UiT

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Dieting, weight perception and eating disorders in adolescence and later mental health disorders

A population-based registry study of Norwegian youth

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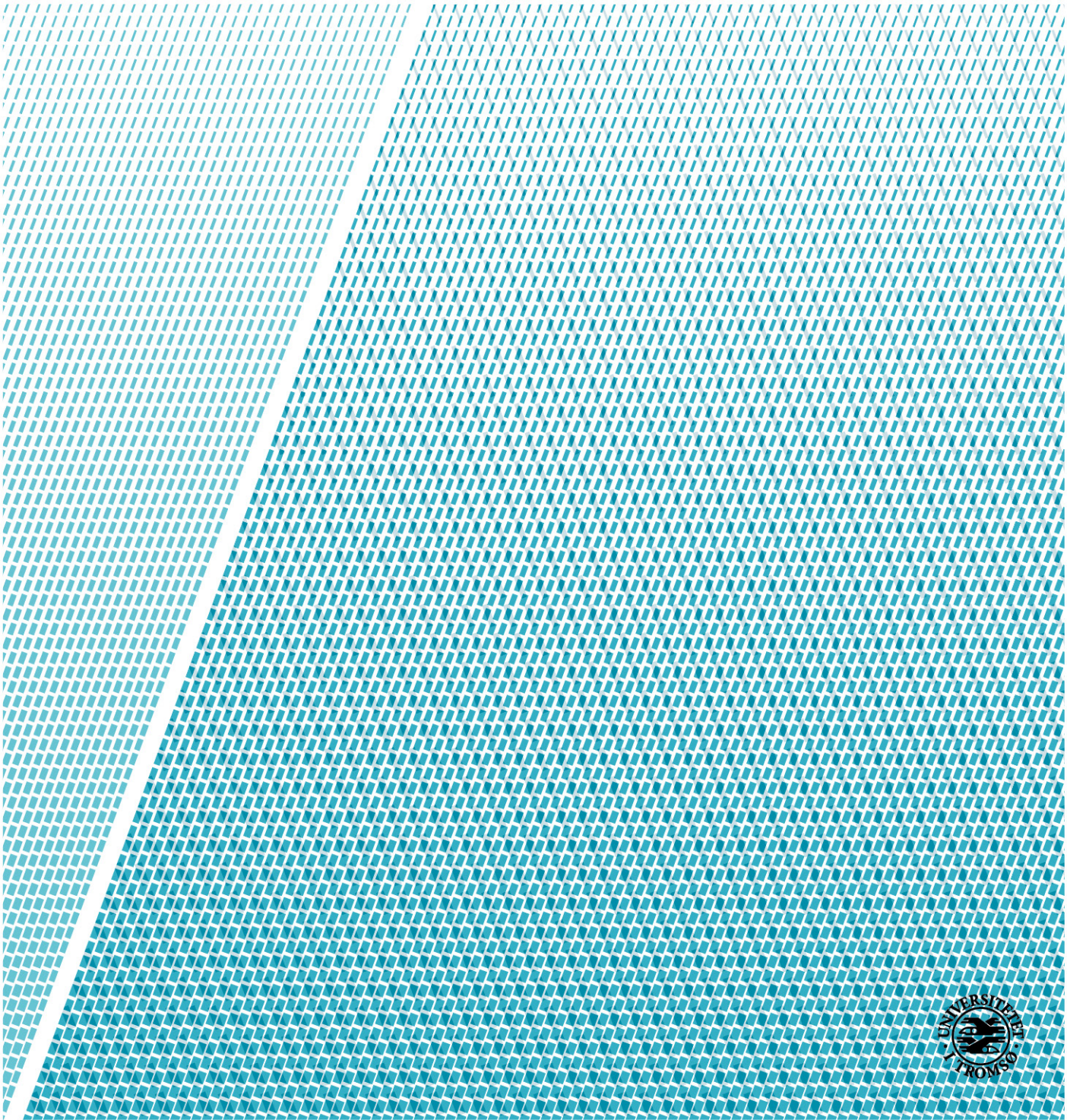

Preface

Work process

Mitt ønske ang. masteroppgaven var å finne en oppgave innenfor barne- og ungdomspsykiatrien, da jeg lenge har vært spesielt interessert i dette fagfeltet og ønsket å lære mer innenfor teamet. Da jeg skulle finne veileder kontaktet jeg derfor Siv Kvernmo. Hun henviste meg videre til Christian Eckhoff, og han kontaktet Anna Dahl Myrvang til å være min biveileder. Vi avtalte et møte og han fortalte meg om helseundersøkelsen som han selv hadde skrevet doktorgrad om, og at jeg kunne skrive en oppgave på bakgrunn av den samme undersøkelsen. De fleste teamene i undersøkelsen hadde blitt belyst tidligere, utenom spiseforstyrrelser. Vi ble derfor enige om at jeg kunne bruke de data vi hadde om slanking og spiseforstyrrelser i ungdomstiden og koble de opp mot senere psykisk helse i voksen alder. Dette synes jeg hørtes veldig spennende ut, spesielt siden det nå er mye fokus på kroppsbilde og psykisk helse i media. Christian Eckhoff har hjulpet meg mye gjennom hele perioden og det er jeg svært takknemlig for, tusen Takk.

Tidsrom	*Hva er gjort*
2 uker, august 2016	Fant veileder og utformet problemstilling Leste anbefalte artikler om temaet for problemstillingen.
3 uker oktober 2016	Litteratur: søk, lesing, vurdering. Skrev prosjektbeskrivelse
2 uker, oktober 2017	Leste meg opp på de ulike statistiske analysene SPSS: ble kjent med programmet
4 uker, februar-mars 2018	SPSS: statistikk og analyser
1 uke, april 2018	Litteratur: søk, lesing, vurdering/GRADE
8 uker, april-mai 2018	Utforming av oppgavetekst.

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Summary

Background

The relationship between body image and eating disorders in adolescence has been largely addressed, but less information exists about the potential longitudinal associations between dieting in adolescence and mental health problems later in young adulthood. The aim of this thesis was first to examine the association between dieting and eating disorder in adolescence and later mental health disorders in young adulthood. Secondly, we examined how sociodemographic and psychosocial factors affected this relationship. Third, we examined how BMI and weight perception was associated with later mental health problems.

Sample and methods

Data was obtained from the Norwegian Arctic Adolescent Health Study (2003–2005) that was linked to the Norwegian Patient Registry (2008–2012). In total, 3987 (68%) of all 5877 invited participants consented to the registry linkage. Dieting was measured by the participants reporting dieting behavior, including different dieting methods. Eating disorders in adolescence was measured by the participants that reported being treated for an eating disorder. BMI was calculated based on self-reported weight and height. Bivariate analyses were carried out using Chi-square tests, one-way ANOVA and logistic regression for the examination of cross-sectional and longitudinal data.

Results

Significantly more females reported to have tried dieting compared to males. Mental healthcare users, and the participants registered with an eating disorder and personality disorder in young adulthood, reported highest percentages of dieting in adolescence. Dieting in adolescence was also associated with mood disorders and anxiety disorders in young adulthood. We found no significant association between dieting in adolescence and later mental health disorders when adjusted for adolescent sociodemographic and psychosocial factors.

Conclusion

Dieting in adolescence is highly prevalent and associated with several mental health disorders in young adulthood, not only with eating disorders. Even though our results did not show that dieting was a significant predictor of later mental health disorders in young adulthood, dieting can be a part of the clinical picture of those who have psychosocial problems in adolescence.

Background

Adolescence is characterized by heightened stress[1] and a struggle for independence[1][2] that may lead to difficulties with emotional and behavioral regulation[3] for some adolescents. The female ”thin-ideal” of Western society has become a potent contributor to the high levels of eating and body image disturbances in the females, more so than in males[4,5]. The thin-ideal promoted by the media is often an unhealthy level of thinness, with images of women who are not just slim, but visibly underweight[6]. When girls get exposed to this unhealthy body image, it can lead to a false perception of their own body. Research has shown that, despite being normal or underweight, many women perceive themselves to be overweight[7–11], and it has been shown that this inaccurate perception extends to the bodies of others. Previous research has found that a wrong body perception and body dissatisfaction is associated with low self-esteem, which in turn is associated with depression in adolescence[12]. French et al. found that both dieting frequency and purging behavior in adolescence were associated with increased psychosocial and health behavior risk factors[13]. Never dieters reported the healthiest pattern of psychosocial and health behaviors, whereas those who dieted frequently reported the most negative pattern. This indicates that dieting is associated with psychosocial problems in adolescence, however, it will be interesting to investigate whether dieting is associated with mental health problems later in young adulthood.

A Japanese study found that body image was to be the best predictor for dieting behaviour. The worse a young female’s perception of her body image was, the more likely she was to diet[14]. Studies have suggested that individuals who experience body dissatisfaction and concerns about their appearance frequently experience comorbid psychological and health related problems[15,16]. Negative body image is a common precursor to eating disorder symptoms and the development of eating disorders. Females are at higher risk than males for developing an eating disorder, particularly during adolescence, and this higher risk is associated with greater levels of body dissatisfaction, anxiety, and depressive symptoms[17].

An American study showed that individuals with greater positive body image reported less depression, higher self-esteem and fewer unhealthy dieting behaviors[18]. These findings occurred independent of BMI, how people feel about their bodies seems to matter more than their objective size. It is evident that a negative body image and dieting can have adverse effects on mental health and vice versa, that a positive body image is associated with less mental health problems.

Fear of gaining weight is highly prevalent, even in young adolescents[19]. Previous research has shown that at age 13 years, 63.2% of girls were reported being afraid of gaining weight or getting fat and 11.5% extremely afraid or terrified of gaining weight or becoming fat. The fear of weight gain may lead to dieting and disordered eating habits. Unhealthy weight control behaviours are relatively common among adolescents, especially females[20]. A large survey study showed that more than 50% of adolescent females in the US reported the use of unhealthy weight control behaviours as fasting and skipping meals[21]. Although the vast majority do not develop an eating disorder, only between 1–3%[22], those who engage in these dieting practices have been shown to be at greater risk for eating disorders[23] and abnormal eating attitudes and behaviors[24]. Studies have shown that the percentage of females scoring above 20 on the Eating Attitude Test (EAT) ranges from 17 to 21%, which indicate problematic eating behaviours[25–27]. The EAT measures self-reported attitudes associated with an eating disorder and is used as a screening tool for anorexia nervosa. A score above 20 on the EAT-26 will indicate an eating disorder[28]. This shows that a significantly higher proportion of females actually has eating disorder behavior, even though only a few develop an eating disorder.

Eating disorders rank among the 10 leading causes of disability among young women, and anorexia nervosa has the highest mortality rate of all mental disorders[29]. Anorexia is a serious disorder with significant medical complications such as alterations in linear growth, osteoporosis, and structural and functional brain changes. Other complications such as cardiac problems and refeeding complications can be life-threatening[30].

Sociocultural models of eating disorders have emphasized “Western” culture’s female beauty ideal of extreme thinness and objectification of the female body as specific factors for the development of an eating disorder[29]. Exposure to the thin ideal, internalization of the ideal, and experience of a discrepancy between self and ideal, which in turn leads to body dissatisfaction, dietary restraint, and restrictions. If all young girls are exposed to these sociocultural pressures, why does only a small fraction go on to develop anorexia and bulimia? Evidence has accumulated in support of both biological (genetic and early developmental trauma) and cultural factors contributing to the increased risk for the development of eating disorder or associated behaviours attitudes[29].

In a study of patients with anorexia nervosa, in terms of psychiatric comorbidities, more than 80% of the participants presented at least one lifetime anxiety disorder or major depressive episode, and for half of the cases, at least one of these disorders occurred before anorexia onset[31]. Another study found that 47% of those who experienced an eating disorder

during adolescence reported high levels of depression and anxiety later in young adulthood[32], however, less information exist about other mental health disorders. The majority of eating disorders occurs in adolescence and tend to be limited to adolescence with only around one in ten persisting into young adulthood[32]. Steinhausen et al. found that the cure rate of anorexia was 47.1%, the improvement rate 32.4% and chronicity 19.7% for a follow-up duration of 4-10 years[33].

A study from 2011 found that, in general, the prevalence of dieting and disordered eating behaviors was high and either remained constant or increased from adolescence to young adulthood[34]. Of particular concern was the large increase in extreme weight control behaviors among youth transitioning from adolescence to young adulthood. Research indicate that a vast number of adolescents exhibit unhealthy eating behavior, but very few develop eating disorders. We know little about the general mental health outcome for adolescents that have disturbed body image and eating behavior but does not develop eating disorders.

Mental disorders account for a large proportion of the disease burden in young people[35]. Men and women have similar levels of mental health problems, with women having a bit higher prevalence, yet the way in which mental distress is expressed differs between gender, with women more often getting mood and anxiety disorders, while men getting substance use disorders and attention-deficit[36]. The cause of mental health disorders is multifactorial, with many risk factors such as genetic tendency to psychiatric disorder, substance abuse, learning disorders, sexual, physical, emotional abuse and neglect, family conflict, bullying and more[35]. When considering symptoms presented in adolescence that are associated with mental health problems in young adulthood, pain, depression, difficulty falling asleep, tension and melancholy among adolescent girls have been strongly associated with depression in early adulthood. Among adolescent boys, depressive symptoms are associated with symptoms of anxiety in later life[37].

Literature have indicated that dieting and negative body image is highly prevalent in adolescent, and we know that many young people struggle with mental disorders. However, we know little about the general mental health outcome for young adults who had body image disturbances and dieting behavior in adolescence but did not develop eating disorder.

Aims of the thesis

The relationship between body image, eating disorders and other mental health disorders in adolescence has been largely addressed. However, less information exists about the

relationship between dieting, eating disorders and body image in adolescence and mental health problems later in adulthood.

The main aims of this study was to;

1. First, to investigate whether self-reported dieting in adolescence was associated with mental health problems in young adulthood. Secondly, to investigate to what degree adolescents treated for eating disorders in adolescence experiences mental health problems in young adulthood.
2. The second aim is to investigate possible relationships between dieting in adolescence and later mental healthcare use and mental health disorders, when adjusting for adolescent sociodemographic and psychosocial factors. The aim was to examine if dieting behavior in adolescence was an independent predictor of mental health disorders in young adulthood.
3. Finally, I examined how self-reported BMI and weight perception in adolescence was associated with mental health care use and mental health disorders in young adulthood.

Methods

Study Design

To address the aims of this study I have used data from a large cross-sectional population-based study, the Norwegian Artic Adolescent Health Study (NAAHS), together with data from the National Patient Registry (NPR) and data analysis as described below.

The Norwegian Arctic Adolescent Health Study (NAAHS) was conducted among 10th graders (15–16-year-olds) in nearly all junior high schools (292 out of 293) in the three northernmost counties in Norway, in 2003–05[38]. The questionnaires were administered in classroom settings by project staff and completed during two school hours. Students who were absent completed the questionnaire at a later date. There were no specific exclusion criteria in this study.

The participants from the NAAHS were, in 2013, linked to the Norwegian Patient Registry (NPR), a detailed registry from 2008 that includes personal identification of specialized healthcare utilization and diagnosis. We used available data from specialized mental healthcare from 2008 through 2012 when the participants were 18–20 to 23–25 years of age.

Ethics

The students and their parents were given written information about the study, and the students provided written consent.

The Norwegian Data Inspectorate and the school authorities approved the NAAHS. The Regional Medical Ethical Committee approved the NAAHS and the registry linkage. The Norwegian Institute of Public Health and Statistics Norway carried out the linkage.

Sample

In total, 4,881 out of 5,877 (83%) invited students responded to the NAAHS, and 3,987 (82%) consented to a future registry linkage, resulting in a 68% sample of all 10th grade students in Northern Norway. The registry sample consisted of 49.9% females and 9.2% indigenous Sami.

Variables

Outcome measures – The Norwegian Patient Registry (NPR):

Mental healthcare use was measured by participants found in the specialized psychiatric patient registry, including use of *public psychiatric healthcare* and *private specialists*.

The number of *mental health care users* and *inpatient admissions* were calculated.

Mental health disorders: Each participant's primary and secondary diagnoses were organized according to the main chapters in the ICD-10. We used a classical model for psychiatric diagnoses to achieve theoretically constructed groups of reasonable size. We recorded whether the participants had received a diagnosis from any of the seven diagnostic groups: substance use disorders (F10–19), psychotic (F20–29), mood (F30–39), anxiety (F40–49), eating disorders (F50.1–50.9), personality and behavioral disorders (F60–61), ADHD/ADD (F90.0–90.8) and undiagnosed. We included both primary and secondary diagnoses due to an evident difference in diagnostic coding practice, making it difficult to pick out the primary disorder in patients with several diagnoses. Patients with two or more diagnoses from the ICD-10 main chapters were: two=102, three=42, four=32 and five or more diagnostic chapters=22.

The Norwegian Arctic Adolescent Health Study (NAAHS)

Main predictors:

Dieting, body image and eating disorders

Dieting was measured by the following question: "have you ever tried dieting?" Responses were measured on a four-point Likert scale from "no, never" (1) to "yes, often" (4). These

were later recoded into two values, “yes” and “no”. The participants that answered “no, never” were to skip the questions on dieting methods.

Dieting methods (0–6) was measured by the following six statements: “I eat less”, “I´m fasting”, “I work out more”, “I throw up”, “I use laxatives or diuretics” and “I take hearty or hunger depressant pills”. All these statements had 4 different options: (1) “never”, (2) “seldom”, (3) “often” or (4) “always”. These were later recoded into two values, “never/seldom” (0) and “often/always” (1). The total number of dieting methods was also examined with a range from zero to six.

Body weight image: Responders were asked “what do you think about your weight?” with the following options: “my weight is okay” (1), “I weigh a bit too much” (2), “I weigh way too much” (3), “I weigh a bit too little” (4) and “I weigh way too little” (5). With this statement we made two new variables: “underweight participants who said they weigh a bit no much or way too much” and “normal weight participants who said they weight a bit no much or way too much”. In addition, the participants were asked the following statement “I care a lot about my weight” with the following answers: “agreed” (1), “slightly agreed” (2) and “do not agree” (3). This last statement was recoded into two values (1) “agreed” and “not agreed”, with the “slightly agreed” together with the “not agreed” (0).

Body mass index (BMI) was calculated by using self-reported weight and height, and then recoded into underweight (<18.5), normal weight (18.5–25), overweight (25–30) and obese (>30).

Eating disorders were measured by the following question: “have you ever been treated for eating disorders?”, with the options: “no” (1), “no, but I should have been” (2) and “yes” (3).

<u>Adjusting factors:</u>

Psychosocial factors:

Mental health

Mental health was examined by *anxiety/depression* symptoms measured by the Hopkins Symptom Checklist 10-item version (HSCL-10)[39]. The HSCL-10 (α=0.86) measures symptoms of anxiety/depression in the previous week. Psychometrics has been empirically validated, also among subjects ages 16–24 and for Sami and non-Sami subjects in this study [40,41], with a cut-off of 1.85 of the sum score indicating a presence of emotional distress.

Psychosocial life stressors

School-related stress (α=0.66) was measured by the following experiences: *"Have you ever experienced any of the following:" "Heavy work pressure at school," "heavy pressure from others to succeed/ do well at school," "find it very difficult to concentrate in class"* and *"find it very difficult to understand the teacher when he/she is teaching?"* Responses were measured on a three-point Likert scale from "no" (1) to "yes, often" (3).

Adverse life events were measured by the following 12 questions: *"Have you in the last 12 months had anyone of the following problems," "conflict or fights with your parents," "parental mental health problems," "parental financial problems," "parental drug problems" or "peer problems?"* Responses were measured on a four-point Likert scale from "no, never" (0), "yes, sometimes" (1), "several times" (2), to "very often" (3). Furthermore, respondents were asked, *"have you in the last 12 months experienced trouble being bullied at school/ on the way to school?"* with the following options: "never" (0), "sometimes" (1), "about once a week" (2), and "several times a week" (3). Also, *"Have you in the last 12 months been exposed to violence?"* with the following options of "never" (0), "yes, only by adolescents" (1), "yes, only by adults" (2), and "yes, by both adolescents and adults" (3). Lastly, respondents were asked, *"have you in the last 12 months experienced the following:" "parental unemployment or social care," "serious illness or injury to yourself," "serious disease or injury to someone close to you," "death to someone close to you"* or *"sexual assault?"* The possible answers were yes (1) and no (0). All the variables above were dichotomized into any degree of exposure (1) and zero degree of exposure (0), resulting in range of adverse life events from 0–12.

Psychosocial supportive factors

Self-efficacy was measured by a five-item version (α=0.77) of the *General perceived self-efficacy scale*[42] with higher scores indicating higher self-efficacy. Responses were scored on a four-point Likert scale from "completely wrong" to "completely right." Higher scores indicating higher self-efficacy.

Parental involvement was measured by a four-item version of the *Parental Involvement Scale* (α=0.78) [43]. Based on the questions: "My parents know where I am at and what I do in the weekend," "my parents know where I am and what I do on weekdays," "my parents know who I spend my leisure time with" and "my parents like the friends I spend time with."

Parental support (α=0.88) was measured by the following five statements: "I feel attached to my family"," my family takes me seriously," "my family values my opinions"," I mean a lot to my family" and "I can count on my family when I need help.".

Peer support (α=0.84) was measured by the following four statements: "I feel closely attached to my friends," "my friends value my opinions," "I can help/support my friends," and "I can count on my friends when I need help".

Parental involvement, *parental* and *peer support* were scored on a four-point Likert scale from "completely agree" to "completely disagree." Higher scores indicating more problems.

Sociodemographic factors:

Parental education: Parents' highest education was obtained from Statistics Norway's education registry, registered when the participants were 15–16 years old. Parental education was categorized from "lower secondary" (≤10th grade), "upper secondary" (≤13th grade), "lower university degree" (up to 5 years) to "higher university degree" (5 years or more)[44].

Sami ethnicity was measured by participants having one or more of the following factors: Sami parentage and Sami language competence in parents, grandparents and the participants, and Sami ethnic self-labeling.

Gender differences for adolescent dieting behavior was examined and we adjusted for gender in the multivariable analyses.

Data Analysis

Bivariate analyses were carried out using Chi-square tests, one-way ANOVA and logistic regression for the examination of cross-sectional and longitudinal data. Chi-square analysis were used to test for gender differences in dieting, dieting methods and later mental health problems. We also used Chi-square to test the relationship between dieting in adolescence and later mental health disorders, and on BMI and later mental health disorders. One-way ANOVA were used to compare adolescence problems against dieting and treated for eating disorders, and on other variables with more than two-values such as "total number of dieting methods". Hierarchical logistic regression was used for the multivariable analyses, examining the relationship between dieting and eating disorder in adolescence and later mental healthcare use and disorders in young adulthood. In the first step of the multivariable models,

we adjusted for the sociodemographic factors. In the final models, we adjusted for sociodemographic and adolescent psychosocial factors.

Chi-square test is used to determine whether there is a significant difference between groups. Analysis of variance may be used if one wants to look at the relationship between one or more nominal variables and a continuous dependent variable. The multivariable regression analyses look at the relationship between a dependent variable and more than one independent variable. Binary logistic regression is used if one has a dichotomous dependent variable.

The statistical significance level was set to .05, and all analyses were conducted with SPSS 23 (IBM software).

Results

Gender differences

Table 1 shows that significantly more females (54.8%) reported to have tried dieting compared to 16.6% of males. All the different dieting methods, except laxatives/diuretics were significantly more prevalent in females than in males (Table 1). Of the different dieting methods, eating less (21.1%) and working out more (27.1%), were reported more prevalently, while other means of dieting as fasting (2.9%), throwing up (2.3%), diet pill use (1.3%) and laxatives or diuretic use (0.6%) were less common. The total number of dieting methods used were significantly higher for females (0.87), compared to males (0.24). Significantly, more females than males had been treated for eating disorder in adolescent, 2.1% in females and 0.5% in males.

We found no significant gender difference in the normal weight, overweight and obese groups based on self-reported BMI (Table 1). However, significantly more females reported being underweight compared to males, and significantly more underweighted females thought they weighed to much compared to underweighted males. 55.1% of normal weighted females thought they weighed too much, compared to 14.3% normal weighted male, this finding was also significant. Also, significantly more females (82.6%) cared about their own body weight compared to males (64.0%).

Table 1 show a significantly higher prevalence of mood, anxiety and eating disorders in females, and a significantly higher prevalence of substance use in males. Overall, there were significantly more female mental healthcare users (16.2%) compared to males (11.0%). Table 1 shows that males are more frequent users of inpatient clinics then females, and have a higher prevalence of psychotic disorders, but these differences were not significant.

Dieting and dieting methods, and later mental health problems

Table 2 shows the relationship between dieting and treated eating disorder in adolescence and later mental health disorders. The differences shown between the different diagnostic groups show the difference between the participants registered with a disorder in that diagnostic group and those who are not in that group, this includes participants diagnosed with other mental health disorders and the participants not registered as mental healthcare users. Table 2 shows that mental healthcare users in young adulthood where more likely to diet and use different dieting methods in adolescence, especially eating less, fasting, working out more and throwing up, then those who were not mental healthcare users. The participants registered as mental healthcare users had reported higher total number of dieting methods used in adolescence, with 0.75, compared to 0.52 for the non-mental healthcare users.

The different mental health disorder groups that reported significantly higher proportion on dieting in adolescence were mood, anxiety, eating disorder and personality disorders, in addition to those registered as inpatients. The participants later diagnosed with a personality disorder had the highest reports of adolescent dieting at 62.5%. When it came to the different dieting methods the participants later diagnosed with a mood disorder, anxiety disorder, eating disorder and those undiagnosed showed significantly increasing reports in some dieting methods, especially eating less and working out more. None of the participants showed significant results for laxatives or diuretic use, and only those undiagnosed had significant results on increasing diet pill use. None of the results on dieting methods for the inpatients, substance use and psychotic disorders were significant.

The participants registered with an eating disorder in young adulthood reported a significantly higher number of total dieting methods used in adolescence, compared to the other mental health disorders, with a total number of 1.21 per person, followed by personality disorders with 0.91 per person. The most commonly used dieting methods for those with an eating disorder was also eating less and working out more, but with higher proportions of 41.7% and 54.2% respectively. Both significantly more prevalent compared to the participants not registered with an eating disorder. Those with an eating disorder in young adulthood also had higher reports of fasting as a dieting method in adolescence, with 16.7% compared to the other groups who had between 5–7%, only those with a mood disorder, ADHD or the undiagnosed participants had significant increased results for fasting. Table 2 also show that 12.5% of those in the eating disorder group reported being treated for an eating disorder in

adolescence, and 3.6% of those with an anxiety disorder reported being treated for an eating disorder in adolescence, both of these were significant results.

BMI and weight perception, and later mental health problems

Table 3 shows the proportions of the different BMI categories within the different mental health disorders in young adulthood. The highest number of underweight adolescents were the participants with an ADHD/ADD diagnosis in young adulthood, but this result was not significant. The highest number of obese adolescents were the participant with a personality disorder in young adulthood, followed by inpatients, anxiety and mood disorders. All these were significant.

The participants that were underweight as adolescents and responded that they weighed too much showed no significant results on the different mental health disorders in young adulthood. Of the participants that were registered as mental healthcare users, 42.6% reported that they were normal weight as adolescent, but thought they weighted too much. Of those with anxiety, 47.7% were normal weight and thought they weighted too much, and those with an eating disorder, 68.4% were normal weight as adolescent but thought they weighted too much. All these results were significant.

The participants that said "I care about my weight" showed no significance on the participants registered as mental healthcare users, anxiety and ADHD/ADD, were ADHD/ADD have the highest proportions of participants with 49.2%.

Dieting as a predictor for later mental health

Table 4 shows the unadjusted and adjusted multivariable analyses on the relationship between self-reported dieting and treated eating disorder in adolescence and later mental health problems. In the unadjusted model we found a significant higher odds ratio for the relationship between adolescent dieting and later mental healthcare use, mood, anxiety, eating and personality disorders. When we adjusted for sociodemographic factors adolescent dieting was still significantly associated with mental healthcare users, mood, anxiety and personality disorders, with female gender as the significant covariate in all but personality disorders. When we adjusted for adolescent psychosocial factors we found no significant relationship between dieting in adolescence and later mental health problems.

Self-reported treated eating disorder in adolescence was significantly associated with eating disorder in young adulthood (OR=11.52) in the unadjusted analysis. Eating disorder in adolescence was still significantly associated with eating disorder in young adulthood (OR=

6.81) when adjusted for sociodemographic and adolescent psychosocial factors. This was the only significant results in the adjusted part of the table, compared to the other mental health disorders.

Dieting and psychosocial problems in adolescence

Supplement table S1 shows the relationship between dieting behavior and psychological factors in adolescence. The results show that the participants who reported dieting in adolescence, reported significantly less self-efficacy, less parental involvement, less parental support and more peer support than those not dieting. The participants who reported dieting also reported more school-related stress, more adverse life events and more anxiety/depression than those not dieting, all these results were significant. Similar results are shown for the participant who reported treatment for eating disorder in adolescence, but the results on parental involvement and peer support were not significant for those treated for an eating disorders in adolescence.

Discussion

Main findings

We found that dieting was more prevalent in female than in male adolescents. Adolescent dieting was highly prevalent in participants with a mood disorder, anxiety, eating disorder and personality disorder in young adulthood. We found a significant relationship between treated for adolescent eating disorders and eating disorders in young adulthood. We found no significant association between dieting and later mental health disorders when adjusted for adolescent sociodemographic and psychosocial factors. We found a significant association between a wrong weight perception in adolescence and mental healthcare users, anxiety and eating disorders in young adulthood. By wrong weight perception I mean participants that were normal weight, but thought they weighted too much.

Dieting

The main aim of this study was to investigate the association between dieting in adolescence and mental health problems later in young adulthood. In our study, 54.8% of females and 16.6% of males reported dieting in adolescence. The prevalence of dieting in males and females vary from different studies dependent on timeframe and sample size, but overall

females report more dieting and disordered eating compared to males[45]. Why dieting is more prevalent in females may be related to the larger exposure to the "ideal thin body" promoted by the media.

Of the different dieting methods, we found that eating less (skipping meals) and working out more were most commonly used, followed by fasting and throwing up, all significantly more prevalent in females. These findings are supported by previous studies[20]. When it comes to dieting methods, previous studies have shown that to lose or control weight, fasting or skipping meals were the most commonly reported behavior, followed by smoking cigarettes to control weight, taking diet pills, vomiting, and laxatives, and that all of these are more prevalent in females[20]. Compared to this study, our study found lower percentage of each dieting method, in both genders. This may be due to a difference in sample size, or other sample differences.

No previous research has looked at dieting and mental healthcare users in general. In our study, mental healthcare users reported more dieting in adolescence then the participants who were not registered as mental healthcare users. Of the different mental health disorders, participants with a mood disorder, anxiety, eating disorder and personality disorder reported the highest percentages of dieting in adolescence. In previous studies this was the case only for mood disorders, more specifically depression[12], and eating disorders[29]. Many studies before has looked at the relationship between eating and weight-related disturbances (EWRDs) and depression in adolescence, finding that EWRDs often precede the development of depression, particularly in early adolescent females[12]. A key implication seems to be that EWRDs and depression both have an underlying cognitive component, which is a wrong body perception, like body dissatisfactions, self-surveillance and appearance comparisons. These negative cognitions affects self-esteem, which leads to depressed mood or more generalized unhappiness[12]. The aim of this study was to see if dieting in adolescence was associated with mental health disorders later in young adulthood. Rawana et al. reviewed several studies on adolescence dieting and depression, but none of the studies did include young adults[12]. However, there may be signs that this pattern continues into young adulthood. A previous study found that body dissatisfaction increased between middle school and high school, and increased further during the transition to young adulthood[46]. If body dissatisfaction is associated with eating and weight-related disturbances and depression, then these too will increase into young adulthood. Here we have an important area of intervention. M.Gillen found that individuals with higher positive body image report less depressive symptoms, higher self-esteem and fewer unhealthy dieting behavior[18]. One implication of this study will

be that we should teach adolescents how to focus on developing a positive body image, which in turn could lead to less dieting behavior and less depression and other mental health disorders.

One aim of this study was to investigate if there was a possible relationship between dieting in adolescence and later mental health care use and mental health disorders when adjusting for adolescent sociodemographic and psychosocial factors. In our study we found no significant relationship between dieting in adolescence and later mental health problems when adjusting for these factors, but we did so with treatment for eating disorders in adolescence and eating disorders in young adulthood.

Eating disorders

One aim of this study was to examine to what degree adolescents treated for eating disorders in adolescence struggled with mental health problems in young adulthood. Our findings show that dieting in adolescence had the highest prevalence in the participants registered with an eating disorder in young adulthood. The participants with an eating disorder had the highest total number of dieting methods, and had the highest percentages of fasting, working out more and fasting as a diet method. They also had the highest percentage of normal weighted adolescence, who think they weight too much. This was not surprising results since the core features of eating disorders include disturbances in body image, over or under control of eating and extreme behaviors to control weight or shape[29].

In our study, more females than males report being treated for eating disorder in adolescence. It is a known fact that eating disorders are more prevalent in females than males, the lifetime prevalence of anorexia nervosa in females is between 0.5 and 1.7% and bulimia nervosa 1.0 - 2.3%, compared to males were the lifetime prevalence of anorexia is around 0.3% and bulimia around 0.5%[22].

Treated for an eating disorder in adolescence was associated with eating disorder in young adulthood, this was the only significant result after adjusting for sociodemographic and psychosocial factors. Although eating disorders tend to be limited to teens, a proportion of adolescence with eating disorders will have problems for the rest of their lives[33]. In this study 3.6% of those with an anxiety disorder reported eating disorder treatment in adolescence, none of the other mental health disorders were significantly associated with treatment for eating disorders in adolescence. However, previous studies have suggested a high level of psychiatric comorbidities to eating disorders, especially anxiety and

depression[31,32]. It is therefore important to detect early dieting and eating disorder behavior in young adolescence, since this may reduce the proportion of eating disorders and other mental health disorders in young adulthood.

Sociodemographic and psychosocial factors

One aim of this study was to investigate if there was a possible relationship between dieting in adolescence and later mental health care use and mental health disorders when adjusting for adolescent sociodemographic and psychosocial factors. When addressing this aim, we also made a supplement table to look at the relationship between dieting, treatment for eating disorders and the sociodemographic and psychosocial factors. Our findings found that those who reported dieting and treatment for eating disorders in adolescence, also reported less self-efficacy, less parental involvement, less parental support, more school-related stress, more adverse life events and more anxiety and depression, compared to those who reported no dieting and no eating disorder treatment. A previous study found similar results, that dieting frequency and purging status in girls was associated with negative psychosocial factors such as lower family connectedness, higher peer concerns, sexual and physical abuse, as well as other factors such as low weight satisfaction, low body pride and higher concerns about being overweight[13].

We found a significant relationship between some of the sociodemographic and psychosocial factors in adolescence and mental health problems later in young adulthood. Our findings showed that lower parental education, low peer support, higher school-related stress and anxiety/depression in adolescence were significantly associated with mental health disorders in young adulthood. These are known risk factors for mental health problems, as a previous study found that young people living in families with conflict, inconsistent care-giving, parental mental disorders, violence and child abuse are at greater risk for poor mental health, as well as other factors such as poverty, educational pressures and bullying[35]. If we take our findings of dieting and the sociodemographic and psychosocial factors together with what the previous study above suggests[13], and the risk factors of mental health disorders, it appears that dieting and disturbed body image is a part of the clinical picture of those who have psychosocial problems in adolescence.

Weight perception

We did not look directly on body dissatisfaction in our study, but we have looked at weight perception, and used this as a definition of body image. Our last aim was to see how BMI and weight perception in adolescence was associated with mental health care use and mental health disorders in young adulthood. Findings from this study suggest that females, despite being normal or underweight, consider themselves to weigh too much. In total, 14.0% of underweighted, and 55.1% of normal weighted females think they weight too much. This is significantly more than in males. In our study, we found that 14.3% of normal weighted males think they weight too much. These are not novel findings and previous studies have found similar results[10,47]. A study from 2004 found that 33.4% of females perceived themselves as being overweight, although only 4.5% of them were actually overweight[10]. In our study we also found that 82.6% of females and 64.0% of males reported that they care about their weight. A Norwegian study from 2015 found that although girls were generally most dissatisfied with their appearance and perceived themselves to be overweight more often than boys, many boys also reported a poor physical self-image and were at similar risk of slimming attempts as girls[47]. Girls compare themselves to girls they see in the media and on advertisements, and if these girls are visible underweight, a large proportion of girl will consider themselves to be overweight.

When looking at the relationship between weight perception in adolescence and mental health problems later in young adulthood, our study found an association between those who reported that they were normal weight as adolescent, but thought they weighted too much, and mental healthcare use, anxiety and eating disorders in young adulthood. This is a big concern since previous studies also have indicated that body dissatisfaction is associated with comorbid psychological and health related problems[12,15,16].

Of the mental health disorders, only anxiety and ADHD/ADD got significant results on the statement: "I care about my weight", with 40.1% in anxiety and 49.2% in ADHD/ADD. The participants with an eating disorder did surprisingly not get a significant result. One would think that those with an eating disorder did care about their weight, when this is a big part of the disease, but for decades, patients with anorexia nervosa have said "it's not about looking like a model." However, we continue with these explanations of the thin-ideal internalization as a major contributor to the development of eating disorders[29]. Although there is no question that thin-ideal internalization is damaging, the mechanism whereby it influences risk for eating disorders remains unknown. However, the participants who were normal weight as adolescence, but thought they weighted too much, those with an

eating disorder did respond highest compared to the other mental health disorders. This is not the same statement as "I care about my weight", but they are connected.

Strengths and limitation

The main strength of this study is that it's a large population-based study, and its linkage to a national patient registry, making it possible to study a wide range of predictors of mental healthcare use and disorders[38]. The study invited all 10th graders in Northern Norway to participate, with only one high school who refused to participate. The study had a high response rate and equal gender distribution, which strengthened the study, thereby making it representative to the total population.

The mental healthcare users in our study represent the total population of mental healthcare users (13.6% compared to 14.9%). It was calculated that 17.8% of those missing in our sample were mental healthcare users, this is a bit higher than the total population estimation of 14.9%, which makes it a mild selection bias[38]. This indicates increased mental health problems in the non-responder group, which is hard to avoid. Overall the findings in our study are representative of all Norwegian youth. The national patient registry that we used to link the population-based study to, is a highly quality national patient registry for specialist care. The registry has few errors, but we could not distinguish between primary and secondary diagnosis.

The Norwegian Artic Adolescent Health Study is of cross-sectional design, thus no causal inferences between dieting and mental health disorders may be made. We had a linkage to a national registry, but with only one cross-sectional study, therefore there may be other factors involved in the associations we have found in this study.

One of the aims of this study was to see if dieting in adolescence was associated with mental health problems in young adulthood. We had a large sample, and therefore the opportunity to perform multiple observations. A hierarchical model was chosen as we wanted to see how the adjusting factors (sociodemographic, physical, psychosocial and mental health factors) influenced the relationship between adolescent dieting behavior and treatment for eating disorders and mental health disorders in young adulthood.

A main limitation with this study was the fact that the population study relied on self-reports with the risk of information bias. Dieting and dieting methods were measured by brief statements, and frequency of use were not assessed. BMI was also calculated by self-reported height and weight, and not by objective measurements. We only had variables on weight and

weight perception, no other questions on body image were included in this study. We then had to use the weight-related questions as a definition of body image.

The study included several psychosocial and mental health factors, like parental involvement, adverse life-events, parental and peer support and school related stress. Mental health factors were measured by commonly used and validated scales, such as the HSCL-10, which reduces the chance or measurement error, however, the HSCL-10 only measured anxiety/depression symptoms in the previous week. Other mental health factors were not included.

Conclusion

The main aim of this study was to investigate if there was an association between dieting in adolescence and later mental health problems in young adulthood. We found that dieting in adolescence was highly prevalent and associated with many mental health disorders in young adulthood, not only with eating disorders, but not when adjusting for sociodemographic and psychosocial factors. Secondly, we found that 3.6% of those with an anxiety disorder reported treatment for eating disorder in adolescence, but we found no significant association between treatment for eating disorders in adolescence and other mental health disorders in later in young adulthood.

Our results did not show that dieting was a significant predictor of later mental health disorders in young adulthood, when adjusting for sociodemographic and psychosocial factors. However, the participants who reported dieting in adolescence also reported higher proportion of the psychosocial stress factors, and lower proportion of the psychosocial support factors, and several of these factors showed a significant relationship with many of the different mental health disorders in young adulthood. The relationship between dieting in adolescence and mental health disorders in young adulthood appears to be explained by the psychosocial problems in adolescence, which in turn is associated with later mental disorders. It is therefore important to detect eating disordered symptoms in adolescence early to prevent the development of eating disorders and other mental health problems.

We found a relationship between those who reported that they were normal weight as adolescent, but thought they weighted too much, and mental healthcare use, anxiety and eating disorders in young adulthood. Previous studies suggest the same, and this is of big concern.

Even though our study did not show that dieting in adolescence was a predictor of later mental health disorders in young adulthood, it appears that dieting and disturbed weight perception is a part of a bigger picture that can lead to mental health problems later in adulthood. This shows that parents, teachers, doctors and the rest of society should work together and teach adolescents how to focus on developing a positive body image, which in turn could lead to less dieting behavior and less depression and other mental health disorders. It is also important that we detect early eating disorder symptoms and unhealthy dieting behavior in adolescence, to prevent the development of eating disorders.

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Attachments

Tables

Table 1: Self-reported dieting and eating disorders in adolescence, and mental healthcare use and disorders in young adulthood, by gender (%)

Factors (%)	Females (n=1991)	Males (n=1996)	Total (n=3987)	Gender diff. (x^2)
Adolescent eating behaviors (%):				
Dieting	54.8	16.6	35.7	$623.81^{p<.001}$
- Eating less	34.5	7.8	21.1	$423.02^{p<.001}$
- Fasting	5.0	0.9	2.9	$56.56^{p<.001}$
- Working out more	40.4	13.8	27.1	$356.6^{p<.001}$
- Throwing up	4.3	0.3	2.3	$69.64^{p<.001}$
- Laxatives or diuretics	0.9	0.4	0.6	$3.42^{p=.064}$
- Diet pills	2.1	0.4	1.3	$22.14^{p<.001}$
Total number of dieting methods	0.87	0.24	0.55	$568.52^{p<.001}$
Treated for eating disorder	2.1	0.5	1.3	$20.38^{p<.0011}$
Weight:				
BMI				
- Underweight	15.6	11.8	13.7	$10.27^{p=.001}$
- Normal weight	73.3	76.1	74.7	$3.59^{p=.058}$
- Overweight	9.0	9.8	9.4	$0.59^{P=.44}$
- Obese	2.1	2.2	2.1	$0.02^{p=.88}$
Underweight who think they weigh too much	14.0	1.4	8.6	$22.57^{p<.001}$
Normal weight who think they weigh too much	55.1	14.3	34.4	$490.61^{p<.001}$
I care about my weight	82.6	64.0	73.3	$174.13^{p<.001}$
Adult mental health problems (%):				
Mental healthcare users	16.2	11.0	13.6	$22.48^{p<.001}$
Inpatient	3.0	3.4	3.2	$0.28^{p=.60}$
Mental health disorders:				
Substance use	0.9	2.3	1.6	$11.51^{p=.001}$
Psychotic	0.7	0.8	0.7	$0.03^{p=.86}$
Mood	5.5	2.8	4.1	$17.23^{p<.001}$
Anxiety	6.7	3.4	5.0	$23.00^{p<.001}$
Personality disorders	1.2	0.4	0.8	$7.13^{p=.008}$
Eating disorders	1.2	0.1	0.6	$18.54^{p<.001}$
ADHD/ADD	1.6	1.6	1.6	$0.01^{p=.99}$
Undiagnosed	3.5	3.0	3.2	$0.53^{p=.47}$

Note: Analysis method: chi-square and one-way ANOVA. Substance use (F10-19), psychotic (F20-29), mood (F30-39), anxiety (F40-49), eating disorder (F50.1-50.9), personality (F60-61), ADHD/ADD (F90.0-90.8) and undiagnosed

Table 2 The relationship between self-reported dieting and treated eating disorder in adolescence and mental health disorders in young adulthood

Adolescent eating behaviors (%)	No mental healthcare use n=3444	Mental health users n=543	Inpatients n=127	Substance use n=64	Psychotic n=28	Mood n=165	Anxiety n=201	Eating disorders n=24	Personality disorders n=32	ADHD/ADD n=63	Undiagnosed n=129
Dieting (n=1409)	34.0	46.4$^{p<.001}$	46.5$^{p=.013}$	37.5$^{p=86}$	42.9$^{p=.55}$	52.7$^{p<.001}$	52.3$^{p<.001}$	58.3$^{p=.035}$	62.5$^{p=.003}$	39.7$^{p=.59}$	42.6$^{p=.11}$
Dieting methods:											
Eating less (n=842)	19.9	28.7$^{p<.001}$	26.0$^{p=.21}$	21.9$^{p=.99}$	28.6$^{p=.46}$	32.1$^{p=.001}$	29.9$^{p=.002}$	41.7$^{p=.026}$	25.0$^{p=.75}$	25.4$^{p=.50}$	28.7$^{p=.042}$
Fasting (n=117)	2.6	5.3$^{p=.001}$	5.5$^{p=.14}$	6.3$^{p=.23}$	7.1$^{p=.45}$	6.1$^{p=.028}$	5.0$^{p=.12}$	16.7$^{p=.001}$	6.3$^{p=.56}$	9.5$^{p=.006}$	6.2$^{p=.049}$
Working out more (n=1079)	26.1	33.0$^{p=.001}$	31.5$^{p=.30}$	26.6$^{p=.99}$	28.6$^{p=.99}$	37.6$^{p=.003}$	36.8$^{p=.002}$	54.2$^{p=.006}$	50.0$^{p=.006}$	22.2$^{p=.47}$	25.6$^{p=.78}$
Throwing up (n=29)	2.0	4.4$^{p=.001}$	2.4$^{p=.99}$	1.6$^{p=.99}$	7.1$^{p=.28}$	6.1$^{p=.003}$	5.0$^{p=.019}$	4.2$^{p=.99}$	9.4$^{p=.037}$	3.2$^{p=.97}$	6.2$^{p=.007}$
Laxatives or diuretics (n=24)	0.5	1.1$^{p=.18}$	1.6$^{p=.39}$	[a]0.0$^{p=.99}$	[a]0.0$^{p=.99}$	1.8$^{p=.12}$	1.5$^{p=.23}$	4.2$^{p=.35}$	[a]0.0$^{p=0.99}$	1.6$^{p=.84}$	1.6$^{p=.40}$
Diet pills (n=50)	1.1	2.0$^{p=.13}$	1.6$^{p=.99}$	1.6$^{p=.99}$	3.6$^{p=.80}$	[b]0.0$^{p=.26}$	2.0$^{p=.52}$	[b]0.0$^{p=.99}$	[b]0.0$^{p=.99}$	4.8$^{p=.051}$	3.9$^{p=.020}$
Total number of dieting methods used	0.52	0.75 $^{p<.001}$	0.69$^{p=.09}$	0.58$^{p=.82}$	0.75$^{p=.24}$	0.84$^{p<.001}$	0.80$^{p<.001}$	1.21$^{p<.001}$	0.91$^{p=.026}$	0.67$^{p=.31}$	0.72$^{p=.031}$
Treated for eating disorder	1.1	2.2$^{p=.061}$	3.2$^{p=.13}$	3.1$^{p=.45}$	3.6$^{p=.81}$	3.0$^{p=.096}$	3.6$^{p=.010}$	12.5$^{p<.001}$	[c]0.0$^{p=.99}$	1.6$^{p=.99}$	0.8$^{p=.90}$

Note: Analysis method: chi-square and one-way ANOVA. The statistical difference is between the participants in the disorder groups and those who is not, not between the mental health disorder groups and the participants not registered as mental healthcare users. Substance use (F10-19), psychotic (F20-29), mood (F30-39), anxiety (F40-49), eating disorder (F50.1-50.9), personality (F60-61), ADHD/ADD (F90.0-90.8) and undiagnosed.

a) no one with substance use disorder, psychotic disorder or personality disorder reported use of laxatives or diuretics. b) no one with mood disorder, eating disorder or personality disorder reported diet pill use. c) no one with PF have been treated for eating disorder as adolescents.

Table 3 The relationship between self-reported body weight (BMI) in adolescence and mental health disorders in young adulthood.

Body weight (BMI)	No mental healthcare use n=3444	Mental health users n=543	Inpatients n=127	Substance use n=64	Psychotic n=28	Mood n=165	Anxiety n=201	Eating disorders n=24	Personality disorders n=32	ADHD/ADD n=63	Undiagnosed n=129
Underweight (n=491)	13.7	13.9$^{p=.97}$	14.2$^{p=.99}$	16.1$^{p=.75}$	16.0$^{p=.97}$	13.7$^{p=.99}$	12.6$^{p=.74}$	9.1$^{p=.75}$	11.1$^{p=.91}$	20.0$^{p=.24}$	13.4$^{p=.99}$
Normal weight (n=2673)	75.0	72.8$^{p=.34}$	67.3$^{p=.81}$	76.8$^{p=.84}$	72.0$^{p=.93}$	68.5$^{p=.09}$	71.4$^{p=.34}$	86.4$^{p=.31}$	59.3$^{p=.10}$	61.8$^{p=.04}$	73.2$^{p=.79}$
Overweight (n=337)	9.3	10.3$^{p=.53}$	11.5$^{p=.54}$	7.1$^{p=.72}$	8.0$^{p=.99}$	13.0$^{p=.17}$	10.4$^{p=.72}$	4.5$^{p=.68}$	18.5$^{p=.20}$	16.4$^{p=.12}$	12.5$^{p=.33}$
Obese (n=76)	2.0	2.9$^{p=.24}$	7.1$^{p=.001}$	[a]0.0$^{p=.52}$	4.0$^{p=.99}$	4.8$^{p=.05}$	5.5$^{p=.003}$	[a]0.0$^{p=.99}$	11.1$^{p=.01}$	1.8$^{p=.99}$	0.9$^{p=.56}$
BMI diff. (x^2)		2.48$^{p=.48}$	14.91$^{p=.002}$	1.78$^{p=.62}$	.591$^{p=.90}$	7.98$^{p=.046}$	10.9$^{p=.01}$	1.78$^{p=.62}$	13.74$^{p=.003}$	5.73$^{p=.13}$	2.03$^{p=.57}$
I care about my weight (n=2890)	28.5	37.5$^{p<.001}$	35.4$^{p=.19}$	32.8$^{p=.69}$	28.6$^{p=.99}$	29.9$^{p=.99}$	40.1$^{p=.001}$	45.8$^{p=.13}$	40.6$^{p=.25}$	49.2$^{p=.001}$	36.2$^{p=.11}$
Underweight who think they weigh too much	8.3	10.8$^{p=.67}$	18.8$^{p=.31}$	[b]0.0$^{p=.74}$	25.0$^{p=.78}$	10.0$^{p=.99}$	13.0$^{p=.69}$	[b]0.0$^{p=.99}$	[b]0.0$^{p=.99}$	[b]0.0$^{p=.63}$	14.3$^{p=.78}$
Normal weight who think they weigh too much	33.2	42.6$^{p=.001}$	40.0$^{p=.36}$	28.6$^{p=.52}$	38.9$^{p=.88}$	43.4$^{p=.07}$	47.7$^{p=.002}$	68.4$^{p=.004}$	50.0$^{p=.29}$	44.1$^{p=.31}$	40.7$^{p=.27}$

Note: Analysis method: chi-square and one-way ANOVA. The statistical difference is between the participants in the disorder groups and those who is not, not between the mental health disorder groups and the participants not registered as mental healthcare users. Substance use (F10-19), psychotic (F20-29), mood (F30-39), anxiety (F40-49), eating disorder (F50.1-50.9), personality (F60-61), ADHD/ADD (F90.0-90.8) and undiagnosed.

a) no one with substance use disorder or eating disorder were obese. b) no one with substance use disorder, eating disorder, personality disorder or ADHD/ADD were underweight and thought they weighted too much.

Table 4 Self-reported dieting behavior and treated eating disorder in adolescence as a predictor of later mental health disorders in young adulthood adjusted for sociodemographic and adolescent psychosocial factors

		Mental healthcare users and disorders in young adulthood[#]								
		Unadjusted OR (95% CI)								
Adolescent factors	n	Mental health users n=543	Substance use n=64	Psychotic n=28	Mood n=165	Anxiety n=201	Eating disorders n=24	Personality and behavior n=32	ADHD/ ADD n=63	Undiagnosed n=129
No dieting	2538	1	1	1	1	1	1	1	1	1
Dieting	1409	1.68 (1.40-2.02)$^{p<.001}$	1.08 (.65-1.80)$^{p=.76}$	1.35 (0.64-2.87)$^{p=.43}$	2.08 (1.52-2.84)$^{p<.001}$	2.05 (1.54-2.73)$^{p<.001}$	2.54 (1.12-5.73)$^{p=.025}$	3.03 (1.48-6.22)$^{p=.002}$	1.19 (.71-1.98)$^{p=.51}$	1.35 (0.95-1.93)$^{p=.096}$
Not treated for eating disorder	3891	1	1	1	1	1	1	1	1	1
Treated eating disorder	51	1.97 (1.03-3.79)$^{p=.042}$	2.52 (.60-10.6)$^{p=.21}$	2.86 (.38-21.48)$^{p=.31}$	2.54 (.99-6.47)$^{p=.052}$	3.12 (1.39-7.01)$^{p=.006}$	11.52 (3.32-39.91)$^{p<.001}$	–	1.24 (.17-9.08)$^{p=.84}$	.59 (.08-4.33)$^{p=.61}$
		Adjusted for sociodemographic factors OR (95% CI)								
Adolescent factors	n	Mental health users	Substance use	Psychotic	Mood	Anxiety	Eating disorders	Personality and behavior	ADHD/ ADD	Undiagnosed
Dieting	3947	1.48 (1.20-1.84)$^{p<.001}$	1.66 (.91-3.05=$^{p=.10}$	1.76 (.73-4.25)$^{p=.21}$	1.49 (1.04-2.14)$^{p=.031}$	1.66 (1.20-2.31)$^{p=.003}$	1.72 (.50-2.75)$^{p=.72}$	2.23 (.97-5.12)$^{p=.060}$	1.47 (.81-2.65)$^{p=.21}$	1.40 (.93-2.11)$^{p=.11}$
Sig.covariates		1, 3	1		1	1				
Treated eating disorder	3942	1.70 (.86-3.37)$^{p=.13}$	1.99 (.27-14.99)$^{p=.50}$	3.48 (.45-26-84)$^{p=.23}$	1.75 (.62-4.95)$^{p=.30}$	2.33 (.97-5.59)$^{p=.059}$	7.42 (2.10-26.24)$^{p=.002}$	–	1.35 (.18-10.02)$^{p=.77}$	.612 (.08-4.49)$^{p=.63}$
Sig.covariates		1	1		1	1				
		Adjusted for sociodemographic and adolescent psychosocial factors OR (95% CI)								
Adolescent factors	n	Mental health users	Substance use	Psychotic	Mood	Anxiety	Eating disorders	Personality and behavior	ADHD/ ADD	Undiagnosed
Dieting	3947	1.07 (0.84-1.36)$^{p=.57}$	1.14 (.57-2.29)$^{p=.71}$	1.4 (.50-3.93)$^{p=.52}$	1.18 (.79-1.78)$^{p=.42}$	1.11 (.76-1.61)$^{p=.59}$	.88 (.34-2.29)$^{p=.80}$	1.69 (.64-4.44)$^{p=.29}$	.93 (.47-1.83)$^{p=.82}$	1.02 (.65-1.61)$^{p=.93}$
Sig.covariates		3, 7, 8, 10	1, 10	6	1, 7, 8, 10	4, 8, 10			1, 4, 8	8, 9
Treated eating disorder	3942	1.12 (.51-2.49)$^{p=.78}$	1.40 (.18-11.0)$^{p=.75}$	2.88 (.33-24.89)$^{p=.34}$	1.13 (.32-3.91)$^{p=.85}$	1.46 (.53-4.03)$^{p=.46}$	6.81 (1.36-34.23)$^{p=.020}$	–	.83 (.10-7.11)$^{p=.86}$	.52 (.07-3.89)$^{p=.52}$
Sig.covariates		3, 7, 8, 10	1, 10	6	1, 7, 8, 10	4, 8, 10			1, 4, 8	8, 9

Note: Analysis method: logistic regression. 1=female gender, 2=Sami ethnicity, 3= lower parental education, 4=self-efficacy, 5=parental involvement, 6=parental support, 7=peer support, 8=school-related stress, 9=negative life events, 10=anxiety/depression. Substance use (F10-19), psychotic (F20-29), mood (F30-39), anxiety (F40-49), eating disorder (F50.1-50.9), personality (F60-61), ADHD/ADD (F90.0-90.8) and undiagnosed

Supplement table S1 the relationship between self-reported dieting behavior and those treated eating disorder in adolescence and other adolescent psychosocial problems.

Adolescent problems	Dieting (n=1409)	No Dieting (n=2538)	F-value	Treated eating disorder (n=51)	Not treated eating disorder (n=3891)	F-value
Psychosocial factors:						
Self-efficacy (5-20)	14.21	15.05	$94.12^{p<.001}$	13.94	14.76	$4.95^{p=.026}$
Parental involvement (4-16)	6.69	6.30	$26.13^{p<.001}$	6.82	6.44	$1.44^{p=.230}$
Parental support (5-20)	7.75	6.90	$82.12^{p<.001}$	8.64	7.18	$13.45^{p<.001}$
Peer support (4-16)	5.49	5.68	$8.38^{p=.004}$	5.76	5.61	$0.27^{p=.61}$
School-relates stress (4-12)	7.79	6.91	$185.04^{p<.001}$	8.44	7.20	$19.21^{p<.001}$
Adverse life events (0-11)	3.34	2.44	$232.60^{p<.001}$	4.20	2.74	$29.53^{p<.001}$
Anxiety/depression (1-4)	1.71	1.34	$568.32^{p<.001}$	2.07	1.46	$65.43^{p<.001}$

Note: analysis method: one-way ANOVA. Higher scores indicates increased problems with the included factors, except for self-efficacy higher scores indicate better self-efficacy.

U

Helse-undersøkelsen

Dato for utfylling:
Dag Måned År

U1. EGEN HELSE

1.1 Hvordan er helsen din nå? *(Sett bare ett kryss)*

Dårlig	Ikke helt god	God	Svært god
☐ 1	☐ 2	☐ 3	☐ 4

1.2 Har du, eller har du hatt? *(Sett ett kryss for hver linje)*

	JA	NEI
Astma	☐	☐
Høysnue (pollenallergi, allergisk reaksjon, rennende nese, svie i øynene)	☐	☐
Eksem	☐	☐
Diabetes (sukkersyke)	☐	☐

1.3 Har du de siste 12 mnd hatt? *(Sett ett kryss for hver linje)*

Ørebetennelse	☐	☐
Halsbetennelse *(minst 3 ganger)*	☐	☐
Bronkitt eller lungebetennelse	☐	☐
Psykisk plage som det er søkt hjelp for	☐	☐
Alvorlig skade eller sykdom	☐	☐

Hvis du svarte «JA»; hva slags alvorlig skade eller sykdom var dette:

_____

1.4 Har du følgende funksjonshemming? *(Sett ett kryss for hver linje)*

	Nei	Ja, litt	Ja, mye
Bevegelseshemming	☐	☐	☐
Nedsatt syn	☐	☐	☐
Nedsatt hørsel	☐	☐	☐

1.5 Har du i løpet av de siste 12 mnd flere ganger vært plaget med smerter i? *(Sett ett kryss for hver linje)*

	JA	NEI
Hode (hodepine, migrene e.l.)	☐	☐
Nakke/skuldre	☐	☐
Armer/ben/knær	☐	☐
Mage	☐	☐
Rygg	☐	☐

Hvis du svarte «NEI» på alle spørsmålene under 1.5: Hopp til U2

1.6 Har disse smertene ført til at du har vært hjemme fra skolen?

Oppgi også ca. antall skoledager de siste 12 mnd. *(Sett bare ett kryss)*

Nei	Ja, 1-2 dager	Ja, 3-5 dager	Ja, 6-10 dager	Ja, mer enn 10 dager
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

1.7 Har smertene ført til redusert aktivitet i fritida? ☐ JA ☐ NEI

U2. TANNHELSE

2.1 Mener du at du har bedre eller dårligere tenner enn andre ungdommer på din alder? *(Sett bare ett kryss)*

Bedre	Som de fleste	Dårligere	Vet ikke
☐ 1	☐ 2	☐ 3	☐ 4

2.2 Bryr du deg om at du har fine tenner? *(Sett bare ett kryss)*

Ja, mye ☐ 1 Ja, litt ☐ 2 Nei ☐ 3

2.3 Hvor ofte pusser du tennene dine? *(Sett bare ett kryss)*

Flere ganger om dagen	En gang om dagen	Annenhver dag	Sjeldnere enn annenhver dag
☐ 1	☐ 2	☐ 3	☐ 4

2.4 Har du hatt tannverk på grunn av hull? *(Sett eventuelt flere kryss)*

Ja, men før jeg begynte på skolen	Ja, etter at jeg begynte på skolen	Nei, aldri	Vet ikke
☐	☐	☐	☐

U3. MOSJON OG FYSISK AKTIVITET

3.1 Utenom skoletid: Hvor mange ganger i uka driver du idrett/mosjon slik at du blir andpusten eller svett? *ganger pr. uke*

3.2 Omtrent hvor mange timer pr. uke bruker du på dette?

0 timer	1-2 timer	3-4 timer	5-7 timer	8-10 timer	11 timer eller mer
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6

3.3 Driver du med konkurranseidrett? ☐ JA ☐ NEI
(Individuelt eller på lag)

3.4 Bruker du naturen (skog og mark) til turer?

	Aldri	Ja, mindre enn 1 gang i måneden	Ja, 1 gang i måneden eller mer
Sommer:	☐ 1	☐ 2	☐ 3
Vinter:	☐ 1	☐ 2	☐ 3

3.5 Utenom skoletid: Hvor mange timer pr. skoledag *(mandag til fredag)* **sitter du i gjennomsnitt foran TV, video og/eller PC (spill og internett)?**

Inntil 1 time	1-2 timer	3-5 timer	Mer enn 5 timer
☐ 1	☐ 2	☐ 3	☐ 4

3.6 Hvordan kommer du deg normalt til skolen i sommerhalvåret? *(Sett bare ett kryss)*

Med buss/tog e.l. *(offentlig transport)*	☐ 1
Med bil/moped	☐ 2
På sykkel	☐ 3
Til fots	☐ 4

3.7 Hvor lang skolevei har du?

Mindre enn 2 km	2-4 km	Over 4 km
☐ 1	☐ 2	☐ 3

Ikke skriv her: 1.3 *(skade)* 8.1 *(utdanning - annet)* 9.5 *(far født)* *(mor født)*

U4. RØYKING, RUSMIDLER OG DOP

4.1 Røyker du, eller har du røykt? *(Sett bare ett kryss)*

Nei, aldri	Ja, men jeg har sluttet	Ja, av og til	Ja, hver dag
☐ 1	☐ 2	☐ 3	☐ 4

Hvis du har svart «NEI, ALDRI»; hopp til pkt. 4.3

4.2 Hvor gammel var du da du begynte å røyke? ____ år

4.3 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
☐ 1	☐ 2	☐ 3	☐ 4

4.4 Røyker noen av de du bor sammen med? *(Sett ett eller flere kryss)*

Ja, mor	Ja, far	Ja, søsken	Ja, andre	Nei
☐	☐	☐	☐	☐

	JA	NEI
4.5 Har du noen gang drukket alkohol? ..... *(f.eks. alkoholholdig øl, rusbrus, vin, brennevin eller hjemmebrent)*	☐	☐

Hvis du svarte «NEI»; hopp til pkt. 4.8

4.6 Har du noen gang drukket så mye alkohol at du har vært beruset (full)? *(Sett bare ett kryss)*

Nei, aldri	Ja, en gang	Ja, 2-3 ganger	Ja, 4-10 ganger	Ja, mer enn 10 ganger
☐	☐	☐	☐	☐

4.7 Omtrent hvor ofte har du i løpet av det siste året drukket alkohol? *(Sett bare ett kryss)* *(Lettøl og alkoholfritt øl regnes ikke med)*

4-7 ganger i uka	2-3 ganger i uka	ca. 1 gang i uka	2-3 ganger pr. måned
☐ 1	☐ 2	☐ 3	☐ 4

Omtrent 1 gang i måneden	Noen få ganger siste år	Har ikke drukket alkohol siste år	Har aldri drukket alkohol
☐ 5	☐ 6	☐ 7	☐ 8

4.8 Har du noen gang prøvd dopingmidler? *(Sett bare ett kryss)*

Nei, aldri	Ja, en gang	Ja, flere ganger	Ja, jeg bruker det regelmessig
☐ 1	☐ 2	☐ 3	☐ 4

U5. MAT, DRIKKE OG SPISEVANER

5.1 Hvor ofte spiser du vanligvis disse matvarene? *(Sett ett kryss for hver linje)*

	Sjelden /aldri	1-3 g. pr.mnd	1-3 g. pr.uke	4-6 g. pr.uke	1-2 g. pr.dag	3 g. el. mer pr.dag
Frukt, bær	☐	☐	☐	☐	☐	☐
Ost *(alle typer)*	☐	☐	☐	☐	☐	☐
Poteter	☐	☐	☐	☐	☐	☐
Kokte grønnsaker	☐	☐	☐	☐	☐	☐
Rå grønnsaker/salat	☐	☐	☐	☐	☐	☐
Feit fisk *(f.eks. laks, ørret, makrell, sild)*	☐	☐	☐	☐	☐	☐
Sjokolade/smågodt	☐	☐	☐	☐	☐	☐
Chips, potetgull	☐	☐	☐	☐	☐	☐

U5. Mat, drikke og spisevaner (fortsettelse)

5.2 Hvor mye drikker du vanligvis av følgende? *(Sett ett kryss pr. linje)* *(1/2 liter = 3 glass)*

	Sjelden /aldri	1-6 glass pr.uke	1 glass pr.dag	2-3 glass pr.dag	4 glass el. mer pr.dag
Helmelk, kefir, yoghurt	☐	☐	☐	☐	☐
Lettmelk, cultura, lettyoghurt	☐	☐	☐	☐	☐
Skummet melk (sur/søt)	☐	☐	☐	☐	☐
Cola/brus med sukker	☐	☐	☐	☐	☐
Cola/brus «light»	☐	☐	☐	☐	☐
Fruktjuice	☐	☐	☐	☐	☐
Saft	☐	☐	☐	☐	☐
Vann	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

5.3 Hva slags fett bruker du oftest på brødet? *(Sett bare ett kryss)*

Smør/hard margarin	Myk/lett margarin	Oljer	Bruker ikke
☐ 1	☐ 2	☐ 3	☐ 4

5.4 Hvor ofte spiser du disse måltidene en vanlig uke? *(Sett ett kryss for hver linje)*

	Sjelden /aldri	1-2 ganger pr.uke	3-4 ganger pr.uke	5-6 ganger pr.uke	Hv da
Frokost	☐	☐	☐	☐	☐
Formiddagsmat/matpakke	☐	☐	☐	☐	☐
Middag	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

5.5 Hvor mye penger bruker du i uka på snop, snacks, cola/brus og gatekjøkkenmat? *(Sett bare ett kryss)*

0-25 kr	26-50 kr	51-100 kr	101-150 kr	151-200 kr	over 2(
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐

5.6 Bruker du følgende kosttilskudd:

	Ja, daglig	Iblant	Nei
Tran, trankapsler, fiskeoljekapsler?	☐	☐	☐
Vitamin- og/eller mineraltilskudd?	☐	☐	☐

5.7 Har du noen gang prøvd å slanke deg? *(Sett bare ett kryss)*

Nei, aldri	Ja, tidligere	Ja, nå	Ja, hele tiden
☐ 1	☐ 2	☐ 3	☐ 4

Hvis du svarte «NEI, ALDRI»; hopp til pkt. 5.9:

5.8 Hva har du gjort for å slanke deg? *(Sett ett kryss for hver linje)*

	Aldri	Sjelden	Ofte	Alltid
Jeg spiser mindre	☐	☐	☐	☐
Jeg faster	☐	☐	☐	☐
Jeg trener mer	☐	☐	☐	☐
Jeg kaster opp	☐	☐	☐	☐
Jeg bruker avføringspiller eller vanndrivende midler	☐	☐	☐	☐
Jeg tar mettende eller sult-dempende piller	☐	☐	☐	☐

5.9 Hva veide du sist du veide deg? ____ *hele kg*

5.10 Hvor høy var du sist du målte deg? ____ *hele cm*

5.11 Hva synes du om vekta di? *(Sett bare ett kryss)*

Vekta er OK	Veier litt for mye	Veier alt for mye	Veier litt for lite	Veier alt for lite
☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

5.12 Jeg bryr meg mye om vekta mi. *(Sett bare ett kryss)*

Enig ☐ Litt enig ☐ Ikke enig ☐

5.13 Hvilken vekt ville du vært tilfreds med nå (din «trivselsvekt»)? ____ *hele kg*

5.14 Har du vært behandlet for spiseforstyrrelser *(Sett bare ett kry*

Nei Nei, men jeg burde vært Ja

U6. PÅKJENNINGER OG MESTRING

6.1 Under finner du en liste over ulike plager. Har du opplevd noe av dette den siste uken (til og med i dag)?
(Sett ett kryss for hver linje)

	Ikke plaget	Litt plaget	Ganske mye	Veldig mye
Plutselig frykt uten grunn	☐	☐	☐	☐
Føler deg redd eller engstelig	☐	☐	☐	☐
Matthet eller svimmelhet	☐	☐	☐	☐
Føler deg anspent eller oppjaget	☐	☐	☐	☐
Lett for å klandre deg selv	☐	☐	☐	☐
Søvnproblemer	☐	☐	☐	☐
Nedtrykt, tungsindig (trist)	☐	☐	☐	☐
Følelse av å være unyttig, lite verd	☐	☐	☐	☐
Følelse av at alt er et slit	☐	☐	☐	☐
Følelse av håpløshet mht. framtida	☐	☐	☐	☐
	1	2	3	4

6.2 Under finner du noen påstander.
(Sett ett kryss for hver linje)

	Helt galt	Nokså galt	Nokså riktig	Helt riktig
Jeg klarer alltid å løse vanskelige problemer hvis jeg prøver hardt nok	☐	☐	☐	☐
Hvis noen motarbeider meg, så kan jeg finne måter og veier for å få det som jeg vil	☐	☐	☐	☐
Hvis jeg har et problem og står helt fast, så finner jeg vanligvis en vei ut	☐	☐	☐	☐
Jeg føler meg trygg på at jeg ville kunne takle uventede hendelser på en effektiv måte	☐	☐	☐	☐
Jeg beholder roen når jeg møter vanskeligheter, fordi jeg stoler på mine evner til å mestre/få til ting	☐	☐	☐	☐
	1	2	3	4

6.3 Har du i løpet av de siste 12 mnd selv opplevd noe av følgende?
(Sett ett kryss for hver linje)

	JA	NEI
Foreldre (foresatte) har blitt arbeidsløse eller uføretrygdet	☐	☐
Alvorlig sykdom eller skade hos deg selv	☐	☐
Alvorlig sykdom eller skade hos noen som står deg nær	☐	☐
Dødsfall hos noen som sto deg nær	☐	☐
Seksuelle overgrep *(f.eks. blotting, beføling, ufrivillig samleie m.m.)*	☐	☐

6.4 Har du opplevd noe av følgende?
(Sett ett kryss for hver linje)

	Nei	Ja, av og til	Ja, ofte
Stort arbeidspress på skolen	☐	☐	☐
Stort press fra andre for å lykkes/ gjøre det bra på skolen	☐	☐	☐
Store vansker med å konsentrere deg i timen	☐	☐	☐
Store vansker med å forstå læreren når hun/han underviser	☐	☐	☐

6.5 Har fagpersonell sagt at du har eller har hatt lese- og skrivevansker. *(Sett bare ett kryss)*

Ja, store ☐ 1 Ja, middels ☐ 2 Ja, lette ☐ 3 Nei ☐ 4

6.6 Har du i løpet av de siste 12 mnd. opplevd problemer med mobbing på skolen/skoleveien?
(Sett bare ett kryss)

Aldri ☐ Av og til ☐ Omtrent en gang i uka ☐ Flere ganger i uka ☐

U7. BRUK AV HELSETJENESTER

7.1 Har du de siste 12 mnd. selv brukt?:
(Sett ett kryss for hver linje)

	Ingen ganger	1-3 ganger	4 ganger eller mer
Skolehelsetjenesten	☐	☐	☐
Helsestasjon for ungdom	☐	☐	☐
Vanlig lege (Allmennpraktiserende lege)	☐	☐	☐
PP-tjenesten	☐	☐	☐
Psykolog eller psykiater *(privat eller på poliklinikk)*	☐	☐	☐
Familierådgivning	☐	☐	☐
Annen spesialist *(privat eller på poliklinikk)*	☐	☐	☐
Legevakt *(privat eller offentlig)*	☐	☐	☐
Sykehusinnleggelse	☐	☐	☐
Sosialtjenesten i kommunen	☐	☐	☐
Fysioterapeut	☐	☐	☐
Tannlege/skoletannlege	☐	☐	☐
Alternativ behandler	☐	☐	☐

U8. UTDANNING OG UTDANNINGSPLANER

8.1 Hva er den høyeste utdanning du har tenkt å ta?
(Sett bare ett kryss)

- Universitet eller høyskoleutdanning av høyere grad ☐ 1
  (F.eks. lektor, advokat, sivilingeniør, tannlege, lege, psykolog, siviløkonom)
- Universitet eller høyskoleutdanning på mellomnivå ☐ 2
  (F.eks. cand.mag., lærer, sosionom, sykepleier, politi, ingeniør, journalist)
- Videregående allmennfaglig/økonomisk administrative fag ☐ 3
- Yrkesfaglig utdanning på videregående skole ☐ 4
  (kokk, frisør, byggfag, elektrofag, helse- og sosialfag o.l.)
- Ett år på videregående skole ☐ 5
- Annet: _____ ☐ 6
- Har ikke bestemt meg ☐ 7

8.2 Hvor mye egne penger brukte du siste uke? *kr*
(Småinnkjøp pluss større gjenstander som f.eks. musikkanlegg o.l.)

8.3 Har du lønnet arbeid i løpet av skoleåret? JA ☐ NEI ☐

Hvis du svarte «JA»:

Hvor mange timer i uka arbeider du? *ca.* _____ *hele timer*

Hvor mye tjener du i gjennomsnitt pr. måned på dette arbeidet? _____ *kr*

8.4 Hvilken karakter fikk du siste gangen i karakterboken? *(Sett bare inn hele tallkarakterer)*

Matte _____ Norsk skriftlig _____ Engelsk _____ Samfunnsfag _____

U9. OPPVEKST OG TILHØRIGHET

9.1 Hvor lenge har du bodd i Norge? _____ *hele år*

9.2 Hvor lenge har du bodd der du bor nå? _____ *hele år*

9.3 Har du flyttet i løpet av de siste 5 årene? *(Sett bare ett kryss)*

Nei ☐ 1 Ja, en gang ☐ 2 Ja, 2-4 ganger ☐ 3 Ja, 5 ganger eller flere ☐ 4

9.4 Mine foreldre er: *(Sett bare ett kryss)*

Gift/samboere ☐ 1 Ugift ☐ 2 Skilt/separert ☐ 3 En eller begge er døde ☐ 4 Annet ☐

9.5 Hvor er dine foreldre født?

	Norge	Annet land	Hvilket land:
Far:	☐	☐	Far: _____
Mor:	☐	☐	Mor: _____

U9. Oppvekst og tilhørighet (fortsettelse)

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

Dårlig råd ☐ 1 | Middels råd ☐ 2 | God råd ☐ 3 | Svært god råd ☐ 4

9.7 Er far og/eller mor i arbeid nå?

	Ja, heltid	Ja, deltid	Arbeidsløs/ trygdet	Hjemme-værende	Går på skole/ studerer	Død
Far:	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6
Mor:	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5	☐ 6

Hvis far og/eller mor er i arbeid, hvilket yrke har de?

Far: _____

Skriv kort hva han gjør på jobben:

_____

Mor: _____

Skriv kort hva hun gjør på jobben:

_____

U10. FAMILIE OG VENNER

10.1 Hvem bor du sammen med nå? *(Sett bare ett kryss)*
(Ta ikke med søsken og halvsøsken.)

Mor og far ☐ 1 | Bare mor ☐ 2 | Bare far ☐ 3 | Omtrent like mye hos mor og far ☐ 4

Mor el. far og ny samboer el. ektefelle ☐ 5 | Fosterforeldre ☐ 6 | Andre ☐ 7

10.2 Hvor mange søsken eller halvsøsken bor du sammen med? *Antall søsken*

10.3 Hvor mange av disse er like gamle eller eldre enn deg? *Antall søsken*

10.4 Når du tenker på familien din, vil du si at: *(Sett ett kryss for hver linje)*

	Helt enig	Delvis enig	Delvis uenig	Helt uenig
Jeg føler meg knyttet til familien min	☐	☐	☐	☐
Jeg blir tatt på alvor i familien min	☐	☐	☐	☐
Familien legger vekt på mine meninger	☐	☐	☐	☐
Jeg betyr mye for familien min	☐	☐	☐	☐
Jeg kan regne med familien min når jeg trenger hjelp	☐ 1	☐ 2	☐ 3	☐ 4

10.5 Hvilket forhold har du til dine foreldre? *(Sett ett kryss for hver linje)*

	Stemmer meget godt	Stemmer ganske godt	Stemmer ikke særlig godt	Stemmer ikke i det hele tatt
Foreldrene mine vet hvor jeg er og hva jeg gjør i helgene	☐	☐	☐	☐
Foreldrene mine vet hvor jeg er og hva jeg gjør på hverdagene	☐	☐	☐	☐
Foreldrene mine vet hvem jeg er sammen med i fritida	☐	☐	☐	☐
Foreldrene mine liker vennene jeg er sammen med på fritida	☐ 1	☐ 2	☐ 3	☐ 4

10.6 Når du tenker på vennene dine, vil du si at: *(Sett ett kryss for hver linje)*

	Helt enig	Delvis enig	Delvis uenig	Helt uenig
Jeg føler meg nært knyttet til vennene mine.	☐	☐	☐	☐
Vennene mine legger vekt på mine meninger.	☐	☐	☐	☐
Jeg kan bidra/være til støtte for vennene mine.	☐	☐	☐	☐
Jeg kan regne med vennene mine når jeg trenger hjelp	☐ 1	☐ 2	☐ 3	☐ 4

10.7 Hvor mange personer utenfor din nære familie står deg så nær at du kan regne med å få hjelp hvis du:

Har personlige problemer *Antall personer*

Har praktiske problemer *(f.eks. ny skolearbeidet)* *Antall personer*

10.8 Har du selv vært utsatt for vold (blitt slått, sparket e.l.) de siste 12 mnd.? *(Sett bare ett kryss)*

Aldri | Ja, bare av yngre | Ja, bare av voksne | Ja, av både yngre og voksne

U11. SEKSUELL ADFERD OG PREVENSJON

11.1 Har du noen gang hatt samleie? Ja, med en partner ☐ | Ja, med flere partnere ☐ | Nei ☐

Hvis du svarte «NEI»; hopp til U12

11.2 Alder første gang? ..... Jeg var _____ år

11.3 Brukte du/dere prevensjon ved siste samleie?

Nei ☐ 1 | Ja, kondom ☐ 2 | Ja, p-pille/p-sprøyte ☐ 3 | Ja, annet ☐ 4 | Vet ikke ☐ 5

11.4 Har du noen gang blitt gravid/gjort ei jente gravid? JA ☐ | NEI ☐ | Vet ikke ☐

Hvis du svarte «JA»;

Hvor gammel var du da dette skjedde? Jeg var _____ år

Ble det utført abort? ..... JA ☐ | NEI ☐ | Vet ikke ☐

U12. BRUK AV MEDISINER M.M

12.1 Hvor ofte har du i løpet av de 4 siste ukene brukt følgende medisiner? *(Sett ett kryss for hver linje)*
Med medisiner mener vi her medisiner kjøpt på apotek. Kosttilskudd og vitaminer regnes ikke med her.

	Aldri	Daglig	Hver uke, men ikke daglig	Sjeldnere enn hver uke	Ikke brukt siste 4 uker
Smertestillende uten resept	☐	☐	☐	☐	☐
Smertestillende på resept	☐	☐	☐	☐	☐
Allergi-medisin	☐	☐	☐	☐	☐
Astma-medisin	☐	☐	☐	☐	☐
Sovemedisin	☐	☐	☐	☐	☐
Beroligende medisin	☐	☐	☐	☐	☐
Medisin mot depresjon	☐	☐	☐	☐	☐
Annen medisin på resept	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

12.2 Skriv navnet på medisinene som du har krysset av for ovenfor, og hva grunnen var til at du tok medisinene (sykdom eller symptom):
(Kryss av for hvor lenge du har brukt medisinen)

Navn på medisinen: *(ett navn pr. linje)*:	Grunn til bruk av medisinen:	Hvor lenge har du brukt medisinen? Inntil 1 år	Ett år eller mer
		☐	☐
		☐	☐
		☐	☐

Dersom det ikke er nok plass her, kan du fortsette på eget ark som du legger ved.

SPØRSMÅL TIL JENTENE

12.3 Har du fått menstruasjon («mensen»)? ..... JA ☐ | NEI ☐

Hvis du svarte «NEI»; hopp til 12.5

12.4 Hvor gammel var du da du fikk din første menstruasjon?

Jeg var _____ år

12.5 Bruker du, eller har du brukt: *(Sett ett kryss for hver linje)*

	Nå	Før, men ikke nå	Aldri
P-pille/minipille/ p-sprøyte	☐	☐	☐
Annen prevensjon	☐	☐	☐

Hvilken type prevensjon?:

_____

12.6 Til deg som bruker p-pille/minipille:
Hvilket merke bruker du nå?:

U/T1. DINE STERKE OG SVAKE SIDER

1.1 Svar på grunnlag av slik du har hatt det de siste 6 månedene.
(Sett ett kryss for hver linje)

	Stemmer ikke	Stemmer delvis	Stemmer helt
Jeg prøver å være hyggelig mot andre. Jeg bryr meg om hva de føler	☐	☐	☐
Jeg er rastløs. Jeg kan ikke være lenge i ro	☐	☐	☐
Jeg har ofte hodepine, vondt i magen eller kvalme	☐	☐	☐
Jeg deler gjerne med andre (mat, spill, andre ting)	☐	☐	☐
Jeg blir ofte sint og har kort lunte	☐	☐	☐
Jeg er ofte for meg selv. Jeg gjør som regel ting alene	☐	☐	☐
Jeg gjør som regel det jeg får beskjed om	☐	☐	☐
Jeg bekymrer meg mye	☐	☐	☐
Jeg stiller opp hvis noen er såret, lei seg eller føler seg dårlig	☐	☐	☐
Jeg er stadig urolig eller i bevegelse	☐	☐	☐
Jeg har en eller flere gode venner	☐	☐	☐
Jeg slåss mye. Jeg kan få andre til å gjøre det jeg vil	☐	☐	☐
Jeg er ofte lei meg, nedfor eller på gråten	☐	☐	☐
Jeg blir som regel likt av andre på min alder	☐	☐	☐
Jeg blir lett distrahert, jeg synes det er vanskelig å konsentrere meg	☐	☐	☐
Jeg blir nervøs i nye situasjoner. Jeg blir lett usikker	☐	☐	☐
Jeg er snill mot de som er yngre enn meg	☐	☐	☐
Jeg blir ofte beskyldt for å lyve eller jukse	☐	☐	☐
Andre barn eller unge plager eller mobber meg	☐	☐	☐
Jeg tilbyr meg ofte å hjelpe andre (foreldre, lærere, andre barn/unge)	☐	☐	☐
Jeg tenker meg om før jeg handler (gjør noe)	☐	☐	☐
Jeg tar ting som ikke er mine hjemme, på skolen eller andre steder	☐	☐	☐
Jeg kommer bedre overens med voksne enn de på min egen alder	☐	☐	☐
Jeg er redd for mye, jeg blir lett skremt	☐	☐	☐
Jeg fullfører oppgaver. Jeg er god til å konsentrere meg	☐	☐	☐
	1	2	3

1.2 Samlet, synes du at du har vansker på ett eller flere av følgende områder: med følelser, konsentrasjon, oppførsel eller med å komme overens med andre mennesker?

Nei ☐ 1 Ja, små vansker ☐ 2 Ja, tydelige vansker ☐ 3 Ja, alvorlige vansker ☐ 4

Hvis du har svart JA, vennligst svar på følgende spørsmål:

Hvor lenge har disse vanskene vært tilstede?

Mindre enn en måned ☐ 1 1-5 måneder ☐ 2 6-12 måneder ☐ 3 Mer enn ett år ☐ 4

Forstyrrer eller plager vanskene deg?

Ikke i det hele tatt ☐ 1 Bare litt ☐ 2 En god del ☐ 3 Mye ☐ 4

Virker vanskene inn på livet ditt på noen av disse områdene?

	Ikke i det hele tatt	Bare litt	En god del	Mye
Hjemme/ i familien	☐	☐	☐	☐
Forhold til venner	☐	☐	☐	☐
Læring på skolen	☐	☐	☐	☐
Fritidsaktiviteter	☐	☐	☐	☐
	1	2	3	4

U/T

Er vanskene en belastning for de rundt deg (familie, venner, lærere osv.)?

Ikke i det hele tatt ☐ 1 Bare litt ☐ 2 En god del ☐ 3 Mye ☐ 4

U/T2. BEKYMRINGER OG PROBLEMER

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

	Nei, aldri	Ja, av og til	Flere ganger	Svært ofte
Krangler, eller konflikter med foreldrene dine	☐	☐	☐	☐
Bekymringer i forhold til seksualitet	☐	☐	☐	☐
Psykiske problemer hos foreldre/ foresatte	☐	☐	☐	☐
Problemer i forhold til venner	☐	☐	☐	☐
Økonomiske problemer hos foreldre/foresatte	☐	☐	☐	☐
Rusproblemer hos foreldre/ foresatte	☐	☐	☐	☐
	1	2	3	4

U/T3. LITT OM RØYK, RUSMIDLER OG HOLDNINGER

	Helt enig	Delvis enig	Delvis uenig	Helt uenig
Det er lett for ungdom å få tak i sigaretter/tobakk	☐	☐	☐	☐
Det er lett for ungdom å få tak i øl	☐	☐	☐	☐
Det er lett for ungdom å få tak i vin/brennevin	☐	☐	☐	☐
Det er lett for ungdom å få tak i hasj	☐	☐	☐	☐
Det er lett for ungdom å få tak i «partydop»,(ecstasy, amfetamin, GHB, kokain osv)	☐	☐	☐	☐
Det er lett for ungdom å få tak i «dopingmidler» (anabole steroider, testosteron osv)	☐	☐	☐	☐
Det er OK for ungdom på min alder å røyke	☐	☐	☐	☐
Det er OK for ungdom på min alder å drikke alkohol på fest	☐	☐	☐	☐
Det er OK for ungdom på min alder å røyke hasj	☐	☐	☐	☐
Det burde være lovlig å bruke hasj	☐	☐	☐	☐
	1	2	3	4

U/T4. HVEM KAN DU SNAKKE MED

4.1 Hvis du har personlige problemer, hvem føler du at du kan snakke med om dette? *(Kryss av ett alternativ i hver linje)*

	Ja	Nei	Vet ikke
Ingen	☐	☐	☐
Venn/venninne(r)	☐	☐	☐
Kamerater/gjengen	☐	☐	☐
Søsken	☐	☐	☐
Foreldre	☐	☐	☐
Lærer	☐	☐	☐
Helsesøster	☐	☐	☐
	1	2	3

	Ja	Nei	Vet ikke
Egen lege	☐	☐	☐
Andre slektninger	☐	☐	☐
Andre voksne	☐	☐	☐
	1	2	3

U/T5. SKOLESITUASJONEN DIN

5.1 Hvordan har du det på skolen? *(Sett ett kryss for hver linje)*

	Helt enig	Delvis enig	Delvis uenig	Helt uenig
Jeg trives på skolen	☐	☐	☐	☐
Jeg har mye til felles med andre i klassen	☐	☐	☐	☐
Jeg føler meg knyttet til klassen	☐	☐	☐	☐
Jeg syns jeg har gode muligheter til å snakke mitt morsmål med mine medelever på skolen	☐	☐	☐	☐
Jeg føler at jeg har et språkproblem (fordi jeg har et annet morsmål enn norsk)	☐	☐	☐	☐
Klassen legger vekt på mine meninger	☐	☐	☐	☐
Lærerne legger vekt på meningene mine	☐	☐	☐	☐
Lærerne mine setter pris på meg	☐	☐	☐	☐
Lærerne hjelper meg med fagene når jeg trenger det	☐	☐	☐	☐
Lærerne hjelper meg med personlige problemer hvis jeg trenger det	☐	☐	☐	☐
	1	2	3	4

5.2 Hvor lett er det for deg å få nye venner på skolen? *(Sett ett kryss for hver linje)*

	Alltid lett	Som regel lett	Som regel vanskelig	Alltid vanskelig
Blant ungdom med samme kulturelle bakgrunn som meg	☐	☐	☐	☐
Blant ungdom med en annen bakgrunn enn meg	☐	☐	☐	☐

	Ja	Nei	Hvis «ja», hvor fra? (Spesifiser)
Er du adoptert?	☐	☐	

5.3 Ønsker du å bosette deg på hjemstedet ditt når du er ferdig med utdanningen din?

1 ☐ Ja, svært gjerne 2 ☐ Ja, dersom det faller seg slik
3 ☐ Usikker 4 ☐ Nei, jeg ønsker å bosette meg et annet sted

U/T6. FORHOLDET TIL FAMILIEN DIN

6.1 Hvor viktig er det for deg: *(Sett ett kryss for hver linje)*

	Meget viktig	Ganske viktig	Litt viktig	Ikke viktig i det hele tatt
Å tilfredsstille behovene til familien din, selv om dine egne behov er forskjellige fra deres	☐	☐	☐	☐
Å unngå krangling med andre medlemmer av familien	☐	☐	☐	☐
Å sette familiens behov foran dine egne	☐	☐	☐	☐
Å dele tingene (eiendelene) dine med andre i familien	☐	☐	☐	☐
Å dele pengene dine med familien din	☐	☐	☐	☐
Å leve opp til forventningene fra familien din	☐	☐	☐	☐
Å ha kontakt med besteforeldre, tanter/onkler, gudforeldre osv	☐	☐	☐	☐
	1	2	3	4

U/T7. KULTUR OG KONTAKT

Du kan føle deg som medlem av ulike etniske eller kulturelle grupper, som samisk, finsk, kvensk, russisk, tamilsk osv, og du kan samtidig føle at du er en del av et større samfunn som for eksempel det norske.

7.1 Her følger noen utsagn om kontakt mellom etniske grupper. *(Sett ett kryss for hver linje)*

	Helt enig	Delvis enig	Delvis uenig	Helt uenig
Jeg liker meg like godt blant nordmenn som blant folk fra andre etniske grupper og kulturer	☐	☐	☐	☐
Jeg foretrekker å være sammen med folk fra samme etniske gruppe som meg selv	☐	☐	☐	☐
Jeg synes at folk fra andre etniske grupper og kulturer burde tilpasse seg norske kulturtradisjoner og *ikke* holde på sine egne	☐	☐	☐	☐
Jeg har like godt forhold til nordmenn som til folk fra min egen kultur	☐	☐	☐	☐
Siden jeg bor i Norge, er det best jeg lever helt som norsk	☐	☐	☐	☐
Jeg synes at folk med en annen kulturell bakgrunn skal leve som de gjør i sin gruppe/kultur, selv om de bor i Norge	☐	☐	☐	☐
Jeg synes det er vanskelig å velge om jeg skal leve som norsk, eller i tråd med min egen etniske gruppe/kultur	☐	☐	☐	☐
Jeg føler meg like trygg sammen med nordmenn som folk fra min egen gruppe/ kultur	☐	☐	☐	☐
	1	2	3	4

7.2 Hvordan ser du på deg selv? *(Sett ett kryss for hver linje)*

etnis 2.

Jeg oppfatter meg selv som:	Helt enig	Delvis enig	Delvis uenig	Helt uenig
Norsk	☐	☐	☐	☐
Samisk	☐	☐	☐	☐
Kvensk	☐	☐	☐	☐
Finsk	☐	☐	☐	☐
Annet (hva)	☐	☐	☐	☐
	4	3	2	1
6 Jeg har brukt tid til å prøve å finne ut mer om min etniske gruppe, slik som historie, tradisjoner og skikker	☐	☐	☐	☐
7 Jeg deltar aktivt i organisasjoner eller sosiale sammenhenger som hovedsakelig har medlemmer fra min egen etniske gruppe	☐	☐	☐	☐
8 Jeg har en klar oppfatning av min etniske bakgrunn og hva den betyr for meg	☐	☐	☐	☐
9 Jeg tenker mye på hvordan min etniske tilhørighet vil påvirke livet mitt	☐	☐	☐	☐
10 Jeg er glad for å tilhøre den gruppen jeg tilhører	☐	☐	☐	☐
11 Jeg har en sterk følelse av å tilhøre min etniske gruppe	☐	☐	☐	☐
12 Jeg har en ganske god forståelse av hva min etniske tilhørighet betyr for meg	☐	☐	☐	☐
13 For å lære mer om min bakgrunn, har jeg ofte snakket med andre om min etniske tilhørighet	☐	☐	☐	☐
14 Jeg er veldig stolt over min etniske gruppe	☐	☐	☐	☐
15 Jeg deltar i kulturelle aktiviteter og tradisjoner innen min etniske gruppe slik som f.eks tradisjonell matlaging, musikk eller andre skikker	☐	☐	☐	☐
16 Jeg føler en sterk tilknytning til min egen etniske gruppe	☐	☐	☐	☐
	4	3	2	1

	Helt enig	Delvis enig	Delvis uenig	Helt uenig
7 Jeg er fornøyd med min etniske eller kulturelle bakgrunn	☐	☐	☐	☐
8 Jeg er glad for å være norsk	☐	☐	☐	☐
9 Jeg føler at jeg er en del av den norske kulturen	☐ 4	☐ 3	☐ 2	☐ 1

Min etnisitet er (skriv ett eller flere av tallene nedenfor):
1=Norsk, 2=Samisk, 3=Kvensk, 4=Finsk, 5=Annet
(skriv hvilken): .....

Fars etnisitet er (bruk tallene ovenfor): .....

Mors etnisitet er (bruk tallene ovenfor): .....

7.3 Hvilket språk snakker du og familien din?
(Sett ett eller flere kryss)

	Norsk	Samisk	Kvensk/finsk	Annet språk
Hjemme har jeg lært	☐	☐	☐	☐
1. språk på skolen	☐	☐	☐	☐
2. språk på skolen	☐	☐	☐	☐
Far snakker	☐	☐	☐	☐
Mor snakker	☐	☐	☐	☐
Farmor snakker(t)	☐	☐	☐	☐
Farfar snakker(t)	☐	☐	☐	☐
Mormor snakker(t)	☐	☐	☐	☐
Morfar snakker(t)	☐	☐	☐	☐

7.4 Har du, dine foreldre /foresatte og besteforeldre tilhørighet til noe spesielt trossamfunn?
(Kryss av det som passer for deg, dine foreldre/foresatte og besteforeldre)

	Meg selv	Mor	Far	Besteforeldre
Statskirken	☐	☐	☐	☐
Læstadianismen	☐	☐	☐	☐
Annet (feks. Pinsemenigheten, Jehovas vitner)	☐	☐	☐	☐

7.5 Når folk med forskjellig bakgrunn er sammen, kan noen føle seg urettferdig behandlet. Følgende utsagn handler om dette.
(Sett ett kryss for hver linje)

	Helt enig	Delvis enig	Delvis uenig	Helt uenig
Jeg synes at andre har oppført seg urettferdig eller negativt ovenfor folk fra min kultur	☐	☐	☐	☐
Jeg føler meg ikke akseptert av folk fra andre kulturer	☐	☐	☐	☐
Jeg føler at folk fra andre kulturer har i mot meg	☐	☐	☐	☐
Jeg har blitt ertet og fornærmet på grunn av min kulturelle bakgrunn	☐	☐	☐	☐
Jeg har blitt truet eller angrepet på grunn av min kulturelle bakgrunn	☐ 1	☐ 2	☐ 3	☐ 4

U/T8. KOSTHOLD

Hvor ofte spiser du disse matvarene? *(Sett kryss for hver linje)*

	Sjelden/ aldri	1-3 g. mnd.	1-2 g. pr. uke	2-4 g. pr. uke	5-7 g.pr. pr. uke
Kokt fisk	☐	☐	☐	☐	☐
Fisk (uansett type)	☐	☐	☐	☐	☐
Stekt kjøtt (alle slag, inkl. hamburgere, pølser, kjøttkaker)	☐	☐	☐	☐	☐
Reinkjøtt	☐	☐	☐	☐	☐
Tørket kjøtt	☐	☐	☐	☐	☐
Jerntabletter	☐	☐	☐	☐	☐
Vitamintabl. som inneholder jern	☐ 1	☐ 2	☐ 3	☐ 4	☐ 5

U/T9. MAGE-/TARM SYMPTOMER

9.1 Har du noen gang hatt smerter eller «verk» i magen som har vart i minst 3 måneder? ☐ Ja ☐ Nei

9.2 Hvis Ja, hvor i magen sitter smertene?
☐ Øvre del ☐ Nedre del ☐ Hele magen

9.3. Er smerten eller «verken» jevnt over tilstede:
1 ☐ I perioder på en til flere dager? 2 ☐ I perioder av ukers varighet?
3 ☐ I perioder på måneders varighet? 4 ☐ Bestandig?
5 ☐ Etter måltider? 6 ☐ Om natten?

9.4 Er du ofte plaget av oppblåsthet, rumling i magen eller rikelig luftavgang? ☐ Ja ☐ Nei

9.5 Er avføringen din vanligvis:
1 ☐ Normal 2 ☐ Vekslende hard og løs 3 ☐ Løs
4 ☐ Hard og perlete 5 ☐ Illeluktende 6 ☐ Fettaktig og glinsende

9.6 Har du i perioder 3 eller flere avføringer daglig:
☐ Ja ☐ Nei

9.7 Har du hatt plager i mage/tarm etter inntak av melk:
☐ Ja ☐ Nei

9.8 Er det andre i familien som har de samme mage symptomene:
☐ Mor ☐ Far ☐ Søsken ☐ Ingen ☐ Vet ikke

9.9 Har du vært undersøkt hos lege på grunn av:	Ja	Nei
Magesmerter i lengre tid (> 3 mndr)?	☐	☐
Avføringsproblemer ?	☐	☐
Halsbrann/sure oppstøt?	☐	☐
Lav blodprosent eller dårlig jernlagre ?	☐	☐

U/T10. SELVSKADING

10.1 Kjenner du noen som har tatt sitt eget liv? ☐ Ja ☐ Nei

10.2 Hvis «ja», var det: *(Sett ett eller flere kryss)*
1 ☐ Nær familie? 2 ☐ Slekt? 3 ☐ Venn/venninne?
4 ☐ Medelev? 5 ☐ Kjæreste? 6 ☐ Noen i nærmiljøet?

	Ja	Nei
10.3 Har du noen gang tenkt på å ta livet ditt?	☐	☐
10.4 Har du noen gang forsøkt å ta ditt eget liv?	☐	☐
10.5 Har du skadet deg selv med vilje noen gang?	☐	☐

Hvis du har svart «Nei» på alle de tre spørsmålene ovenfor, hopp til punkt U/T11. RISIKOATFERD.

	Ja	Nei
10.6 Har du i løpet av de siste 12 månedene tenkt på å ta livet ditt?	☐	☐
10.7 Har du i løpet av de siste 12 månedene forsøkt å ta ditt eget liv?	☐	☐

DERSOM DU ALDRI HAR FORSØKT Å TA DITT EGET LIV, HOPP TIL SPØRSMÅL 10.13.

10.8 På hvilken måte forsøkte du å ta ditt eget liv?
1 ☐ Henging 2 ☐ Ved hjelp av piller/medikamenter
3 ☐ Skarp gjenstand 4 ☐ Skytevåpen
5 ☐ Annet

	Ja	Nei
10.8.1 Var du beruset/rusa da du forsøkte å ta ditt eget liv?	☐	☐

10.9 Hvor gammel var du første gang du forsøkte å ta ditt eget liv? ..... Jeg var ..... år

10.10 Hvor mange ganger har du forsøkt å ta ditt eget liv? ..... Antall ganger

10.11 Fortalte du til noen andre om selvmordsforsøket? ☐ Ja ☐ Nei

10.12 Har du vært i kontakt med helsepersonell, lege, helsesøster og /eller politi i forbindelse med selvmordsforsøket/ene? ☐ Ja ☐ Nei

10.12.1 Hva var årsaken til at du forsøkte å ta ditt eget liv?

10.13 Har du i løpet av de siste 12 månedene skadet deg selv med vilje? ..... Ja ☐ Nei ☐

10.14 På hvilken måte skadet du deg selv?

1 ☐ Brenning 2 ☐ Kutting, skjæring, risping med skarp gjenstand
3 ☐ Slag mot kroppsdeler, hodedunking 4 ☐ Annet

U/T11. RISIKOATFERD

11.1 Har det i løpet av de siste 12 månedene hendt at du i forbindelse med din egen bruk av alkohol *(Sett ett kryss for hver linje)*

	Nei	Ja, 1-2 ganger	Ja, flere ganger/alltid
– Har følt deg mer ovenpå (hatt større selvtillit)	☐	☐	☐
– Har hatt ubeskyttet samleie (ikke brukt kondom) mens du har vært påvirket?	☐	☐	☐
– Har havnet i bråk eller slagsmål?	☐	☐	☐
– Har følt at din alkoholbruk går utover din fysiske helse?	☐	☐	☐
– Har følt at din alkoholbruk går utover din psykiske helse?	☐	☐	☐
	1	2	3

11.2 Har du noensinne vært passasjer i kjøretøy der sjåføren har vært i alkoholpåvirket tilstand? *(Sett ett eller flere kryss)*

1 ☐ Nei, aldri 2 ☐ Ja, motorsykkel 3 ☐ Ja, snøscooter 4 ☐ Ja, bil

U/T12. FORELSKELSE OG SEKSUALITET

12.1 Har du fast kjæreste?

1 ☐ Ja, har kjæreste nå, han/hun er ..... år
2 ☐ Nei, men jeg har hatt kjæreste tidligere
3 ☐ Nei, jeg har aldri hatt fast kjæreste

12.2. Har du noen gang vært forelsket	Nei	Ja	Usikker
i en jente?	☐	☐	☐
I en gutt?	☐	☐	☐

12.3. Har du hatt noen form for seksuelt omgang med personer av samme kjønn som deg selv (klining, beføling, samleie og lignende)?

☐ Ja ☐ Nei

12.4. Hva regner du som din seksuelle legning/orientering?

1 ☐ Heterofil 2 ☐ Lesbisk/homofil 3 ☐ Biseksuell/bifil 4 ☐ Usikker

U/T13. OM VENNER

13.1 Omtrent hvor mange nære venner har du? *(Ta ikke med søsken)*	Ingen	1	2-3	4 eller flere
	☐	☐	☐	☐
	1	2	3	4

13.2 Omtrent hvor mange ganger i uka er du sammen med dem utenom skolen?	Færre 1 gang	1 eller 2 ganger	3 eller flere ganger
	☐	☐	☐
	1	2	3

13.3 Er noen av dine beste venner eldre enn deg?

1 ☐ Ingen 2 ☐ Noen
3 ☐ Omtrent halvparten 4 ☐ Alle eller nesten alle

U/T14. PUBERTETSUTVIKLING

Når man er tenåring er det perioder da man vokser raskt.

14.1 Har du merket at kroppen din har vokst fort (blitt høyere)?

1 ☐ Har ikke begynt
2 ☐ Har så vidt begynt å vokse raskt
3 ☐ Har helt tydelig begynt å vokse rask
4 ☐ Det virker som om jeg er ferdig å vokse raskt

14.2 Og hva med hår på kroppen (under armene og i skrittet?) Vil du si at hår på kroppen din har:

1 ☐ Ikke begynt å vokse enda 2 ☐ Har så vidt begynt
3 ☐ Helt tydelig begynt å vokse 4 ☐ Det virker som om håret på kroppen er utvokst

14.3 Har du begynt å få uren hud, f.eks kviser?

1 ☐ Ikke merket noe enda 2 ☐ Har så vidt begynt
3 ☐ Har helt tydelig begynt 4 ☐ Har hatt uren hud en god stund

BARE FOR JENTER:

14.4 Har du begynt å få bryster?

1 ☐ Har ikke begynt ennå 2 ☐ Har så vidt begynt
3 ☐ Har helt tydelig begynt 4 ☐ Det virker som om brystene er fullt utviklet

BARE FOR GUTTER:

14.5 Har du begynt å komme i stemmeskiftet?

1 ☐ Har ikke begynt ennå 2 ☐ Har så vidt begynt
3 ☐ Har helt tydelig begynt 4 ☐ Det virker som om stemmeskiftet er helt ferdig

14.6 Har du begynt å få bart eller skjegg?

1 ☐ Har ikke begynt ennå 2 ☐ Har så vidt begynt
3 ☐ Har helt tydelig begynt 4 ☐ Har fått en god del skjeggvekst

U/T 15. HVORDAN ER DU?

Nedenfor er en liste over egenskaper folk kan ha. Vennligst kryss for det som stemmer eller ikke stemmer for deg.

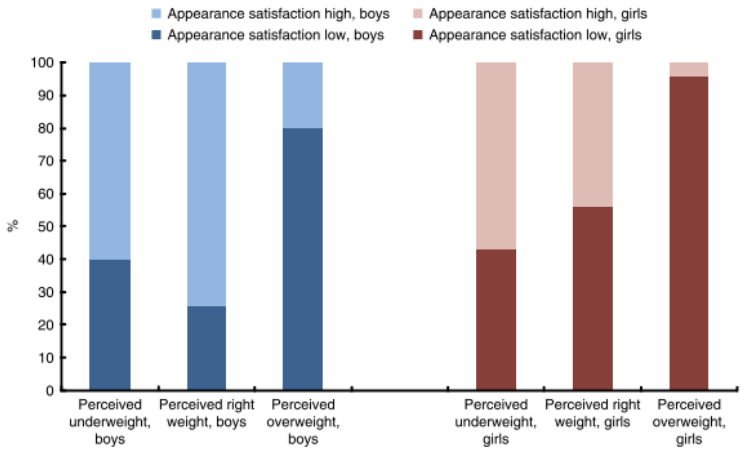
	Stemmer ikke i det hele tatt	Stemmer nokså dårlig	Stemmer omtrent	Stemmer nokså godt	Stemmer helt
Forsvarer mine meninger	☐	☐	☐	☐	☐
Tar hensyn til andre	☐	☐	☐	☐	☐
Sterk personlighet	☐	☐	☐	☐	☐
Forståelsesfull	☐	☐	☐	☐	☐
Har lederegenskaper	☐	☐	☐	☐	☐
Trøster gjerne andre	☐	☐	☐	☐	☐
Villig til å ta sjanser	☐	☐	☐	☐	☐
Varm	☐	☐	☐	☐	☐
Sier hva jeg mener	☐	☐	☐	☐	☐
Vennlig	☐	☐	☐	☐	☐
	1	2	3	4	5

TIL SLUTT VIL VI SPØRRE DEG OM DITT SAMTYKKE TIL Å KONTAKTE DEG IGJEN FOR EVT. VIDERE UNDERSØKELSER: ☐ JA ☐ NEI

Kunnskapsevaluering (GRADE)

Referanse:
Oellingrath IM, Hestetun I, Svendsen M V. Gender-specific association of weight perception and appearance satisfaction with slimming attempts and eating patterns in a sample of young Norwegian adolescents. Public Health Nutr [Internet]. 2015;19(2):265–74.

Design: Tverrsnitt	
Dokumentasjonsnivå	**III**
Grade:	**Moderat**

Formål	**Materiale og metode**	**Resultater**	**Diskusjon/kommentarer**
To examine gender-specific associations of weight perception and appearance satisfaction with slimming attempts and eating patterns among young Norwegian adolescents. **Konklusjon** ***Gender differences were observed in subjective body concerns. Perceived overweight was the main predictor of slimming attempts by both genders. Different aspects of body dissatisfaction were related to different food behaviors in boys and girls*** **Land** **2010** **År data innsamling** Norway	**Study design**: Cross-sectional study **Participants:** Children (n=469), mean age 12.7 years, and parents. **Measures:** Adolescent dietary data were reported by parents using a retrospective FFQ. Eating patterns were identified using principal component analysis. Adolescents' reported weight perception, appearance satisfaction and slimming attempts. **Statistical analysis:** Gender differences were analyzed using cross-tabulation and Pearson's x^2 test. Associations between perceived weight, appearance satisfaction and slimming attempts/eating patterns were examined using multiple logistic regression analysis. **Ethics:** The study was conducted in accordance with the guidelines laid down in the Declaration of Helsinki and the research protocol was approved by the Regional Committee for Ethics in Medical Research and the Norwegian Data Inspectorate.	**Table 2** Gender differences in self-perceived weight, appearance satisfaction and slimming attempts among girls and boys (*n* 469), mean age 12·7 (SD 0·3) years, Telemark, Norway, 2010 Girls (*n* 237) / Boys (*n* 232) *n* % *n* % *P* value* Self-perceived overweight 54 23 35 15 0·034 Self-perceived underweight 21 9 30 13 Appearance satisfaction high 85 36 149 64 <0·001 Appearance satisfaction low 152 64 83 36 Slimming attempts 52 22 41 18 0·250 *Pearson's χ^2 test (Fisher's exact test).  The main findings of the present study were that girls perceived themselves as overweight more often than boys and reported low appearance satisfaction more frequently. Higher reported appearance satisfaction among girls correlated with self-perceived thinness. Girls who were dissatisfied with their appearance were generally more likely to adhere to a low-fat, low-sugar eating pat- tern, a pattern often associated with dieting and weight control.	**Sjekkliste:** - Var studien basert på et tilfeldig utvalg fra en egnet pasientgruppe? **Ja** - Var det sikret at utvalget ikke var selektert? **Ja** - Var inklusjonskriteriene for utvalget klart definert? **Ja** - Er svarprosenten høy nok? **Ja** - Var alle pasientene i utvalget i samme stadium av sykdom? **Ikke relevant** - Var oppfølgningen tilstrekkelig (type/omfang/tid) for å synliggjøre endepunktene? **Ikke relevant** - Ble objektive kriterier benyttet for å vurdere/validere endepunktene? **Ikke relevant** - Ved sammenlikninger av pasientserier, er seriene tilstrekkelig beskrevet og prognostiske faktorers fordeling beskrevet? - Var registreringen av data prospektiv? **Ja** **Strengths** - the use of eating patterns derived from principal component analysis **Limitations** - Children's self-reported appearance satisfaction, perceived weight and slimming attempts - Parents reported dietary data, so biases caused by errors in memory and parental insight - Limited to one Norwegian county - Cross-sectional design makes it impossible to identify causal relationships.

Referanse:
Gillen MM. Associations between positive body image and indicators of men's and women's mental and physical health. Body Image [Internet]. 2015;13:67–74. Available from: http://dx.doi.org/10.1016/j.bodyim.2015.01.002

Design: Tverrsnitt

Dokumentasjonsnivå	III
Grade:	**Moderat**

Formål	Materiale og metode	Resultater	Diskusjon/kommentarer
The goal of this study was to examine associations between positive body image and various mental and physical health-related indicators in both men and women **Konklusjon** ***Results suggest that positive body image has significant implications for health and well-being beyond objective body size.*** **Land** **USA** **År data innsamling** 2014	**Study design:** cross-sectional study. Data collected at a non-residential regional college of a large university located in a suburban area in the northeastern U.S **Participants:** Undergraduate students, n=284 Mean age= 20.14 years 60% female **Measures:** - Self-reported height and weight - Positive body image was assessed with the Body Appreciation Scale - Depression was assessed with the Center of Epidemiological Studies Depression Scale - Self-esteem was assessed with the Rosenberg Self-Esteem Scale - Dieting behavior was assessed with the Unhealthy Dieting Behavior subscale of the Weight Control Behavior Scale - Drive for muscularity was assessed with the Drive for Muscularity Scale - Skin type and skin protection intension were also measured **Statistical analysis:** Correlation and stepwise linear regression analyses was used **Ethics:** This study was approved by the university's Institutional Review Board	**Table 3** Standardized betas in regression models predicting mental and physical health indicators. |	Depression	Self-esteem	Unhealthy dieting behavior	Drive for muscularity	Skin protection intentions
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Step 1					
Gender	.22***	−.15*	.19**	−.54***	.14*
BMI	.11	−.24***	.16**	.02	.04
Race/ethnicity	.03	.18**	−.01	−.09	.03
Skin type	–	–	–	–	−.09
Step 2					
Gender	.12	.02	.08	−.59***	.20**
BMI	−.03	.01	.01	−.04	.12
Race/ethnicity	.11	.05	.07	−.05	.00
Skin type	–	–	–	–	−.14
Positive body image	−.41***	.70***	−.43***	−.17**	.25***
Step 3					
Gender	−.06	.31	.21	−1.07***	−.03
BMI	−.03	.01	.01	−.04	.12
Race/ethnicity	.11	.06	.07	−.06	.00
Skin type	–	–	–	–	−.14*
Positive body image	−.45***	.78***	−.40***	−.30**	.20
Positive body image × gender	.17	−.29	−.13	.49	.22
Step 1 R^2	.06**	.09***	.06**	.31***	.03
Step 2 R^2	.20***	.49***	.21***	.33***	.08***
Step 3 R^2	.20***	.50***	.21***	.34***	.09**
ΔR^2 1–2	.14***	.41***	.15***	.02**	.05***
ΔR^2 2–3	.00	.00	.00	.01	.00	 *Note.* $N = 261–267$ due to missing data. "–" = variable not included in model. Gender is coded as 0 = men, 1 = women, and race/ethnicity is coded as African American/Black = 1, and all other racial/ethnic groups = 0. * $p < .05$. ** $p < .01$. *** $p < .001$. Results show that individuals with higher positive body image reported fewer depressive symptoms, higher self-esteem, fewer unhealthy dieting behaviors, a lower drive for muscularity, and greater intentions to protect their skin from UV exposure and damage. These findings occurred independent of BMI. That is, regardless of individuals' actual body size, those who have higher positive body image experience better mental and physical health outcomes. How individuals feel about their bodies seems to matter more than their objective size for the studied mental and physical health-related indicators. Gender did not moderate these associations; thus, connections between positive body image and health-related indicators were similar for women and men.	**Sjekkliste:** - Var studien basert på et tilfeldig utvalg fra en egnet pasientgruppe? **Ja** - Var det sikret at utvalget ikke var selektert? **Ja** - Var inklusjonskriteriene for utvalget klart definert? **Ja** - Er svarprosenten høy nok? **Ikke nevnt** - Var alle pasientene i utvalget i samme stadium av sykdom? **Ikke relevant** - Var oppfølgningen tilstrekkelig (type/omfang/tid) for å synliggjøre endepunktene? **Ikke relevant** - Ble objektive kriterier benyttet for å vurdere/validere endepunktene? **Nei** - Ved sammenlikninger av pasientserier, er seriene tilstrekkelig beskrevet og prognostiske faktorers fordeling beskrevet? **Ja** - Var registreringen av data prospektiv? **Ja** **Strengths** - the study included a racially/ethnically diverse sample of both men and women - the measurements used have been validated by several studies before **Limitations** - Small sample - The survey was self-report with the risk of information bias - The sample included students enrolled in psychology courses in the U.S, so generalizability beyond this population may be limited

Referanse: Micali N, Ploubidis G, De Stavola B, Simonoff E, Treasure J. Frequency and patterns of eating disorder symptoms in early adolescence. J Adolesc Heal [Internet]	**Design: Kohortestudie**	
	Dokumentasjonsnivå	**IIa**
	Grade:	**Moderat**

Formål	**Materiale og metode**	**Resultater**	**Diskusjon/kommentarer**
The aim of this study was to determine the prevalence of ED symptoms in early adolescence, derive symptoms dimensions, and determine their effects on social and psychological outcomes and subsequent BMI **Konklusjon** ***Eating disorder cognitions are common among young teenage girls. Eating disorder symptoms have adverse cross-sectional and distal consequence, in particular on increasing weight 2 years later.*** **Land** **England** **År data innsamling** 1991-2006	**Study design:** Cohort study **Participants:** Data on 7,082 adolescents aged 13 years from the Avon Longitudinal Study of Parents and Children (ALSPAC). **Measures:** - Developmental and Well-being Assessment (DAWBA). - BMI: objective weight and height was measured at the ALSPAC base - Sociodemographic data were obtained from parents **Statistical analysis:** Exploratory structural equation models were used to derive ED symptoms dimensions separately by sex and to relate these to contemporary outcomes (impairment, burden, and emotional and behavioral disorders) and a distal outcome (objective BMI at age 15 years). **Ethics:** the study was approved by the Institute of Psychiatry Ethics committee, the ALSPAC Law and Ethics Committee, and the local research ethics committees.	Eating disorder behaviors and cognitions overall were more common in girls. Extreme levels of fear of weight gain, avoidance of fattening foods, and distress about weight and shape were common among girls (11%). Three ED symptoms dimensions were identified: bingeing/overeating, weight/shape concern and weight-control behaviors, and food restriction. **Table 2** Prevalence of eating disorder behaviors in girls and boys and gender comparisons from ordinal logistic regression |	Girls				Boys				Odds ratio (95% confidence interval)[a]
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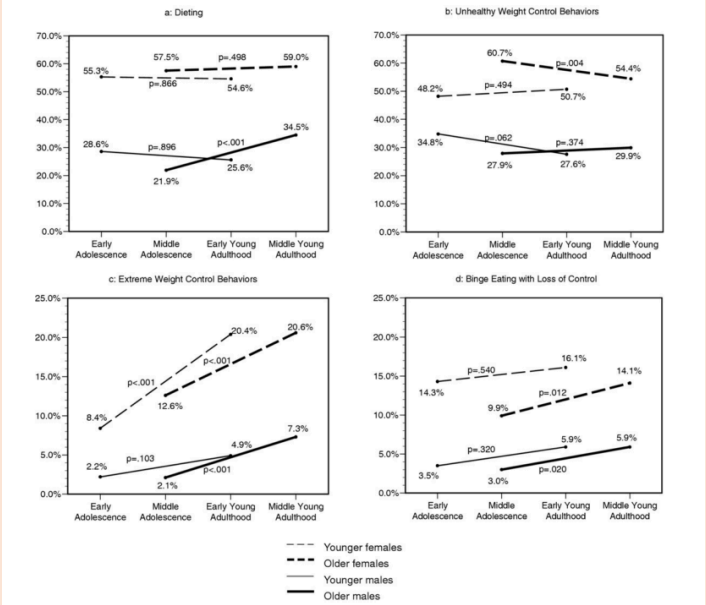
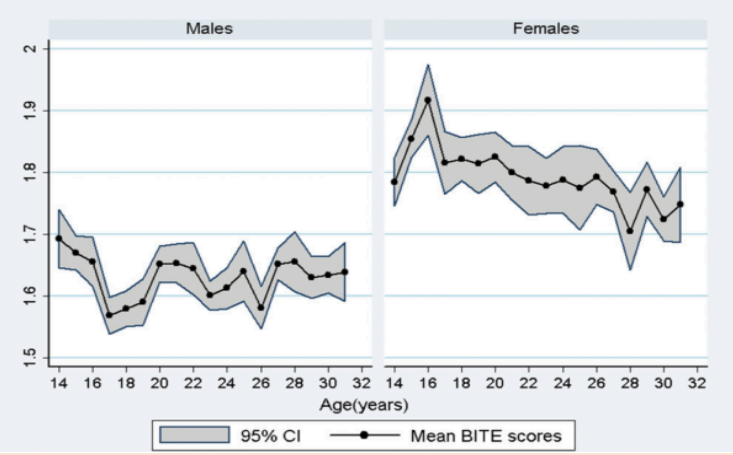
	N	No	A little	A lot/it terrifies her	N	No	A little	A Lot/It terrifies him	
Afraid of gaining weight or getting fat	3,473	1,278 (36.8%)	1,795 (51.7%)	400 (11.5%)	3,471	2,111 (60.8%)	1,197 (34.5%)	162 (4.7%)	2.2 (2.0–2.4)*
		No	A little	A lot		No	A little	A lot	
Upset/distressed about weight and shape	3,413	2,265 (66.4%)	979 (28.7%)	169 (4.9%)	3,387	2,667 (78.7%)	638 (18.8%)	82 (2.4%)	2.6 (1.5–4.5)*
Eating disorder behaviors		No	A little	A lot		No	A little	A lot	
Avoids fattening foods	3,501	1,653 (47.2%)	1,654 (47.2%)	194 (5.5%)	3,484	2,065 (59.0%)	1,288 (37.0%)	140 (4.0%)	1.6 (1.4–1.7)*
Food restriction in past 3 months	3,476	2,591 (75.5%)	802 (23.1%)	83 (2.4%)	3,483	2,980 (85.6%)	441 (12.7%)	62 (1.8%)	2.1 (1.8–2.3)*
Exercise for weight loss in past 3 months	3,486	2,530 (72.6%)	822 (23.6%)	134 (3.8%)	3,474	2,682 (77.2%)	625 (18.0%)	167 (4.8%)	1.2 (1.1–1.4)*
Purging in past 3 months	3,476	3,475 (99.8%)	6 (.2%)	1 (.03%)	3,466	3,461 (99.9%)	3 (.1%)	2 (.06%)	1.4 (.4–4.4)
		No	Occasionally	Once a week or more		No	Occasionally	Once a week or more	
Bingeing in past 3 months	3,505	3,342 (95.3%)	134 (3.8%)	29 (.8%)	3, 496	3,319 (95.0%)	134 (3.8%)	43 (1.2%)	.8 (.5–1.2)	 [a] Girls versus boys. * $p < .0001$. Bingeing/overeating was strongly associated with higher functional impairment, family burden, and comorbid psychopathology. Bingeing/overeating and weight/shape concern and weight-control behaviors predicted higher BMI 2 years later, whereas food restriction predicted lower BMI. These effects did not change when BMI at age 13 years was included in the model.	**Sjekkliste:** Var gruppene sammenliknbare i forhold til viktige bakgrunnsfaktorer? **Ja** Er gruppene rekruttert fra samme populasjon/befolkningsgruppe? **Ja** Var de eksponerte individene representative for en definert befolkningsgruppe/populasjon? **Ja** Var studien prospektiv? **Ja** Ble eksposisjon og utfall målt likt og pålitelig i de to gruppene? **Ja** Ble mange nok personer i kohorten fulgt opp? **Ja** Er det utført frafallsanalyser? **Nei** Var oppfølgingstiden lang nok til å påvise positive og/eller negative utfall? **Nei** Er det tatt hensyn til viktige konfunderende faktorer i design/gjennomføring? **Ja** Er den som vurderte resultatene (endepunktene) blindet gruppetilhørighet? **Ikke nevnt** **Strengths:** - Large community-based sample - They used a validated measure that closely reflects DSM and ICD diagnostic criteria for eating disorder. - A wealth of data is available on potential confounders. **Limitations:** - Parental report was used to measure ED symptoms, psychopathology, impairment, and burden. This could have resulted in an underestimation of purging and related behaviors. - Attrition was present

Referanse:	**Design: Kohortestudie**	
Neumark-Sztainer D, Wall M, Larson NI, Eisenberg ME, Loth K. Dieting and disordered eating behaviors from adolescence to young adulthood: Findings from a 10-year longitudinal study. J Am Diet Assoc [Internet]. 2011;111(7):1004–11. Available from: http://dx.doi.org/10.1016/j.jada.2011.04.012	Dokumentasjonsnivå	**IIb**
	Grade:	**Moderat**

Formål	**Materiale og metode**	**Resultater**	**Diskusjon/kommentarer**
To examine the prevalence and tracking of dieting, unhealthy and extreme weight control behaviors, and binge eating from adolescence to young adulthood **Konklusjon** ***Study findings indicate that disordered eating behaviors are not just an adolescent problems, but continue to be prevalent among young adults.*** **Land** **USA** **År data innsamling** 1999-2010	**Study design:** Population-based, 10-year longitudinal study **Participants:** n = 2,287 young adults. - a younger group: mean age 12.8 years at baseline and 23.2 years at follow-up - an older group: mean age 15.9 at baseline and 26.2 years at follow-up. **Measures:** The EAT-survey was used to measure dieting, unhealthy and extreme weight controls behaviors and binge eating. Sex, age, race/ethnicity, and socioeconomic status were based on self-reports **Statistical analysis:** Generalized estimating equations and log binomial models were used. P values and 95% CI for relative risks were calculated based on the likelihood ratio test. SAS version 9.2 was used for all analyses. **Ethics:** all study protocols were approved by the University of Minnesota's Institutional Review Board Human Subjects Committee. Parental consent and written assent from participants was obtained at baseline.	Among both age cohorts of girls, the prevalence of dieting remained fairly constant from adolescence through young adulthood (see figure). Among boys, the prevalence of dieting stayed constant over time in the younger age cohort, but significantly increased in the older cohort (see figure).  In younger girls, the prevalence of unhealthy weight control behaviors remained constant from early adolescence to early young adulthood (see figure). Among older girls, the prevalence of unhealthy weight control behaviors showed a statistically significant decrease from middle adolescence to middle young adulthood.	**Sjekkliste:** Var gruppene sammenliknbare i forhold til viktige bakgrunnsfaktorer? **Ja** Er gruppene rekruttert fra samme populasjon/befolkningsgruppe? **Ja** Var de eksponerte individene representative for en definert befolkningsgruppe/populasjon? **Ja** Var studien prospektiv? **Ja** Ble eksposisjon og utfall målt likt og pålitelig i de to gruppene? **Ja** Ble mange nok personer i kohorten fulgt opp? **Ja** Er det utført frafallsanalyser? **Nei** Var oppfølgingstiden lang nok til å påvise positive og/eller negative utfall? **Ja** Er det tatt hensyn til viktige konfunderende faktorer i design/gjennomføring? **Nei** Er den som vurderte resultatene (endepunktene) blindet gruppetilhørighet? **Ikke nevnt** **Strengths** - Large population-based sample - Long follow-up period - The use of two age cohorts **Limitations** - Dieting and disordered eating were assessed with brief self-reported measures and frequency of use of behaviors was not assessed - There was attrition from the original study population

Referanse: Abebe DS, Lien L, Von Soest T. The development of bulimic symptoms from adolescence to young adulthood in females and males: A population-based longitudinal cohort study. Int J Eat Disord. 2012;45(6):737–45.	**Design: Kohortestudie**	
	Dokumentasjonsnivå	**IIb**
	Grade:	**Moderat**

Formål	**Materiale og metode**	**Resultater**	**Diskusjon/kommentarer**
To investigate age-related trends in bulimic symptoms and associated putative risk factors among Norwegian youth **Konklusjon** ***Mid-adolescence for females and early 20s for males represent high-risk periods for developing bulimic symptoms. These symptoms is related to changes related to BMI, appearance satisfaction, alcohol consumption, symptoms of anxiety and depression, and cohabitation status*** **Land** **Norway** **År data innsamling** 1992-2005	**Study design:** Cohort study **Participants:** Data from the longitudinal study "Young in Norway". A sample of 3,150 participants (45,1% males and 54,9% females) was prospectively followed for 11 years at three times points from adolescence to adulthood - 1992 (T0), 1994 (T1), 1999 (T2) and 2005 (T3). Overall response rate was 67%. **Measures:** - Bulimic Investigatory Test, Edinburgh (BITE). - Body Areas Satisfactions Scale (BASS). - Depressive Mood Inventory. - Hopkins Symptoms Checklist. - Global Self-Worth subscale **Statistical analysis:** Linear random coefficient models were applied	Figure1: for females, bulimic symptoms increased from age 14 to 16 and declined slowly thereafter. For males, the symptoms decreased between ages 14 and 16 and returned in the early 20s. Females had higher levels of symptoms than males at every age. Figure 1: mean with 95% CI of the BITE score in males and females from adolescence to young adulthood.  Age-associated trends in body mass index, appearance satisfaction, and symptoms of anxiety and depression were associated with some of the trends for both genders. For females, changes in alcohol consumption and cohabitation status functioned as predictors of the changes in the level of bulimic symptoms from adolescence to adulthood.	**Sjekkliste:** Var gruppene sammenliknbare i forhold til viktige bakgrunnsfaktorer? **Ja** Er gruppene rekruttert fra samme populasjon/befolkningsgruppe? **Ja** Var de eksponerte individene representative for en definert befolkningsgruppe/populasjon? **Ja** Var studien prospektiv? **Ja** Ble eksposisjon og utfall målt likt og pålitelig i de to gruppene? **Ja** Ble mange nok personer i kohorten fulgt opp? **Ja** Er det utført frafallsanalyser? **Nei** Var oppfølgingstiden lang nok til å påvise positive og/eller negative utfall? **Ja** Er det tatt hensyn til viktige konfunderende faktorer i design/gjennomføring? **Ja** Er den som vurderte resultatene (endepunktene) blindet gruppetilhørighet? **Strengths** - Longitudinal. Large sample - The study provides information about developmental trends and putative risk factors that may have important implications for understanding the preventive management of bulimic disorders. **Limitations** - Could not delineate the temporal order between bulimic symptoms and the putative risk factors. - Bulimic symptoms are measured by survey only, no information about the diagnosis of bulimic disorder - Factors related to family relationships, adverse life-events, perfectionism, drive for thinness, and thin-ideal internalization were not included in this stud