school, which also corresponds to findings in other studies (Archambault et al., 2009; Gustafsson et al., 2010; Lewis et al., 2011; Markussen, 2016a). When looking at the interviews of the participants in the group: *A sense of failure* (paper 2) they did consider school important for future employment but at the same time they were struggling with academic subjects and corresponding feelings of hopelessness, which affects life-satisfaction negatively. This created a sense of failure and reduced motivation for school.

Mental Health

As described in *Diagnostic and Statistical Manual of Mental Disorders* 5the ed., DSM-5 and the *International Classification of Diseases* (ICD-10) (American Psychiatric Association, 2013; World Health Organization (WHO), 1993), mental illnesses or disorders, such as anxiety and depressive disorders, refer to specific clusters of symptoms of necessary duration with accompanying functional impairment in everyday life. To set a psychiatric diagnosis, a clinical interview and examination is necessary. However, in larger population surveys and cohort studies such as "Ung vilje", standardized and validated self-report mental health measures are often used, since clinical interviews would not be feasible. Validity testing also involves identifying the lower score threshold which probably indicates the presence of a diagnosable mental disorder (Strand et al., 2003). Still, a certain diagnosis cannot be given through questionnaires alone, but raw scores on a mental health self-reported instrument may indicate the level of mental distress, or the symptom burden, in the responders. When using self-report instruments, though, it is important to test if the questions are understood similarly among cultural subgroups included in a study (Sørlie et al., 2018).

Contrary to earlier studies (Askeland et al., 2022; Chalita et al., 2012; De Ridder et al., 2013; Lindhardt et al., 2022; Mikkonen et al., 2018), our prospective study (paper 3) did not reveal overall associations between mental health and dropout. One reason for this may be that there actually is no relationship mental health at the beginning of upper secondary school and later dropout. Another explanation may be that the relationship is still there, but that we could not identify the effect in our study due the timing of data collection (see below for details).

Esch et al. (2014) describes internalizing disorders as a consequence of dropout rather than the opposite, in contrast to Dupéré et al. (2018), who found that one out of four in high-risk dropout-group had depressive symptoms within the three months before dropping out of high school. Additionally, Gubbels et al. (2019) concludes in a meta-analytic review that dropout is multifactorial with more than 600 risk factors for dropping out. They found large effects on dropout related to school and academic performance, but smaller effects for mental and physical health (Gubbels et al., 2019), and Brière et al. (2017) found no association between non-completion and earlier depressive symptoms, but for earlier scores on anxiety. In our study, subgroup analyses showed that poor mental health was more frequent in vocational track than in general track. Also, being in vocational track significantly increased the risk of dropping out. Hjorth et al. (2016) showed that poor mental health was associated with dropout in vocational track, which corresponds to our findings. In our study 17% of all the students had a HSCL-5 score above the cut-off of 2, and in the vocational group we found a small though not significant, difference in scores between completers and dropouts. We used a cut-off > 2 slightly different from Krokstad et al. (2022) who used cutoff ≥ 2. Still the findings correspond approximately to the study of Krokstad et al. (2022) where they found 18,5% from 2006 to 2008. The null-findings regarding mental health in our study may also be because mental health was measured at the beginning of upper secondary school and the dropout was

measured after five years. Lindhart et al. (2022) found an association between self-reported mental health and later dropout. The study followed more than 11,000 students, with the first measurement point before the students entered upper secondary school and the last 2,5 years after they started. This differed from our study, which followed the students for five years, thus after they were supposed to graduate. According to the Norwegian Ministry of Education a considerable part of dropout (non-completion) is in the third year (NOU, 2018), completing the school programme but not passing one or more of the last exams which is also confirmed by Markussen et al. (2011). For students in vocational track many of the dropouts happen between second and third year by not starting in apprenticeship (Markussen, 2016b). The report from NOU (2018) also shows that the students with low GPA fail their exams the whole way through the three years, while the main part of dropout students starting with higher GPA`s mainly fails their last exams at the end of third year. This might indicate that the students going through to the end of secondary school might have some engagement and hope for finishing school. When we consider the answers from T2 (2.5 years after enrolment) we can see that approximately 50% of the students changed their reported mental health status during these few years (22% from good to poor and 34% from poor to good). This fluctuation may explain why we failed to find a relationship between initial mental health status and dropout. Our findings are to some extent also supported by Fergusson et al. (2015), who did not find an association between subsequent mental health problems in grownups (age 30) and leaving school without qualifications.

When measuring mental health entering upper secondary school, the responses may have been affected by transient situational stress connected to concerns of the change from the established to something new. As we discuss in paper 3, it is a vulnerable phase when changing from lower to upper secondary school (Kingery et al., 2011), but also it might represent a new start (Gustafsson et al., 2010). Measuring mental health in the first month of

upper secondary school may therefore be affected by hopes of changes when having a new start (Brissette et al., 2002; Morton et al., 2014) as some participants explained in the qualitative study (page 7 (A4)). Poor mental health is relatively unstable in adolescence and may periodically be experienced in shorter periods of weeks or months (Dupéré, Dion, Nault-Brière, et al., 2018; Nolen-Hoeksema & Hilt, 2013; Yoon et al., 2023). Changes in mental health status and psychological symptoms may therefore happen the whole way through upper secondary school. In the study of Brännlund et al. (2017) they found that poor mental health during the late teens, closer to graduation in upper secondary school, had a stronger influence on educational achievement than poor mental health earlier in adolescence. Dupéré et al. (2018) found a higher dropout rate in students where depressive symptoms were present within the 3 months before the dropout. They also found that students who recovered from earlier depressive symptoms did not have a higher risk of dropout. This confirm the above discussion that mental health can be fluctuating in adolescents and may also indicate that the null-findings in our study should be interpreted carefully.

An earlier report concludes that mental health problems may predict dropout among females but not for males (Bania et al., 2016), and Krokstad et al. (2022) studied the increase in poor mental health among adolescents and young adults in the period from 1997 to 2019. They found that the HSL-5 scores above cut-off increased within females from 21% to 44%, but less within males; 10% to 16,5%. Moreover, reports have indicated that males underestimate their mental health symptom burden (Bramness et al., 2010). Corresponding to earlier findings (Markussen et al., 2011) the highest rate of dropout in our study occurred in vocational track where the share of male students is also highest. If the same trend, that males have poorer mental health than indicated by their scores, also applies to our study population, it may have contributed to mental health not predicting dropout.

Another reason of why we did not find mental health as a predictor for dropout may be that we did not include questions in the questionnaire that could reveal externalizing mental health problems in particular. Earlier studies have shown a stronger association between externalizing mental health problems and dropout than for internalizing problems (Breslau et al., 2011; Esch et al., 2014; Mikkonen et al., 2018; Nordmo et al., 2022; Sagatun et al., 2014; von Simson et al., 2022). Nordmo et al. (2022) made a register study of nearly half a million adolescents who had visited a general practitioner at least once in a period of five years to find associations between diagnoses and academic performance in compulsory school. They found that psychological problems (44.6%) had the highest association with educational achievement and highest for boys (24.6% vs 20% for girls) due to the prevalence of hyperkinetic disorders (14.6% vs 7.5% for girls). Depressive/anxiety disorder contributed much less with 1.8/0.6% for boys and 4.3/1.2% for girls. Even though, the study is based on diagnoses and not on self-rated mental health, these findings also may explain the missing association in our study between mental health and drop out, since we tested for internalizing symptoms and not for hyperkinetic disorders. Esch et al. (2014) found in a review on school dropout that internalizing disorders at the same time were reported as a consequence of dropout. Still, Sagatun et al. (2014) showed that females with internalizing mental health problems had higher risk of dropping out. Patel et al. (2007) showed that there is a higher risk of having a depression among females and several times higher risk of having behaviour disorders or schizophrenia within males.

In our qualitative study (paper 2) none of the 4 participants in the category: *Proactive life orientation*, reported feelings of sadness or loneliness, contrary to 8 of 9 participants in the category: *a sense of failure*. We found that experiences with mental stress in school, supportive/non-supportive relationships or family problems influenced their decision of leaving school (Ottosen et al., 2017a). The majority of participants described negative

circumstances out of their control that led to dropout. This corresponds to studies showing that people who possess external locus of control have a higher risk of poorer mental health and well-being (Gore et al., 2016; Jain & Singh, 2015). It seemed that participants with supportive parents or significant others had experienced less mental health problems.

Healthcare services for young people are well-established in Norway. They are low threshold services, free of charge, and situated in every local upper secondary school. The health care services are staffed with school nurses, educated within a broad spectrum of child- and adolescence health (Utdanning.no, 2022). The school nurses can help the students through crisis in their lives and may identify students at risk of having poor mental health (also discussed in paper 3). As shown by Kerns et al. (2011) there is an association between using the health care service and reduction in dropout. Even if the school health care services are well established in Norwegian schools, the demand is by far higher than the capacity (Waldum-Grevbo & Haugland, 2015). Walker et al. (2010) and Kerns et al. (2011) showed that healthcare centres could recognize and help students with mental health problems and thereby reduce the risk of dropout. By strengthening these services, which also is suggested by Dupéré et al. (2018), this may increase the chance of identifying students having poor mental health and who are at risk of dropping out making them able to take preventive actions.

Satisfaction With Life

Similar to the findings in other studies (Gustafsson et al., 2010; Liem et al., 2010; Meule & Voderholzer, 2020; Moksnes, Espnes, et al., 2014) we also found a significant correlation (.44) between mental health and satisfaction with life in paper 1. Moreover, we found several common predictors for satisfaction with life and mental health, including social support and importance of school. In paper 3, satisfaction with life were one of the dropout predictors that

was significant in the initial analysis, but mental health was not. The explanation for this may be as Diener et al. (2002) have shown, that satisfaction with life (SWLS) is a broader term and a better measure of how a person generally function than mental health. This corresponds to the findings in the qualitative study (paper 2) where the students in the category; sense of failure, expressed feelings of hopelessness, defeat and loneliness rather than directly mentioning poor mental health.

Stigma (e.g., stereotypes, beliefs, avoidance from others, discrimination etc.) around mental health problems are common in adolescence and it is difficult to talk about and a barrier to seeking help even from low-level health care (Chandra & Minkovitz, 2007; Moses, 2010; Tharaldsen et al., 2017; Thrana, 2016). Moses (2010) found high stigmatization within peers (62%) and family (46%) and even from school staff which generated unwanted attention, were treated differently and even to social exclusion. In a qualitative study from Taraldsen et al. (2017) they interviewed 8 students from vocational track to reveal factors that kept them away from seeking help for mental health problems. They found that there is a taboo and/or the participants found it embarrassing to talk about mental health problems both with friends and professionals.

It may be associated with less stigma to answer questions about life-satisfaction than mental health. SWLS may therefore be a more useful indicator for functioning at school, and may be appropriate to follow over time, to be able to initiate special attention to students less satisfied with life.

Sense of Coherence

In our study we wanted to find out in which way meaningfulness, comprehensibility and manageability in their usual social contexts influenced dropping out. Therefore, we used

Antonovsky's theory in paper 2 to analyse the 13 interviews with students who had dropped out, and in paper 3 we included SOC as a predictor for dropout.

In the prospective study (paper 3) we found no evidence that SOC predicted dropout. Still SOC (reversed scale) did correlate moderately with satisfaction with life (.57), and mental health (HSCL-5) (.45). This corresponds to other studies (Carlén et al., 2020; Länsimies et al., 2017; Schäfer et al., 2023) where they found a negative association between SOC and mental health problems in adolescence.

In the qualitative study the participants described themselves as "being passive participants in their own lives". This involves passivity, decreasing initiative and low motivation, related to experiences of daily rejections and lack of support both from their families and at school. This corresponds to Antonovsky's (1987) components manageability and *meaningfulness*; Life becomes meaningful if people have influence and participate in solving problems, hence the passivity may be an expression of a meaningless life. Other studies have shown that social support affect sense of coherence during adolescence (Marsh et al., 2007) and participation in family decisions will affect the sense of coherence later in life (Sagy & Antonovsky, 2000). Two of the pro-active participants in the qualitative study reported health problems, but instead of being subject to restrictions and categorized as sick, they were attentive of their potentials. The passivization that the main part of the participants described may be an expression of a less meaningful life and a low SOC, which is related to poor mental health (Carlén et al., 2020; Moksnes, Espnes, et al., 2014). As in the qualitative study one of the participants said (Ottosen et al., 2017a): "*I have nothing meaningful in my life…"* (page 8 under A7) and expressed not participating in the outside world.

It might be a paradox that sense of coherence was a relatively prominent factor in the qualitative interviews but turned out to be of little importance in the quantitative survey. This may be because the quantitative results were based on a complete instrument with closed,

predefined questions with weak contextual anchoring, while their demanding life situation was highlighted in a completely different way in the interviews. The interviews touched upon elements that are only part of the concept of sense of coherence, for instance, meaningfulness.

Health in General

De Ridder et al. (2013) and Mikkonen et al. (2018) have shown that general health problems are associated with school dropout. We did not replicate this association in our data. However, we did find that students dropping out of vocational track had significantly poorer general health than the dropout students in general track. In the qualitative study some participants reported physical health as a problem attached to the dropout (e.g., sleeping problems, chronic illness). Previous studies have yielded various findings on this issue. A study from North -Trøndelag in Norway (De Ridder et al., 2013) found that students with self-rated health problems were at higher risk of dropping out. These analyses were adjusted for sex, but not for study track. In a large study (more than 100.000 participants) by Mikkonen et al. (2018) they found that more than 20% of dropouts from upper secondary school were related to health conditions, mostly, but not all explained by poor mental health. The relation was higher among girls than boys. Neither of these studies adjusted for grades. Nordmo et al. (2022) found in their register study of Norwegian adolescents that most specific somatic diseases did not influence educational achievement. They found that mental health disorders, and especially hyperkinetic disorders had the highest association with risk of disengaging from education. Among somatic conditions the highest categories were; unknown causes or possibly mental causes (Nordmo et al., 2022) which may be an expression of somatization of psychological distress and not somatic illness. It is possible that males and students with masculine personality traits in our study to a higher degree attribute negative feelings and tension to physical problems, than to mental distress. This is supported by the association

between sex and mental/physical health in paper 1 where we showed that higher scores on masculinity traits were associated with better physical health and life satisfaction, while having higher scores on female traits were associated with poorer mental health.

Effects of Sex on Dropout

An increased risk for dropout among boys has been found in several countries, and in Norway as well (Markussen et al., 2011; OECD, 2016; Statistics Norway, 2023a). We did find a higher risk of dropout for males, but male sex was not a significant predictor for dropout when GPA were introduced in the regression model. Stratifying the sample by sex did not reveal further information. This may be due to males struggling more academically (Markussen et al., 2011; Sæle et al., 2016) and lower grades have been shown to be one of the main predictors of dropout (e.g. Gubbels et al., 2019; Markussen et al., 2011; Rumberger & Lim, 2008). Additionally, Bania et al. (2016) found in the Norwegian Arctic Adolescent Health Study (collected in the three Northernmost counties) that living in the most remote areas and having functional school and home problems predicted dropout among males.

School Measures

Track and Grades

We confirmed previous findings that lower grades predict school dropout (Allensworth & Easton, 2005; Bowers, 2010; Casillas et al., 2012; Dæhlen, 2017 etc.). We also confirmed that being in the vocational track predict school dropout, which corresponds to the national statistics of Norway (2023a) and Dæhlen M (2017). Before adjusting for grades, we also found that males had a higher risk of dropping out, which corresponds to studies that have shown that males often have poorer academic achievements (Markussen et al., 2011). Males

are over-represented in vocational track, and this could be one of many explanations behind the difference in dropout rate by track.

Experiences With the Dropout Process - the Qualitative Findings

As described in paper 2 we found two main categories of dropouts: Those who were proactive and those who felt a sense of failure. The proactive group who took an active and positive choice to leave school and the group who felt a sense of failure dropped out because of dissatisfaction, lack of mastery, or poor mental health. This is an important difference from most retrospective studies which often focus on the negative effects of dropout on mental health which increases the risk of selection bias having a representation of dropouts with poor mental health.

Most of the participants described that they dropped out because of negative circumstances they didn't have any control over. At the same time, they reported feelings of loneliness and sadness. This corresponds to studies showing that people who possess external locus of control have a higher risk of poor mental health and wellbeing (Gore et al., 2016; Jain & Singh, 2015). Obviously, the feeling of loneliness and isolation per se also may lead to poor mental health (Liem et al., 2010; Matthews et al., 2016). Despite a difficult school situation, four participants found a meaningful career track by dropping out corresponding to the findings by Markussen (2016a) and described in the section *Some Theoretical and Empirical Explanations for Dropout*. We found that the participants had made changes in their lives by a reflected and deliberate choice. Their parents were stable, supportive and interacting with them, included them in social networks and introduced them to the labour market. In contrast participants in the group: *a sense of failure*, described absent parents and ignoring teachers

leading to negative experiences, resignation, poor expectations towards the school and lack of interest from parents; issues also is discussed in the review of De Witte et al. (2013).

All in all, this indicates the importance of caring teachers and school social workers especially if young people do not have necessary support from parents or a familial or social network. Thus, it is important that the professionals consider the students' background and networks, capabilities, and possible learning difficulties. The importance of caring teachers and school social workers when young people do not have sufficient support from parents or a network, has also been found in other studies (Cornelius-White, 2007; Gustafsson et al., 2010; Knesting, 2008; Krane et al., 2016; Ottosen et al., 2017b), and Gustafsson et al. (2010) found that the teacher-student relation is protective to poor mental health and increase well-being in students. In the qualitative study (paper 2) many of the students who had experienced not being seen by the teachers, reported that it pushed them/made them give up, which refers to the *push* factors by Doll et al. (2013) (described in the section *Some Theoretical and Empirical Explanations for Dropout*). It also corresponds to Holen et al. (2018) and Ramsdal & Wynn (2022) who found that a good teacher-student relationship facilitated the student's motivation for being in school and thereby completing school.

Some of the students described the school dropout as a long-lasting process with experiences of passiveness, low self-esteem, personal failure and feeling of hopelessness, struggling with the theoretical subjects and lack of help and support. This corresponds to some extent to Ramsdal et al. (2018), who found that students dropping out reported considerable mental health problems and lack of social support. Some of the participants also described worry for the future. The negative associations between feelings of hopelessness, passivity and worry for the future and satisfaction with life and poorer mental health have also been described in earlier studies (Çapri et al., 2013; Derdikman-Eiron et al., 2011) and are also corresponding to Antonovsky (1987) who states that challenges in life must be

meaningful, comprehensive and manageable. Some of the participants in the interviews experienced this together with academic problems, which is in line with Gustafsson et al. (2010) who describes mental health and academic achievement affecting each other. The participants described a long academic struggle in school and a negative view on school and life as well.

Referring to Doll et al. (2013) the core factors; *push*, *pull* and *falling out* occurred in the qualitative data material. The *push* factors we found in our study were the school's policy of attendance and tests/exams, experienced by most students in both categories. Many students in the category: *A sense of failure* also reported a poor relationship to other students/teachers by being bullied, feelings of loneliness, reporting few friends and uninterested/ignoring teachers as a factor.

We also found *pull* factors from outside school in our study in paper 2 (Ottosen et al., 2017a). Two students experienced that work was more attractive than staying in school and described illness as the reason for dropping out. Corresponding to Doll et al. (2013), *falling out* as a result of passiveness or disappointment/disillusions of school were also reported by some students.

We cannot generalize from the qualitative study and make conclusions on the above factors, but the participants reported all the three factors *push*, *pull* and *falling out* as reasons for dropping out.

Strengths of the Study

We have not found any study similar to the present in North Norway which combines both quantitative and a qualitative method within the same cohort. The large sample size (1676) was one of the main strengths of the study, and 2/3 of the population who were asked,

participated. The participation rate is quite similar to other population studies among adolescents, except for the Tromsø-Study; Fit Futures, focusing on physical health, who had a participation rate of 93% (Evensen et al., 2017). In a study from Hordaland, 53% participated in 2012 (Hysing et al., 2013), Young-HUNT 3 from 2006-08 had 78% (Logstein et al., 2013) and the Danish study by Hjort et al. (2016) had 58%. Since we included all the upper secondary schools located throughout the county, we had representation from both rural and urban areas, and all the different training and education programmes were represented in the study. The study elucidates differences in dropout (see above) in the adolescent population, with a higher dropout rate in a rural population in Northern Norway, similar to the statistics of Norway in the same period (Statistics Norway, 2023a).

The questionnaire contained a varied selection of relevant measures and questions enabling us to gain a broad understanding of participants sociodemographic, psychological and school related situation. Many of the questions were retrieved from validated measures used in other population surveys, enabling more direct comparison of results and findings.

The project is a prospective follow-up study with collection of questionnaires in 2010 (T1), 2013 (T2) and 2020 (T3). Because of the response rate (39% and 32%) this enables investigation of baseline parameters for prediction of dropout and mental health problems at later follow-up stages. The endpoint used in paper 3 – dropout – was carried out five years after T1, which meant that students who extended schooling up to two years after regular time were included. Both school-status and GPA were collected from the registry of Troms County, and we therefore avoided missing data on these variables along the way.

If the population in the study is different from the population not participating on variables that are central for the research question, there is a risk that the selection is biased. In this case the study showed a dropout rate, also within track and sex, similar to the national

findings for the population started in 2010 (Statistics Norway, 2023a). Taking this and the high response rate into account the risk is considered relatively low.

Especially for the Qualitative Study

By using interviews in addition to the questionnaires, we collected the students' own description of the process around dropout, and we got a deeper understanding of the phenomenon. At the time of consenting to participate in the quantitative study we also obtained consent to conduct an interview with the students if they dropped out of upper secondary school, which made us able to contact them briefly after they quit school. They were able to remember the process and they recalled the many considerations and feelings they had had. At the same time, we were able to contact students who varied in terms of sex, track and study programmes, and that came both from rural and urban schools. Within the group of interviewed students, there were both first time dropouts and students who had dropped out for a second time.

As described above the interviews with the students were conducted by two researchers with different sex, education, cultural background and approach. Thereby it was possible to get a wider perspective of the dropout process, because each researcher would deliberately, and sometimes unintentionally, follow the conversation into different pathways.

The interviews started with open questions of the student's thoughts of dropping out and the process around it. The open questions lead to the students talking about what they found important, and the interviewers could then follow tracks in the conversation that seemed of significance for the student. By letting the participants tell their story in their own words and from their own perspective it contributed to a broad understanding of the dropout-processes and its influence on their life and mental health.

Limitations of the Study.

The Quantitative Study

The questionnaire was quite comprehensive, which may have led the students to lose focus and rush it through. The schools agreed to allocate 1,5 hours to complete the questionnaire and some participants completed it much sooner. Self-reported questionnaires may be biased because of sensitive or socially acceptable/unacceptable questions and answers that are difficult/problematic to provide. There could also be a systematic bias if a question is misunderstood (construct validity). By having a pilot test among a small group of adolescents regarding feedback at specific difficult/misleading questions, we tried to counteract this. At T1 the researchers were present in the classroom and available for answering questions.

The HSCL-5 only assesses internalizing mental health problems; anxiety and depressive symptoms and does not reveal externalizing problems. When dichotomising the scale as we did in paper 3 (see paper 3), there is a risk of missing the variations in the extremes of the scale. Nevertheless, when running the continuous HSCL-scale in the logistic regression it did not change the result nor reveal further information.

Another aspect of our study is that the data were collected only one month after beginning upper secondary school. Although starting in a new school and changing environment may be stressful and scary, some studies have shown that the transition can be positive (Brissette et al., 2002; Gustafsson et al., 2010; Morton et al., 2014) and may represent a new beginning. As Gore et al. (2016) showed; people with internal locus of control have a feeling of control over their future and see opportunities rather than limitations. Therefore, some of the students may have experienced a period of optimism that may have influenced how they rated their actual mental health, while others may have had a higher level of anxiety and stress temporarily.

Students in Norway are allowed to enrol in upper secondary school regardless of grade level from lower secondary school. Some even have no grades at all, due to specialized training. We had to exclude these students in paper 3 since GPA was one of our main predictors. Even though there was low correlation between GPA and mental health, it cannot be ruled out that the group we excluded because of missing GPA may have had poorer mental health (referring to (Gustafsson et al., 2010)). The data on track was registered at the same time the students started up in upper secondary school in 2010. We did not have the opportunity to adjust for changing tracks. This means that the students may have changed track along the way in the process and therefore may end up with another track when leaving school. Still, the data reflects the large differences in graduation rates between the tracks (seen from the starting point); 38% in vocational and 22% in the general track. The corresponding data from the national register in the same period were 42% in vocational and 17% in general track (Statistics Norway, 2023a).

Since the data on student status (completed/dropout) were collected from the county registry, we did not have the opportunity to distinguish between completed and dropouts for students who had moved out of the county, approximately 4% per year according to the official statistics (Statistics Norway, 2023c). These cases became missing data in the county registry, hence also in our data set.

Unfortunately, there was low participation at T2 and T3 (39% and 32%, respectively). Other longitudinal studies, especially for young people, have also faced problems with a lower participation, for instance Neumark-Sztainar et al. (2011) had 48% after 10 years and Opdal et al. (2019) had 67% of the initial participants at T2 in the adolescent study in Tromsø, 2 years after baseline. In a Danish (Winding et al., 2013) follow-up among adolescents, the participation rate was 83% at baseline and in T2 and T3; 71% and 64%, respectively. However, they found no indications that the initial non-participating group were significantly

biased (Winding et al., 2013). In our study some of the explanation may also be due to the timing of data collection at T2, which was at the end of the third year. The students in general track were busy with the final exams and the students in vocational track had started in apprenticeships and were not located at the schools.

Since the initial data collection took place in 2010/2011 one may argue with lack of relevance, but despite the dropout rates having decreased, it is still a major problem both in Norway (Ramsdal & Wynn, 2022) and worldwide (OECD, 2022). Furthermore, the difference in dropout rates between general and vocational track is still significant and the gradient between Southern and Northern Norway persists. Thus, the data in our study may still be relevant for elucidating the mechanisms behind dropout in Northern Norway.

One last limitation of the quantitative parts of Ung vilje is that the project and hypotheses were not preregistered. This was not a common routine at the time when the project started. Also, the project aims were quite exploratory in nature, with a broad questionnaire containing a wide range of variables and constructs.

The Qualitative Study

We asked 23 students for an interview and 13 of these accepted and turned up. We don't know the reasons why these 10 students rejected or didn't turn up to take part in the interview despite having given their consent earlier. The students who rejected to participate in the interviews may have had greater ambivalence to share their experiences and stories that may have broadened our understanding of dropout processes.

The interviewed students may have had difficulty with being truly open and thereby giving the interviewers the answers that they thought they wanted. As discussed above it is possible that it is easier for males to talk about practical difficulties instead over emotional

themes (mental health problems). At the same time the interviewers' preconception of the dropout phenomena (knowledge in advance and previous perspectives) may also have influenced the participants in a particular direction, even though we tried to compensate for it as described above to not limit our openness for the students' thoughts and experiences.

When doing qualitative research with interviews it is not possible to generalize the findings on a group level. The analyses will however give an indication of several aspects of dropping out and give a deeper understanding of the reasons, the process and reflexions attached to it. By analysing until data saturation, we were able to get as many aspects as practically possible.

Preventing Poor Mental Health and Dropout

Although poor mental health often begins during the teens (Patel et al., 2007) and a lot of studies show an association between poor mental health and dropout, we found that mental health cannot be used as a predictor for dropout when measured by HSCL-5 at the beginning of upper secondary school. Taking into account that adolescents often experience poorer mental health in shorter periods (up to twelve months) but may have severe consequences (Dupéré, Dion, Nault-Brière, et al., 2018; Gustafsson et al., 2010; Nolen-Hoeksema & Hilt, 2013; Yoon et al., 2023), students should be monitored throughout the years of schooling to identify the ones at risk of poor mental health. We suggest that students are followed up on an ongoing basis with a focus on mental health also because mental stress is a sensitive indicator of the individual's reactions to difficulties in school and everyday life. As shown in paper 1, there is an overlap between the predictors of life satisfaction and mental health also shown by Meule & Voderholzer (2020). It might therefore also be appropriate to monitor life satisfaction. Since this concept is broader and less detailed regarding more vulnerable feelings

and reactions its items might be experienced as less stigmatizing to respond to than a mental health questionnaire, and possibly give some indication of a potential dropout.

By strengthening the teacher-student relation also discussed by Holen et al. (2018) and Gustafsson et al. (2010), it may be possible to monitor mental distress, identify the stress-driving challenges, and actively help the student solve the problems. This may promote coping, health, and well-being through universal prevention programmes, and thereby prevent dropout in upper secondary school. In Norway there have been focus on strengthening mental health by a range of different programmes, both in and outside of the school. The general programme VIP (guidance and information about mental health in youth) have shown effect on student's ability to seek help and support (Neumer et al., 2023). Specific programmes targeting youth with specific problems have shown significant effect on getting better mental health, e.g. traumatized adolescents (Jensen et al., 2017) and adolescents with light to moderate depressive symptoms (Wergeland et al., 2016). Strengthening the health care services for young people in school would as shown in other studies (Kerns et al., 2011; Ramsdal & Wynn, 2022; Walker et al., 2010) likely increase the chances to detect mental health problems at an early stage and thereby turn around a difficult life situation, preventing dropout.

Conclusion

Our study showed that low grades and being in vocational track is associated with dropout, while poor mental health and general health in the beginning of upper secondary school were not predictors for dropout. When we interviewed students after having dropped out during the first year, they told us about a wide variety of reasons for dropping out. Many

of them had difficulties with the amount of theoretical learning in school, and they talked about a long struggle with sadness, pessimism and hopelessness. Nevertheless, four of the participants had changed a difficult situation to a positive and meaningful way in life by making the deliberate choice of dropping out. One main finding from the qualitative study was that the students with the feeling of failure both had negative experiences in the teacher-student relationship, as well as in their relationship with their parents. The various experiences and life perspectives provided us with a more profound understanding of the dropout process.

The study also shows that research on group-level can give us indications on the overall problems in school when it comes to dropout. To get a broader understanding of the student's experiences and multifaceted factors playing a role in the dropout for the individual student it is important to do qualitative research. This can also be transferred in practice into the school, by having more focus on each individual student by strengthening the school-based healthcare centres and the teacher- student relationship outside the classroom. Considering the fluctuation of mental health in adolescence, students at risk of dropping out should be encouraged to have more frequent conversations with teachers or/and health personnel.

Perspectives on Future Research

In this section I give some suggestions for future research.

- Is there an association between poor mental health in upper secondary school and the education level and participating in labour marked later in life? How stable is mental health over 10 years?

- Expectations, visions for the future and engagement of dropout students who returned to school or are in work after reaching the age of thirty.
- Mental health, including internalizing and externalizing problems among students should be measured at several times throughout upper secondary school, and thereby identify and elucidate relationships between mental and general health, wellbeing and dropout (what happens along the way in upper secondary school?). Fluctuations in mental health and association with dropout throughout upper secondary school.
- Do monitoring mental health and life satisfaction, and at the same time offering help to students having poor mental health, prevent dropout, and how early is intervention needed?
- Will strengthening the health care services, make the system able to detect up more students with poor mental health and at risk of dropping out, to then take preventive actions and thereby decrease the dropout rate?
- May strengthening the teacher-student relationship help to elucidate mental health problems and thereby prevent dropout?
- Further research in rural districts is needed to explorer the differences in dropout rates.
- Doing qualitative studies 10 years after dropout:
    - To get a broader understanding if there were a specific turning point or help from others that got them to move on with their lives.
    - Did the participants experience that the school had prepared them for future education and work life?
    - To what extent did the students experience help and support from parents, peers, teachers and others and how did it influence their development.

- The students' experiences with various life events, how they did deal with it, and the association with dropout from upper secondary school, education and work life.

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Paper 1

Paper 2

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'From a sense of failure to a proactive life orientation': First year high school dropout experiences and future life expectations in Norwegian youth

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Abstract
Employing a salutogenic perspective, we designed a qualitative study to explore experiences related to Norwegian students' decision to leave school and their future life expectations. We identified a range of attitudes: pessimistic, discouraged participants found school to be equally lacking in care and support as their home background, whereas optimistic, proactive participants emphasized that supportive interactions with important others had made them believe in themselves and in alternative career tracks. The implications of our findings are discussed, focusing on social work that can empower marginalized young people to find new opportunities to succeed in school and employment.

Keywords
Career tracks, high school dropout, peripheral districts in the Barents Region, relationships with important others, sense of coherence, social exclusion

Introduction

The school dropout phenomenon has become a serious problem in many Western countries; about one-third of all students leave high school before graduating or stay in school but fail to graduate

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(Organisation for Economic Co-operation and Development [OECD], 2012), often referred to as dropouts (Markussen et al., 2011). This study focuses on circumstances related to Norwegian students' decision to leave high school and their future life expectations. The review literature points out a number of factors related to the risk of dropout (Lamb and Markussen, 2011). These are individual factors such as ability, attitudes, habits, expectations, life goals, and academic skills, and how these have been shaped through interaction with important others in the family, school, and community. Especially the feeling of being noticed, acknowledged, and stimulated in close interpersonal relationships and having significant others as role models seem to strongly influence youth self-esteem and ability to master challenges in later life (Sagy and Antonovsky, 2000). Research suggests that dropouts have often not acquired sufficient coping skills, perseverance, flexibility, and social and relational skills to deal with the academic and social challenges of high school (Ottosen et al., 2017). Youth from homes with conflicts, violence, low income, disability, substance abuse, and mental illness are particularly vulnerable to developing poor mental health at an early age (Patel et al., 2007), which increases the risk of poor school performance (Gustafsson et al., 2010) and dropout for students on both vocational and academic tracks (Sagatun Heyerdahl et al., 2014). Students who do not navigate a school transition will face an increased risk of social marginalization, exclusion from the labor market, and social and health problems, which in turn generate increased expenditure and reduced tax revenues for the state (Lamb and Markussen, 2011).

Context of the study

The study took place in Northern Norway, the home of 10 percent of the 5.2 million Norwegian population. Northern Norway, north-western parts of Russia, Northern Finland, and Northern Sweden form the Barents Region, which is characterized by vast geographical distances, a scattered population, and rich natural resources. Despite a harsh climate, growing interest in the midnight sun, the Northern Lights, and the polar night makes Northern Norway an attractive year-round international tourist destination. This has boosted the tourist industry, which employs around a quarter of the workforce (Pedersen and Moilanen, 2012). However, the shift in the 1970s from subsistence economy to increased production in fisheries, forestry, and mining led to greater centralization, higher unemployment, and rural depopulation (Pedersen and Moilanen, 2012). Today, barely 6 percent work in primary industries that have traditionally employed people with low education, whereas over 45 percent work in public administration and services with increasing demands for educational qualifications.

The international recession of the 1990s led to record youth unemployment in Norway and the whole Nordic region. To remedy this, the government introduced new school reforms aimed at enhancing opportunities for youth recruitment to growth industries such as tourism and seafood production (Lamb and Markussen, 2011). Since the reform, about 98 percent of students have chosen to continue from middle to high school. But although Norway spends more money on education than most other OECD (2012) countries, as many as 43 percent of Norwegian students dropped out or did not complete school in the usual time in 2012, compared to an average of 30 percent in 25 other OECD countries. Nationally, the dropout rate has historically been greatest in Northern Norway. In 2015, it was 51–63 percent in the three Northern Norwegian counties (Statistics Norway, 2015), with the greatest dropout among boys in vocational subjects. Compared with other parts of the country, long distances mean that relatively more Northern Norwegian students stay in rented rooms from Monday to Friday.

Aims of the study

The aim was to conduct a qualitative study where the purpose was to explore and describe factors related to Norwegian students' decision to drop out during their first year at high school and their subsequent experiences.

Theoretical perspective of the analysis

Antonovsky (1987) introduced the salutogenic perspective ('salus' = health), which focuses on the resources and human qualities that enable us to endure hardship and crises without getting sick. His premise is that life necessarily involves challenges and that we will move along a health–disease continuum throughout our lives, according to our mastery of these challenges. As a tool to explain why people tackle problems and life events so differently, Antonovsky (1987: 19) created the term 'Sense of Coherence' (SOC), defined as

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

Studies have shown that good academic performance and good relationships with parents, teachers, and classmates are positively associated with a strong SOC (Rivera et al., 2012). These factors form part of what Antonovsky (1987) refers to as generalized resistance resources (GRRs). These are resources within an individual (e.g. knowledge, attitudes, self-efficacy beliefs) or in their environment (e.g. social support, cultural stability) that can be used to counter the stressors of everyday life (Lindström and Eriksson, 2010). Antonovsky's premise is that GRRs affect the extent to which our experiences, especially in youth, promote or hinder a SOC, co-determination, and a balance between too few and too many challenges.

Operationalized in school, a salutogenic approach to vulnerable and disadvantaged student groups may involve skilled and engaging teachers and social and health professionals with a talent for counseling and the ability to collaborate and interact in a school environment based on closeness and humanity. The learning climate should enable students to be seen and heard, and receive support and guidance through adapted work based on the students' previous school achievements, knowledge, and abilities. The classroom should provide room for reflections, interpretations, and opportunities to express opinions and understandings. In summary, this can create a meaningful school day that enhances students' robustness, self-esteem, and utilization of their inherent capacities. A salutogenic reference frame will thus be highly relevant in a study of dropout.

Research materials and methods

Participants

This study was part of a larger project, 'The Young Intent Study: Dropout from High School in Troms County – Causes, Consequences and Actions', which focuses mainly on socio-demographic inequalities and educational and psychosocial determinants related to dropout in Northern Norway. It commenced in autumn 2010 and was approved by the REK Nord Committee for Medical and Health Research Ethics. A total of 1676 students agreed to participate in the main project, and 1538 of these also consented to be interviewed in this sub-study if they dropped out of school. Of the 98 students who had dropped out in their first year of high school, we telephoned 12 girls and 11 boys. Six girls and seven boys aged 16–21 agreed to be interviewed. Among the other 10, two refused to be interviewed in the phone call and 5 did not meet at the time and place agreed on the phone, nor did they answer the phone afterwards. One canceled the interview because of military service and one due to illness. The last one had recently given birth and was on leave from school. Participants were selected from the county educational database to represent variability in gender, place of residence, and

Table 1. Characteristics of the 13 participants.

Participant number	Proactive participants				Other participants								
	1	2	3	4	5	6	7	8	9	10	11	12	13
*Sex, female = F, male = M	M	M	M	F	F	F	M	M	M	M	F	F	F
*Age	16	20	16	18	16	16	21	17	18	19	18	19	16
*Place of residence, rural = R, city = C	C	R	R	R	C	R	C	C	C	R	R	R	R
*Educational track: Last/earlier Qualification for higher education = H Vocational qualification = V	V	V/V	V	V/V	V	V	V/H	V	H/V	V/V	V/H	V/H	V
Number of dropouts	1	2	1	2	1	1	3	2	2	3	3	3	1
Struggled with subjects, yes = 1, no = 2	1	1	2	1	1	1	1	1	2	1	1	1	1
Concentration difficulties, yes = 1, no = 2	2	1	2			1		1	1	1	1	1	1
High absenteeism, yes = 1, no = 2	2	1	1		1	1			1	1	1	1	
Bullied over time, yes = 1, no = 2	2	2	2	2	2	1		1	1	1	1		1
Friends, few = 1, many = 2	2	2	2	2		1	1	1	1	1		1	
Feeling of loneliness, yes = 1, no = 2	2	2	2	2	1	1	1		1	1	1	1	
Sadness, yes = 1, no = 2	2	2	2	2	1	1		1	1	1	1	1	1
Sleeping problems, yes = 1			1		1	1	1		1			1	1
Grown up with 1 or 2 parents	2	2	2	1	2	2	2	2	2	1	1	2	1
Family relocation when growing up, yes = 1, no = 2	1	2	1	1	2	2	1			1	1	2	1

Information marked with * is based on the county educational database, whereas the remaining information is based on self-reported data from the interviews. Empty cells denote missing information.

educational track (Table 1) – all variables with proven correlation with dropout (Lamb and Markussen, 2011). Detailed characteristics of the participants have been omitted or anonymized.

Data collection and procedure

The first and second authors conducted individual interviews with 10 participants at a previously agreed location and time. Due to external circumstances, three interviews were conducted by telephone. The 30- to 80-minute interviews took place 2–8 months after dropout and were audiotaped and transcribed verbatim. The questions were open to allow participants maximum freedom in telling their stories. A thematic guide steered the dialogue, with questions such as the following: 'Can you tell me about your childhood?' and 'What are your thoughts/wishes for the future?' Interviews were continuously processed and discussed by the authors. The aim was for new interviews to provide a deeper understanding of the most important and most challenging experiences mentioned in previous interviews (Kvale and Brinkmann, 2009: 137–154).

Analysis

The first and second authors read all the interviews, after which the first author, with input from the co-authors, analyzed the data using systematic text condensation (Malterud, 2012). This method is inspired by Giorgi's (2009) phenomenology, which aims to create new knowledge of people's experience and understanding of a phenomenon (Giorgi, 2009: 89–93). The analytical process consisted of (1) reading and re-reading the transcribed interviews to gain a general idea of the

Table 2. Categories and content relevant to the theme 'From sense of failure to a proactive life orientation'.

Categories	Content	Sample quotation
A. A sense of failure	1. Dismissive parents	1. I've missed a good father figure in the years I grew up. There has been a non-existent father and son relationship. (10)
	2. Uninterested teachers and own passivization	2. When I got no help with my math, problems built up and gave me trouble with lots of things, so I just didn't give a damn in everything. (11)
	3. A stressful learning climate	3. My teacher kept pushing me to speak English in class, even though I clearly said that I couldn't speak the language – then I really felt bullied. (1)
	4. Poorly adapted programs and teaching	4. I didn't enjoy school. I couldn't keep calm and I had ongoing conflicts with the teachers . . . . Then I walked into the principal's office and said that I wasn't going to bother with school any more. Then I just left the office and took the bus home. (8)
	5. An unstable home environment	5. I've had a lot of trouble with my mom … I had to move a lot over the year with my mother. From place to place, so I've become very antisocial … I was suddenly torn away from everything wherever I was. (10)
	6. Unsatisfactory counseling and confusing career information	6. Nobody helped me find out what I really wanted … nobody showed me what it was really all about … I was kind of not prepared for anything. (6)
	7. A gendered labor market	7. I applied for jobs in different stores, but the response has been poor. . . . I worry a lot about the future – worry that I can't get on in life. (5)
B. Proactive life orientation	1. Engagement and a well-functioning network	1. I have many good friends who I meet in my spare time . . . . My parents knew someone who works here, so that's how I first got a summer job here. (1)
	2. Child-centered parenting	2. I have a wonderful mother and we've talked a lot about everything. . . . We're close to each other and she's always supported and helped me when I needed help – for example with my homework. (4)
	3. Parental involvement in youth leisure time	3. My parents were involved with me so much right from kindergarten that from an early age, I could take part in various leisure activities like football and skiing. (1)
	4. Good interlocutors	4. I've talked a lot with my mother about career planning […]. Because of my chronic illness, now we've planned that I'll start studying transport and logistics subjects, so when I'm no longer comfortable driving machines, I can work in an office with logistics. (4)

material, bracketing preconceptions; (2) identifying meaning units representing different aspects of participants' experiences of the period around dropout and coding of these; (3) condensing and abstracting meaning within each coded group; and finally, (4) summarizing the content of each code group to form generalized descriptions of participants' experiences of schooling ending in dropout. The analysis program NVivo, Version 10 (QSR International, 2014) was used to extract meaningful units and sort them into code groups. This process enabled identification of two main categories. A table was drawn up containing categories, content, and examples of quotations (Table 2). The findings were validated by systematically comparing content and categories with the original

data throughout the analytical process (Malterud, 2012: 803). Although our findings partly reflected different aspects of the salutogenic perspective (Antonovsky, 1987), they were not organized in a theory-driven template analysis style.

Findings

The participants' experiences related to the aim of the study are summarized in Table 2. Participants' voices emerged through the quotes in order to support the two main categories and contents (sub-categories) as described, bringing nuances to the participants' experiences and views on aspects of childhood, schooling, and the time after dropout.

Category A: A sense of failure

Category A described participants' experiences of various feelings of failure and poor coping at home and school during childhood, and subsequent experiences after school dropout.

A1: Dismissive parents. Participants recalled a childhood where parents had scarcely allowed them the experience of being noticed or helped with schoolwork and other everyday problems they could not solve themselves. They remembered home episodes ending in shouting and slamming doors when neither they nor their parents understood the homework. One said,

> I was angry and frustrated sitting with my homework at night … there were tough discussions between me and dad, and we weren't on the same wavelength, so I gave up. (7)

A2: Uninterested teachers and own passivization. Participants remembered episodes in previous schools where teachers ignored or gave scant attention to their reading and writing difficulties. They suggested that this probably led to negative expectations of help and support from high school teachers; some were reluctant to ask for help because they did not expect to be noticed and understood, as one said:

> I reckon I gave up math in middle school, so in high school I was completely incompetent …. Maybe I'd have performed better if I'd got more support in high school, but I really don't know. (7)

Participants reported experiences of limited participation in discussions and contributions to solutions in group work, which made them feel uncomfortable among more successful classmates. This affected their self-respect and in many cases led to much absence from school prior to drop-out. One said,

> While six of my classmates were talking and working together at the subject, mostly I was alone …. Gradually, I couldn't face going to school, so I stayed home …. I've stopped planning for the future. Really, I have no goals. (5)

A3: A stressful learning climate. Participants described sensing poor contact with teachers, leading to little involvement and low mastery right from elementary school. Among others who talked about their learning/reading/writing/concentration difficulties, one boy said that his math teacher often went too quickly through new material, making it difficult for him to succeed in writing and math. When he mentioned this or asked for help, it was seen as interfering with the lesson, which could lead to quarreling with the teacher and classmates. He said resignedly, 'I couldn't make it at school' (10). Others had felt ignored by teachers who favored the bright students:

> In first grade, it was mostly playing, but once things got a bit harder in class, I got behind. It's always been like that … I was kind of kept out. I wasn't best, I wasn't smartest. If I put up my hand, the teachers preferred to let a clever kid answer. I was kind of scarred for life by that discrimination. So I was never really part of the class. (6)

A4: Poorly adapted programs and teaching. Participants had expected the transition to high school to represent a new start, where they could make friends and choose subjects that interested them. They expressed disappointment that the high school programs and teaching were not better adapted to their abilities, talents, and interests. Several explained more specifically that they had expected more practical classes with work connected to a future job situation. One said,

> … it was a drag … sitting in class just listening to the teacher. There was so much theory that there was kind of no point in continuing. Finally I just went to school so I wouldn't be marked absent. I couldn't keep up, it was too hard. Now it's much better, I get up and look forward to going to work. (1)

A5: An unstable home environment. Almost half the participants reported having moved during their childhood, some several times, and often due to parental substance abuse or other recurring problems that the parents could not solve. In their stories about such upheavals, they expressed a loss of cohesion and belonging, and not only in the family. Participants reported being excluded or bullied in the new school because of their different clothes or interests. Because of their family's financial situation, they could rarely participate in activities with their peers. Participants' stories demonstrated how such early experiences impacted later schooling. One girl said,

> … Mom's an alcoholic and she's been into drugs and stuff … My boyfriend got help from his parents with school work and leisure time activities. It hurts to hear that, because I never got help, nobody bothered with me. So when I started high school, I struggled with the subjects. (13)

A6: Unsatisfactory counseling and confusing career information. Participants were disappointed with the guidance they had received in secondary school, which they felt did not adequately address their needs and the demands of high school. They particularly complained that the counselors seemed to know little about the content of vocational subjects and the possibilities and limitations their choice of subjects would imply for their subsequent career. One said, 'I don't think the counselor quite knew what to say in that job he had' (12). Another said that the guidance was too general and superficial; she missed more depth, where her own interests, abilities, and skills could be assessed before a decision was taken, and added,

> It's important to put things in perspective, what you want with your life and where in the job market you fit in. (11)

There were stories from homes where education and work were not discussed; those students said they did not know what work their parents did and whether they had completed high school. Participants reported having talked to classmates and chosen the same track as them just to be with their friends in high school, regardless of their own abilities and interests.

A7: A gendered labor market. After dropout, two boys had found permanent jobs and one was on a job training course, whereas others reported having ended up with seasonal work and temporary employment. Employers had turned them down because they lacked qualifications in, for example, forklift driving or welding. Apart from one girl on a job training course, the girls admitted that they were unemployed without any plan or direction for future work. At the time of the interviews, most

lived with their parents, including one girl who found it exhausting to sit at home alone and brood on unexplained things that drained her strength and stole her sleep. Another said,

> I avoid thinking about the future, because it scares me, school scares me, everything scares me … I have nothing meaningful in my life, no job, no school or anything like that to go to. It affects your self-confidence and how you feel every day. The world's outside and I'm not part of it. (11)

Category B: Proactive life orientation

Category B described the way four participants (to be referred to as the 'proactive' ones) with experience of child-centered parenting, access to a solid network, and faith in self-efficacy had taken steps to carve out alternative career tracks.

B1: Engagement and a well-functioning network. Proactive participants described how, at an early stage, they had involved their parents in their plans to quit school. They admitted that there had been many discussions at home; they had had to present and argue for their future plans, before their parents agreed to the dropout. One said,

> We discussed … my parents sure tried to understand my situation … they tried to make me understand what being out of school would be like. (2)

Two proactive participants said that they did not formally leave school until they had got permanent full-time jobs through family contacts and in agreement with the school itself. The other two explained that after consultation with their parents/social services they had decided to leave school for health reasons. After pressure from the parents, the youth follow-up services drew up a specific plan to help the participants to quickly receive job training/work. They were pleased to have received job training or work. It was a good feeling to be useful and know that others depended on their work. They thought that work experience would give them insight into their own skills and interests, to help them to make later decisions about work or education. The proactive young people liked to have regular routines and something meaningful to fill their days, as one said:

> You must have a rhythm and go to bed early so you can get up at seven and do a good day's work … although I might be tired after work, I go out with my friends, so I don't completely lose contact with the guys – that's quite important. And I train in the evenings. (1)

B2: Child-centered parenting. Proactive participants described their relationship with their parents while growing up as close and trustworthy. They had experienced caring at home during childhood and being able to talk openly about everything from everyday problems to learning disabilities. One said,

> They made quite sure I did my homework, they knew how weak I was in the subjects … They said that as long as I did my best, that was good enough, but also accept that you can't be equally good at everything. (1)

B3: Parental involvement in youth leisure time. Proactive participants described their parents as well-educated, and three of these also had to move because of their parents' career/job. But none found the move to be a problem. They had friends and relatives in the new place and their parents involved them in their own leisure activities:

> Mom's the leader of the gymnastics group and I've been doing gymnastics since I was a little kid. So I appreciate that … Nowadays, I really appreciate having friends and family around. (3)

B4: Good interlocutors. Proactive participants reported that talk about education and work had been an everyday theme in their family, as one said:

> I've always been interested in electronics. My dad studied that and I've asked him a lot about it …. I enjoyed learning about electronics at school, but unfortunately, I was sick and had to quit school. (3)

Discussion

Our participants' dropout-related experiences varied from passivity and hopelessness linked to repeated failures and shortcomings at home, socially, and at school to a proactive life orientation in those reporting well-functioning interpersonal relationships throughout their lives. However, almost everyone, including those with repeated experiences of failure, had a strong concern about their future, albeit tinged with pessimism. They reported little active involvement in most interpersonal relationships, which eventually led to feelings of inferiority, pessimism, and passivity. Analysis showed that participants often came from conflictual, poorly structured home environments combined with little attention, poor interaction with teachers about complex learning difficulties, and little influence in peer groups in and outside school. These findings correspond with national and international research in the past three decades that highlights these risk factors for school dropout, which again increases the risk of little education, long-term unemployment, disability, and at worst complete exclusion from the labor market (Lamb and Markussen, 2011). In the following we discuss our main findings in more detail in light of previous research and Antonovsky's salutogenic model.

The core of participants' descriptions was a lack of initiative, encouragement, and structure in the home environment, leaving the young people with a feeling of being passive participants in their own lives (A1, A2, etc.; refer to Findings in A1, A2, etc. and the summarizing of A1, A2, etc. in Table 2). Daily rejections and insufficient guidance and support to solve everyday problems may have made them passive, as they did not receive adequate help to become familiar with their own problem-solving resources. When years of schooling also brought the experience of not being noticed or encouraged on the basis of their particular abilities (A2), coupled with low grades for their efforts, their despair and resignation may have increased. This form of passivization with potential negative consequences for social learning, personality development, and mental health is related to the component of meaningfulness in the salutogenic model where involvement is central (Antonovsky, 1987). If we find that our actions have no meaning in the world, the world eventually becomes meaningless. Such is Antonovsky's reasoning when he argues that the key to the development of a strong SOC is the experience of influence and participation in solutions of tasks and problems. This assumption is supported by studies that find that children's involvement in school activities (Marsh et al., 2007) and being given a say in family decisions (Sagy and Antonovsky, 2000) affect the experience of coherence in the world in later life.

Participants reported a stressful learning climate, where their academic shortcomings arising from significant learning and concentration difficulties appeared to have received little attention or help in previous schools (A3). In combination with experiences of being ignored, rejected, and sometimes excluded by classmates, the learning difficulties later seemed to undermine the participants' belief that they could meet the requirements of academic performance, independence, and social skills of high school. Our assumptions are supported by research (Gustafsson et al., 2010: 131–142) which finds that a learning climate characterized by external pressures on

social comparison, such as competition for academic achievement and material values, can cause psychosomatic problems and poorer school performance, especially for already low-performing students. Blackwell et al. (2007) describe an experimental study where relatively weak seventh graders were motivated by being taught that learning improves intelligence. Two comparable groups took an identical 8-week course in study skills, but the teacher of both groups motivated one group by emphasizing a message that learning changes the brain and makes us smarter. Students in this group clearly improved both performance and interest in the subject. They changed a downward trend in performance to a rising trend, while the control group continued the expected downward trend. The latter students may be those who are reluctant to be active in class for fear of failure after many previous failures, as with many of our participants, and instead use their energy to conceal their shortcomings. This is found in Antonovsky (1987) when, supported by Bandura's (1977) theory of self-efficacy, he discusses why individuals with a strong SOC more frequently experience less stress in certain situations than those with a weak SOC. Antonovsky states, 'If you are [referring to Bandura 1977: 193] convinced that one can successfully execute the behavior required to produce the results, the tension is not a big problem'. Bandura (1977: 195–200) argues that the most effective way to develop strong self-efficacy is through repeated personal mastery experiences. He also points out that seeing others succeed with similar tasks and having good role models who give verbal support and encouragement to overcome doubt are both good sources of motivation and expectations of mastery.

Many participants expressed disappointment that the school environment did not provide space for mastery experiences (A4). Accordingly, school life with little closeness to teachers and peers, unhappiness, boredom, and tasks and challenges poorly adapted to their individual skills and abilities may have led to low academic self-efficacy. Cornelius-White (2007) has documented that a learning climate where teachers are more present and focused on students as individuals and not merely on learning in isolation strongly enhances students' academic progress. The researchers involved found that these teachers adapted their teaching to make it seem interesting, manageable, and meaningful in terms of the individual student's personal characteristics and needs. This led to greater student engagement than other teachers achieved. Cornelius-White argues for the importance of the teacher's ability to take students' perspectives and give them good feedback, to enable them to evaluate themselves, feel secure, and build good social relationships with their classmates.

Moreover, poor academic mastery over time may have triggered mental stress with an associated need for protection and withdrawal, manifested as truancy and prolonged absence with dropout as endpoint (A2–A4). Our assumptions concur with the findings of a Norwegian study (Markussen et al., 2011), which revealed that high school dropouts had lower grades and higher absence in their final year of middle school and more often felt socially excluded and anxious about going to school compared to students who completed. As in our findings, this study demonstrates the need for additional resources for early identification of students needing extra support, adaptation, and guidance. This work should predominantly involve approaching and encouraging the individual on the basis of his or her unique capabilities, in line with best practices in high school dropout prevention (White and Kelly, 2010). Best practices focus on specific strategies in social work in schools that can develop a supportive culture, including peer support to counter bullying, discrimination, and violence and also the involvement of parents in their children's schooling. Also emphasized is training of teachers in effective and inclusive classroom management, with the aim of creating a good social learning environment with reduced absenteeism, truancy, and failure in school subjects (White and Kelly, 2010: 229).

In contrast to the participants who spoke of personal failure and future pessimism, there were four participants who had taken steps to carve out a new career track, helped by a solid, well-functioning network (B1). They demonstrated understanding of active engagement and regular everyday routines

to make progress in life. The purposefulness of these participants in changing their situation is consistent with what Becker and Rhynders (2013) term a proactive approach, that is, attitudes that create life coping skills, resilience, and good health. These researchers emphasize that '… the starting point for salutogenesis is the desired positive outcome and the subsequent determination of what must be done to move toward that desired state' (p. 2). In our study, this is illustrated by two proactive participants approaching people in their network; one used his linguistic and social skills to land a job in tourism, whereas the more practical one had found a job in processing. These examples illustrate the importance of access to a social network that can help to provide suitable alternative practical training for youth on the margins of education. This may again enhance personal development, self-esteem, and a positive self-image. Similarly, it was interesting to see how the two proactive students with health problems actively, with parental involvement, sought to utilize their residual work capacity. Instead of defining them as sick, with associated stigmatizing restrictions, greater emphasis was placed on the potential of their interests, life goals, and everyday concerns. This is consistent with Antonovsky's (1987) recommendation that social research must avoid dichotomizing people into healthy or sick. Helpers should have good contact and cooperative skills in working closely with young people and their parents to attempt to shift their focus from poor health and inadequate resources toward inherent resources and health promotion. Such work should involve suggestions for various compensatory and supportive measures, preferably with a salutogenic approach (Super et al., 2014).

Our analysis shows that the parents of the proactive students had consistently communicated with care, support, and encouragement in both everyday domestic tasks and difficult homework (B2). By contrast, other participants recalled weak emotional ties and negative interactions between family members (A5). This often involved interpersonal and socio-economic challenges which the parents failed to solve and which could be linked to an unstable home environment, marital breakups, parental custody disputes, poor finances, alcohol and substance abuse, and mental health problems. There is a proven correlation between these family problems and mental health problems in children (Bøe et al., 2013; Moksnes et al., 2014) and poor SOC (Olsson et al., 2006). Participants expressed frustration that their parents had failed as stable, problem-solving role models. Parents' poor education and coping skills may have been important reasons for the ignorance and rejection our participants repeatedly experienced when they did not understand and asked for help with homework. Faith in self-efficacy develops through mastery experiences and identification with role models who have developed good coping skills. Parental rejection of children that reminds them of their own limitations can mean that children, just like their parents, begin to avoid situations and people that may remind them of their limitations. This may be assumed to predispose to negative thoughts and emotions, loneliness, low self-esteem, and hopelessness, which in turn may have led to a behavioral pattern characterized by impatience, social withdrawal, and high absenteeism, as described by our participants. Similar links were reported in a Finnish longitudinal study (Feldt et al., 2005) which found that successful coping with stress was strongly associated with child-centered parenting (including good relations between the parents and a good home environment), together with school success. Child-centered parenting was also associated with high SOC and career stability 28 years later.

In our study, it is interesting that parents' social involvement through active participation as leaders in child and youth leisure-time activities in a new environment in small rural communities seemed to give the proactive participants an advantage in integrating and establishing solid networks, and subsequently local employment (B3). Conversely, the analysis revealed that other participants had experienced frequent moves due to parental conflict, and the new places had also brought social exclusion, isolation, unhappiness, and depression (A5). These findings correspond with those of Barber and Schluterman (2008), who found that connectedness serves as a protective function for adolescent health in general. Moreover, perceived parental supportive behavior was strongly linked to adolescent social initiative (adolescents initiating social interaction with peers

and adults outside the home) and to some degree lower levels of depression. Other studies conclude that societies which care for young people and offer them a good social life enhance their ability to develop a strong and stable belief that they can handle life's challenges and stresses, by either adapting to situations or seeking to change them (Benz et al., 2014; Marsh et al., 2007).

Participants expressed dissatisfaction with counselors' personal guidance and poor insight into educational and career paths or the prior knowledge required for high school (A6). Buland et al. (2010) found uneven quality of guidance among Norwegian schools and that about half of school counselors desired more knowledge of educational programs, working life, and psychosocial work. Similarly, Lidström et al. (2014) reported that superficial and confusing career information led to more disturbances in class, higher dropout rates, and frequent change of program among Swedish students. When students in addition have little knowledge of their parents' educational and occupational backgrounds, like our non-proactive participants, this may mean that neither home nor school has provided these young people with expectations of academic success. All these factors may lead to arbitrary educational choices (Lidström et al., 2014), just as our participants had chosen the same subjects as their friends, in the hope that it would be suitable for them. In any case, our participants more or less clearly expressed criticism of their parents' unstable lifestyle, coupled with their personal preference for future employment, housing, self-expression, and a sense of belonging to the community, can form a good basis for a discussion about their education; school counselors with broad expertise thus have a unique opportunity to be good interlocutors, like the parents of our proactive participants (B4), who can help students to sort out their thoughts about education and career on the basis of their own interests and abilities. For young people from troubled backgrounds, such a salutogenic approach may meet the expressed need for more useful and concrete information about schools and programs (Lidström et al., 2014) and provide students with more meaningful awareness of their life situation.

While boys reported being in permanent or temporary employment, girls despaired at the difficulty of gaining access to the labor market. Vocational education is very gender segregated in Norway (typically, boys study construction-related subjects, whereas girls study health care subjects) as in other OECD countries, and our participants' descriptions correspond well with the findings in a Norwegian school/work study (Von Simson, 2015). In an economic upturn, as around 2010, male high school dropouts are more likely to get jobs, especially in cyclically sensitive industries such as construction, compared to females, who are overrepresented in the less cyclically sensitive field of health and social care. However, the importance of adequate education and career counseling is increased by the fact that young unskilled labor is not in great demand, beyond odd jobs and temporary employment; employment opportunities increase with educational level, both internationally (Rumberger, 2011) and in the Barents Region (Pedersen and Moilanen, 2012).

In summary, there was great variation in participants' understandings of the reasons for their decision to drop out of high school and how this was done. Despite typical descriptions of negative circumstances beyond participants' control, we found four participants who, from a salutogenic perspective, had actively utilized personal and collective resistance resources to navigate out of a difficult school situation and into a meaningful career track. We identified success factors where young people's conscious choices and a reflexive attitude to their environment to create change in their lives were key. Their home environment was characterized by stability, strength, and close emotional ties, allowing for open communication and co-determination. Their parents' broad involvement in the local community was an asset for these participants' inclusion in society and working life. With regard to young people without such support and networks, the study emphasizes the importance of teachers and school social workers relating to individual students with care and consideration on the basis of their backgrounds, capabilities, and learning challenges.

The participants' open stories and great variation in attitudes to life provided a deeper understanding of the processes that can lead to dropout. That said, the small number of participants makes generalization difficult. Nevertheless, we believe that the knowledge generated through these interviews may have significant transfer value, especially for young people in rural areas with comparable educational, cultural, and social circumstances. However, it is also likely that the students who refused to be interviewed represented a different reality than those who accepted, which could weaken the validity of the study.

Finally, the study highlights the importance of cooperation between the social support system and active community-based social and working life, involving willingness and flexibility to include youth on the margins of the educational system.

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Poorer self-reported mental health and general health among first year upper secondary school students do not predict school dropout: a five-year prospective study

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Introduction: Education is important for socioeconomic, work and health status; thus, dropping out of secondary school is of major concern. In Norway, 1 out of 5 is dropping out from upper secondary education. Academic performance is a known predictor for dropout, but the role of mental and general health status is studied less.

Methods: By use of student data collected during the first school year we examined the accumulated risk of school dropout over 5 years. Students entering upper secondary school in a North-Norwegian region (Troms County) completed a comprehensive questionnaire during August 2010 ($N = 1{,}676$, 69% response rate). The contribution of mental and general health problems in predicting five-year dropout was of primary interest, adjusted for demographics and academic performance.

Results: One-third of the students had dropped out after 5 years. A logistic regression analysis showed no significant effect of mental and general health problems on dropout. Among the covariates, higher grades from lower secondary education reduced the chance of dropping out (OR = 0.31; $p < 0.001$). Subgroup analyses showed that students in the vocational track reported poorer mental and general health, compared to students in the general track, but this difference was not related to dropout. General track students were also less likely to drop out than vocational track students (OR for dropout 0.66; $p < 0.05$).

Discussion: In conclusion, lower grades from lower secondary education represented a warning flag for school dropout during upper secondary education whereas mental health issues were not.

KEYWORDS

school dropout, mental health, general health, academic performance, upper secondary school

Introduction

Dropout from upper secondary education is a major concern in Norway, and in the rest of Europe, as it increases the risk of unemployment, poorer mental health and even mortality (De Ridder et al., 2013; Markussen, 2017; Hale and Viner, 2018; OECD, 2022; Hetlevik et al., 2023). In technologically advanced information societies, higher education is a key requisite for success in the labour market (Halvorsrud, 2017; Markussen, 2017; OECD, 2022). The expectations of acquiring education are high, both among the students and in the society, as employers of today are less willing to accept unskilled labour. The high number who continue secondary schooling after finishing lower secondary – 98% in Northern Norway (Norwegian Directorate for Education and Training, 2023) is perhaps a reflection of this trend. However, in Norway, about 1 in 5 students do not complete upper secondary schooling within 5 years. In Northern Norway, where this study was conducted, this problem is even more pronounced, with 1 in 4 (25%) not completing within 5 years (Statistics Norway, 2023).

Upper secondary school in Norway includes two main tracks: The general track preparing students for higher education, and a vocational track providing students with a vocational qualification enabling them to enter the labour market directly after finishing school (Vilbli, 2024). Both tracks have a theoretical foundation, but theory is less pronounced and more combined with practical training in the vocational track (Norwegian Directorate for Education and Training, 2023). A graphical representation of the Norwegian school system is provided in Figure 1.

A variety of individual, family, socio-economic and school related factors go along with dropout (Rumberger and Lim, 2008; Markussen et al., 2011; Dæhlen, 2017). In the following sections, we summarize the empirical background for the inclusion of the current study variables.

Poor *general health* may limit the opportunities for participation in the labour market as well as in the society in general (Curnock et al., 2016; Thern et al., 2017; OECD, 2022). It is well known that there is a social gradient in health (WHO, 2013a) and poor health, school dropout and receiving social benefits are closely related to each other (De Ridder et al., 2012, 2013). About 10% of the Norwegian population receive disability benefits, and the percentage is increasing in the younger ages (18–44) (NAV, 2023b). At the age of 30, approximately 7% of the population receive such benefits.

In the younger groups receiving disability benefits, more than 60% had *mental health* diagnoses (NAV, 2023a). The most common mental health issues among adolescents in general (WHO, 2021). In Norway, mental health disorders affect about 15–20%, and according to Norwegian Institute of Public Health approximately half of these needs (NIPH, 2018). According to WHO, depression is one of the largest causes to disability also in (WHO, 2013b, 2021) and Patel et al. (2007) connects the inflicted mental health burden in young people to lower educational achievements and substance abuse. Previous studies have shown that poor mental health is associated with dropout in upper secondary school (Gustafsson et al., 2010; Hjorth et al., 2016), and particularly among students in the vocational track (Hjorth et al., 2016). In addition, poor mental health relates to other health conditions, such as *disturbed sleeping* (Zhang et al., 2017) and *eating disturbances* (Allen et al., 2013), and these variables were also investigated.

Adolescence is a highly transformational period involving bodily changes, identity formation and general worry. It is characterized by uncertainty, many choices, new experiences and finding a role in the society, all while navigating between often contrasting opinions and expectations from family and friends. Having a stronger *sense of coherence* (SOC; i.e. meaningfulness, comprehensibility and manageability) may be an advantage for adolescents in order to formulate and maintain plans that are in accordance with their own needs and preconditions, despite external stressors or strains that otherwise would increase the risk of dropout. Since a higher SOC is also protective against both poor mental health and poor health in general (Kouvonen et al., 2010; Super et al., 2014; Mittelmark et al., 2017), it is a relevant concept to examine in the context of school dropout.

Students achieving lower grades in their courses have a considerably higher risk for dropout compared to students achieving higher grades (Bowers, 2010). *Previous grades* also predict dropout (Casillas et al., 2012; Statistics Norway, 2023). According to Statistics Norway (2023), the completion rate among upper secondary students is approximately 98% among students with top grades from lower secondary school, while it is only approximately 42% among those in the lowest grade range.

Students experiencing *learning problems* tend to have lower educational attainment and aspirations than their non-afflicted peers (Wagner et al., 2005; Kortering et al., 2010; Irvin et al., 2011), which contribute to the dropout problem (Korhonen et al., 2014; Gubbels et al., 2019). As adults, they earn less – an effect that is mediated by attainment levels (McLaughlin et al., 2014), which underscores the importance of school completion. Gender may play a modifying role, as girls with learning problems attain more education than boys with similar problems (McLaughlin et al., 2014).

The dropout-rate in the vocational *track* is higher than in the general track (Statistics Norway, 2023) and Hjorth et al. (2016) showed that mental health measured by the Short-Form Health Survey (SF-12) prior to their dropout, was associated with dropout in the vocational track. A higher percentage of males are in the vocational track (Statistics Norway, 2023). This combined with higher risk of learning problems (see above) and lower academic achievement (Markussen et al., 2011; Sæle et al., 2016) may be one explanation of the higher dropout-rate in males. Derdikman-Eiron et al. (2011) showed that even though females had higher depression and anxiety scores, this did not influence academic performance as it did for males. The *gender* differences in school performance and dropout need to be explored further.

Also, other factors may be relevant for our context. Psychosocial factors, such as being *bullied* and receiving *social support*, influence both mental health (Reid et al., 2016) and school-related problems (Bania et al., 2016). Motivation is a central variable underpinning learning processes (Dweck, 1986). One aspect of motivation is the type of goals (Lockwood et al., 2002). Examples of such goal types are

Abbreviations: EDS, The Eating Disturbance Scale; GPA, Grade Point Average; HSCL, Hopkins Symptom Checklist; HUNT, The Nord-Trøndelag Health Study; MCTQ, The Munich ChronoType Questionnaire; PAQ, The Personal Attributes Questionnaire; SES, Socio-Economic Status; SOC, Sense of Coherence; SRH, Self-Rated Health; SWLS, The Satisfaction with Life Scale; WHO, World Health Organization.

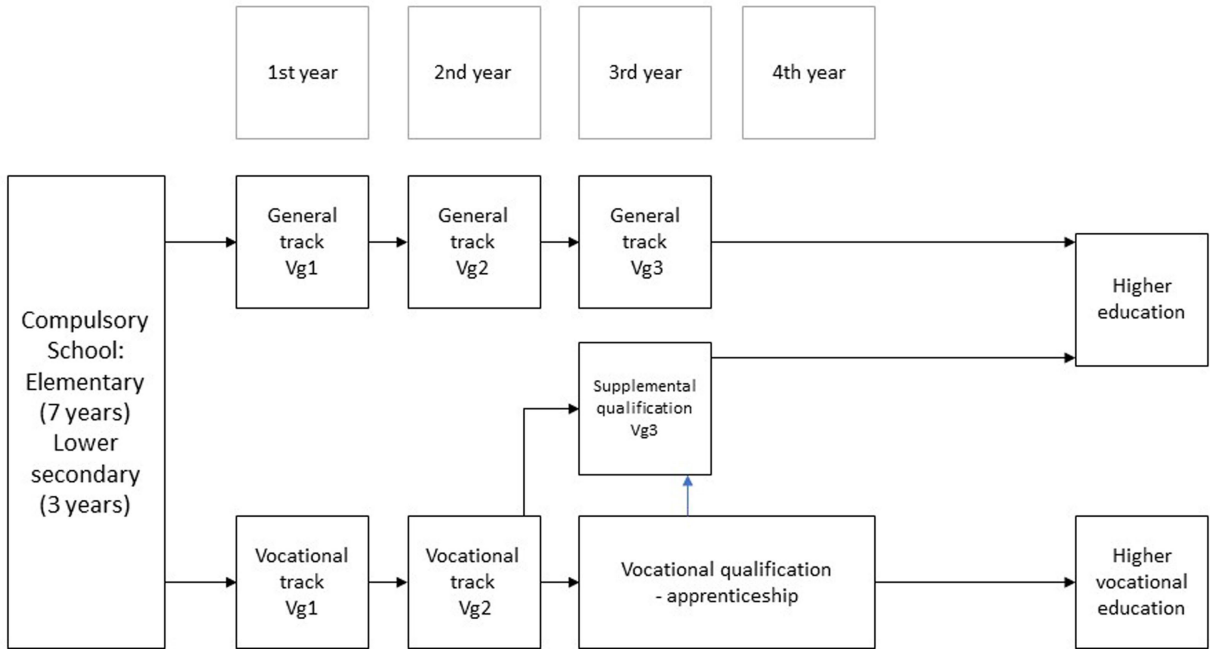

FIGURE 1
Norwegian upper secondary school (based on Vilbli, 2024).

prevention goals, which motivates avoidance of failure, and *promotion goals*, which motivates towards achieving success.

Objectives: This study investigated empirically selected predictors – measured at the beginning of the first study year – of dropout from upper secondary school 5 years later as recorded by the county's registry. The present study use data from the longitudinal research project "young will," aiming to investigate predictors and consequences of dropout through data collections during a ten-year period.

Based on the above summary, we expected the following: dropout rates would be highest among (1) male students, (2) students in vocational track, (3) students with more learning problems, (4) students with poorer grades from lower secondary education, and (5) students with poorer general health, more internalized mental health problems, more eating problems, less life satisfaction and less sense of coherence.

We also examined if there were associations between dropout and feminine or masculine personally traits, total sleep time, motivation patterns, social support, and SES.

Finally, we examined if scores on self-reported mental and general health changed significantly during the upper secondary school years.

Methods

Participants and procedures

All students entering the first year of upper secondary school in Troms County in the autumn of 2010 were invited to participate. Recruitment was done through school personnel, who informed the students about the study. Of the 2,434 students, 1,676 (69% response rate) consented in written and completed a questionnaire in class during August, just after study start. For students under the age of 16, parental consent was collected. A follow up study was conducted 30 months later through e-mail. The attrition of participants was very high ($N = 660$, 39% participated) despite two reminders, which precluded use of these data in the dropout analyses.

The sample consisted of 48% females and the mean age was 16.7 (SD = 1.3). The majority were ethnic Norwegians (94%), whereas 4.7% identified as Sami, Kven or Finnish, and 5.5% as other.

The study was approved by the Regional Committee of Medical and Health Research Ethics in North Norway (ref no: 2010/1503).

Measures and variables

Student status after 5 years was coded as: (0) completed and passed upper secondary, (1) completed, but not passed, (2) still in school, (3) not registered on any of the county's schools, and (4) dropout. For the outcome analysis, only the first and the last category was retained and recoded as 0 – completed/passed (coded 0 initially) and 1 – dropout (coded 4 initially). This left us with 1,447 cases, of which 473 (32.7%) had dropped out.

The questionnaire consisted of a range of measures considered relevant for adolescents in school. In this paper, we have focused on demographics, health, personality and educational variables. Most of the instruments used in our study have earlier been used and validated in studies of adolescents and young adults in Norwegian and international settings (Bøe et al., 2012; De Ridder et al., 2013; Bania et al., 2016; Markussen, 2017) (see below for detailed descriptions of instruments used in this paper). Data on student dropout, lower

secondary grade point average (GPA), sex and birth dates, were collected through the county's registry.

HSCL-5, a short version of HSCL-10 (Hopkins Symptom Checklist), has been used earlier in studies of adolescents (Strand et al., 2003; Myklestad et al., 2012). HSCL-5 is a self-rating scale with five items that accesses internalizing problems during the past 2 weeks. Strand et al. (2003) found that a mean score above 2 can indicate a mental disorder, and we collapsed the variable into two categories (below and above this cut-off). The internal consistency (Cronbach's $\alpha = 0.85$) in our study corresponds to previous studies (Tambs and Moum, 1993; Strand et al., 2003).

The Satisfaction with Life Scale (SWLS) is developed by Diener et al. (1985), includes five items and is used widely in population surveys, also among adolescents in Norway (Moksnes et al., 2014). Cronbach's $\alpha = 0.89$ and corresponds to earlier studies (Pavot et al., 1993; Moksnes et al., 2014).

Total sleep time in workdays was measured by the Munich ChronoType Questionnaire (MCTQ) (Roenneberg et al., 2003) translated to Norwegian. The actual sleep time in hours was calculated as: Bedtime (time going to bed) to wake-up time subtracted the time it took to fall asleep. Roenneberg et al. (2004) used the MCTQ in a large population survey including adolescents.

General health was measured by Self-rated health (SRH), which is a single-item variable used in several adolescent surveys (Idler and Benyamini, 1997; Breidablik et al., 2009). The response categories were 1-very good, 2-good, 3-not so good, and 4-poor, and we dichotomized these into two categories (very good/good and not so good/poor) as in a study of De Ridder et al. (2012).

The Eating Disturbance Scale (EDS-5) (2001) estimates general eating problems. EDS-5 consists of five-items and uses a seven-point Likert scale, earlier used in a survey among adolescents in Norway (Heradstveit et al., 2019). Cronbach's α in this study = 0.79, which corresponds to findings in studies of Rosenvinge et al. (2001) and Heradstveit et al. (2019).

The Sense of Coherence scale is based on Antonovsky's salutogenic model of coping with stressors (Antonovsky, 1993). It consists of 13 items, mapping meaningfulness, comprehensibility and manageability. SOC has previous been used by Moksnes et al. (2013) in an adolescent population. Cronbach's $\alpha = 0.84$, corresponding to the original reports and similar studies (Moksnes et al., 2014). We reversed the scores before including the scale in the analyses, making it correspond with the direction of the other included scales (higher scores = poorer sense of coherence).

Norwegian students normally start in upper secondary school directly after compulsory school, which means they are 15–16 years old. The age range in this sample was, however, 15–31, which means that some of the participating students were considerably older. We made a dichotomous variable with students aged 15 and 16 years old at the time of data collection in one category (students born in 1994, plus three younger students, born in 1995; 84% of the sample) and older students in the other.

We included measures of socio-economic status (SES), and asked them "*Compared to others in Norway, I consider our family's economy as*; 1 – poor, 2 – average, 3 – good or 4 – very good." The question was previously used in the Bergen Child Study (Bøe et al., 2012) and in Young-HUNT (HUNT, 2013), and when asked to parents, it correlated moderately with actual monetary income ($r = 0.59$) (Bøe et al., 2012). Goodman et al. (2001) have shown that adolescents' perception of the family economic status correlate highly with objective social status ($r = 0.72$–0.79). We also asked questions regarding parental educational level, but these contained a large amount of "I do not know"-responses and had to be discarded from analyses, leaving us with the one item measuring SES.

GPA was calculated as the average of all grades recorded the last year of lower secondary school. Possible scores range from 0 (poorest) to 6 (best), with 2 as the pass mark. Mean GPA for the sample was 4.1 (SD = 0.79; range 1.56–5.94). In 19.2% of the records, GPA was missing, for various reasons: Some students may have been enrolled at upper secondary with other qualifications than GPA (like age), some students had a Steiner school background without grades, and some students had grade exemptions due to learning or behavioural disabilities.

We assessed social support by six questions, for example "*Do you have friends appreciating you,*" and *"Do you ever feel lonely.*" Items were rated 1 to 5. Some of the items have previously been used in several large Norwegian population studies including adolescents (Breidablik and Meland, 2001; HUNT, 2013; Tromsøundersøkelsen, 2013). A principal component analysis indicated a single component with an eigenvalue >1 ($\lambda = 2.46$, $R^2 = 41\%$). The total score range was 6–30 (Cronbach's $\alpha = 0.69$).

One item was used to assess bullying: "*I am bullied or harassed at my school*" (range 1–6). The item has previously been used in the young-HUNT study (HUNT, 2013).

The Personal Attributes Questionnaire (PAQ; Spence and Helmreich, 1978) measures the presence of personality traits with 24 items belonging to three subscales: Masculinity (M), femininity (F) and masculinity-femininity (M-F) (Helmreich et al., 1981). The masculine and feminine subscales represent traits that are seen as desirable for both sexes, but most prevalent in one or the other (e.g., *competitive* (M) and *understanding* (F)). The last subscale represents traits that are considered desirable only for one sex (e.g., submissive (F) and aggressive (M)). In our sample, this subscale had a Cronbach's alpha as low as 0.46 and was not included in the analyses (see also Sæle et al., 2016). The masculinity and femininity subscales had a presentable Cronbach's $\alpha = 0.73$ and 0.82, respectively compared with the originally scale (0.85 and 0.82 respectively) (Spence and Helmreich, 1978; Sæle et al., 2016).

To assess motivational goals, we used the Promotion/Prevention scale (Lockwood et al., 2002), which builds on Regulatory focus theory (Higgins and Fowler, 1997). The scale has been used earlier in a sample of university students (Lockwood et al., 2002). A promotion focus involves being motivated by achieving a desirable outcome, while a prevention focus involves being motivated by avoiding a non-desirable outcome. Sample items are "*I typically focus on the success I hope to achieve in the future*" (promotion) and "*I frequently think about how I can prevent failures in my life*" (prevention). In our sample, Cronbach's α was 0.88 for promotion and 0.79 for prevention, which corresponds to the original study (Lockwood et al., 2002).

Reading and writing problems, or literacy problems, were measured by a short scale addressing current and previous difficulties with decoding, reading comprehension, spelling, and written expression. The psychometric properties of the scale, as reported in a previous paper (Sæle et al., 2016), are satisfactory. Sample items are "*Do you have reading difficulties?*" and "*Do you make many writing mistakes?*" Cronbach's $\alpha = 0.84$.

Among the last variables included in the analyses were track. The students are normally enrolled either in general or vocational track. However, 11 students were enrolled in an alternative track; a track with schedules and teaching individually adapted. Since these students represented a very small group, they were treated as missing on the Track variable, leaving only the two main categories. In addition, we included ambitions (measured by having plans for further education or not).

Data analyses

Two cases were excluded because they were multivariate outliers (logit residuals were −20.96 and −17.13), leaving 1,674 cases eligible for analysis. We excluded further 227 students in the dropout analyses due to the coding of the outcome variable (see above), leaving us with a final $n = 1{,}447$. The number of available cases for analyses varied substantially due to some missing data in the included variables (n varying between 1,065 and 1,229).

All analyses were conducted in IBM SPSS, version 25. Correlations were explored using Pearson's r and Spearman's rho for the continuous and dichotomous variables. We examined three simple associations through Chi square tests; one between health status (poor or good) and study track (vocational or general), one between health status (poor or good) and school status (dropout/completion), and one between study track and school status. All these variables are scored dichotomously; hence we report Phi coefficients as effect size measure.

Since dropout status is dichotomous a logistic regression analysis was used when examining predictors for drop out. Coefficients and effect sizes are reported by odds ratio (OR) and Nagelkerke's R^2 equivalent. Variables not contributing significantly ($p > 0.10$) were excluded backwardly. The predictors were organized in four blocks: (1) health-related variables, (2) demographics, (3) covariates, and (4) GPA. Within each block, except the final we removed variables with p-values above 0.10, to avoid excluding potentially relevant variables (Hosmer and Lemeshow, 2000). In the final block, only variables with p-values below 0.05 were retained. We also tested for interaction effects between mental health* track, general health*track, mental health*GPA, general health*GPA, mental health*sex and general health*sex. Finally, we tested how good the models were at classify cases correctly as dropouts or completers. The cut-off value was set to 0.327, corresponding to the observed share of dropouts in the sample.

Results

Descriptive statistics and correlations between the variables are reported in Tables 1, 2. One third (33%) of the students had dropped out after 5 years, which was significantly ($p < 0.001$) related with several variables, the strongest associations being with lower GPA ($r = -0.41$), vocational track ($r = -0.32$) and literacy problems ($r = 0.26$).

The number of students with poor mental and general health was significantly higher in the vocational compared to the general track (Table 3). Furthermore, there was a significant difference between dropouts and completers within the vocational group regarding general health, but this difference was not present for mental health (Table 4). In the general track, students with good/poor self-reported mental and general health were comparably represented in the dropout and completers groups. A significantly higher number of students that enrolled in the general track completed upper secondary as compared to students enrolled in the vocational track (Table 5).

Prediction of dropout

A logistic regression analysis was conducted to discern multivariable predictors of the five-year dropout rate (Table 6). The adjusted coefficients indicated that higher GPA from lower secondary school (OR = 0.31; $p < 0.001$) and being enrolled in the general track (OR = 0.66; $p < 0.05$) decreased the odds of dropping out as compared to lower GPA and vocational track students. The other variables that contributed significantly in the initial steps of the analysis, such as general health, EDS-5, SWLS and total sleep time, turned non-significant after the introduction of the GPA and the study track variables. Mental health (HSCL) did not contribute significantly neither in the unadjusted nor the adjusted analyses. The final model was statistically significant compared to a constant-only model, χ^2 (7, $N = 1{,}087$) = 195.66, $p < 0.001$, accounting for 25% of the variance (Nagelkerke). The model classifies completers rather well (83% correct in the final model) but perform poorer on classifying dropouts (54%).

In order to examine if the nonsignificant mental health – dropout relationship could be masked by other factors, we added a range of interaction terms to the logistic model: mental health* track, general health*track, mental health*GPA, general health*GPA, mental health*sex and general health*sex. Even though the initial descriptive statistics showed some health differences among vocational and general track, none of these variables moderated the primary relationship significantly when included as interaction terms in the full analyses. Hence, we did not find support for the existence of any sub-group relationships between health and dropout status.

A follow up data collection was conducted 30 months after baseline, but the attrition of participants was very high ($N = 661$, 39% participated). Attrition analyses revealed that the participants and the non-participants in the follow-up study where significantly different from each other on group level analyses on demographic baseline variables. The participants and non-participants were different with regards to gender distribution (χ^2 (1, $N = 661$) = 59.20, $p < 0.001$, $Phi = -0.19$) and track distribution (χ^2 (2, $N = 661$) = 12.71, $p < 0.01$, $Phi = 0.09$), where more females and students in general track participated in the follow up study. The attrition group was also different from the follow-up group on high school GPA ($t = -7.47$, df (1353), $p < 0.001$), where non-participants had lower GPA (M: 39.57, SD: 7.82) than participants (M: 42.78, SD: 7.76).

This, coupled with missing data on the predictor and outcome variables, a regression analysis including both time points was not deemed valid.

We did nevertheless examine if health status worsened during the study years by examining stability and change in the health variables among the students answering both data collections. The proportion of students increasing their HSCL-score above the cut-off (>2) was 22%, whereas those crossing below the cut-off was 34%. Because more students changed their health status in a favourable rather than unfavourable direction, the lack of significant predictive findings for health status rather strengthen than weaken the validity of this null-finding.

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TABLE 1 Descriptive statistics for all variables.

Variable (range)	N	Percent	M	SD	Median	Skewness	Kurtosis
1. Status (completer = 0; dropout = 1)	1,447	67.3/32.7					
2. SWLS (1–7)	1,569		3.19	1.37	3	0.57	−0.15
3a. HCSL-5 baseline (mean score ≤ 2 = 0; > 2 = 1)	1,608	82.6/16.7					
3b. HCSL-5 follow-up (mean score ≤ 2 = 0; > 2 = 1)	579	69.4/30.6					
4. Total sleep time workdays (hours)	1,509		6.81	1.24	7	−0.71	3.38
5. General health (0–2)	1,629		1.12	0.33	2	0.58	0.37
6. EDS (1–7)	1,628		2.55	1.29	2.2	1.10	0.64
7. SOC (1–7)	1,523		3.77	0.97	3.85	−0.13	−0.23
8. Sex (0 ♀. 1 ♂)	1,674	48/52					
9. Birthyear (94/95 = 1; older = 0)	1,674	83.7/16.3					
10. SES (1–4)	1,635		2.61	0.68	3	−0.10	−0.17
11. Social support (1–6)	1,636		4.45	0.58	4.5	−1.75	4.37
12. Bullying (1–6)	1,618		1.27	0.84	1	4.05	17.51
13. PAQ $_{masculine}$ (1–5)	1,530		3.36	0.63	3.38	−0.23	0.27
14. PAQ $_{feminine}$ (1–5)	1,530		3.79	0.67	3.88	−0.73	1.20
15. Promotion (1–5)	1,526		3.68	0.72	3.78	−0.79	1.54
16. Prevention (1–5)	1,526		3.05	0.70	3.11	−0.33	0.39
17. Literacy problems (0–1)	1,622		0.24	0.29	0.13	1.29	0.69
18. Plans for the future (not decided = 0; decided = 1)	1,674	26.3/73.7					
19. Track (vocational = 0; general = 1)	1,663	54.4/45.6					
20. GPA lower secondary (0–6)	1,355		4.09	0.80	4.13	−0.18	−0.49

SWLS, satisfaction with life scale; HSCL, Hopkins symptom checklist; EDS, eating disturbance scale; SOC, sense of coherence; SES, socioeconomic status; PAQ, personal attributes questionnaire.

Discussion

The aim of this study was to investigate a collection of academic, psychosocial, and health-related predictors of dropout from upper secondary school. We expected that health-related variables (satisfaction with life, sleep habits, general health, internalized mental health problems, eating disturbances and sense of coherence) would predict dropout 5 years later, as well as social support, bullying, personality, motivational goals, ambitions, and literacy problems. In addition, we expected that being male, a student older than the typical age, enrolled in vocational track, and having poorer grades would contribute to predicting dropout. Finally, we aimed to investigate these variables through a follow-up study, but due to high attrition, we did not include data from the second data collection in the dropout analyses.

In the first analyses of simple associations, we found that both mental and general health were poorer among students in vocational track than among students in general track. We also found that general health was poorer among students that had left school, and that dropout rates were higher among students enrolled in the vocational track. In addition, dropout was negatively associated with GPA.

However, when entering other variables in the analyses, all the health variables turned non-significant. Also, demographics and other variables were non-significant in the final model, leaving track and

TABLE 2 The association between the study variables as correlation coefficients.

Variable	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19
1. Dropout status																			
2. SWLS	0.10[3]																		
3. HCSL	0.02	0.48[3]																	
4. Total sleep time workdays	−0.12[3]	−0.15[3]	−0.09[3]																
5. General health	0.14[3]	0.37[3]	0.33[3]	−0.17[3]															
6. EDS	−0.02	0.36[3]	0.42[3]	−0.12[3]	0.30[3]														
7. SOC (R)	0.08[2]	0.57[3]	0.58[3]	−0.20[3]	0.34[3]	0.46[3]													
8. Sex	0.17[3]	−0.11[3]	−0.20[3]	−0.05	−0.11[3]	−0.40[3]	−0.16[3]												
9. Birthyear	−0.09[3]	−0.15[3]	−0.12[3]	0.09[2]	−0.11[3]	−0.04	−0.09[3]	−0.03											
10. SES	−0.06[1]	−0.23[3]	−0.16[3]	0.10[3]	−0.19[3]	−0.06[1]	−0.17[3]	−0.02	0.09[3]										
11. Social support	−0.12[3]	−0.39[3]	−0.35[3]	0.09[3]	−0.24[3]	−0.17[3]	−0.36[3]	−0.11[3]	0.19[3]	0.19[3]									
12. Bullying	0.06[1]	0.14[3]	0.20[3]	−0.09[2]	0.08[3]	0.10[3]	0.17[3]	0.10[3]	−0.01	−0.05	−0.21[3]								
13. PAQ $_{masculine}$	−0.12[3]	−0.43[3]	−0.32[3]	0.11[3]	−0.36[3]	−0.26[3]	−0.42[3]	0.09[3]	0.11[3]	0.25[3]	0.37[3]	−0.09[2]							
14. PAQ $_{feminine}$	−0.12[3]	−0.15[3]	0.02	0.04	−0.09[2]	0.10[3]	−0.10[3]	−0.28[3]	0.10[3]	0.11[3]	0.27[3]	−0.08[2]	0.35[3]						
15. Promotion	−0.16[3]	−0.11[3]	0.05	0.14[3]	−0.15[3]	0.06[1]	−0.07[1]	−0.15[3]	−0.01	0.14[3]	0.15[3]	−0.10[3]	0.28[3]	0.33[3]					
16. Prevention	−0.04	0.25[3]	0.42[3]	−0.05	0.14[3]	0.31[3]	0.41[3]	−0.19[3]	−0.08[2]	−0.05[1]	−0.15[3]	0.09[2]	−0.22[3]	0.11[3]	0.42[3]				
17. Literacy problems	0.26[3]	0.11[3]	0.22[3]	−0.06[1]	0.20[3]	0.05	0.16[3]	0.15[3]	−0.21[3]	−0.15[3]	−0.24[3]	0.17[3]	−0.26[3]	−0.19[3]	−0.17[3]	0.10[3]			
18. Future plans	−0.04	−0.08[2]	−0.03	0.07[2]	−0.08[1]	−0.01	−0.07[2]	0.00	0.02	0.07[2]	0.09[3]	−0.02	0.19[3]	0.06[1]	0.12[3]	−0.03	−0.06[1]		
19. Track	−0.32[3]	−0.09[3]	−0.03	0.18[3]	−0.23[3]	−0.03	−0.13[3]	−0.14[3]	0.20[3]	0.14[3]	0.16[3]	−0.10[3]	0.23[3]	0.16[3]	0.26[3]	0.00	−0.29[3]	0.06[1]	
20. GPA lower secondary	−0.41[3]	−0.06[1]	−0.01	0.18[3]	−0.20[3]	0.08[2]	−0.08[2]	−0.29[3]	0.13[3]	0.14[3]	0.22[3]	−0.14[3]	0.26[3]	0.25[3]	0.31[3]	0.01	−0.44[3]	0.12[3]	0.59[3]

SWLS, satisfaction with life scale; HSCL-5, Hopkins symptom checklist – 5 items; EDS, eating disturbance scale; SOC, sence of coherence (reversed); SES, socioeconomic status; PAQ, personal attributes questionnaire; LP, literacy problems. Correlations are reported as Pearson's r. *N* ranges from 1,192 (dropout vs. GPA) to 1,674 (gender vs. birthyear).

[3] $p < 0.001$, [2] $p < 0.01$, and [1] $p < 0.05$.

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TABLE 3 Simple associations between health status and study track.

	Track		
Health status	Vocational[a]	General[a]	*p*
Mental health			
Good	694 (81%)	627 (85%)	
Poor	165 (19%)	113 (15%)	0.038
General health			
Good	724 (82%)	696 (94%)	
Poor	155 (18%)	45 (6%)	<0.001

[a]Percentage of total responders by track. p = chi-square probability value. Phi = −0.18, $p < 0.001$.

TABLE 4 Simple associations between health status and dropout among students in vocational track.

	School status		
Health status	Dropout	Completed	*p*
Mental health			
Good	263 (80%)	323 (83%)	
Poor	67 (20%)	66 (17%)	0.251
General health			
Good	270 (79%)	340 (86%)	
Poor	71 (21%)	56 (14%)	0.017

Respondents with unknown dropout status are excluded. p = chi-square probability value. Phi = −0.05, $p < 0.001$.

TABLE 5 Simple associations between school status and study track.

	Study track		
School Status	Vocational	General	*p*
Completed	404 (53.4%)	568 (83.4%)	
Dropout	352 (46.6%)	113 (16.6%)	<0.001

Respondents with unknown dropout status are excluded. p = chi-square probability value. Phi = −0.32, $p < 0.001$.

GPA as the only significant predictors for dropout. However, these effect sizes were small.

Contrary to other studies (Hjorth et al., 2016; Askeland et al., 2022; Lindhardt et al., 2022), we did not find a clear association between mental health and dropout, but the study *does* confirm previous findings indicating that lower grades (e.g., Allensworth and Easton, 2005; Bowers, 2010; Casillas et al., 2012) predict school dropout. A meta-analysis from 2014 (Esch et al., 2014) indicated an association between measures of emotional problems and dropout ($r = 0.15–0.18$); however, these associations were of a small magnitude even in unadjusted analyses. Another study by Sagatun et al. (2014), who adjusted for grades, did not observe a significant relationship. In a review of school related variables and mental health, Gustafsson et al. (2010) reported associations between internalizing problems and poor academic achievement, which in turn is known to be associated with dropout (Bowers, 2010; Casillas et al., 2012). Taken together, we conclude that internalized mental health at the start of upper secondary school is not the most important factor for dropping out of school given the existing null-findings, or in best case, findings of minor effect sizes.

The transition between lower and upper secondary, is a vulnerable phase (Bowers, 2010). In our study, we collected the data within the first 2 months of upper secondary school. Fluctuation in the individual symptom burden related to mental health (Fleming et al., 2014; WHO, 2017), which may be particularly present in the beginning of the high school years, may underpin the lack of a predictive contribution by self-rated mental health in our analyses. The fact that the students were trying to adapt to a new environment could inflict higher levels of anxiety or worry during the first months, not representing their stable condition. Moreover, if students potentially improved their mental health status during the study period, these favourable changes may have aroused feelings of hope and positive expectations related to a new start. Another possibility is that an ongoing drop-out process may be associated with negative feelings, less efficient or unhelpful emotional regulatory strategies that were not present when beginning upper secondary school (Ottosen et al., 2017).

Bania et al. (2016) found that worse mental health predicted dropout exclusively among females, and boys dominated the vocational track where the dropout rates were highest. Previous research has indicated that boys report a lower symptom burden than girls (Sigmon et al., 2005; Bramness et al., 2010; Krokstad et al., 2022), but our data provided no indication of sex as a moderator between symptom burden and dropout.

When it comes to self-reported general health, De Ridder et al. (2012) has shown an association with school-dropout. However, they did not control for variables directly related to school, like track or grades. In our study, general health was a significant predictor initially, but as soon as other predictors were included in the analyses, health was no longer an independent predictor. Even though the effects are small, grades and track seem better at predicting dropout than health.

In line with the national statistics for dropout (Statistics Norway, 2023) males had a higher risk of dropping out than females initially in the regression analyse; however, this difference disappears when we adjust for grades. This could relate to the fact that males often achieve poorer academically than females (Markussen et al., 2011; Sæle et al., 2016).

In our study we found that mental health screening in the beginning of upper secondary school is not enough to predict later dropout. However, Dupéré et al. (2018) found in a retrospective study conducted shortly after dropout of secondary education, that nearly 25% of them had clinical depressive symptoms within the last 3 months before leaving. Many adolescent struggles in school and in life as well. This may have implications for the healthcare services provided for youth, that is the threshold for receiving psychosocial healthcare services at the schools should be low. Health care workers may help to identify students at risk of poor mental health (Gall et al., 2000; Walker et al., 2010) which, as shown in other studies reduces the risk of dropout (Kerns et al., 2011; Westbrook et al., 2020).

In summary, our data did not confirm our hypothesis that general health, mental health, sense of coherence, life satisfaction, sleep habits or eating disturbances or even sex predicts dropout. However, being enrolled at a vocational track and having achieved lower GPA from lower secondary education do, to some degree, predict dropout.

TABLE 6 Logistic regression analysis on predictors for dropout.

Blocks and variables	Block 1		Block 2		Block 3		Block 4		Predicted completed, dropped, total (%)[b]
	B (SE)	OR [95% CI]	B (SE)	OR [95% CI]	B (SE)	OR [95% CI]	B (SE)	OR [95% CI]	
Block 1: Health ($n = 1,185$)									80.7, 26.4, 67.8
Satisfaction with life	0.14 (0.05)	1.15** [1.04, 1.28]		ns					
Hopkins symptom checklist-5		ns							
Total sleep time workdays	−0.19 (0.05)	0.83*** [0.75, 0.92]	−0.13 (0.05)	0.88* [79, 0.97]		ns			
General health	0.69 (0.20)	1.99** [1.34, 2.97]	0.62 (0.21)	1.85** [1.22, 2.81]	0.40 (0.22)	1.50[a] [0.98, 2.32]		ns	
Eating disturbance scale	−0.14 (0.06)	0.87* [0.78, 0.97]		ns		ns			
Sense of Coherence		ns							
Block 2: Demographics ($n = 1,234$)									87.0, 44.3, 74.3
Sex			0.66 (0.15)	1.94*** [1.44, 2.61]	0.55 (0.15)	1.73*** [1.29, 2.32]		ns	
Birth year			−1.77 (0.18)	0.17*** [0.12, 0.24]	−1.39 (0.20)	0.25*** [0.17, 0.37]		ns	
SES				ns					
Block 3: other variables ($n = 1,160$)									88.9, 40.1, 75.5
Support						ns			
Bullying						ns			
PAQ Masculine						ns			
PAQ Feminine						ns			
Promotion						ns			
Prevention					−0.23 (0.11)	0.80* [0.65, 0.98]			
Literacy problems					0.87 (0.28)	2.38** [1.38, 4.09]		ns	
Plans for further education						ns			
Track					−1.01 (0.16)	0.36*** [0.27, 50]	−0.42 (0.19)	0.66* [0.45, 0.96]	
Block 4 ($n = 1,087$)									83.2, 54.4, 76.5
GPA							−1.16 (0.15)	0.31*** [0.24, 0.42]	

SES, socio-economic status; PAQ, personal attributes questionnaire; GPA, grade point average. Nagelkerke R square = 0.24. Cut-off value is set to 0.327, corresponding to the observed share of dropouts in the sample.

*** $p < 0.001$, ** $p < 0.01$, and * $p < 0.05$.

[a]The variable is non-significant, but with a p-value below 0.10 (see Data analyses section). ns, non-significant.

[b] The percentage of correct classification of cases for each subsequent block/model. Cut-off value is set to 0.327, corresponding to the observed share of dropouts in the sample.

Strengths and limitations of the study

Strengths of study: The sample size was fairly large ($N = 1,676$) and also quite representative for the entire cohort in this North-Norwegian county due to a high participation rate (69%). This response rate is clearly above what is normally expected in general epidemiological studies as of today (Hysing et al., 2013; Hjorth et al., 2016). The comprehensive baseline characterization and the minor prospective part of the current study are also strengths.

Limitations of the study: While the aim of this particular study was to focus on health variables, the complete survey "ung vilje," consisted of a broad set of questions and instruments. Because the study was exploratory, and because the original data collection happened in 2010, the hypotheses are not pre-registered. Use of comprehensive questionnaire may incur limitations, by tiring students before reaching the final questions, leading to less valid responses of items (Sahlqvist et al., 2011). In "ung vilje" the health questions appeared early in the questionnaire leaflet (first one-third), which may have reduced this risk.

Self-reported data can lead to misreporting; the questions may be misunderstood or to complex and by using validated instruments previously used in similar populations this risk is minimized (Boynton and Greenhalgh, 2004).

The data were collected only a few weeks after the students entered first year in upper secondary school, and their responses to some of the questions may primarily have reflected previous school experience or the change of school *per se*.

Despite the large original sample size (1674), a relatively large number of students had to be excluded because of missing values on GPA or missing status of completion. Together with missing responses, this left us with 1,187 at the final stage in the logistic regression analysis.

Recommendation for future research

The relationships between dropout and sex, track, mental and general health, and grades still need further investigation. The symptom burden among students should be measured at several time points throughout the whole study period, in order to better identify and elucidate the possible relationships between mental and general health and dropout. Whether differences in self-rated mental health between boys and girls are due to real diversity or to under-reported symptoms are also questions to be further investigated.

Conclusion

Low grades are suited to function as a warning flag for dropout, as others have suggested earlier. Further studies should therefor make sure to control for grades, when investigating other variables. Our findings indicate that general health is associated with dropout among students in the vocational track, but not when controlling for previous grades. This result needs replication and further investigation.

Internalized mental problems in the beginning of upper secondary school do not predict dropout. However, the students report of mental health is changing during adolescence, and reports from the beginning of upper secondary may be influenced by expectations and optimism related to a new start. It may therefore still be important to monitor the development of the mental health condition of the individual student during the whole study period.

Data availability statement

The original contributions presented in the study are publicly available. This data can be found here: https://dataverse.no/dataset.xhtml?persistentId=doi:10.18710/Q3GFGG.

Ethics statement

The studies involving humans were approved by Regional Comittee for Medical Research Ethics Northern Norway. The studies were conducted in accordance with the local legislation and institutional requirements. Written informed consent for participation in this study was provided by the participants' legal guardians/next of kin.

Author contributions

CG: Conceptualization, Data curation, Formal analysis, Funding acquisition, Investigation, Methodology, Project administration, Writing – original draft. TS: Conceptualization, Funding acquisition, Methodology, Project administration, Supervision, Writing – review & editing. OF: Conceptualization, Methodology, Supervision, Writing – review & editing. KO: Conceptualization, Data curation, Funding acquisition, Writing – review & editing. RS: Data curation, Formal analysis, Methodology, Supervision, Writing – review & editing.

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Conflict of interest

The authors declare that the research was conducted in the absence of any commercial or financial relationships that could be construed as a potential conflict of interest.

Publisher's note

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Appendix 1

Questionnaire T1

Spørreskjema for elever på Vg1-kurs i Troms fylke

Kategori: Oppvekst og tilhørighet

1) Hvem bor du sammen med nå?
(Ta ikke med søsken og halvsøsken)

- ☐ Mor og far
- ☐ Bare mor
- ☐ Bare far
- ☐ Omtrent like mye hos mor og far
- ☐ Mor/far og ny samboer/ektefelle
- ☐ Fosterforeldre
- ☐ Bokollektiv
- ☐ Alene på hybel/leilighet
- ☐ Sammen med kjæreste
- ☐ Andre

2) Mine foreldre er:

- ☐ Gifte/samboere
- ☐ Ugift
- ☐ Skilt/separert
- ☐ Annet

3) Er du borteboer? (Det vil si at du bor utenfor hjemmet i ukene, og drar hjem i helgene)**:**

Ja: ☐ Nei: ☐

4) Hvor bodde du da du fylte 1 år?
(Sett bare ett kryss)

- ☐ I Tromsø *(med dagens kommunegrenser)*
- ☐ I Troms, men ikke i Tromsø
- ☐ I Finnmark fylke
- ☐ I Nordland fylke
- ☐ Annet sted i Norge
- ☐ I utlandet

5) Hva regner du deg selv som?
(Kryss av for ett eller flere alternativ)

- ☐ Norsk
- ☐ Samisk
- ☐ Kvensk
- ☐ Finsk
- ☐ Annet

Hvis annet, spesifiser _____

6) Hvor mange søsken har du/har du hatt?
(Bruk tall, hvis ingen søsken skriv 0)

Antall søsken: ☐

7) Hva var/er den høyeste fullførte utdanning til dine foreldre?
(Sett kun ett kryss for mor og ett for far)

Mor	Far	
☐	☐	Ingen
☐	☐	Grunnskole 7-10 år, framhaldsskole eller folkehøgskole
☐	☐	Yrkesfaglig videregående, yrkesskole eller realskole
☐	☐	Allmennfaglig videregående skole eller gymnas
☐	☐	Universitet eller høyskole av lavere grad (mindre enn 4 år)
☐	☐	Universitet eller høyskole av høyere grad (4 år eller mer)
☐	☐	Vet ikke

8) Jeg tror vår familie, sett i forhold til andre i Norge, har: (Sett bare ett kryss)

- ☐ Dårlig råd
- ☐ Middels råd
- ☐ God råd
- ☐ Svært god råd

9) Hvilken betydning har religion i ditt liv?
(Sett bare ett kryss)

- ☐ Stor betydning
- ☐ En viss betydning
- ☐ Ingen betydning

10) Har du nære venner utenom familien som setter pris på deg? (Sett bare ett kryss)

Ingen	Ikke sikker	Kanskje	Én venn	Flere venner
☐	☐	☐	☐	☐

11) Dersom du har nære venner, omtrent hvor ofte prater du med dem?

Har ingen nære venner	Sjelden	1-2 ganger i måneden	Omtrent 1 gang i uken	Mer enn én gang i uken
☐	☐	☐	☐	☐

12) Er det blant dem som står deg nærmest noen som er omtenksom, oppmerksom og interessert i det du holder på med? (Sett bare ett kryss)

Ingen	Ikke sikker	Kanskje	Én person	Flere personer
☐	☐	☐	☐	☐

13) Føler du at du hører med i et fellesskap (gruppe med mennesker) som stoler på hverandre og føler forpliktelse overfor hverandre
(For eksempel i politiske parti, religiøs gruppe, slekt, naboskap, arbeidsplass eller organisasjon)?

Nei	Ikke sikker	Kanskje	Ja, tror det	Ja, helt sikkert
☐	☐	☐	☐	☐

14) Dersom du ble syk og måtte holde senga i lengre tid, hvor sannsynlig tror du det er at du kunne få nødvendig hjelp og støtte av familie, venner eller naboer?

Ikke sann-synlig i det hele tatt	Lite sann-synlig	Kanskje	Ganske sikkert	Helt sikkert
☐	☐	☐	☐	☐

15) Hender det at du føler deg ensom?

a. Aldri el. svært sjelden ☐
b. Sjelden ☐
c. Av og til ☐
d. Ofte ☐
e. Svært ofte ☐

16) Er det noen mennesker som du føler har gitt deg troen på deg selv, og dermed har påvirket til en god utvikling i oppveksten?
(Sett kryss under det tallet som passer)

I liten grad — I stor grad

1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

17) Hva er den høyeste utdanning du har tenkt å ta?

a. Universitet eller høyskoleutdanning av høyere grad (f. eks. master, lektor, advokat, sivilingeniør, lege mv) ☐
b. Universitet eller høyskoleutdanning av lavere grad (f. eks. bachelor, lærer, politi, sykepleier, ingeniør, journalist mv) ☐
c. Videregående skole: Allmenne- , økonomiske og administrative fag/ idrettsfag/ musikk, dans og drama ☐
d. Videregående skole: Yrkesfag ☐
e. Har ikke bestemt meg ☐

f. Annet, spesifiser _____ ☐

18) Hvor vil du helst bo etter at du er ferdigutdannet og skal begynne i jobb? (Sett bare ett kryss)

a. Din nåværende hjemkommune ☐
b. Annen plass i Nord-Norge ☐
c. Flytte lenger sør i landet ☐
d. Flytte ut av landet ☐

19) Hvor mye vil du vektlegge hver av de åtte forholdene som er nevnt under, når du skal velge bosted etter endt utdanning? (Sett ett kryss for hvert forhold)

	Svært mye	Mye	Noe	Lite	Ingenting
a. Kort avstand til jobben:	☐	☐	☐	☐	☐
b. Mulighet å finne jobb på stedet som gir høy lønn:	☐	☐	☐	☐	☐
c. Mulighet å finne jobb på stedet som gir faglige utfordringer:	☐	☐	☐	☐	☐
d. Familie bor på samme sted:	☐	☐	☐	☐	☐
e. Venner bor på samme sted:	☐	☐	☐	☐	☐
f. Mulighet for å delta i foreningsvirksomhet, som f. eks. idrettslag, politiske lag osv.:	☐	☐	☐	☐	☐
g. Kort vei til offentlige sentra, hvor man finner lege, tannlege, skole:	☐	☐	☐	☐	☐
h. At det finnes fritidstilbud som kino, idrettshall osv:	☐	☐	☐	☐	☐

Kategori: Skole og miljø

20) Nedenfor står fire utsagn om syn på forhold ved din skolehverdag.
(Sett et kryss ved tallet som passer best for hvert utsagn)

	Helt uenig					Helt enig
	1	2	3	4	5	6
a. Skolearbeidet er for belastende, fysisk eller følelsesmessig	☐	☐	☐	☐	☐	☐
b. Jeg har tilstrekkelig innflytelse på når og hvordan skolearbeidet mitt skal utføres	☐	☐	☐	☐	☐	☐
c. Jeg blir mobbet eller trakassert på skolen min	☐	☐	☐	☐	☐	☐
d. Jeg blir rettferdig behandlet på skolen min	☐	☐	☐	☐	☐	☐

21) Har du over lengre tid opplevd noe av det følgende? (Sett ett eller flere kryss for hver linje)

	Nei	Ja, som barn	Ja, som voksen	Ja, siste år
a. Blitt plaget psykisk, eller truet med vold	☐	☐	☐	☐
b. Blitt slått, sparket eller utsatt for annen type vold	☐	☐	☐	☐
c. Noen i nær familie har brukt rusmidler på en slik måte at dette har vært til bekymring for deg	☐	☐	☐	☐

22) Dersom du har opplevd noen av disse forholdene, hvor mye plages du av dette nå?
(Sett bare ett kryss)

☐ Ingen plager ☐ Noen plager ☐ Store plager

23) I hvilken grad synes du at du har slike venner på skolen, som bidrar til at du når dine mål på skolen?
(Sett ett kryss ut for et av tallene)

I liten grad — I stor grad

1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

24) Hvordan var det første skoleåret for deg som 6 - åring? (Sett bare ett kryss for hver påstand)

	Helt enig	Ganske enig	Ganske uenig	Helt uenig
a. Jeg var flink på skolen:	☐	☐	☐	☐
b. Jeg var urolig:	☐	☐	☐	☐
c. Jeg grudde meg for å gå på skolen:	☐	☐	☐	☐
d. Jeg hadde venner:	☐	☐	☐	☐

25) I klasserommet gjelder noen regler og rammer for hva som er tillatt å gjøre inne i timene. I hvilken grad har du vært i konflikt med disse reglene? (Sett et kryss ut for tallet som passer best)

I liten grad — I stor grad

1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

26) Hvor stor betydning tror du hver av de fem forholdene under har, for om du skal lykkes på skolen?

	Svært stor	Stor	En del	Lite	Ingen
a. At det er et godt faglig miljø på skolen:	☐	☐	☐	☐	☐
b. At det er gode lærere på skolen:	☐	☐	☐	☐	☐
c. At skolen ligger nær hjemmet mitt:	☐	☐	☐	☐	☐
d. At jeg kan ha nær kontakt med mine venner på skolen:	☐	☐	☐	☐	☐
e. At det er et godt sosialt miljø på skolen:	☐	☐	☐	☐	☐

27) Hvilken innflytelse har skolen på din selvtillit?
(Sett ett kryss for det som passer best)

☐ Styrker den
☐ Svekker den
☐ Ingen virkning
☐ Usikker

28) I hvilken grad synes du lærerne i *ungdomsskolen* har brydd seg om deg på skolen, hva du gjør og hvordan du har det?
(Sett et kryss ved tallet som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

29) Har noen lærere stilt opp og hjulpet deg hvis du har følt deg litt utafor, eller har hatt problemer på skolen? (Sett ett kryss for det som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

☐ Én lærer
☐ To eller flere lærere
☐ Ingen lærere
☐ Usikker

30) I hvilken grad synes du undervisningen blir lagt fram på en slik måte at du forstår hva det dreier seg om? (Sett et kryss ved tallet som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

31) Når undervisningen er over og dere får utdelt oppgaver, i hvilken grad er du da i stand til å løse disse på egenhånd? (Sett et kryss ved tallet som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

32) Lærerne har hjulpet deg til å finne deg til rette i skolen. (Sett bare ett kryss)

☐ Helt enig
☐ Ganske enig
☐ Ganske uenig
☐ Helt uenig

33) Når du tenker tilbake på din tid fra 1. klasse til nå, føler du at du har blitt "sett" på skolen?
(Sett et kryss ved tallet som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

34) I hvilken grad har du slike venner på skolen, som gjør at du finner deg til rette der?
(Sett et kryss ved tallet som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

35) I hvilken grad føler du at det du driver med på skolen, fører deg dit du ønsker å komme i livet? (Sett et kryss ved tallet som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

36) Har du lesevansker?
(Sett bare ett kryss)

Ja: ☐ Nei: ☐

37) Har du hatt lesevansker?
(Sett bare ett kryss)

Ja: ☐ Nei: ☐

38) Leser du sakte?
(Sett bare ett kryss)

Ja: ☐ Nei: ☐

39) Har du problemer med å forstå, og/eller huske det du har lest? (Sett bare ett kryss) ..... Ja: ☐ Nei: ☐

40) Har du skrivevansker?(Sett bare ett kryss) ..... Ja: ☐ Nei: ☐

41) Har du hatt skrivevansker? (Sett bare ett kryss) ..... Ja: ☐ Nei: ☐

42) Har du mange skrivefeil? (Sett bare ett kryss) ..... Ja: ☐ Nei: ☐

43) Bruker du lang tid på å formulerer setninger, og få tankene dine ned på papiret?
(Sett bare ett kryss) ..... Ja: ☐ Nei: ☐

44) Hvis du skulle finne ut at du vil slutte på skolen før du er ferdig med den utdanningen du har startet på nå, hvilken betydning tror du det ville ha for deg i framtiden? (Sett bare ett kryss)

☐ Ingen betydning
☐ Positiv betydning
☐ Negativ betydning
☐ Usikker

45) Følger du med i aviser og på TV hva som skjer rundt i verden? (Sett et kryss ved tallet som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

46) Tror du at du får bruk for det du lærer i skolen, når du en gang skal begynne i lønnet arbeid?
(Sett et kryss ved tallet som passer best)

I liten grad					I stor grad
1	2	3	4	5	6
☐	☐	☐	☐	☐	☐

47) I hvilken grad er skolen:
(Sett et kryss på hver linje ved tallet som passer best)

	I liten grad 1	2	3	4	5	I stor grad 6
a. En plass hvor du møter dine venner:	☐	☐	☐	☐	☐	☐
b. En plass hvor undervisningen er nødvendig for at du skal klare deg i livet:	☐	☐	☐	☐	☐	☐
c. En plass som har betydning for om du vil få oppfylt dine drømmer i framtiden: ..	☐	☐	☐	☐	☐	☐
d. En plass hvor du lærer deg hvordan du skal oppføre deg i samfunnet?	☐	☐	☐	☐	☐	☐
e. En plass hvor du kan finne og utvikle kjæresteforhold?	☐	☐	☐	☐	☐	☐

48) Hva mener du om teori i grunnskolen, var det:
(Sett bare ett kryss)

☐ Passe
☐ For mye
☐ For lite
☐ Usikker

49) I hvilken grad bør skolen vektlegge teoriundervisingen? (Sett bare ett kryss)

☐ Som i dag
☐ Mer
☐ Mindre
☐ Usikker

50) I hvilken grad bør skolen vektlegge praktiske ferdigheter? (Sett bare ett kryss)

☐ Som i dag
☐ Mer
☐ Mindre
☐ Usikker

Kategori: Helse og sykdommer

Nedenfor finner du en oppstilling av plager som man av og til har. Les nøye gjennom dem en for en og angi deretter med ett kryss hvor mye hvert enkelt problem har plaget deg eller vært til besvær i løpet av de siste 14 dagene.

	Ikke plaget	Litt plaget	Ganske mye	Veldig mye
51) Nervøsitet eller indre uro	☐	☐	☐	☐
52) Stadig redd eller engstelig	☐	☐	☐	☐
53) Følelse av håpløshet for framtida	☐	☐	☐	☐
54) Nedfor	☐	☐	☐	☐
55) Bekymrer deg for mye	☐	☐	☐	☐

56) Hvordan vurderer du din egen helse sånn i alminnelighet?

Svært god	God	Ikke helt god	Dårlig
☐	☐	☐	☐

57) Hvordan vurderer du din egen fysiske helse nå?

Svært god	God	Ikke helt god	Dårlig
☐	☐	☐	☐

58) Hvordan vurderer du din egen psykiske helse nå?

Svært god	God	Ikke helt god	Dårlig
☐	☐	☐	☐

59) Har du hatt noen av disse plagene i løpet av de siste 12 månedene?
(Sett ett kryss på hver linje)

	Aldri	Sjelden	Av og til	Ofte
a. Kvalme	☐	☐	☐	☐
b. Treg mage	☐	☐	☐	☐
c. Diaré, magesyke	☐	☐	☐	☐
d. Hjertebank	☐	☐	☐	☐
e. Vekslende treg mage og diaré	☐	☐	☐	☐
f. Oppblåsthet	☐	☐	☐	☐

60) Hvor ofte har du hatt noen av disse plagene i løpet av de siste 3 månedene?
(Uten at du har skadet deg eller har en kjent sykdom som er årsak til smertene) *Sett ett kryss for hver linje*

	Aldri/ sjelden	Omtrent en gang i måneden	Omtrent en gang i uka	Flere ganger i uka	Nesten hver dag
a. Hodepine/migrene	☐	☐	☐	☐	☐
b. Nakke-/skuldersmerter	☐	☐	☐	☐	☐
c. Smerter i øvre del av ryggen	☐	☐	☐	☐	☐
d. Smerter i nedre del av ryggen/setet	☐	☐	☐	☐	☐
e. Smerter i brystkassen	☐	☐	☐	☐	☐
f. Magesmerter	☐	☐	☐	☐	☐
g. Smerter i venstre arm	☐	☐	☐	☐	☐
h. Smerter i høyre arm	☐	☐	☐	☐	☐
i. Smerter i venstre bein	☐	☐	☐	☐	☐
j. Smerter i høyre bein	☐	☐	☐	☐	☐
k. Andre smerter	☐	☐	☐	☐	☐

Hvis du har hatt smerter i løpet av de siste 3 månedene:

61) Stemmer noe av det som står nedenfor på deg?
(Sett ett kryss på hver linje)

	Stemmer	Stemmer ikke
Smerter gjør det vanskelig for meg å sovne	☐	☐
Smerter forstyrrer den gode nattesøvnen min	☐	☐
Smerter gjør det vanskelig å sitte i skoletimen	☐	☐
Smerter gjør det vanskelig for meg å gå mer enn 1 km	☐	☐
Pga smerter har jeg problemer i gym-timen	☐	☐

Hvis du har hatt smerter i løpet av de siste 3 månedene:

62) Har smertene alt i alt hindret deg i å utføre daglige aktiviteter?
(Sett ett kryss på hver linje)

	Nei	Ja, av og til	Ja, ofte
På skolen	☐	☐	☐
I fritida	☐	☐	☐

63) Hvor ofte har du i løpet av de siste 4 uker brukt følgende medisiner?
(Sett ett kryss på hver linje)

	Ikke brukt	Sjeldnere enn hver uke	Hver uke men ikke hver dag	Stort sett hver dag
a. Smertestillende på resept	☐	☐	☐	☐
b. Smertestillende uten resept	☐	☐	☐	☐
c. Sovemedisin	☐	☐	☐	☐
d. Beroligende medisin	☐	☐	☐	☐
e. Medisin mot depresjon	☐	☐	☐	☐

64) Har du hatt kontakt med helsevesenet på grunn av psykiske problemer, slik som nedstemthet, tristhet, håpløshet, oppgitthet, før du begynte på videregående skole?

☐ Ja ☐ Nei

Hvis ja, med hvem:

a. Fastlege ☐
b. Legevakta ☐
c. Avdeling på sykehus ☐
d. BUP ☐
e. Skolehelsetjenesten ☐
f. Helsestasjon for ungdom ☐
g. Fysioterapeut ☐
h. Alternativ behandler ☐
i. PP-tjenesten ☐
j. Utekontakten ☐
k. Sosialmedisinsk senter ☐
l. Sosialtjenesten ☐
m. Barnevernet ☐

65) Røyker du? (Sett bare ett kryss)

☐ Ja, jeg røyker daglig
☐ Ja, jeg røyker av og til, men ikke daglig
☐ Nei, ikke nå, men tidligere røykte jeg av og til
☐ Nei, ikke nå lenger
☐ Nei, jeg røyker ikke

66) Bruker du eller har du brukt snus, skrå eller lignende? (Sett bare ett kryss)

☐ Nei, aldri
☐ Ja, men jeg har sluttet
☐ Ja, av og til
☐ Ja, hver dag

Din døgnrytme

Vi har noen spørsmål som handler om dine søvnvaner. Fyll ut skjema ut fra hvordan det vanligvis er for deg på skoledager og på fridager i en vanlig skoleuke. Klokkeslett angis som f. eks kl 2,3,0,0 for klokken elleve om kvelden og 1,1,0,0 for klokken elleve om formiddagen.

67) Hvor mange dager i uken går du på skole?
(Gjelder dager i uken hvor du har en fast timeplan og ikke kan velge fritt når du vil legge deg og stå opp)

0	1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐	☐

På skoledager:

a. Jeg legger meg i sengen klokken (husk at noen ligger en stund før de legger seg til å sove, f. eks leser osv) ..... ☐☐☐☐

b. Jeg gjør meg klar til å sove (f. eks slukker lyset) klokken ..... ☐☐☐☐

c. Antall minutter det vanligvis tar før jeg sovner ..... ☐☐

d. Jeg våkner klokken ..... ☐☐☐☐

Jeg vekkes ved:

e. Vekkeklokke ..... ☐
f. Av foreldre, søsken el. andre ..... ☐
g. Våkner av meg selv ..... ☐

h. Antall minutter det vanligvis tar før jeg står opp ..... ☐☐

68) Har du ekstrajobb ved siden av skolen?

☐ Ja ☐ Nei

69) Hvis du har ekstrajobb, hvilke dager har du ekstra jobb?
(Sett kryss ut for alle dagene du jobber)

a. Mandag ..... ☐
b. Tirsdag ..... ☐
c. Onsdag ..... ☐
d. Torsdag ..... ☐
e. Fredag ..... ☐
f. Lørdag ..... ☐
g. Søndag ..... ☐

Når begynner du på og slutter vanligvis på jobben?

Fra klokken: ☐☐☐☐ Til klokken: ☐☐☐☐

70) Hvor mange dager i uken har du helt fri?
(Dager hvor du ikke har en fast timeplan og derfor kan velge fritt når du vil legge deg og stå opp)

0	1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐	☐

På fridager:

a. Jeg legger meg i sengen klokken (husk at noen ligger en stund før de legger seg til å sove, f. eks leser osv) ☐☐:☐☐

b. Jeg gjør meg klar til å sove (f. eks slukker lyset) klokken ☐☐:☐☐

c. Antall minutter det vanligvis tar før jeg sovner ☐☐

d. Jeg våkner klokken ☐☐:☐☐

Jeg vekkes ved:

e. Vekkeklokke ☐
f. Av foreldre, søsken eller andre ☐
g. Våkner av meg selv ☐

h. Antall minutter det vanligvis tar før jeg står opp ☐☐

Bruk av helse og sosialtjenester

71) Har du i løpet av de siste 12 måneder brukt:
(Sett ett kryss på hver linje)

	Ingen ganger	1-3 ganger	4 el. flere ganger
a. Fastlege	☐	☐	☐
b. Legevakta	☐	☐	☐
c. Avdeling på sykehus	☐	☐	☐
d. BUP	☐	☐	☐
e. Skolehelsetjenesten	☐	☐	☐
f. Helsestasjon for ungdom	☐	☐	☐
g. Fysioterapeut	☐	☐	☐
h. Alternativ behandler	☐	☐	☐
i. PP-tjenesten	☐	☐	☐
j. Utekontakten	☐	☐	☐
k. Sosialmedisinsk senter	☐	☐	☐
l. Sosialtjenesten	☐	☐	☐
m. Barnevernet	☐	☐	☐

Kategori: Fysisk aktivitet

72) Utenom skoletida: Hvor mange dager i uka driver du idrett, eller mosjonerer du så mye at du blir andpusten og/eller svett? (Sett bare ett kryss)

Hver dag ☐
4- 6 dager i uken ☐
2- 3 dager i uka ☐
1 dag i uka ☐
Sjeldnere enn 1 gang i uka ☐
Aldri ☐

73) Utenom skoletida: Til sammen hvor mange timer i uka driver du idrett, eller mosjonerer du så mye at du blir andpusten og/eller svett? (Sett bare ett kryss)

Ingen ☐
Omtrent ½ time ☐
Omtrent 1 time ☐
Omtrent 2-3 timer ☐
Omtrent 4-6 timer ☐
7 timer eller mer ☐

74) Trener du på helsestudio?

☐ Ja ☐ Nei

75) Utenom skoletid: Hvor mange timer sitter du foran tv, video og/eller pc (spill og internett) **på en ukedag** (mandag – fredag)**.**

☐ Inntil 1 time
☐ 1-2 timer
☐ 3-5 timer
☐ Mer enn 5 timer

Kategori: Kost og matvaner

Sett kryss over det tallet som best beskriver spisevanene dine slik du synes de har vært den siste måneden:

76) Hvor fornøyd har du vært med spisevanene dine ?

Svært misfornøyd						Svært fornøyd
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

77) Har du trøstespist eller spist ekstra på grunn av at du har vært nedstemt eller følt deg utilfreds?

Ikke i det hele tatt						Hver dag
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

78) Har du hatt skyldfølelse i forbindelse med spising?

Ikke i det hele tatt						Hver dag
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

79) Har du følt at det er nødvendig for deg å følge strenge dietter eller andre mat-ritualer for å holde kontroll med hvor mye du spiser?

Ikke i det hele tatt						Hver dag
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

80) Har du følt at du er for tykk?

Ikke i det hele tatt						Hver dag
1	2	3	4	5	6	7
☐	☐	☐	☐	☐	☐	☐

81) Hvor ofte spiser du til vanlig disse måltidene? (Sett ett kryss for hver linje)

	Hver dag	4-6 dg i uka	1-3 dg i uka	Sjeldnere el. aldri
a. Frokost	☐	☐	☐	☐
b. Formiddagsmat/niste	☐	☐	☐	☐
c. Varm middag	☐	☐	☐	☐
d. Kveldsmat	☐	☐	☐	☐

82) Hvor mange måltider spiser du vanligvis daglig?

0 ☐ 1 ☐ 2 ☐ 3 ☐ 4 el. flere ☐

83) Hvor mye drikker du av nedenstående i løpet av dagen?

a. Cola/Pepsi:	☐ Aldri	☐ Under 1 liter	☐ 1- 2 ½ liter	☐ 3 liter el. mer
b. Kaffe/kaffe latte, mm:	☐ Aldri	☐ 1-3 kopper	☐ 4-6 kopper	☐ over 7 kopper
c. Energidrikke (Red Bull, Battery, Burn el. lign.)	☐ Aldri	☐ 1- 2 stykker	☐ 3-5 stykker	☐ 6 el. mer

Kategori: Alkohol og rusmidler

84) Hvor ofte drikker du alkohol? (Sett bare ett kryss)

☐ Aldri
☐ Månedlig eller sjeldnere
☐ 2-4 ganger hver måned
☐ 2-3 ganger pr. uke
☐ 4 eller flere ganger pr. uke

85) Hvor mange enheter alkohol (en øl, glass vin, eller en drink) **tar du vanligvis når du drikker?**
(Sett bare ett kryss)

☐ 1-2 ☐ 3-4 ☐ 5-6 ☐ 7-9 ☐ 10 eller flere

86) Hvor ofte drikker du 6 eller flere enheter alkohol ved en anledning? (Sett bare ett kryss)

☐ Aldri
☐ Sjeldnere enn månedlig
☐ Månedlig
☐ Ukentlig eller oftere

87) Har du prøvd andre stoffer enn alkohol?

☐ Nei ☐ Ja

Hvis ja, spesifiser: _____

88) Hvor ofte bruker du andre stoffer enn alkohol?
(Vi er takknemlige om du svarer så grundig og ærlig som mulig ved å markere det alternativ som gjelder for deg).

☐ Aldri
☐ 1 gang i måneden eller sjeldnere
☐ 2-4 ganger i måned
☐ 2-3 ganger i uke
☐ 4 ganger i uke eller mer

Kategori: Livshendelser

Har du i løpet av det siste året opplevd noe av det følgende? Hvis du svarer ja, angi hvor viktig dette har vært for deg? (Sett kryss for hver linje).

	Nei	Ja	Uviktig 1	2	3	4	5	Veldig viktig 6
89) En alvorlig sykdom eller ulykke?	☐	☐	☐	☐	☐	☐	☐	☐
90) Skilsmisse mellom dine foreldre?	☐	☐	☐	☐	☐	☐	☐	☐
91) Alvorlig sykdom/ulykke hos et nærstående familiemedlem eller venn?	☐	☐	☐	☐	☐	☐	☐	☐
92) Fått barn?	☐	☐	☐	☐	☐	☐	☐	☐
93) Flyttet sammen med samboer?	☐	☐	☐	☐	☐	☐	☐	☐
94) Flyttet hjemmefra?	☐	☐	☐	☐	☐	☐	☐	☐

Kategori: **Mestring**

Vennligst les hvert utsagn nedenfor og angi i hvilken grad utsagnene beskriver måten du vanligvis reagerer på utfordrende/vanskelige livssituasjoner/hendelser.

(For hvert utsagn: Sett ett kryss i boksen som best beskriver ditt svar).

		Ikke i det hele tatt	Litt	En del	Ganske mye	Veldig mye
		0	1	2	3	4
95)	Jeg konsentrerer meg om det neste jeg må gjøre - det neste skrittet.	☐	☐	☐	☐	☐
96)	Jeg prøver å analyse problemet for å forstå det bedre.	☐	☐	☐	☐	☐
97)	Jeg forhandler eller gjør et kompromiss for å få noe positivt ut av situasjonen.	☐	☐	☐	☐	☐
98)	Jeg snakker med noen for å finne ut mere om situasjonen.	☐	☐	☐	☐	☐
99)	Jeg håper på at et mirakel vil skje.	☐	☐	☐	☐	☐
100)	Jeg overlater det til skjebnen, noen ganger har jeg bare uflaks.	☐	☐	☐	☐	☐
101)	Jeg prøver å holde følelsene mine for meg selv.	☐	☐	☐	☐	☐
102)	Jeg ser etter lyspunkter, prøver å se positivt på tingene.	☐	☐	☐	☐	☐
103)	Jeg sier ting til meg selv som hjelper meg til å føle meg bedre.	☐	☐	☐	☐	☐
104)	Jeg skaffer meg profesjonell hjelp.	☐	☐	☐	☐	☐
105)	Jeg snakker med noen som kan gjøre noe konkret med problemet.	☐	☐	☐	☐	☐
106)	Jeg bevarer min stolthet og holder meg ovenpå utad.	☐	☐	☐	☐	☐
107)	Jeg lar det ikke gå inn på meg, unnlater å tenke for mye på det.	☐	☐	☐	☐	☐
108)	Jeg spør en slektning eller en venn jeg respekterer om råd.	☐	☐	☐	☐	☐
109)	Jeg sørger for at andre ikke får vite hvor ille situasjonen er.	☐	☐	☐	☐	☐
110)	Jeg spøker om situasjonen, unnlater å ta den alvorlig.	☐	☐	☐	☐	☐
111)	Jeg snakker med noen om hvordan jeg føler meg.	☐	☐	☐	☐	☐
112)	Jeg bygger på tidligere erfaringer, har vært i en liknende situasjon tidligere.	☐	☐	☐	☐	☐
113)	Jeg vet hva som må gjøres så jeg tar i dobbelt så hardt for å få ting til å fungere.	☐	☐	☐	☐	☐
114)	Jeg lover meg selv at ting skal bli annerledes neste gang.	☐	☐	☐	☐	☐
115)	Jeg kommer frem til et par andre løsninger på problemet.	☐	☐	☐	☐	☐
116)	Jeg prøver å unngå at følelsene mine forstyrrer andre ting for mye.	☐	☐	☐	☐	☐
117)	Jeg dagdrømmer eller forestiller meg en tid eller et sted hvor jeg har det bedre enn nå.	☐	☐	☐	☐	☐
118)	Jeg ønsker at situasjonen vil forsvinne eller på annen måte være over.	☐	☐	☐	☐	☐
119)	Jeg fantaserer om hvordan det vil gå.	☐	☐	☐	☐	☐
120)	Jeg forbereder meg på det verste.	☐	☐	☐	☐	☐

Kategori: **Trivsel og livsforhold**

Nedenfor står fem utsagn om tilfredshet med livet som et hele. Vis hvor enig eller uenig du er i hver av påstandene ved å sette et kryss i rubrikken der du synes det stemmer best for deg.

		Stemmer perfekt						Stemmer dårlig
121)	På de fleste måter er livet mitt nær idealet mitt.	☐	☐	☐	☐	☐	☐	☐
122)	Mine livsforhold er utmerket	☐	☐	☐	☐	☐	☐	☐
123)	Jeg er tilfreds med livet mitt	☐	☐	☐	☐	☐	☐	☐
124)	Så langt har jeg fått de betydningsfulle tingene jeg ønsker i livet	☐	☐	☐	☐	☐	☐	☐
125)	Hvis jeg kunne leve livet på nytt, ville jeg nesten ikke forandret på noe	☐	☐	☐	☐	☐	☐	☐

Her er en serie spørsmål som angår forskjellige sider ved livet. (Sett et kryss under det tallet som passer for deg).

	1	2	3	4	5	6	7
126) Har du følelsen av at du egentlig ikke bryr deg om hva som foregår rundt deg?	☐ Sjelden/aldri	☐	☐	☐	☐	☐	☐ Meget ofte
127) Har det tidligere hendt at du ble overrasket over oppførselen til folk du trodde du kjente godt?	☐ Aldri hendt	☐	☐	☐	☐	☐	☐ Har alltid hendt
128) Har det hendt at mennesker du stolte på skuffet deg?	☐ Aldri hendt	☐	☐	☐	☐	☐	☐ Har alltid hendt
129) Hittil har ditt liv	☐ Overhodet ikke hatt klare mål eller mening	☐	☐	☐	☐	☐	☐ Hatt meget klare mål og mening
130) Har du følelsen av at du blir urettferdig behandlet?	☐ Meget ofte	☐	☐	☐	☐	☐	☐ Sjelden/aldri
131) Har du følelsen av at du er i en uvant situasjon og ikke vet hva du skal gjøre?	☐ Meget ofte	☐	☐	☐	☐	☐	☐ Sjelden/aldri
132) Å gjøre de hverdagslige gjøremål er en:	☐ Kilde til dyp glede og tilfredstillelse	☐	☐	☐	☐	☐	☐ Kilde til plage og kjedsomhet
133) Har du svært blandede følelser og tanker?	☐ Meget ofte	☐	☐	☐	☐	☐	☐ Sjelden/aldri
134) Hender det at du har følelser inni deg som du helst ikke vil føle?	☐ Meget ofte	☐	☐	☐	☐	☐	☐ Sjelden/aldri
135) Mange mennesker – også sterke personligheter føler seg av og til som tapere i visse situasjoner. Hvor ofte har du i fortiden følt deg slik?	☐ Meget ofte	☐	☐	☐	☐	☐	☐ Sjelden/aldri
136) Når noe hendte, har du da ofte funnet ut at:	☐ Du over- eller undervurderte dets viktighet	☐	☐	☐	☐	☐	☐ Du hadde en riktig vurdering av sitasjonens viktighet
137) Hvor ofte har du følelsen av at det er lite mening i det du driver med i dagliglivet?	☐ Veldig ofte	☐	☐	☐	☐	☐	☐ Veldig sjelden eller aldri
138) Hvor ofte har du følelser som du ikke er sikker på at du kan kontrollere?	☐ Veldig ofte	☐	☐	☐	☐	☐	☐ Veldig sjelden eller aldri

Kategori: Personlighet

Veiledning:
Spørsmålene nedenfor omhandler hvilken type person du tenker at du er. Hvert spørsmål består av to ulike egenskaper med bokstavene A-E i mellom. For eksempel,

Ikke kunstnerisk A.....B.....C.....D.....E Svært kunstnerisk

Hvert par av egenskaper beskriver motsatte egenskaper - det vil si at du ikke kan være begge samtidig, som ikke kunstnerisk og veldig kunstnerisk.

Bokstavene skaper en skala mellom to motsetninger. Du skal velge en bokstav som beskriver hvor DU passer på skalaen. Hvis du for eksempel mener du ikke er kunstnerisk velger du A. Hvis du mener du er ganske flink kunstnerisk velger du D. Hvis du er bare medium kan du velge C, og så videre.

		A	B	C	D	E	
139)	Overhodet ikke aggressiv	☐	☐	☐	☐	☐	Svært aggressiv
140)	Overhodet ikke selvstendig	☐	☐	☐	☐	☐	Svært selvstendig
141)	Overhodet ikke et følelsesmenneske	☐	☐	☐	☐	☐	Et typisk følelsesmenneske
142)	Svært underdanig	☐	☐	☐	☐	☐	Svært dominerende
143)	Blir overhodet ikke opphisset i en stor krise	☐	☐	☐	☐	☐	Svært opphisset i forbindelse med en stor krise
144)	Svært passiv	☐	☐	☐	☐	☐	Svært aktiv
145)	Kan ikke vie seg helt til andre	☐	☐	☐	☐	☐	Kan vie seg helt til andre
146)	Svært voldsom og hensynsløs	☐	☐	☐	☐	☐	Svært mild og hensynsfull
147)	Overhodet ikke hjelpsom ovenfor andre	☐	☐	☐	☐	☐	Svært hjelpsom ovenfor andre
148)	Overhodet ikke et konkurransemenneske	☐	☐	☐	☐	☐	Et meget utpreget konkurransemenneske
149)	Svært hjemmekjær	☐	☐	☐	☐	☐	Vil veldig ut i verden
150)	Overhodet ikke snill	☐	☐	☐	☐	☐	Svært snill
151)	Likegyldig til andres meninger om deg	☐	☐	☐	☐	☐	Svært avhengig av hva andre mener om deg
152)	Ikke lett såret	☐	☐	☐	☐	☐	Lett såret
153)	Overhodet ikke oppmerksom på andres følelser	☐	☐	☐	☐	☐	Svært oppmerksom på andres følelser
154)	Tar lett avgjørelser	☐	☐	☐	☐	☐	Vanskelig å ta avgjørelser
155)	Gir lett opp	☐	☐	☐	☐	☐	Gir aldri opp
156)	Gråter aldri	☐	☐	☐	☐	☐	Gråter lett
157)	Overhodet ikke selvsikker	☐	☐	☐	☐	☐	Svært selvsikker
158)	Føler mindreverdighet	☐	☐	☐	☐	☐	Føler overlegenhet
159)	Overhodet ikke forståelsesfull overfor andre	☐	☐	☐	☐	☐	Svært forståelsesfull overfor andre
160)	Svært lite engasjert i andre	☐	☐	☐	☐	☐	Veldig engasjert i andre
161)	Svært lite behov for trygghet	☐	☐	☐	☐	☐	Svært stort behov for trygghet
162)	Mister lett fatningen under press	☐	☐	☐	☐	☐	Beholder fatningen under press

Spørsmålene nedenfor dreier seg om generelle tanker og følelser man kan ha om seg selv og sine egne prestasjoner. Benytt skalaen nedenfor. Merk av (ved å sette kryss) hvor enig eller uenig du er i de 20 utsagnene. Begynn med spørsmål 1 og hopp ikke over noen. Vær så ærlig og så nøyaktig som mulig.

		Svært uenig			Svært enig
		1	2	3	4
163)	På grunn av mine evner har jeg mange muligheter:	☐	☐	☐	☐
164)	Jeg føler meg vel med meg selv:	☐	☐	☐	☐
165)	Jeg lykkes ikke i mye:	☐	☐	☐	☐
166)	Jeg har gjort det bra i livet til nå:	☐	☐	☐	☐
167)	Jeg gjør en rekke ting svært bra:	☐	☐	☐	☐
168)	Det er ofte ubehagelig å tenke på meg selv:	☐	☐	☐	☐
169)	Jeg har en tendens til å rakke ned på meg selv:	☐	☐	☐	☐
170)	Jeg fokuserer på mine sterke sider:	☐	☐	☐	☐
171)	Til tider føler jeg meg verdiløs:	☐	☐	☐	☐
172)	Jeg er et dyktig menneske:	☐	☐	☐	☐
173)	Jeg har ikke mye å være stolt av:	☐	☐	☐	☐
174)	Jeg føler meg sikker på min egenverd:	☐	☐	☐	☐

	Svært uenig 1	2	3	Svært enig 4
175) Jeg liker meg selv:	☐	☐	☐	☐
176) Jeg har ikke nok respekt for meg selv:	☐	☐	☐	☐
177) Jeg er talentfull:	☐	☐	☐	☐
178) Jeg føler meg vel med den jeg er:	☐	☐	☐	☐
179) Jeg er ikke særlig dyktig:	☐	☐	☐	☐
180) Jeg har en negativ holdning til meg selv:	☐	☐	☐	☐
181) Jeg håndterer utfordringer dårlig:	☐	☐	☐	☐
182) Jeg gjør det ikke godt nok i viktige situasjoner:	☐	☐	☐	☐

Kategori: Oppfatning av seg selv

Om hva som opptar deg.
(Angi med ett kryss for hvert spørsmål, hvor godt hver påstand stemmer med din oppfatning av deg selv).

	Stemmer ikke	Stemmer dårlig	Usikker	Stemmer noe	Stemmer fullstendig
183) Jeg er vanligvis opptatt av hvordan jeg kan forhindre negative hendelser i livet mitt:	☐	☐	☐	☐	☐
184) Jeg er redd for at jeg ikke vil leve opp til mitt ansvar og mine forpliktelser:	☐	☐	☐	☐	☐
185) Jeg forestiller meg ofte hvordan jeg skal oppnå mine håp og drømmer:	☐	☐	☐	☐	☐
186) Jeg tenker ofte på den personen jeg er redd for at jeg kan komme til å bli i framtida:	☐	☐	☐	☐	☐
187) Jeg bekymrer meg ofte over at jeg vil mislykkes i å oppnå mine målsetninger:	☐	☐	☐	☐	☐
188) Akkurat nå er mitt hovedmål i tilværelsen å være forsiktig slik at jeg unngår å bli syk:	☐	☐	☐	☐	☐
189) Jeg tenker ofte på den personen som jeg ideelt ville ønske å være i framtida:	☐	☐	☐	☐	☐
190) Jeg fokuserer ofte på den suksess jeg håper å oppnå i framtida:	☐	☐	☐	☐	☐
191) Jeg forestiller meg ofte at jeg opplever dårlige ting som jeg frykter skal skje meg:	☐	☐	☐	☐	☐
192) Jeg tenker ofte på hvordan jeg kan unngå å feile i livet mitt:	☐	☐	☐	☐	☐
193) Jeg er mer orientert mot å forhindre tap enn å oppnå vinning:	☐	☐	☐	☐	☐
194) Akkurat nå er mitt hovedmål i tilværelsen å oppnå mine ambisjoner om å leve et aktivt liv:	☐	☐	☐	☐	☐
195) Jeg ser på meg selv som en som primært jobber for å bli mitt "ideelle selv" – å oppfylle mine håp, ønsker og drømmer:	☐	☐	☐	☐	☐
196) Jeg tenker ofte på hvordan jeg vil klare å oppnå mine mål:	☐	☐	☐	☐	☐
197) Jeg ser på meg selv som en som først og fremst jobber for å bli den personen jeg "burde" bli – å oppfylle mine plikter, mitt ansvar, og mine forpliktelser:	☐	☐	☐	☐	☐
198) Jeg er vanligvis opptatt av hvordan jeg kan oppnå positive resultater i livet mitt:	☐	☐	☐	☐	☐
199) Jeg forestiller meg ofte at jeg opplever gode ting som jeg håper vil skje meg:	☐	☐	☐	☐	☐
200) Alt i alt er jeg mer orientert mot å oppnå suksess enn å forhindre og feile:	☐	☐	☐	☐	☐

Holdninger til deg selv og mennesker omkring deg.
Vennligst angi hvordan du i løpet av den siste måneden har tenkt og følt om deg selv, og om betydningsfulle mennesker omkring deg. Vennligst kryss av i boksen som er nærmest det utsagnet som best beskriver deg.

Hvordan har du det? Vennligst tenk gjennom hvordan du har hatt det i løpet av siste måned, hvordan du har tenkt og følt om deg selv og om andre mennesker omkring deg.

	Helt enig	Litt enig	Vet ikke	Litt uenig	Helt uenig
201) Jeg føler jeg er dyktig	☐	☐	☐	☐	☐
202) Min tro på meg selv får meg gjennom vanskelige perioder	☐	☐	☐	☐	☐
203) Når jeg skal velge noe, vet jeg oftest hva som blir riktig for meg	☐	☐	☐	☐	☐
204) Jeg er flink til å snakke med nye folk	☐	☐	☐	☐	☐
205) Jeg har lett for å finne nye venner	☐	☐	☐	☐	☐
206) Jeg får lett andre til å trives med meg	☐	☐	☐	☐	☐
207) I familien min er vi enige om hva som er viktig i livet	☐	☐	☐	☐	☐
208) I familien min støtter vi opp om hverandre	☐	☐	☐	☐	☐
209) Jeg trives godt i familien min	☐	☐	☐	☐	☐
210) Jeg har noen venner/familiemedlemmer som pleier å oppmuntre meg	☐	☐	☐	☐	☐
211) Jeg har noen nære venner/familiemedlemmer som virkelig bryr seg om meg	☐	☐	☐	☐	☐
212) Jeg har alltid noen som kan hjelpe meg når jeg trenger det	☐	☐	☐	☐	☐

Kategori: **Humor**

Holdninger til humor.

(Svar ved å sette kryss ved det alternativ som best gir uttrykk for din generelle holdning).

213) Oppfatter du lett et hint (blunk med øyet, en lett endring av tonefallet) som forsøk på en morsomhet?

☐ Svært lett ☐ Ganske lett ☐ Ganske vanskelig ☐ Svært vanskelig

214) Ville det være lett for deg å finne noe komisk eller vittig i de fleste situasjoner?

☐ Svært lett ☐ Ganske lett ☐ Ganske vanskelig ☐ Svært vanskelig

215) Det er noe ansvarsløst og upålitelig over folk som stadig prøver å være morsomme.

☐ Helt uenig ☐ Ganske uenig ☐ Ganske enig ☐ Helt enig

216) Det som irriterer meg mest med humorister, er at de så tydelig nyter sin evne til å få andre til å le.

☐ Helt uenig ☐ Ganske uenig ☐ Ganske enig ☐ Helt enig

217) Vil du si at du opplever mange grunner til munterhet i løpet av en vanlig dag?

☐ Svært mange ☐ Ganske mange ☐ Ganske få ☐ Svært få

218) Det er mitt inntrykk at de som stadig prøver å være morsomme, gjør det for å skjule sin mangel på selvtillit.

☐ Nei, slett ikke ☐ I noen grad ☐ Ganske riktig ☐ Helt riktig

Takk for ditt bidrag til undersøkelsen så langt!

Appendix 2

Interview guide

Skolefrafall, kvalitativ metode. Tromsø 12.1.2011

Intervju av elevene

Formål: Å kartlegge hvem som avbryter skolegangen, når og hvorfor og den enkeltes forslag til forbedring av skoletilbudet.

Metode: Ved melding om frafall kontaktes de elevene som har samtykket til dette for intervju. Dette vil foregå som et semi- strukturert (1, 2), minidybde intervju. Varighet: inntil 45 minutter. Intervjuer inviterer innledningsvis åpent til at eleven skal komme med sin egen fortelling om sin situasjon. Intervjueren må være lydhør for utdypning av temaer som er viktige for informanten. Deretter vil intervjuer når sentrale spørsmål i intervjuguiden ikke er blitt belyst, be om informantens svar på disse (se sjekkliste).
Intervjuene vil foregå enten ansikt til ansikt (mest hensiktsmessig) eller telefonisk. Intervjuene opptas på bånd og transkriberes fortløpende.

Inngangsspørsmål:

- Kan du fortelle om hvorfor du slutta på skolen?
- Hvordan hadde du det i perioden før du slutta?
- Hvordan har du det nå?

Tema 1: Oppvekst, tiden i barne- og ungdomskolen.

- Kan du fortelle litt om oppveksten din?
- Hvem vokste du opp sammen med?
- Hvem har betydd mest for deg i oppveksten?
- Hva gjorde du på fritida:
    - Hvem var du sammen med?
    - Var du med på organiserte aktiviteter?
- Hvordan opplevde du barne- og ungdomsskolen:
    - Både positive og negative erfaringer?
    - Faglig, sosialt, egne prestasjoner og engasjement?
- Fulgte foreldrene dine med på det du gjorde på skolen:
    - At du kom deg opp på morgenen?
    - Leksehjelp osv.?
    - Forventninger fra hjemmet, store eller små krav?
- Hadde du fravær på ungdomsskolen?
- Skulle du ønsket noe var annerledes på ungdomsskolen?
- Hadde du problemer på skolen, eventuelt når startet disse?

Tema 2: Om tiden på videregående, det å ha sluttet og oppfølgingen.

- Kan du fortelle om tiden på videregående:
    - Faglig utbytte? Strøk du i noen fag (hvis kommet lenger)?
    - Hva var bra/mindre bra?
    - Følte du deg hjemme i skolen eller var du utilpass der?
    - Hvordan var klassemiljøet?
- Hvorfor startet du på denne videregående linja?
- Følte du at du mestret de kravene som ble stilt til deg på skolen?
- Likte du å gå på skolen?
- Var du aktiv i timene?
- Ser du på deg selv som utholdende, liker å gjøre deg ferdig med en oppgave?
- Var du innstilt på å fullføre videregående da du begynte?
- Snakket du med noen (for eksempel karriereveileder) om det før du tok beslutningen om å slutte, i tilfelle hvem?
- Fikk du hjelp /oppfølging fra skolen – klasseansvarlig lærer eller andre lærere – før du tok beslutningen?
- Har du erfaring med "de nye" fagene på skolen – arbeidslivsfaget, utdanningsvalg, prosjekt til fordypning, og i tilfelle hvordan vurdere du nytten av disse fagene.
- Har du vært på noen utdanningsmesser? I tilfelle fikk du råd og hjelp om valg av linje og fremtidig yrke? Var det nyttig? Hvis ikke, hvorfor? For lite muntlig veiledning, for lite konkret, for dårlige brosjyrer, var du moden til å ta imot råd da?
- Tok du avgjørelsen om å slutte på egenhånd?
- Hvilke tanker for og imot å fortsette skolegangen hadde du før du slutta?

Tema 3: Om hverdagen nå, aktiviteter og fritid.

- Personlig nettverk, bor du alene? Hvor mye kontakt har du med familie og venner?
- Hva beskjeftiger du deg med i dag, jobb og fritid?

Tema 4: Helse.

- Hvordan vurdere du din fysiske helse?
- Hvordan vurdere du din psykiske helse?
- Hvordan er søvnen din?
- Har du hatt kontakt med helsevesenet, spesialisthelsetjenesten, fastlege, helsestasjon?
- Har du hatt kontakt med noen fra det profesjonelle nettverk: utekontakten, barnevern eller andre?
- Bruker du eller har du brukt alkohol eller annen rus? Tror du dette har vært medvirkende til at du slutta?

Tema 5: Om framtiden.

- Hvilke tanker/ønsker har du for framtiden?
- Har du satt deg noen mål?
- Hvilke konsekvenser tror du det har for deg at du slutta, her og nå, på lengre sikt?
- Hva opplever du som mest meningsfullt i ditt liv nå for tiden?
- *Hva skal til for at du ville trives og gjennomføre videregående skole?*