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The Impact of Eating Disorders on the Adolescent Process

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ACADEMIC DISSERTATION
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To Jussi, Aino and Elina

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List of original papers

This dissertation is based on the following original publications, which are referred to in the text by the Roman numerals I-IV

I Ruuska J, Kaltiala-Heino RK, Koivisto AM and Rantanen P (2003): Puberty, sexual development and eating disorders in adolescent outpatients. European Child & Adolescent Psychiatry, 12(5): 214 – 220.

II Ruuska J, Kaltiala-Heino RK, Rantanen P and Koivisto AM (2005): Are there differences in the attitudinal body image between adolescent anorexia nervosa and bulimia nervosa? Eating and Weight Disorders, 10(2): 98 – 106.

III Ruuska J, Kaltiala-Heino R, Rantanen P and Koivisto AM (2005): Psychopathological distress predicts suicidal ideation and self-harm in Adolescent Eating Disorder outpatients. European Child & Adolescent Psychiatry, 14(5): 276 – 281.

IV Ruuska J, Koivisto AM, Rantanen P and Kaltiala-Heino RK: Psychosocial Functioning Needs Attention in Adolescent Eating Disorders. (Submitted)

Abbreviations

AN	Anorexia Nervosa
APA	American Psychiatric Association
BD	Body Dissatisfaction
BN	Bulimia Nervosa
BMI	Body Mass Index
C.I.	Confidence Interval
CMR	Crude Mortality Rate
COST	COperation in the Field of Scientific and Technical Research
DSM-III	Diagnostic and Statistical Manual of Mental Disorders, Third Edition
DSM-IV	Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition
DT	Drive for Thinness
ED	Eating Disorder
EDI	Eating Disorder Inventory
ED-NOS	Eating Disorders Not Otherwise Specified
FPI-R	Freiburger Personality Inventory
GAF	Global Assessment of Functioning scale
GSI	Global Severity Index
HUCH	Helsinki University Central Hospital
ICD-10	10th International Classification of Diseases
OCD	Obsessive Compulsive Disorder
OR	Odds Ratio
PQB/PQE	Patient's Questionnaire at the Beginning/End
SAS	Social Adjustment Self-report
SCL-90	Symptom Check List-90
SEED	Short Evaluation of Eating Disorder
SMR	Standardized Mortality Rate
TAUH	Tampere University Hospital
TIB/TIE	Therapist Interview at the Beginning/End

Abstract

Eating disorders (ED) mostly begin in adolescence and may have a serious impact on physical and psychological development. In clinical experience EDs seem on the one hand to be consequences of difficulties in adolescent development and on the other to have impact on the adolescent's development in one or more of the developmental domains. The aim of this study was to evaluate adolescent development among adolescent onset ED patients (anorexia nervosa, AN and bulimia nervosa, BN) and especially the differences and similarities between these ED groups at the early phases of illness.

Pubertal timing, psychosexual development, body image, suicidal behaviour and psychosocial functioning in adolescent AN and BN were evaluated in the studies. Multivariate analyses were done in order to find out if other relevant factors (age, age at menarche, duration of illness, BMI and GSI) explain the study variables better than type of ED (AN/BN).

The study group was collected between 1. January 1996 – 16. July 1998 and comprised 57 adolescent outpatients (girls) attending Tampere University Hospital, Department of Adolescent Psychiatry for assessment because of ED symptoms and fulfilling the ICD-10 diagnostic criteria for AN (typical, F50.0 and atypical, F50.1) or BN (typical, F50.2 and atypical, F50.3). The study design and the measures used were based on the European COST B6 Action for EDs. The interviews were conducted and questionnaires distributed in the beginning phase of assessment in the first two sessions.

The age at menarche was significantly earlier in the BN group compared to the mean age at menarche in Finland. The age at menarche did not differ statistically significantly between the two ED groups. Girls with AN reported more negative attitude towards sexual matters and dating than girls with BN, who in turn reported significantly more body dissatisfaction and suicidal behaviour than girls with AN. Overall psychosocial functioning was impaired in both ED groups measured by GAF. When various psychosocial developmental domains were evaluated, difficulties in autonomy development and loneliness in social contacts were pronounced in the AN group and unsatisfactory relationships with parents in the BN group. In multivariate analyses there emerged not only the influences of EDs but also of general

psychological distress (GSI). GSI was associated especially with body dissatisfaction, suicidal behaviour (as also depression) and difficulties with family.

The results concur with many earlier studies of EDs associating early maturing, suicidal behaviour, body dissatisfaction and conflicts in family relationships especially with BN, and psychosexual difficulties and few social contacts with AN. These findings were noteworthy although, otherwise than many earlier studies, the study also included the atypical, and thus also milder, forms of ED and although the vast majority of girls were in the early stages of their illness without previous major treatment interventions. It is not possible to draw any etiological conclusion from the findings, because the study group consisted of girls already having EDs. The findings, however, strengthens those earlier results connecting EDs to adolescent development and especially to difficulties in progressing in it. There were differences between the AN and BN groups in various developmental domains, pointing to differences in psychological background and in the progression on adolescent development.

This study emphasizes not only the importance of evaluation of EDs but also the overall psychiatric symptoms in adolescent EDs. We know from earlier studies that psychiatric comorbidity affects the quality and quantity of treatment needed. This study also strengthens the main principle in adolescents´ psychiatric treatment – helping the adolescents to progress in their development. Further long-term follow-up studies are needed in order to identify the course of adolescent onset EDs and the impact on psychosocial functioning in adulthood, likewise to ascertain the effect of early treatment interventions and to elaborate new interventions.

Tiivistelmä

Syömishäiriöt alkavat yleensä nuoruusiässä ja niillä voi olla vakavia vaikutuksia fyysiseen ja psyykkiseen kehitykseen. Kliinisen kokemuksen perusteella syömishäiriöt toisaalta näyttävät olevan seurausta kehityksellisistä vaikeuksista nuoruusiässä ja toisaalta ne vaikuttavat nuoruusiän kehitykseen yhdellä tai useammalla kehityksellisellä alueella. Tämän tutkimuksen tarkoituksena oli arvioida nuoruusiässä syömishäiriöön (anorexia nervosa, AN ja bulimia nervosa, BN) sairastuneiden nuoruusiän kehitystä ja erityisesti eroja ja samankaltaisuuksia näiden syömishäiriöryhmien välillä sairauden alkuvaiheessa.

Tutkimuksessa arvioitiin puberteetin ajoitusta, psykoseksuaalista kehitystä, ruumiinkuvaa, itsetuhoisuutta ja psykososiaalista toimintakykyä nuoruusiän anoreksiassa ja bulimiassa. Monimuuttuja-analyyseillä tutkittiin selittivätkö muut merkittävät tekijät (ikä, menarke ikä, syömishäiriön kesto, BMI ja GSI) paremmin kuin syömishäiriön tyyppi (AN/BN) tutkittavia muuttujia.

Tutkimusryhmä kerättiin 1.1.1996 – 16.7.1998 ja se käsitti 57 nuoruusikäistä avohoitopotilasta (tyttöjä), jotka tulivat syömishäiriöoireiden vuoksi arviointiin Tampereen Yliopistollisen Sairaalan nuorisopsykiatrian klinikkaan, ja jotka täyttivät ICD-10 tautiluokituksen diagnostiset kriteerit AN (tyypillinen, F50.0 ja epätyypillinen, F50.1) tai BN (tyypillinen, F50.2 ja epätyypillinen, F50.3). Tutkimussuunnitelma ja käytetyt mittarit perustuivat eurooppalaiseen COST B6 syömishäiriötutkimukseen. Haastattelut suoritettiin ja kyselylomakkeet annettiin arvioinnin alussa kahdessa ensimmäisessä tapaamisessa.

BN ryhmässä menarke ikä oli merkitsevästi varhaisempi kuin keskimääräisesti Suomessa. Menarke ikä ei eronnut merkitsevästi syömishäiriöryhmien (AN/BN) välillä. Anorexiaa sairastavat tytöt suhtautuivat kielteisemmin seksuaalisuuteen ja seurustelemiseen kuin bulimiaa sairastavat tytöt, jotka puolestaan toivat esiin enemmän tyytymättömyyttä omaan ruumiiseen ja itsetuhoista käyttäytymistä kuin anorexiaa sairastavat tytöt. Molemmissa syömishäiriöryhmissä psykososiaalinen toimintakyky oli huonontunut sairauden alkuvaiheessa mitattuna GAF:lla. Tutkittaessa eri psykososiaalisen toimintakyvyn alueita AN ryhmässä korostuivat vaikeudet itsenäistymiskehityksessä ja yksinäisyys sosiaalisissa suhteissa ja BN ryhmässä epätyydyttävät perhesuhteet. Monimuuttuja-analyyseissä nousi erityisesti esille paitsi ongelmien yhteys syömishäiriöön, myös yleisten psyykkisten

vaikeuksien merkitys (GSI). GSI oli erityisesti yhteydessä tyytymättömyyteen omaan ruumiiseen, itsetuhoiseen käyttäytymiseen (samoin kuin depressio) ja vaikeuksiin perhesuhteissa.

Tulokset sopivat moniin aikaisempiin syömishäiriötutkimuksiin, jotka ovat liittäneet varhaisen puberteetin, itsetuhoisen käyttäytymisen, tyytymättömyyden ruumiinkuvaan ja ristiriidat perhesuhteissa erityisesti BN:aan samoin kuin psykoseksuaaliset vaikeudet ja vähäiset sosiaaliset suhteet AN:aan. Nämä löydökset olivat merkittäviä, vaikka tämä tutkimus, toisin kuin moni aikaisempi, käsitti myös epätyypillisiä, ja siten myös lievempiä, syömishäiriön muotoja, ja vaikka suurin osa tytöistä oli sairastamisen alkuvaiheissa ilman aikaisempia merkittäviä hoitovaiheita. Löydöksistä ei voi kuitenkaan vetää etiologisia johtopäätöksiä, koska tutkimus koostui nuorista, jotka jo sairastivat syömishäiriötä. Löydökset kuitenkin vahvistavat niitä aikaisempia tutkimustuloksia, jotka liittävät syömishäiriöt nuoruusiän kehitykseen ja erityisesti vaikeuksiin siinä etenemisessä. AN ja BN ryhmien välillä oli eroja eri kehityksellisillä alueilla, viitaten eroon psykologisissa taustatekijöissä ja nuoruusiän kehityksessä etenemisessä.

Tutkimus korostaa syömishäiriöoireen lisäksi yleisen psyykkisen oireilun arvioimisen tärkeyttä nuoruusiän syömishäiriöissä. Aikaisempien tutkimuksien perusteella tiedämme, että psykiatrinen komorbiditeetti vaikuttaa tarvittavan hoidon laatuun ja määrään. Tutkimus myös vahvistaa nuorten psykiatrisen hoidon keskeistä periaatetta – nuoren auttamista kehityksessä eteenpäin. Riittävän pitkäkestoisia seurantatutkimuksia tarvitaan edelleen nuoruusiässä alkavien syömishäiriöiden kulun ja aikuisiän psykososiaaliseen toimintakykyyn kohdistuvan vaikutuksen, samoin kuin varhaisten hoitointerventioiden vaikutuksen selvittämiseksi ja kehittämiseksi.

1. Introduction

Adolescence is a transitional phase between ages 12 and 22 years, leading from childhood to adulthood. During adolescence an individual is faced with great physiological and psychological developmental changes and challenges. Adolescence is often described as consisting of "developmental tasks" regarding puberty development, maturing body and sexuality, autonomy development, changing peer relationships and identity formation. Individual variations in the adolescent process are great alternating between phases of progression and occasional regression. Mental disorders during adolescence are often viewed as both reflecting and causing difficulties during adolescence.

Eating disorders (ED) mostly begin during adolescence. They constitute a rather small but a most serious group of mental disturbances with elevated risk for chronicity or death (Nielsen 2001, Sullivan 1995). The incidence rates of anorexia nervosa (AN) increased until the 1970´s, but have lately remained fairly stable in Europe (Hoek and van Hoeken 2003). Bulimia nervosa (BN) was only introduced in 1979 by Russell (Russell 1979) and added to DSM-III in 1980 (APA 1980). The incidence rates for AN have been estimated at 8/100,000 and for BN at 13/100,000 per year. The point prevalence rates are 0.3% for AN and 1% for BN among young females. Milder forms of EDs especially have increased, as also EDs among even younger adolescents than was earlier believed (Hoek 2006). EDs are still disorders of females, the female/male ratio is approximated at 10:1, although a slight increase among males has been suggested lately (e.g. Hoek and van Hoeken 2003). Earlier studies have connected EDs especially with western cultures, but nowadays they have also been increasingly reported in other cultures (Hoek et al. 2005).

While originally EDs were understood as purely neurophysiological disturbances, nowadays the etiology of EDs is seen to be multidimensional, consisting of individual, familial and sociocultural factors, which compose predisposing, precipitating and perpetuating factors. The research regarding risk factors for EDs is ambiguous, because of the difficulty of differentiating between early symptoms of the EDs and risk factors (Bulik et al. 2005, Jacobi et al. 2004).

In the psychodynamic view of adolescent development AN especially has been suggested to reflect a defence against developmental challenges which are difficult to meet (Lehto-Salo and Aalberg 1996). These difficulties may constitute one or more of the key developmental tasks in adolescence. Pressure for psychosexual maturing induced by puberty causes some adolescents to react to the maturing body and sexuality with anxiety and to try to avoid the inevitable changes and maturing sexual body (Laufer and Laufer 1984). Puberty is considered to constitute a critical period for developing EDs. The increase in adipose tissue during puberty may push girls especially away from the desired thin ideal and cause body dissatisfaction, which in turn has been found to increase risk for dieting and thus to constitute a risk factor for EDs (e.g. Attie and Brooks-Gunn 1989, Fairburn et al. 1999a, Striegel-Moore et al. 2001). The exact significance of the timing of puberty has been debated, but early maturing has been found especially to increase the risk of bulimic type eating pathology (e.g. Fairburn et al. 1997, Kaltiala-Heino et al. 2001, Ponton and Judice 2004).

EDs have been found to lead to persistent physiological and psychosocial consequences. Somatic consequences include pubertal delay or interruption, growth retardation leading to diminished adult height, early onset osteoporosis, fertility problems and cardiovascular emergencies (Brewerton 2002). Although ED symptoms have disappeared, psychosocial difficulties (such as non age-appropriate dependency on parents and loneliness) have been seen to persist in both ED groups (e.g. Fairburn et al. 2000, Fichter et al. 2006). Mortality in EDs is usually due to somatic complications or suicide and the mortality rates are still among the highest in mental disorders (e.g. Nielsen 2001, Sullivan 1995). Risk of suicide especially is found in AN, although impulsivity and suicidal behaviour are also associated with BN (e.g. Herzog et al. 2000, Stein et al. 2003). Comorbidity with depression and anxiety disorders has been found in both ED groups, obsessive-compulsive disorders especially in AN (e.g. Herpertz-Dahlman et al. 2001, Råstam et al. 2003) and depression in BN (e.g. Cooper and Hunt 1998, Kendler et al. 1991). Many of the earlier studies emphasize early treatment interventions in order to prevent chronic course.

Although developmental aspects have been proposed in EDs, the studies concerning the impact of EDs on adolescent development are scarce. This study reports the results of the baseline assessment of adolescent development in a group of adolescent ED patients at study entry and focuses especially on the differences and similarities in pubertal development, psychosexual state, body image, comorbid suicidality, psychosocial functioning and adjustment in adolescent AN and BN.

2. Review of the literature

2.1 Adolescent development

Adolescence is a crucial developmental stage between the ages of 12 and 22 years (Aalberg and Siimes 1999, Hägglund 1985). Physical puberty starts adolescent development and is needed for the continuing psychosocial development towards adulthood. Adolescence has been described as a developmental crisis or a transitional phase during which the individual undergoes great biological, psychological and social changes. It has been suggested to form a vulnerable period due to variations in emotions, cognitions and behaviour during development (Steinberg 2005).

Adolescence has been divided into five distinct phases: preadolescence (10-12 years), early adolescence (12-14 years), middle adolescence/adolescence proper (14-16 years), late adolescence (17-20 years) and post adolescence (20-22-25 years) (Blos 1962, Mangs and Martell 1982). Individual variation in progressing through these stages is great and progression from one developmental stage to another requires both maturation and psychic restructuring (Blos 1962). Adolescence consists of developmental tasks or milestones through which adolescents proceed. The primary developmental tasks are: 1. Achievement of biological and sexual maturation, 2. Development of personal identity, 3. Development of ability to form intimate sexual relationships with an appropriate peer and 4. Establishment of independence and autonomy in the context of the sociocultural environment. These developmental tasks act differently during each developmental phase and gradually become integrated with emerging competencies and lead to adaptive functioning during maturity.

(Aalberg and Siimes 1999, Blos 1962, Erikson 1950, Erikson 1983, Mangs and Martell 1982).

Early adolescence is characterized by marked physical changes and constitutes an important period for the development of body image. Changing body image comprises an essential part of psychological and interpersonal development in adolescence. Erikson (1983) has stated that identity means a sense of "being home in one's body". He postulated that in adolescence one is faced not only with psychological crisis but also with physiological crisis, which affects the formation of a reliable body image. Adolescents are especially vulnerable to sociocultural pressures to be thin and to perceptions of how they appear to others. Parents, peers and media influence body image and how one feels about it (Gerner and Wilson 2005, Jones 2004, Smolak 2004, Stice and Whitenton 2002). Sociocultural influence may foster body dissatisfaction through feedback from parents, peers, dating partners and messages from the media (Presnell et al. 2004, Taylor et al. 1998). Each adolescent responds differently to bodily changes, but the importance of physical appearance, weight concerns and dieting increases, as the adolescents have to cope with rapid changes in the body. For some adolescents bodily changes, including growth of body hair and genital development, can be a source of embarrassment and the changing body may be experienced as being out of control, while for others bodily changes are a source of pride and enjoyment. The normal increase of adipose tissue caused by biological maturing moves most girls especially away from the dominant ideal thin body shape. In girls, dissatisfaction with body increases after menarche, while in boys' physical maturing causes movement towards the more muscular ideal (Cooper and Goodyear 1997, Field et al. 1999, Jones 2004, Levine and Smolak 2002, Stice and Whitenton 2002). Mental disturbances in adolescence are inextricably linked to the body. This can be seen especially in EDs, but also in somatic fears, compulsive needs to changing one's body parts or in suicidal behaviour (Laukkanen 1993 and 1995, Laukkanen et al. 1998). Many authors have found that early puberty among girls constitute a risk for body dissatisfaction (Fairburn et al. 1997, Graber et al. 1994, Kaltiala-Heino et al. 2001, Ohring et al. 2002), although some authors have found no consistent correlation of pubertal timing with body dissatisfaction (Ackard and Peterson 2001, Leon et al. 1993, Levine and Smolak 2002, Stice and Whitenton 2002).

Pubertal development and emerging sexuality influence and are influenced by body image (Levine and Smolak 2002). Research regarding sexual development in adolescence has pointed out the complex development of sexual self and the adolescent's need for support in this development (Ponton and Judice 2004). Difficulties in accepting the maturing sexual body as a part of the concept of self have been connected with psychological disturbances in adolescence. Laufer and Laufer (1984) state that puberty and sexual maturing necessitate analysing and connecting earlier development with a sexually maturing body. They introduced the concept of "adolescent breakdown" to adolescent psychiatry and suggested that adolescent pathology could be viewed as a breakdown in the developmental process that takes place at puberty or during adolescence. This developmental breakdown is associated with the establishment of a final sexual organization by the end of adolescence. For some adolescents the bodily changes occurring at puberty and during adolescence are a source of intense anxiety. These adolescents seem to respond to the physical changes with behaviour that attempts to maintain the omnipotent fantasy that they are in control of their bodies, rather than integrating the new sexual body within the existing body image. While adolescent developmental breakdown may reflect lost hope for adulthood, at the same time it offers "a second chance" where adolescent development can repair earlier unfavourable development (Laufer and Laufer 1984, Laufer 1996, Laufer 1997).

Identity development is stabilized at the end of adolescent development. Identity can be defined as a sense of mental well-being, a sense of "being at home in one's body". Identity also reflects an inner conviction of others´ recognising and acknowledging it. Stable identity leads to an experience of continuity and constancy of self (Blos 1962, Mangs and Martell 1982). Erikson states in his psychosocial theory (1983) that development proceeds by a series of conflicts faced at different ages, which result from the interplay between the social environment and individual growth. According to Erikson adolescents have to deal with an identity crisis when faced with the imminence of adult tasks. He suggested that developmental failure leads to a sense of confusion about "who one is", and to an inability to commit to values when faced with choices of occupation, intimate relationships, and in ideological worldview (Bergh and Erling 2005, Erikson 1950, Erikson 1983). Erikson´s basic

formulations were further developed to four identity statuses during adolescent development: identity diffusion, foreclosure, moratorium and identity achievement, reflecting individual styles of coping with the identity crisis (Marcia 1967). Identity diffused persons have neither engaged in exploration nor finalized a commitment, while in foreclosure an individual has prematurely committed to parentally determined values and goals without experiencing a crisis or critically examining alternatives. Moratorium refers to active exploration of different perspectives and a struggle to make a commitment. Identity-achieved individuals have experienced a crisis, have investigated options, and have committed to a set of values or goals (Marcia 1967).

Peer relationships are important for psychosocial development throughout childhood and adolescence (e.g. Goldstein et al. 2005, Meeus et al. 2002). Harry Sullivan stated in 1955, that "involvement in friendship makes a vital contribution to children's and adolescents´ psychological development and well-being". According to Sullivan during adolescence individuals encounter needs for sexual involvement and intimacy with an opposite-sex partner (Sullivan 1955). The importance of peer relationships is especially significant, providing companionship, social and emotional support, intimate self-disclosure and reflection (e.g. Allen et al. 2005, Culbertson et al. 2003). Relationships with same-sex peers remain important, too, offering companionship and a context for intimacy disclosure (Culbertson et al. 2003, Sullivan 1955). Erikson (1983) postulated that identity formation during adolescence is achieved by emotional disengagement from the family and a transfer of attachment to peers. Peer influence is mediated both within groups and dyadic relationships (Hartup 2005). Properly functioning peer relationships contribute to well-being (Hale et al. 2005), although for some young people peer relationships may constitute a risk for problem behaviour (e.g. drug and alcohol abuse) (Goldstein et al. 2005). In contrast, rejection by peer groups has been linked with difficulties (such as feeling of loneliness, academic difficulties and risk of dropping out of school and developing psychological disorders in adolescence) (Parker and Asher 1987). Peer groups of the same sex are important especially for boys, while girls often form intensive dyadic or triangle relationships with other girls. Peer relationships, as also family relationships, help to guide development and contribute in practising feminine or masculine roles. Peer relationships are also essential in helping the

adolescent to progress in the separation-individuation development from parents and preparing them for adult relationships (Bednar and Fisher 2003, Culbertson et al. 2003, Furman 1988).

Autonomy development progresses during adolescent development leading gradually to adult independence and equality with parents. Peter Blos (1962) termed adolescence “the second individuation process”. He states that in order to achieve individuation, the adolescent has to let go of the internalized childhood image of the parent. According to Blos adolescents emerge during this development from the family into the adult world and society at large. During progressive development adolescents find new identifications, loyalties and intimacies outside the infantile family dependencies (Blos 1962). For adolescents this means abandoning infantile bonds with parents. The parent-adolescent conflict, with fluctuating needs for autonomy and independence and more regressive needs for dependency, peaks in early adolescence and causes inner turmoil (Allison and Schultz 2004, Laursen et al. 1998). For adolescents´ well-being good family relationships are important in forming a protective environment (DeVore and Ginsburg 2005, Joronen 2005, Resnick et al. 1997). Parents´ positive or negative attitudes to developmental changes have been found to contribute to autonomy development (Rantanen 1989). Good family relationships have also been found to facilitate good peer relationships and positive perceptions of self (Field et al. 2002, Parker and Benson 2004). As adolescents become older they experience and need less parental support, while identity development progresses (Meeus et al. 2005). Relationship with parents has been found to remain fairly positive during adolescence (Alsaker 1995) and older adolescents especially do not abandon their parents as a necessary condition for growth. Palladino-Schultheiss and Blustein (1994) have formulated, that “optimal psychosocial development is promoted by progressive mutual redefinition of the parent-child relationship while simultaneously a sense of connectedness and an emotional bond continues to encourage autonomy”.

Cognitive theories of adolescent development emphasize the importance of cognitive and social development and dynamic interaction between the developing child and social environment from early infancy. Early cognitive theories were based on Piaget´s formulations

of different developmental stages including changes in though process, structure of intelligence and logical thinking (Piaget 1988). Progressing from one stage to the next also needs restructuring during former stages. In adolescence cognitive development is considered to progress from concrete operations (7 – 11 years) to formal operations (11 – 15 years) and finally to abstract operations (from 15 years) (e.g. Nieminen 2004). By different social roles adolescents form social, occupational, religious and political identity (Harter et al. 1997). Cognitive-constructive model of cognitive theory, likewise attachment theory, has emphasized the importance of early interactions between the child and parents, where the child's own feelings and thoughts are recognized forming the base for the development of self and normal separation-individuation (Guidano 1991).

Individual variations in the course of the development are great, and adolescent development may be expressed externally in many ways, although leading to the same outcome. The developmental course may progress evenly, or adolescents may alternate between even and turmoil phases. Some adolescents go through adolescence in intense turmoil and some adolescents try to jump straight to adulthood avoiding the developmental demands. During normal development progression is essential, proceeding in spite of occasional "normative" regressions (Aalberg and Siimes 1999, Hägglund 1985, Laukkanen 1993, Mangs and Martell 1982, Rantanen and Kiuttu 1996).

2.2 Eating disorders in adolescence

2.2.1 Incidence and prevalence of eating disorders in adolescence

Epidemiological research on EDs has progressed significantly during the twentieth century, although relevant studies on the incidence of EDs in the general population are still lacking (Hoek and van Hoeken 2003). It is obvious, that in mental health care we meet only a minority of people who meet diagnostic criteria for EDs. Although self-starvation is known to have existed as early as in the 17th century, its nature as an illness was only postulated in the early twentieth century (Pearche 2004, Vandereycken and van Deth 1996). Increasing incidence rates have been found for anorexia nervosa (AN) throughout the twentieth century

until the 1970`s, especially in females 15 to 24 years old (Hoek 1993 and 2006, Hoek and van Hoeken 2003, Keel and Klump 2003, Lucas et al. 1991). Although Lucas et al. (1999) still suggested a linear increase in AN for 15 to 24 year-old females, other studies have found fairly stable incidence rates in Europe since 1970´s (Currin et al. 2005, Fombonne 1995, Hoek and van Hoeken 2003, Hoek 2006). However, the increase in incidence rates among milder forms of AN is clear, and especially among those seen in primary care (Hoek 1991, Steiner and Lock 1998).

Bulimia nervosa (BN) was first introduced 1979 by Russell (Russell 1979) and added to the DSM-III in 1980 (APA 1980). Prior to that, bingeing and purging were considered to be a part of AN. Due to the shorter history of this diagnosis the incidence and prevalence rates still lack precision and only few studies have specifically focused on incidence trend of BN (Nielsen 2001). However, an increase in the incidence of BN and bulimic type of eating behaviour, even in younger age groups, was found especially in the 1990`s (Currin et al. 2005, Kaltiala-Heino et al. 1999, Nielsen 2001).

Nowadays the prevalence rate for young females has been estimated at 0.3% for AN and 1% for BN. The overall annual incidence is 8/100,000 for AN, and at least 13/100,000 for BN (Hoek 1993, Hoek 2006, van Hoeken et al. 2003). The peak age at onset for EDs is between 15 and 19 years (Hoek 2006, Lucas et al. 1991, Soundy et al. 1995). E.g. Cullberg and Engström-Lindberg (1988) found incidence rates 43/100,000 for AN and 65/100,000 for BN in females aged 16-24, indicating the most vulnerable age group for EDs. The epidemiological studies of EDs among males are limited because of the diagnostic criteria used and possibly also because of the higher threshold of men for seeking treatment (Fichter and Krenn 2003). Although the ratio of females to males with EDs is generally approximated at 10:1, recently a slight increase among males has been suggested (Braun et al. 1999). Men usually account for 5-10% of AN patients (Sharp et al. 1994) and for 10 -15% of BN patients (Carlat et al. 1997, Garfinkel et al. 1995). The incidence of AN among males is below 1.0/100,000 per year and 0.8/100,000 in BN (Hoek and van Hoeken 2003). The prevalence rate of BN has been estimated at 0.2% in adolescent boys and young adult men (Carlat and Camargo 1991, Turnbull et al. 1996).

In Finland Pirkola et al. (2005) found bulimic - type of symptoms among 4 % of women aged 18 – 29 years, 2 % reported having bulimia at the time of the study. Only a few men reported having bulimic symptoms at sometime, but none of them reported having had diagnosed BN. AN was reported by 0.2% of women at the time of the study and earlier AN by 3% of women and 0.2% of men.

The age at onset in AN has not changed in recent decades. BN was initially considered to occur among older adolescents and young adults, but later bulimic type of eating pathology was found among younger age groups, too (Franko and Omori 1999, Kaltiala-Heino et al. 1999). AN and BN beginning before puberty are still rare (Bulik 2002, Hindler et al. 1994, Schmidt et al. 1997a). Males have been suggested to have later onset of ED (Braun et al. 1999, Sharp et al. 1994), although the opposite relation of females and males has also been found (Kjelsås et al. 2004).

2.2.2 Etiological and risk factors for eating disorders in adolescence

AN has usually been associated with higher social classes, although this claim has also been challenged (Favaro et al. 2003, Gard and Freeman 1996, McClelland and Crisp 2001). The majority of BN patients, in contrast, have been suggested to come from the lower socio-economic groups (Gard and Freeman 1996). Sociocultural research has associated EDs with the thin ideal of Western society (Demarest and Allen 2000, Gunewardene et al. 2001, Lake et al. 2000, Pinhas et al. 1999, Steiner et al. 2003), although EDs may also arise without this ideal (Ngai et al. 2000). Earlier EDs were considered principally disorders of Western society, but nowadays they have been found increasingly in other societies. Caucasians, however, still seem to have highest incidence of EDs (Demarest and Allen 2000). Femininity has been suggested as a risk factor for EDs (Meyer et al. 2001), while masculinity seems to function rather as a protecting factor (Hepp et al. 2005). Gender role conflicts and problems with sexuality have been connected especially with men developing EDs (Cohane and Pope 2001, Fornari and Dancyger 2003, Russell and Keel 2002). Athletic competition,

participation in weight-related subculture and exercise has been regarded to constitute risks for EDs (Fogelholm and Hiilloskorpi 1999, Fulkerson et al. 1999).

While many studies emphasize the importance of family dynamics and interpersonal relationships among family members in ED, there is still no clear evidence about the causal relations between ED and family issues (Le Grange 2005, Polivy and Herman 2002). Earlier family research concentrated mainly on the dynamic family interaction pattern. In 1980´s Minuchin et al. emphasized familial enmeshment, "boundary problems" (well defined and strong towards external world, but diffuse within the family) and emotional conflicts in AN (Minuchin et al. 1980). In adolescence these individuals seem to meet difficulties in turning towards outside world due to profound orientation to the family from early childhood. This model has subsequently been criticized and it has not been possible to replicate the findings in later studies. Among ED patients earlier studies have found parental problems (e.g. poor parental contact, separation from parents, parental psychiatric problems) (Fairburn et al. 1997, Moorhead et al. 2003), family pathology (e.g. poor family functioning) (Schmidt et al. 1997b) and low parental affection toward the child (Favaro et al. 2003, Johnson et al. 2002a), mother's insecure attachments and unresolved trauma (such as unresolved loss among mothers) (Ward et al. 2001, Ward and Gowers 2003), and early health problems (Moorhead et al. 2003). In AN families especially researchers have found rigid family organisation, great mutual interdependency, and avoidance of conflict while in BN families some researchers have reported especially dysfunctionality, hostility and disorganization (Fairburn et al. 1997, Fornari et al. 1999, Rorty et al.2000, Schmidt et al. 1997b, Steiger and Stotland 1995) and others also high levels of paternal overprotection during adolescence (control and intrusion) (Murray et al. 1999). Adversities during childhood, such as physical neglect and sexual abuse have been associated with ED´s. The research concerning the association of sexual abuse and EDs was considerable in 1990´s. Although childhood sexual abuse constitutes one risk for BN, it has not been considered to be a specific risk factor (Schmidt et al. 1997b, Wonderlich et al. 1997). Recent family studies have also focused on the attitudes and values which families pass on to their children. The family's view and reactions toward somatic symptoms have been found to influence to psychosomatic symptoms in adolescents (Rantanen 1989). Mothers having ED themselves have also been found to demonstrate greater concern over

their children's eating habits and to perceive their children from 5 years on to demonstrate a greater negative affect than the offspring of non-eating-disordered mothers (Agras et al. 1999). Fairburn et al. (1997, 1999b) found that BN patients have a higher-than-expected prevalence of childhood and parental obesity and early experiences of critical comments by family about weight, shape and eating compared with AN patients. While parents may transmit weight, diet, and body shape concerns to their offsprings (e.g. by expressing criticism), a vulnerability factor (such as anxiety proneness) in the child is needed for disadvantageous outcome (Davis et al. 2004).

Certain temperamental and personality traits have been found among ED patients. These precede the onset of ED and are present already in childhood. In AN several authors have suggested an association of perfectionism, obsessionality, compulsivity, diminished self-directedness and low novelty seeking with the disorder (Anderluh et al. 2003, Bulik et al. 2000a, Halmi et al. 2000, Rybakowski et al. 2004, Schmidt 2003). In BN these include higher levels of harm avoidance, but also impulsivity, than in population controls (Berg et al. 2000, Fairburn et al.1997, Schmidt 2003). Poor interoceptive awareness has also been found contributing to EDs as vulnerability factors (Leon et al. 1995). In female adolescents with AN lowered autonomy compared with their healthy sisters has recently been also found empirically (Karwautz et al. 2003). High levels of helplessness or inadequate coping together with high levels of adversity have been found to be a risk factor for bulimic disorders, too (Serpell and Troop 2003).

EDs have been found to be familial. The risk for AN in female relatives of anorexic probands has been found to be 11.4 times higher than the risk in the relatives of control subjects, and the risk for BN in female relatives of bulimic probands 3.5 times higher (Strober et al. 2000). This has led to the suggestion that AN and BN are genetic disorders (Winchester and Collier 2003). Neurobiological research has focused on genes involved with serotoninergic system. Abnormalities in serotonin function have been found to vary across the ED spectrum (Kaye et al. 1998, Klein and Walsh 2003, Steiger 2004, Tiihonen et al. 2004). Twin studies have suggested that genetic factors may function as a process where a trait linked to certain genes or sets of genes is expressed in environmental conditions (Bellodi et al. 2001, Bulik et al.

2000b, Keski-Rahkonen et al. 2005, Klein and Walsh 2003, Klump et al. 2000, Klump et al.2001a and 2001b, Wade et al. 2000). Those genes involved in mood, personality and response to stress have also been assumed to be candidate genes for EDs (The Price Foundation Collaborative Group 2001, Winchester and Collier 2003). Interactions between serotonin and estrogens influencing genetic susceptibility to AN have also been found. These interactions may be through predisposing affects and personality traits together with other biological and environmental risk factors (Klump and Gobrogge 2005).

Many researchers describe puberty, starting major biological and psychological changes, as a critical period for the development of EDs (Fornari and Dancyger 2003, O´Dea and Abraham 1999, Steiner et al. 1995, Steiner and Lock 1998, Steiner et al. 2003). However, the exact relationship between adolescent development and the onset of EDs is not fully understood and studies focusing on this aspect are still scarce (Bruch 1982, Fornari and Dancyger 2003, Klein and Walsh 2003, Steiner et al. 2003). Beginning mostly in adolescence, eating problems have been regarded to emerge in response to pubertal change by many authors (Cooper and Goodyear 1997, de Castro and Goldstein 1995, Graber et al. 1997, Killen et al. 1992) connecting developmental psychopathology with EDs. Increase in adipose tissue for females during puberty development has been found to lead to body dissatisfaction. Body dissatisfaction (Ackard and Peterson 2001, Attie and Brooks-Gunn 1989, Corcos et al. 2000, Leon et al. 1993, Striegel-Moore et al. 2001) and perceived obesity (Fairburn et al. 1999a, Wichstrom 1995), especially when connected with a history of teasing (Thompson et al. 1995), predispose to dieting, which has further been considered to be one of the main risk factors for EDs (Fairburn et al.1997, Hsu 1997, Patton et al. 1999, Stice and Whitenton 2002). The implication of the timing of puberty has been debated, some authors finding early puberty to be a special risk factor for EDs, especially for BN (Fairburn et al. 1997, Graber et al. 1994, Kaltiala-Heino et al. 2001, Ohring et al. 2002, Ponton and Judice 2004), while others find no association of early menarche with ED (Ackard and Peterson 2001, Leon et al. 1993).

In the psychodynamic view of adolescent development EDs are considered as attempts to deal with conflicts faced during adolescent development and as protecting the adolescent

from feelings of being out of control when the multiple demands of puberty and adolescence become overwhelming (Crisp 1997, Lehto-Salo and Aalberg 1996, Steiner et al. 2003). In the psychodynamic view of EDs, underlying deficits in the sense of self, identity, and autonomy have been suggested. Hilde Bruch (1962 and 1982) described feelings of helplessness and ineffectiveness in AN, which complicates adolescents` conducting of their own lives. She stated, "The severe discipline over their bodies represents a desperate effort to ward off panic about being powerless." According to Bruch, AN manifests especially when these often "well-behaved" girls are faced with new experiences and expectations during adolescent development, especially considering autonomy development and peer relationships.

Psychosexual issues have been suggested to be essential among ED patients, although we do not exactly know the interplay between psychosexual problems and e.g. malnutrition. Problems with sexuality (such as shame and disgust) seem to trigger the onset of ED (Schmidt et al. 1997a) although psychosexual issues have been considered neither sufficient nor necessary for the development of ED in adolescence (Fornari and Dancyger 2003). While lack of interest in sex has been reported, especially in AN, all groups have delays in psychosexual development (Casper and Lyubomirsky 1997, Schmidt et al. 1995). Among adolescents at population level bulimia has been associated with early advancing sexual behaviour, which can lead to further psychological problems (Kaltiala-Heino et al. 2001). Problems with sexual identity have been connected especially with male ED patients (Robb and Dadson 2002).

Earlier cognitive theories of EDs have mainly concentrated on the maintaining processes in EDs and only recently have cognitive theories also addressed factors influencing the development of EDs. Restricted eating has been seen to maintain problems in control, while cognitive regulation replaces automatic control of eating. In AN the result is over - control and in BN fluctuating over and under - control. In the cognitive constructive theory of EDs a poorly constructed self is considered to lead to problems in experiencing and feelings, and thus to excessive dependence on the opinions and reactions of others. Guidano (1991) has described a typical unsteady experience of self in EDs, alike Bruch´s (1962) descriptions of emptiness and worthlessness found among ED patients.

Cognitive theories have described typical thought processes in EDs and suggested, that both AN and BN patients have lines of thought both towards eating and body size/shape. People with EDs seem to judge themselves mainly either according to their eating habits, body shape and/or weight or their ability to control over them (APA 1995, Fairburn et al. 2003). The importance of need for control in general has been found to precede the onset of AN, associated with a sense of ineffectiveness, perfectionism and low self-esteem (Bruch 1982, Fairburn et al. 1998, Fairburn et al. 1999a). Fairburn et al. (2003) introduced additional maintaining processes: clinical perfectionism, core low self-esteem, mood intolerance and interpersonal difficulties. These cognitive factors are considered to be common in both AN and BN. This suggestion has formed the basis for transdiagnostic theory.

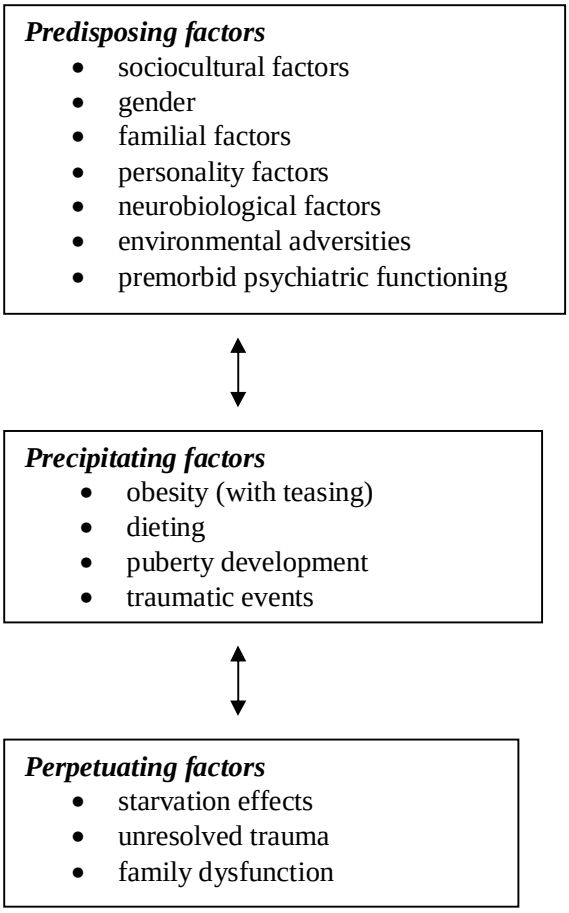
Cooper (2005) recently summarized the most important hypotheses derived from early cognitive theories emphasizing the effect of cognitive therapy in EDs, self statements or automatic thought and underlying assumptions reflecting concern with food, eating, weight and shape, core beliefs reflecting global negative evaluations of the self, dysfunctional styles of reasoning or information processing in food and eating and in weight and shape concerns, causal relationship between underlying assumptions and self-statements and eating behaviour, dietary restraint resulting in episodes of binge-eating and the importance of early experiences in the formation of core beliefs.

2.2.2.1 Multidimensional model of eating disorders

Studying risk factors is considered difficult, because it is not always clear whether the factors studied precede the onset of illness – and thus form clear risk factors – or are symptoms of the EDs, maintaining factors or rather consequences of EDs (Bulik et al. 2005, Jacobi et al. 2004). EDs are nowadays understood to be multidimensional where individual (psychological/biological), familial and sociocultural elements interplay individually in each individual forming predisposing, precipitating and perpetuating factors for EDs (Brewerton 2002, Halmi 1997, Lask and Bryant-Waugh 2000, Moorhead et al. 2003, Steiger and Stotland 1995, Ward and Gowers 2003, Winchester and Collier 2003). The risk factors may be common or specific to AN and BN (Collier and Treasure 2004, Fairburn and Harrison 2003, Rosen 2003, Schmidt 2003). It has been postulated that AN and BN may comprise a common

core psychopathology and biological and psychological causal and maintaining processes, although exhibiting different ED symptoms (Fairburn et al. 2003, Milos et al. 2005, van der Ham et al. 1997) (Figure 1).

Figure 1. The multidimensional model of EDs



2.2.3 Outcome of adolescent onset eating disorders

AN and BN usually begin in adolescence and they have longstanding effects on both physical and psychosocial wellbeing (Fairburn et al. 2000, Finfgeld 2002, Flament et al. 2001, Herperzt-Dahlman et al. 2001, Lewinsohn et al. 2000, Quadflieg and Fichter 2003, Rorty et al. 1999). Acute medical complications include cardiovascular (such as hypotension and

bradycardia, arrhythmia caused by electrolyte disturbances), gastrointestinal (such as pancreatitis, obstipation, gastric dilatation, gastrointestinal bleeding), and haematological complications (such as anaemia caused by bone marrow hypoplasia). When emerging during adolescence, EDs may cause pubertal delay or interruption, growth retardation and thus diminished adult height, early onset osteoporosis, fertility problems and even abnormalities in brain structure (Brewerton 2002, Powers and Santana 2002, Zipfel et al. 2003).

The estimated outcome of EDs has been found to depend on the recovery criteria – whether emphasizing mainly physical or also psychosocial recovery. ED patients also seem to move between AN and BN phases during the course of illness (Fairburn and Harrison 2003, Fairburn et al. 2003, Milos et al. 2005, Tozzi et al. 2005). The course and outcome of EDs have been considered similar for males and females (Eliot and Baker 2001, Woodside et al. 2001). In earlier studies very early age at onset (<11 years), depression during the illness and family adversities have been regarded as poor prognostic factors in AN (Bryant–Waugh et al. 1988). Later final outcome has been found to be associated especially with the extent and intensity of initial symptoms in AN patients and with initial body-related attitudes and impaired psychosocial functioning in BN patients (Ben-Tovim et al. 2001). The overall results have found course and symptom remission in EDs to be long and stepwise (Clausen 2004, Keel and Mitchell 1997, Quadflieg and Fichter 2003) although early treatment interventions have proved successful among adolescent onset EDs, especially regarding physical recovering (Fingeld 2002, Fisher 2003).

Several outcome studies of AN have found considerable and prolonged impairment in physical and psychosocial functioning even in adulthood. Fichter et al. (2006) found good outcome in 27.5%, intermediate in 25.3% and poor outcome in 39.6% of adult AN inpatients after 12 years of follow-up. 7.7% had deceased. In adolescent onset AN the overall outcome has been found to be better, according to the Morgan-Russell criteria 43% having good, 29% intermediate and 27% poor outcome (Saccomani et al. 1998, Wentz et al. 2001). Strober et al. (1997), likewise later Beumont and Touyz (2003), estimated the median time to recovery in adolescent onset AN at 4.8 – 6.6 years. Although the ED symptoms may diminish or disappear during long-term follow-up and weight normalization and resumption of

menstruation is achieved, psychological symptoms (e.g. obsessive-compulsive disorders, autism spectrum disorders, mood disorders and personality disorders) and psychosocial maladjustment (e.g. meagre social relationships, difficulties in forming marital relationships and psychosexual problems) have persisted in about 1/5 of individuals having adolescent onset AN (Fairburn et al. 2000, Fingfeld 2002, Fisher 2003, Steinhausen 2002, Steinhausen et al. 2003, Wentz et al. 2001).

Studies of BN have increased after its introduction to the DSM-III (Quadflieg and Fichter 2003), but long-term outcome studies are still scarce (Nielsen 2001). The findings of outcome studies in BN have also been controversial. While some authors have found further improvement and stabilization in BN after longer follow-up time (Fichter and Quadflieg 2004, Steinhausen et al. 2000), others have found short-term outcome favourable but a considerable high level of relapse and chronicity in longer-term outcome (such as severe bulimic symptoms and social and sexual impairment) (Quadflieg and Ficter 2003). Keel and Mitchell in a review (1997), report that 5 to 10 years after presentation approximately 50% of women initially diagnosed with BN have recovered fully, while nearly 20% continue to meet all criteria for BN. Some researchers have considered BN to exhibit an even more prolonged course than adolescent onset AN (Herzog et al. 1999, Quadflieg and Fichter 2003, Steinhausen 2002, Wentz et al. 2001). Elevated impairment in social and sexual functioning and persistent, even severe, bulimic symptoms have been found in BN (Fichter and Quadflieg 1995, Keel and Mitchell 1997, Keel et al. 1999, Quadflieg and Fichter 2003). In adolescence the effects of BN have been considered less pronounced as the duration of illness is shorter (Flament et al. 1995).

The mortality rates in EDs are still rather high. In AN mortality is still one of the highest among psychiatric illnesses (Fichter et al. 2006, Sullivan 1995). Earlier studies of AN found mortality rates exceeding 22% (Lucas et al. 1976). These studies, however, comprised mostly small samples of adult inpatients with severe disorder and long duration of illness. Nowadays the crude mortality rate (CMR) for AN has been estimated at 5.9%, cause of death being mostly eating disorder complications and suicide (Nielsen 2001, Sullivan 1995). The overall standardized mortality rate (SMR) for AN is from 9.6 (in studies with follow-up time 6 – 12

years) to 3.7 (in studies with follow-up time 20-40 years) (van Hoeken et al. 2003). Mortality in BN is considerably lower than in AN (Quadflieg and Fichter 2003). In BN CMR has been estimated at 0.4% and SMR at 7.4 (in studies with follow-up time 5 -11 years) (Keel and Mitchell 1997, Nielsen 2001, Steinhausen 2003, Sullivan 1995). Suicide has been found to be the major cause of death among AN patients (Birmingham et al. 2005, Pompili et al. 2004), while in BN e.g. Herzog et al. (2000) reported no suicides versus a mortality rate of 58.1 times the expected for suicide in AN. The mortality rates in AN remain high compared with most other psychiatric disorders (Birmingham et al. 2005) although recently outcome studies have been published finding no increased mortality during long-term follow-up in AN (Herpertz-Dahlman et al. 2001, Råstam et al. 2003, Strober et al. 2000).

Recent studies have paid attention to the fluctuation between different EDs in both AN and BN during the course of the illness. Bulik et al. (1997) reported that 54% of patients with AN developed BN at some point during a 15.5-year follow-up. These findings were later confirmed by Milos et al. (2005) and also linked to BN and ED-NOS. It has also been postulated that AN and BN may represent the same primary ED (Fairburn et al. 2003, van der Ham et al. 1997), although some authors have found this claim possibly misleading for focusing on the content of ED rather than on the form of the mental state (Beumont and Touyz 2003, Collier and Treasure 2004, Strober et al. 1997).

2.2.4 Psychiatric comorbidity in eating disorders

Comorbidity of mental disorders in EDs has been considered relevant, because the level of comorbidity impacts on the long-term outcome and on the intensity and number of services needed (Treasure 2006). A recent study estimated that 65% of people with EDs were comorbid for other mental disorders (Jacobi et al. 2004). Comorbidity is higher in clinical samples and adult patients have more comorbidity than adolescents due to prolonged course of the illness (Treasure 2006). EDs have been associated especially with mood disorders, anxiety disorders, substance use disorders, impulse control disorders and personality disorders (Brewerton 2002, Fichter and Quadflieg 1995, Herzog et al. 1996, Hudson et al. 2005, Lewinsohn et al. 2000, Lyon and Chatoor 1997).

AN has been associated especially with OCD (Herpertz-Dahlman et al. 2001, Herzog et al. 1996, Jordan et al. 2003, Råstam et al. 2003, Speranza et al. 2001,Wentz et al. 2001) while phobic disorders are common in both ED groups (Flament et al. 2001 Herzog et al. 1996). Lifetime incidence of any affective disturbance has been reported to be from 52% to 98% in AN and from 52% to 83% in BN (Herzog et al. 1996). Wade et al. (2000) showed that genetic factors influence the risk for AN and contribute to the comorbidity between AN and MDD, while Halmi et al. (2000) suggested that perfectionism is associated especially with a genetic predisposition to AN. Genetic vulnerability has also been proposed by Rowe et al. (2002) among others.

BN has been associated especially with internalizing symptoms (Johnson et al. 2002b, Patton et al. 2003) such as anxiety and mood disorders (Kendler et al. 1991) and multi-impulsivity (Treasure 2006), likewise with predisposition to addictive and impulsive problems (Fisher et al. 2003, Keel and Mitchell 1997) and also with dyscontrol behaviours (Kaltiala-Heino et al. 2003a). BN patients seem to resemble patients with depression in negative self-beliefs and depression (Cooper and Hunt 1998). Negative affect also mediates the association of body dissatisfaction with BN (Cooper and Hunt 1998, Joiner et al. 1995, Stice and Shaw 2002).

EDs have been associated with suicidality in adolescence (Fingeld 2002, Herpertz 1995). Women with BN and binge-eating/purging-type AN have been found to be especially at increased risk for suicidal behaviour (Corcos et al. 2002, Paul et al. 2002, Stein et al. 2003). In AN rates of suicidality resemble the rates found among depressive patients (Herzog et al. 2000). Self-injurious behaviour in EDs has been associated with body image disturbance, lack of awareness of emotions and body sensations, greater obsessionality and a tendency towards impulsive behaviour (Favaro and Santonastaso 1997 and 1999, Herzog et al. 2000, Stein et al. 2003, Sullivan 1995). In general adolescent population, too, bulimic behaviour has been associated with impulsive behaviours (Kaltiala-Heino et al. 2003b). Suicide attempts have been found to be equally common in EDs and in depression (Bulik et al. 1999) and suicide is still a major cause of death in AN (Birmingham et al. 2005, Pompili et al. 2004).

2.3 Summary of the literature reviewed

Eating disorders represent a rather small but a most serious and complex group of mental disturbances. Recent research supports a multidimensional etiological model, where individual and familial biological and psychological factors interplay within cultural circumstances (Halmi 1997, Winchester and Collier 2003). The relationship between adolescent development and the onset of EDs is not fully understood. Although EDs are widely considered to be developmental diseases, studies focusing on this aspect are scarce (Bruch 1982, Fornari and Dancyger 2003, Klein and Walsh 2003).

Adolescents are faced with enormous changes in body image, maturing sexuality, peer relationships and relationships with parents (Aalberg and Siimes 1999, Blos 1962, Mangs and Martell 1982). Development of autonomy, development of sexual identity and development of adult identity as a member of a larger society are key tasks of adolescence (Aalberg and Siimes 1999, Blos 1962, Erikson 1983, Laufer and Laufer 1984, Laufer 1997). EDs have widely been connected to difficulties in any of the developmental domains: difficulties in the development of autonomy and identity, likewise in coping with changing body and maturing sexuality (Bruch 1982, Fornari and Dancyger 2003, Steiner and Lock 1998). While AN and BN have profound medical and psychological consequences, they also impact adversely the developmental tasks of adolescence and young adulthood (Bulik 2002). Although puberty has been considered a critical phase for developing ED, it is not possible to draw strict conclusions as to whether EDs cause developmental difficulties or are results of encountering developmental difficulties during adolescence (Fornari and Dancyger 2003, Steiner et al. 2003). While psychosexual aspects have been connected with EDs since the earliest descriptions, we do not exactly know the interplay between psychosexual anxieties and e.g. malnutrition. In clinical practice, however, in adolescent onset EDs we see adolescents to exhibit a variety of difficulties in progressing in one or more of the key developmental tasks regarding physical and psychosocial development.

Beginning mostly during adolescent development EDs may have serious long-term effects on both the physical and psychological development (Fairburn et al. 2000, Finfgeld 2002, Flament et al. 2001, Herperzt-Dahlman et al. 2001, Lewinsohn et al. 2000, Quadflieg and Fichter 2003, Rorty et al. 1999). Early treatment interventions have proved successful among adolescent onset EDs, especially in weight normalization and resumption of menstruation. However, there still seems to be a risk for persisting psychosocial effects even in adulthood (Fairburn et al. 2000, Fichter and Quadflieg 1995, Fingfeld 2002, Fisher 2003, Keel and Mitchell 1997, Keel et al. 1999, Quadflieg and Fichter 2003, Steinhausen 2002, Steinhausen et al. 2003, Wentz et al. 2001). The mortality rates are strikingly high, especially in AN, although early detection and treatment have been greatly improved since the 1970´s. Mortality rates in BN seem to be more favourable (Nielsen 2001). The average duration of AN is 5-7 years (Beumont and Touyz 2003, Strober et al. 1997) and patients seem to move between AN and BN phases during the course of the illness (Fairburn et al. 2003, Milos et al. 2005, Tozzi et al. 2005). BN has often been considered to exhibit an even more prolonged course than adolescent onset AN (Herzog et al. 1999, Quadflieg and Fichter 2003, Steinhausen 2002, Wentz et al. 2001); approximately 50% of women initially diagnosed with BN have been found to recover fully after 10 years of follow-up (Keel and Mitchell 1997).

AN and BN may share the same core psychopathology, but they exhibit different ED symptoms. It has been postulated that these two ED groups may represent the same primary ED (Fairburn et al. 2003, van der Ham et al. 1997), although this argument has also been debated (Beumont and Touyz 2003, Collier and Treasure 2004, Fairburn et al. 2003, Strober et al. 1997). Studies comparing the similarities and differences of adolescent onset AN and BN are still scarce. Many of the earlier studies of EDs have been restricted to selected ED groups, concerning mostly adult ED patients or patients with severe and long-lasting EDs needing inpatient treatment (Fichter et al. 2006, Steiner and Lock 1998). This exclusiveness may cause bias towards more difficult cases and poorer outcome results, and the results may not be representative regarding general adolescent psychiatry also treating milder forms of EDs.

3. Aims of the study

The research questions were:

1. Are there differences in the pubertal timing and psychosexual state between adolescent onset anorexia nervosa and bulimia nervosa patients? (I)
2. Are there differences in the attitudinal body image between adolescent onset anorexia nervosa and bulimia nervosa patients? (II)
3. Are there differences in suicidal ideation, deliberate self-harm and suicidal acts between adolescent onset anorexia nervosa and bulimia nervosa patients? (III)
4. Are there differences in psychosocial adjustment and functioning between adolescent onset anorexia nervosa and bulimia nervosa? (IV)
5. Do other factors (age, age at onset of ED, age at menarche, body mass index (BMI) or psychological distress) have stronger associations than the type of ED with the developmental difficulties in the early phases of adolescent onset EDs? (I – IV)

4. Material and methods

4.1 Data collection

4.1.1 Study design

In 1994, 8 countries forming a core group initiated COST Action B6 (European COoperation in the field of Scientific and Technical research), which finally came to include 19 European countries. This action was planned to study the outcome of eating disorders in Europe and aimed at improving the empirical base for the development of treatment programmes. COST B6 was directed to assess the effects of psychotherapeutic treatment, to statistically model the relationship between therapeutic effort and success, to identify factors indicating how much treatment patients need and to identify risk factors for long-term course of the disorders (Kordy 2005, Kordy and Treasure 1999). COST Action B6 has been reported in several international articles (see Kordy and Treasure 1999).

The COST B6 group developed a common core assessment measure comprising a semi-structured therapist interview at the beginning (TIB) and end (TIE) and patient's measures at the beginning (PQB) and end (PQE). TIB and TIE elicit information on the working/school situation of the patient, his/her symptom status and illness history. PQB and PQE comprise a detailed documentation of the socioeconomic situation of the patient; his/her view of his/her symptoms and history of the illness. The longitudinal development of symptomatology over treatment was measured by patients´ short evaluation of ED symptoms (SEED) at monthly intervals (Bauer et al. 2005). PQB, PQE and SEED also contain a five-point Likert format of items measuring attitudes to body shape, size, appearance, tone and femininity. One year after entry into the study, a postal measure was sent to the patients. At 2.5-year follow-up, the clinical state and services received were measured by the Longitudinal Interval Follow-Up Evaluation (LIFE) instrument, which was adapted by the European group (COST B6 LIFE) from a German version originally developed by Keller et al. (1987). The Morgan-Russell scales (Morgan and Hayward 1988) were included in TIB and LIFE as core standardized measurements. A battery of standardized self-report measures was used at all study steps. The measures were 1. The Symptom Check List, SCL-90 (Derogatis et al. 1976), 2. The Eating

Disorder Inventory, EDI (Garner et al. 1983), 3. The Freiburger Personality Inventory, FPI-R (Fahrenberg et al. 1985) and 4. Social Adjustment Self-report (SAS) (Weissmann 1971). All questionnaires were translated into English and then translated from English to the various languages represented in the Action (Kordy 2005).

In Finland Helsinki University Central Hospital (HUCH) and Tampere University Hospital (TAUH) joined the action in 1994. HUCH was responsible for the Finnish translation of the interviews and questionnaires. In TAUH the study was carried out at the Unit of Adolescent Psychiatry. The age distribution differed from the original COST B6, covering adolescent patients in Tampere University Hospital (14 – 22 years). The treatment in the Unit of Adolescent Psychiatry in TAUH is based on the psychodynamic view of adolescent development and targeted not only at ED symptoms but also at helping the often delayed or impeded adolescent development. The treatment is based on careful assessment of the adolescent and her family, likewise on the somatic condition and is planned individually. The study design in TAUH was prospective, including follow-ups after 1 year, 2.5 years and 5 years. The present study is cross-sectional, reporting the results from the baseline interviews and questionnaires at the study entry.

All adolescent patients attending the Adolescent Psychiatric Clinic in TAUH between 1 January 1996 and 16 July 1998 and meeting the inclusion criteria were recruited for the study. The inclusion criteria for this study were 1. referred to the clinic because of eating problems or 2. referred for other reasons but diagnosed with eating disorder during initial psychiatric assessment. TIB was conducted and the questionnaires were distributed at the beginning of the assessment phase, in the first two sessions, by the researcher. The diagnoses were made by the researcher according to the ICD-10 diagnostic classification (WHO 1992) (Table 1) and confirmed in a multi-professional team, where information from parents and from the somatic assessment was also available. Eating disorders were classified into anorexia nervosa (AN, F50.0 typical and F50.1 atypical), bulimia nervosa (BN, F50.2 typical and F50.3 atypical) and eating disorder not otherwise specified (ED-NOS, F50.9). The diagnostic group classified as ED-NOS was excluded from further analyses because it consisted of only 5 cases and was considered to be too small for statistical analysis. Those who declined to participate in the study were also diagnosed using the ICD-10 classification as a part of normal adolescent psychiatric assessment.

Table 1

ICD-10 criteria for Anorexia Nervosa and Bulimia Nervosa (WHO 1992)

Anorexia Nervosa

F50.0 Typical Anorexia Nervosa

A. Body weight at least 15% below a mean level for height or body mass index (BMI) (calculated as weight in kilograms/height in metres^2) equal or below 17.5. In prepuberty there may be failure to make expected weight gains (while growing in height rather than weight loss). Weight reduction is self-imposed by avoiding fattening foods. In addition, the patient may use purging (self-induced vomiting, laxatives, excessive exercise and diuretics) or appetite restraining medicine.

B. The individual considers him/herself to be fat and intensely fears becoming fat, which makes her/him set a low weight goal. This is a question of distorted body image, which forms a special psychopathology. The fear of becoming fat becomes an overvalued idea.

C. An extensive disturbance in the hypothalamus - hypophysis - gonadal axis, which manifests as amenorrhea in women and impaired virility in men (except menorrhea induced by hormonal replacement). Pubertal development is typically delayed or halted.

D. Criteria A and B are not fulfilled in Bulimia Nervosa.

F50.1 Atypical Anorexia Nervosa

- The clinical picture is rather typical, but one or more of the key symptoms of typical Anorexia Nervosa are missing (for example amenorrhea or intense fear of weight gain). This diagnosis suits also when all of the key symptoms appear milder.

Bulimia Nervosa

F50.2 Typical Bulimia nervosa

A. Recurrent binge eating (at least twice per week over a period of three months), when the patient eats large amounts of food over a short time.

B. Eating and an intense desire or a compulsive need to eat overwhelms the patient.

C. The patient tries to prevent the "fattening" effects of eating (typically by self-induced vomiting, by laxatives, by occasionally refusing to eat, by appetite restraining medicine, by misuse of thyroxin or diuretics).

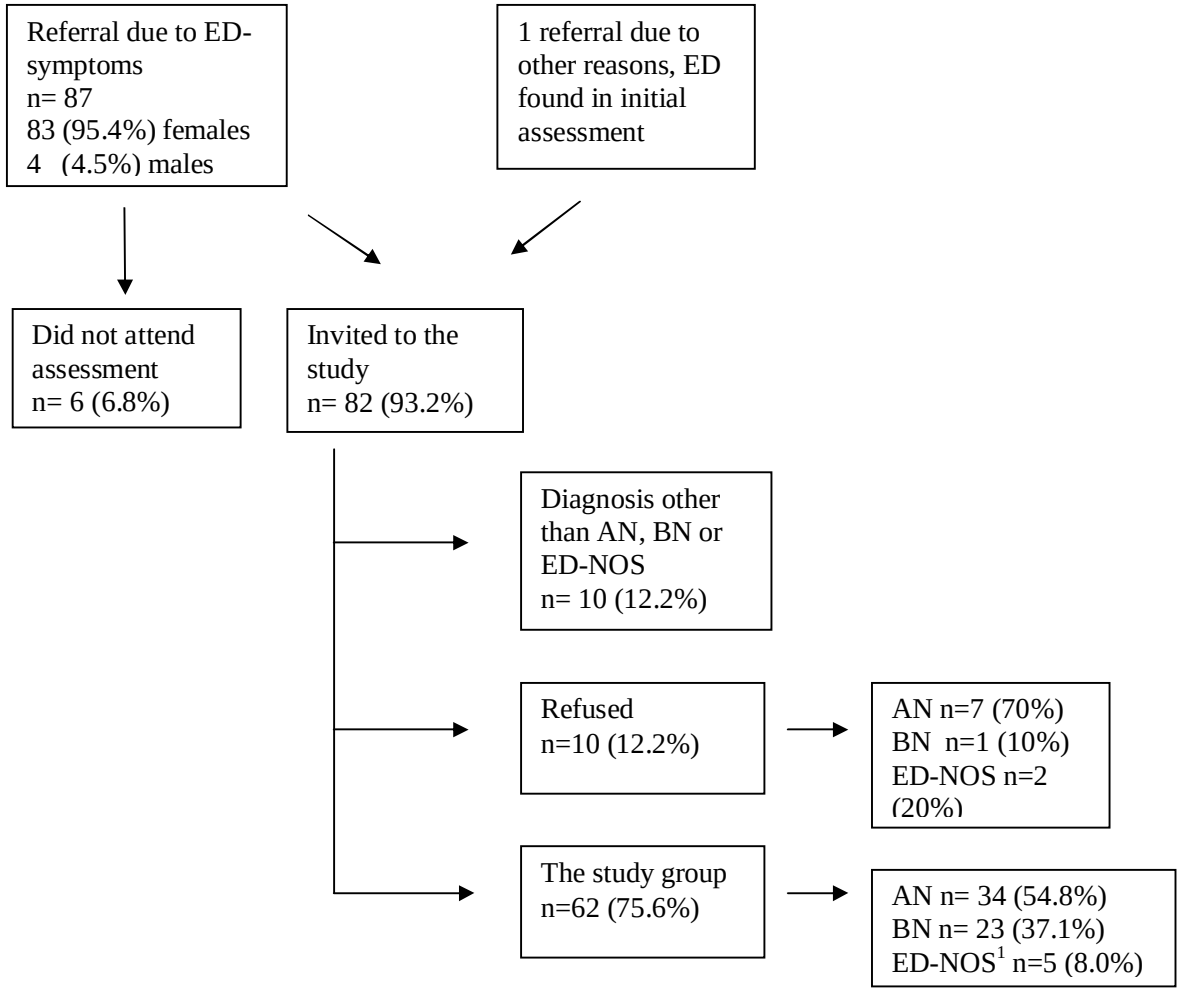
D. The patient considers him/herself fat, fears becoming fat, which often leads to underweight.

F50.3 Atypical Bulimia Nervosa

- Disorders, which in some features correspond to Bulimia Nervosa, but the clinical picture does not fulfil the diagnostic criteria or is less severe.

During the study period 88 adolescents (84 females and 4 males) who met the inclusion criteria were referred to our clinic. Of these 88 cases, 6 (6.8%) did not attend the assessment, 82 (93.2%) attended the initial assessment and were invited to participate. Of these 82 cases 10 (12.2%) had a diagnosis other than AN, BN or ED-NOS and were thus excluded. 10 (12.2%) refused to participate in the study. Of these, 7(70%) had AN and 1(10%) BN (Figure 2). Those who refused to participate in the study were assessed by the normal adolescent psychiatric assessment. The final study group comprised 57 adolescent females (AN = 34, BN = 23).

Figure 2. The sample (I)



[1] not included in the present study

4.1.2 Measures

In present study TIB (Appendix 1), PQB (Appendix 2), structured questionnaires SCL-90 (Appendix 3), EDI (Appendix 4) and SAS (Appendix 5), and GAF (Appendix 6) were used.

The Morgan-Russell interview included in TIB (Questions 4, 7, 9, 11, 12, 14, 15, 16, 17a, 18, 19, 20 and 21, Appendix 1, pages 3 – 7) was originally developed to evaluate the outcome in AN, and has later been widely used in ED studies. The Morgan-Russell interview probes five areas of the patient's state: food intake (restriction of food intake, concern about body image, body weight), menstrual status (menstrual pattern), mental state (disturbance of mental state), psychosexual state (attitude towards sexual matters, aims in sexual matters, overt sexual behaviour, attitude to menstruation whether it has resumed or not) and socio-economic state (relationship with family, emancipation from family, social contacts outside family, social activities outside family, employment record). The questions are open-ended and the responses are classified onto four-point scales by the interviewer and further formulated to sum-scores, higher scores indicating better functioning. Morgan-Russell interview is usually used as a sum-score in order to reflect overall outcome in EDs. The relatedness between the scales based on correlations and factor analyses has been found good (Morgan and Hayward 1988). Chronbach´s alpha 0.74 was found in a Danish study for the overall scores (Lund et al. 1999). In the present study the separate scores of each domains of functioning were used instead of sum-scores in order to determine the functioning in a specific developmental domain.

SCL-90 is a 90-item self-report inventory designed to measure the status of psychopathology in adolescent and adult samples. It includes scores for nine components of psychopathology (somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) rated by the patient on a 5-point Likert scale of distress ranging from 0 (not at all) to 4 (extreme) and a Global Severity Index (GSI), which is a mean of all items (Derogatis et al. 1976). The internal consistency of all nine subscales has been found good (Chronbach´s alpha ranged between 0.77 and 0.90) and each of the subscales and GSI has been found to discriminate well between community

sample and the patient sample (Holi et al 1998). In the present study Chronbach`s alpha in SCL-90 was 0.92 for depression scale and 0.98 for GSI.

EDI is a 64-item quantitative measure of eating disorder symptoms consisting of eight subscales (drive for thinness, bulimia, body dissatisfaction, ineffectiveness, perfectionism, interpersonal distrust, interoceptive awareness and maturity fears). Each item is rated on a 6-point scale ("always", "usually", "often", "sometimes", "rarely", or "never") with higher scores indicating greater symptomatology. Scale scores are the summation of all item scores for that particular scale (Garner et al 1983). The internal consistency of the EDI subscales has been considered good (Chronbach´s alpha ranged between 0.83 and 0.92 in clinical samples). The EDI subscales have been found to correlate with other related measures and to discriminate between ED patients and nonpatient samples (APA 2000). In the present study Chronbach`s alpha in EDI was 0.92 for BD and 0.90 for DT.

SAS assesses interpersonal relationships in various roles, covering feelings, satisfaction, friction and performance in them. The structure reflects six role areas (1. work as a worker, housewife or student, 2. social and leisure activities, 3. relationships with extended family, 4. marital roles as a spouse, 5. a parent and 6. a member of the family unit) and aims at evaluating the patient's performance at expected tasks, the amount of friction with others, the finer aspects of interpersonal relations and the inner feelings and satisfactions. SAS provides alternative questions on work relations for students, housewives and the employed. Five-point response scales are used, higher scores representing increasing impairment (Weissman 1971). High internal consistency (Chronbachs alpha 0.74) has been demonstrated for overall adjustment in SAS, and it also has been considered to discriminate well between impaired and non-impaired individuals (APA 2000). In this study the separate questions considering dating behaviour and attitudes towards dating were used instead of overall adjustment.

Global Assessment of Functioning (GAF) was used to assess overall psychosocial adjustment and functioning. GAF considers psychological, social and occupational functioning on a hypothetical continuum of health-illness. The scale ranges from 0 to 100. Degree of disability is divided into 4 classes: normal variants (100 – 81), slight disability (80 – 61), moderate

disability (60 – 41), serious disability (40 – 1) and inadequate information (0). It covers all age ranges (APA 1995).

4.1.3 Ethical considerations

All patients recruited for the study received written information on the study design and informed consent was obtained from all participants. Participation in the study was voluntary and non-participation did not affect normal assessment and treatment. The Ethical Committee of Tampere University Hospital approved the study design.

4.1.4 Study variables

4.1.4.1 Pubertal timing and psychosexual state (I)

Data concerning pubertal timing and psychosexual state were collected using a semi-structured interview (TIB) and self-report questionnaires (SAS). The timing of menarche was elicited according to TIB by “How old were you when you had your first periods? The age at menarche was reported in years.

The psychosexual state was assessed targeting dating and general attitude to sexuality. Dating behaviour was elicited in SAS by “How many times during last month have you been out with someone of the opposite sex (in a restaurant, movies, dancing etc.)?” The response alternatives were "1 = at least four times / 2 = three times / 3 = two times / 4 = once / 5 = not at all". These alternatives were dichotomized to "dating (1, 2, 3, 4)" and "not dating (5)". The attitude to dating was elicited in the structured self-report by “Have you been interested in dating a person of the opposite sex?” (If you have not been dating, would you like to have been dating?) The response alternatives were "1 = I have been interested in dating all the time / 2 = I have been interested in dating most of the time/ 3 = I have been interested in dating about half of the time/ 4 = Most of the time I have not been interested in dating / 5 = I have not been interested in dating". These alternatives were dichotomized to: "interested in dating (1, 2 and 3)" and "not interested in dating (4 and 5)".

Psychosexual state was enquired according to the psychosexual state area of the Morgan-Russell interview in TIB by an open-ended question about the adolescent's general attitude to sexuality, leading the discussion to sexual matters based on the adolescent's opinion and thoughts about dating, thoughts or experiences of physical contact (kissing, petting) with boys, possible intercourse and thoughts on her own and other adolescents` sexual behaviour. Based on this discussion the respondent's general attitude to sexuality was classified by the interviewer to: "1 = Clear disgust / 2 = Disgust or not interested / 3 = Not interested / 4 = Pleasurable (normal)". In the final analyses the responses were dichotomized to: "disgust or not interested (1, 2 and 3)" reflecting negative general attitude to sexuality and "pleasure (4)" reflecting positive general attitude to sexuality. The classification of the general attitude to sexuality was made taking into account the age-appropriateness of the adolescent's reflections on the topic.

4.1.4.2 Body image (II)

The patient's attitude towards her body was measured according to a multidimensional body image model. Two self-report questionnaires were used: a five-point Likert format of body image, measuring attitudes to body shape, size, appearance, tone and femininity (in PQB), and the subscales Body Dissatisfaction (BD) and Drive For Thinness (DT) from the EDI.

The respondents reported their feelings on five dimensions with Likert format response alternatives after the question "How do you feel about your body?" The five dimensions were body shape (0 = normal – 4 = abnormal), body size (0 = much too thin – 4 = much too fat), appearance (0 = attractive – 4 = disgusting), tone (0 = muscular – 4 = flabby) and femininity (0 = feminine – 4 = unfeminine). In the analyses these scales were dichotomized as follows: body shape: "normal" (0,1 and 2) and "abnormal" (3 and 4), body size: "satisfied" (2) and "dissatisfied" (0,1,3 and 4), appearance: "attractive" (0,1 and 2) and "disgusting" (3 and 4), tone: "muscular" (0,1 and 2) and "flabby" (3 and 4) and femininity: "feminine" (0,1 and 2) and "unfeminine" (3 and 4).

EDI subscales are scored to 0 - 3, responses closer to the pathological end of the continuum receiving score 3 and responses most distant from the pathological end receiving score 0. Some of the items are rated the opposite way. EDI subscale BD consists of 9 items (items 2, 9, 12, 19, 31, 45, 55, 59 and 62) reflecting the belief that specific parts of the body associated with shape change at puberty are too large, and thus measures largely weight-related dissatisfaction. DT consists of 7 items (items 1, 7, 11, 16, 25, 32 and 49) reflecting excessive concern with dieting, preoccupation with weight and entrenchment in an extreme pursuit of thinness. For the statistical analysis we dichotomized BD and DT using upper quartile (16 points in BD and 14 points in DT).

4.1.4.3 Suicidal behaviour (III)

Suicidal ideation, deliberate self-harm and attempted suicides were elicited in PQB by "Have you ever had thoughts of suicide?" "Have you ever otherwise tried to injure yourself?" and "Have you ever attempted suicide?" The response alternatives were "yes" or "no". If the answer was "yes" the timing and frequency were ascertained, as also the means used in deliberate self-harm and suicide attempts.

4.1.4.4 Psychosocial adjustment and functioning (IV)

In order to assess psychosocial functioning two different measures were used. Global Assessment of Functioning (GAF) was used to assess overall psychosocial functioning (APA 1995). GAF was estimated by the researcher and verified by consensus evaluation with an experienced senior child and adolescent psychiatrist according to the case records from the adolescent psychiatric assessment. In the final analyses we dichotomized GAF according to the lower quartile in order to find the most seriously impaired cases. According to the dichotomization the adolescent was classified as at most moderately impaired if her GAF scores were 43 or above and as severely impaired if her GAF scores were 42 or less.

Psychosocial functioning was further evaluated by the socio-economic scale of the Morgan-Russell interview in TQB. The socio-economic scale considers relationships with nuclear

family, emancipation from the family, social contacts outside the family, social activities and working/school functioning. Instead of the traditional sum score the questions were analysed separately to describe the different domains of functioning in adolescence more accurately.

Relationship with nuclear family was elicited in the interview by “How would you assess your relationship with your nuclear family?” The responses were classified to “1 = very unsatisfactory/ 2 = unsatisfactory/ 3 = indifferent/ 4 = satisfactory” according to the most unsatisfactory relationship within the family. In the final analyses the responses were dichotomized to two: “1 unsatisfactory (1, 2)/ 0 satisfactory (3, 4)”.

Emancipation from family (degree of autonomy, freedom from dependence) was elicited by “How would you assess your emancipation from your family?” The responses were classified to “1 = many difficulties, sees no prospect of becoming independent to a satisfactory degree/ 2 = many difficulties, but at times feels difficulties can be surmounted/ 3 = some difficulties but they are surmountable/ 4 = no difficulties. In the final analyses the alternatives were dichotomised to two: “1 difficulties (1, 2)/ 0 no difficulties (3, 4)”.

Social contacts (apart from family or partner) were studied by “Describe your social contacts apart from family and partner” and categorized during the interview to “1 = none/ 2 = few and superficial/ 3 = many but superficial/ 4 = many close and superficial friends”. In the final analyses the alternatives were dichotomised to two: “1 lacking or lonely (1, 2)/ 2 sufficient (3, 4)”.

Social activities were elicited by “Describe your social activities and hobbies” and categorized during the interview to “1 = nil outside family/ 2 = solitary outside family/ 3 = variable: mainly solitary but some group activities outside family/ 4 = adequate group activities: mixes well outside family”. In the final analyses the alternatives were dichotomised to two: “1 lacking/lonely (1, 2)/ 0 age-appropriate (3, 4)”.

Work/school situation was classified according to the interview to “1 = no paid work/ not in school - on sick leave / 2 = under half of the time working or school / 3 = over half of the

time working or school / 4 = regular work or school without absences". In the final analyses the alternatives were dichotomized to two: "1 impaired working ability (1, 2)/ 0 good working ability (3, 4)".

4.1.5 Covariates

4.1.5.1 Sociodemographic variables (I – IV)

The sociodemographic variables comprised sex, age at study entry and duration of illness. The duration of illness was calculated from the reported beginning of eating symptoms to the entry of the study.

4.1.5.2 Body Mass Index (BMI) (I – IV)

The adolescents were weighed at the first interview. Body Mass Index (BMI) was calculated by weight and reported height (kg/m^2).

4.1.5.3 General psychopathological symptoms (GSI) (II – IV)

Psychopathological symptoms were studied using the structured Symptom Checklist –90 (SCL-90) (Derogatis et al. 1976). In the present analyses global severity index GSI (as a measure of overall psychopathology) and the depression item (in order to find out if depression is especially associated with suicidal behaviour) from the SCL-90 were used.

4.1.6 Statistical methods

The data were described using means and standard deviations (SD) or median, minimum (Min) and maximum (Max) for continuous variables and percentages for categorical variables. Differences between ED groups in background variables were tested using independent samples t-test for normally distributed continuous variables, Mann-Whitney u-test for continuous variables with skewed distributions and χ^2tests or Fisher´s exact test for

categorical variables. Differences between ED groups in psychosexual state (I), body image modalities (II), suicidal behaviour (III) and different areas of psychosocial functioning (IV) were first evaluated using crosstabulation, χ^2tests or Fisher´s exact test for categorical variables. Comparison of the mean menarche age to the population menarche age was made using one-sample t-test.

To assess if factors other than type of ED were associated with the psychosexual state multivariate logistic regression analyses were done. Type of ED(AN/BN), age at assessment, age at menarche and duration of ED were used as independent factors and interest in dating, dating experiences and attitudes towards sexuality as dependent variables (I).

To evaluate if factors other than type of ED(AN/BN) were associated with the attitudinal body image modalities, forward stepwise logistic regression analyses were done. Type of ED, age at assessment, age at menarche, duration of ED, BMI and GSI were used as independent factors and reported attitudes to body shape, body size, appearance, tone, femininity and body dissatisfaction (BD) and drive for thinness (DT) as dependent variables (II).

To evaluate if other factors than type of ED(AN/BN) (age, age at menarche, duration of ED, depression and GSI) were associated with suicidality, multivariate logistic regression analyses with forward stepwise method were performed (III).

To ascertain if other factors than type of ED were associated with the psychosocial functioning, multivariate logistic regression analyses were performed using forward stepwise method. Type of ED (AN/BN), age, duration of ED, BMI and GSI were used as independent factors and GAF, relationship with nuclear family, emancipation from family, social contacts, social activities and work/school as dependent variables (IV).
Data were analyzed using SPSS for Windows version 10.1 statistical software.

5. Results

5.1 Participants

Those with BN were older and had a longer median duration of ED than those with AN. Patients with BN also had higher BMI than those with AN. GSI scores did not differ statistically significantly between AN and BN, but girls with BN reported significantly more depression in SCL-90 than those girls having AN (Table 2).

Table 2. Group description

		AN	BN	TOTAL	P
		n = 34	n = 23	n = 57	
Age (years)					<0.001
	Mean	16.2	17.9	16.9	
	Min	14.0	15.6	14.0	
	Max	18.7	21.1	21.1	
	SD	1.3	1.5	1.6	
BMI (kg/m^2					<0.001
	Mean	16.8	22.7	19.2	
	SD	1.4	5.0	4.4	
Duration of illness (years)					0.029
	Median	1.5	4.2	2.0	
	Min	0.4	0.7	0.4	
	Max	9.7	6.4	9.7	
Age at menarche (years)		n= 32	n=22	n=54	0.291
	Mean	12.7	12.3	12.5	
	SD	1.3	1.2	1.3	
GSI (SCL-90)		n=34	n=21	n=55	0.264
	Median	1.2	1.4	1.3	
	Min	0.1	0.3	0.1	
	Max	2.6	2.4	2.5	
Depression (SCL-90)					0.039
	Median	1.6	2.1	1.9	
	Min	0.0	0.5	0.0	
	Max	3.2	3.2	3.2	

ED = Eating Disorder; AN = Anorexia Nervosa; BN = Bulimia Nervosa; BMI = Body Mass Index; GSI = Global Severity Index; SCL-90 = Symptom Check List

5.2 Pubertal development and menstrual status (I)

The mean age at menarche was 12.7 in the AN group (SD 1.3) and 12.3 (SD 1.2) years in the BN group. The difference in age at menarche was not statistically significant between the AN and BN groups (p = 0.291). The mean age at menarche in the BN group was significantly younger (p=0.008) compared with the mean menarche age in Finland (13.03 years) (Rimpelä and Rimpelä 1993). 28(82.4%) in the AN group and 2(8.7%) in the BN group had amenorrhea at T1. Two girls having AN menstruated only occasionally and two girls used contraceptive pills. In the whole ED group 3 subjects had primary amenorrhea, two cases were in the AN group and one case in the BN group.

5.3 Dating and general attitude to sexuality (I)

Significantly fewer dating experiences during the last month prior to the first assessment were reported in the AN group compared with the BN group (p = 0.019). In the AN group there was also significantly less interest in dating than in the BN group (p = 0.031). Between the two ED groups there was a statistically significant difference in the general attitude to sexuality, those having AN reporting more disgust or lack of interest compared with those girls having BN (p = 0.006). In 4 (7.0%) cases in the whole ED group the information about the attitude was missing, all of them had AN.

In multivariate analysis the type of ED, age at time of assessment, age at menarche and duration of ED were added to the model to find out if other factors rather than ED were associated with the psychosexual state. AN was associated with no dating experiences during the last month (OR 4.95, 95% C.I. 1.00 – 24.60, p = 0.051) and negative attitude to sexuality (OR 4.72, 95% C.I. 1.02 – 21.78, p = 0.047). The association between type of ED and interest in dating vanished in multivariate analyses, and age at assessment showed the strongest association with no interest in dating, younger adolescents having less interest in dating (OR 0.46, 95% C.I. 0.21 – 1.03, p = 0.059).

5.4 Body image (II)

Girls having BN reported significantly more experiences of abnormality in body shape (p = 0.041) and dissatisfaction with body size (p = 0.007) modalities. They also had significantly higher scores in the BD (p = 0.004) and DT (p = 0.001) scales in EDI. Those having BN reported a tendency to perceive more dissatisfaction in the appearance modality, too (p = 0.088) while those having AN tended to perceive their bodies to be unfeminine more often than bulimics (p = 0.054).

In multivariate analysis the type of ED, age at time of assessment, age at menarche, duration of illness (years), BMI and GSI were added to the model stepwise to find out if other factors rather than type of ED (AN/BN) were associated with negative body image. BN (OR 5.06, 95% C.I. 1.40 – 18.35, p = 0.014) and higher GSI (OR 2.87, 95 % C.I. 0.97 – 8.43, p = 0.056) were associated with BD while BN (OR 17.69, 95% C.I. 2.30 – 140.48, p = 0.006), younger age at menarche (OR 0.19, 95% C.I. 0.06 – 0.66, p = 0.009) and higher GSI (OR 8.99, 95% C.I. 1.52 – 53.00, p = 0.015) were associated with DT. Higher GSI (OR 7.46, 95% C.I. 2.23 – 25.00, p = 0.001) was associated with negative attitudes towards appearance, and higher BMI with dissatisfaction with body size (OR 1.54, 95% C.I. 1.11 – 2.13, p = 0.010). Longer duration of the illness was associated with negativity regarding body shape (OR 1.72, 95% C.I. 1.20 – 2.47, p = 0.003) and tone (OR 1.72, 95% C.I. 1.20 – 2.47, p = 0.003).

5.5 Suicidal ideation, deliberate self-harm and suicidal acts (III)

Both suicidal ideation and deliberate self-harm were more common in the BN than in the AN group. Of girls with BN 76.2% and of girls with AN 41.2% reported suicidal ideation (p = 0.011). Deliberate self-harm was reported by 38.1% of girls with BN and 14.7% of girls with AN (p = 0.047).

Because there was only one case in both ED groups who reported having attempted suicide, suicide attempts were excluded from the logistic regression analyses assessing risk for suicidality according to the type of ED, age at the time of assessment, age at menarche, duration of ED, depression and GSI. BN and depression were associated with suicidal

ideation (BN: OR 4.6, 95% C.I. 1.1 – 20.3, p = 0.043; Depression: OR 4.2, 95% C.I. 1.6 – 11.1, p = 0.003). Only higher GSI was still associated with suicidal behaviour (OR 8.7, 95% C.I. 1.9 – 39.2, p = 0.005).

5.6 Psychosocial adjustment and functioning (IV)

The overall psychosocial functioning measured by GAF was impaired among the whole study group, GAF scores ranging between 22 and 68 points. In the AN group 8.8% were severely impaired, 70.6% moderately impaired and 20.6% slightly impaired according to GAF. In the BN group 4.3% were severely, 69.6% moderately and 26.1% slightly impaired. 77.2 % of all cases scored 60 or below, reflecting at least moderate impairment in psychosocial functioning. The proportion of slightly or moderately impaired and severely impaired did not differ statistically significantly between different ED (AN/BN) groups (p = 0.826).

The total reported impairment in psychosocial functioning considering different psychosocial domains was also considerable. 45.6% of the whole ED group reported unsatisfactory relationship with nuclear family and 73.7% of cases reported difficulties in emancipation from family. 49.1% of the cases had minimal social contacts and 64.9% no activities or solitary activities. By contrast only 10.5% of the cases reported impairment in work or school performance. When ED groups (AN/BN) were compared on the various Morgan–Russell scales, those with BN reported significantly more unsatisfactory relationship with nuclear family compared with those having AN (p = 0.015). Those having AN reported more difficulties in emancipation from family (p = 0.071) and more minimal social contacts outside the family (p = 0.075), although the significances were borderline. There was no statistically significant differences in reported impairment in social activities between AN and BN groups (p = 0.599). A majority of the cases were still pupils or students (AN n = 32, BN n = 16). Working ability was fairly good in both ED groups, although girls having BN reported significantly more impairment in working or studying than girls having AN (p = 0.023).

In multivariate analysis type of ED (AN/BN), age at time of assessment, duration of ED, BMI and global severity index (GSI) were added to the model forward stepwise to find out if other factors rather than type of ED (AN/BN) were associated with psychosocial adjustment. There was no statistically significant association of either type of ED or any of the covariates with GAF, social contacts and social activities in the multivariate analyses. BN (OR 4.2, 95% C.I. 1.1 – 15.5, p = 0.031) and high scores in GSI (OR 5.9, 95% C.I. 1.8 – 18.8, p = 0.003) were associated with unsatisfactory relationship with family. AN was still associated with difficulties in the emancipation from family (OR 3.5, 95% C.I. 1.0 – 12.1, p = 0.047). Only longer duration of illness was statistically significantly associated with impaired working/school ability (OR 1.56, 95% C.I. 1.02 – 2.37, p = 0.040).

6 Discussion

6.1 Psychosexual state

Study I found that age at menarche did not differ statistically significantly between AN and BN, but in the BN group age at menarche was statistically significantly younger compared with the mean age at menarche in Finland as a whole. The timing of puberty varies between individuals and pubertal development also creates increasing pressure for psychosexual development. Early maturing, especially in girls, has been suggested to constitute a risk factor for psychopathological difficulties (such as internalising symptoms) (Graber et al. 1997, Graber et al. 2004, Hayward et al. 1997, Kaltiala-Heino et al. 2003b, Schmidt et al. 1995), and for earlier sexual experiences (Kaltiala-Heino et al. 2001, Phinney et al. 1990). The findings connecting early puberty and EDs have been more inconsistent (Fornari and Dancyger 2003), some researchers connecting early maturing with body dissatisfaction and thus ED pathology, especially for BN (Kaltiala-Heino et al. 2001, Striegel-Moore et al. 2001), and others finding no association of early menarche with ED (Ackard and Peterson 2001, Leon et al. 1993). The present results concur with those studies reporting an association between early maturing and bulimic type of eating pathology (Fairburn et al. 1997, Kaltiala-Heino et al. 2001), while the implication of early puberty for AN remains unclear, as has also earlier been noted (Fairburn et al. 1999a).

Those having AN showed more inhibited sexual development as measured by general attitude to sexuality, interest in dating and dating experiences compared with girls having BN. This could be due to the younger age of girls having AN, but in multivariate analyses younger age explained less interest in dating, but not the more negative general attitude to sexuality or fewer dating experiences, which were still more strongly associated with AN.

While dating has been regarded as one way of practising an intimate relationship with the opposite sex during the psychosexual development of adolescence, and also as helping to disengage gradually from parents (Aalberg and Siimes 1999, Laukkanen 1993), girls with AN seem to lack this developmental help. The more inhibited and cautious psychosexual development found among girls having AN compared with girls having BN concurs with many earlier studies (e.g. Fornari and Dancyger 2003, Schmidt et al. 1995). This was not explained by younger age, age at menarche or duration of ED. Although we do not know if the girls with BN in this study had been engaged in premature sexual experiences, they do seem to approach and experience sexual development more positively than girls with AN.

In the psychodynamic view of adolescence, EDs have been associated with problems in meeting the developmental challenges emerging from the physically maturing and sexually developing body. In AN especially, there seems to be a need to attain control over body changes which may be experienced as out of control. The slowing down of psychosexual development may imply this need for control when the adolescent is faced with the inevitable bodily changes, a wish for “time-out” when developmental challenges are ahead. This study, too, reveals more inhibited and careful attitudes towards sexual matters among girls having AN. These results are especially important, while the study group in the present research comprised girls at the early phases of EDs and included also atypical – and thus milder – forms of EDs.

6.2 Body image

According to Study II girls with BN reported body dissatisfaction significantly more than girls with AN. This was found in almost all body image modalities, although probably due to the small sample size this difference failed to reach statistical significance regarding appearance modality. Girls with AN tended also to experience their bodies as more unfeminine than girls with BN. In multivariate analyses the importance of general psychological distress in EDs emerged: high GSI scores together with BN was associated with BD, and high GSI was also associated with negativity towards appearance, while BN, lower age at menarche and high GSI were associated with DT. Dissatisfaction with body size was still associated with actual weight.

The results in present study concur with those of earlier studies connecting body dissatisfaction especially with BN, either as a risk factor or preceding the onset of BN (Cash and Deagle 1997, Corcos et al. 2000, Fairburn et al. 1997, Fernandez-Aranda et al. 1999, Kaltiala-Heino et al. 2001, Wiederman and Pryor 2000). Also the impact of younger age at menarche on body image found in earlier studies was shown regarding DT, but not in other body image modalities. Regarding AN, our results point to the ambivalent nature of the disorder: girls with AN may have achieved "the thin ideal", and thus they feel more satisfied with their bodies, while in BN girls may oscillate between alternating binges, purging and diets trying to achieve the desired thin body ideal. Although the younger age at assessment in the AN group could have explained the more negative experiences of femininity, this was not confirmed in multivariate analyses. Negative experiences of femininity may rather reflect the desire to obliterate the feminine body, while struggling to accept maturing feminity, which is often described in the psychodynamic view of AN (e.g. Laufer and Laufer 1984).

The multidimensional model of body image used in Study II has been found to be the most effective predictor of attitudinal body image among the alternative affective/attitudinal scales of body image (Sands 2000). The nature of body image disturbance in EDs has been debated in recent studies emphasizing rather disturbances in the emotional aspect of body image ("attitudinal body image") than actual impairments in body size estimations ("perceptual distortion") (e.g. Cash and Deagle 1997, Fernandez-Aranda et al. 1999). Although body image disturbance is widely seen as one of the key symptoms in EDs and as an essential risk

factor for the development and maintenance of AN and BN (Garner 2002, Stice 2002) this alone is not a sufficient factor for developing ED (Striegel-Moore et al. 2001) and not all those with ED suffer from body-image disturbance (Beumont et al. 1995, Rosen 1990).

In this study the multivariate analyses, too, suggested that in adolescent EDs other factors than the type of ED also have an important influence on attitudinal body image. This has earlier been demonstrated in studies reporting associations especially of psychopathological symptoms (such as anxiety traits, neurotic profile in SCL-90) with body distortion in AN (Corcos et al. 2000, Pollice et al. 1997, Wade et al. 2000). In BN, depression and negative affect especially have been found to mediate the relation between body dissatisfaction and BN (Joiner et al. 1995, Stice and Shaw 2002, Wade et al. 2000). The present results especially support the importance of psychiatric comorbidity in EDs.

6.3 Suicidal behaviour

Suicidal behaviour was more common in the BN group than in the AN group in Study III. Only one girl in each ED group had attempted suicide. After controlling for other relevant variables BN together with depression was associated with suicidal ideation and high GSI with deliberate self-harm, indicating the strong association of psychological distress with suicidality. The amount of reported suicidal ideation and suicidal behaviour was greater than in many previous studies among adolescent population, finding estimated prevalence rates of 10 – 15% for suicidal ideation, 0.2% for suicidal attempts and 5.1% for deliberate self-harm (Haarasilta and Marttunen 2005, Hawton et al. 2002. Klonsky et al. 2003, Lewinsohn et al. 1996, Patton et al. 1997, Pelkonen and Marttunen 2003). In this study, the rates resemble those found in adolescent major depression (Haarasilta et al. 2001, Lewinsohn et al. 1996). These results concur with earlier studies connecting suicidal behaviour especially with BN and greater GSI (Corcos et al. 2002, Favaro et al. 1997, Favaro and Santonastaso 1999, Stein et al. 2003), and especially with BN and depression (e.g. Bulik et al. 1999, Corcos et al. 2002, Favaro and Santonastaso 1997, Youssef et al. 2004) and also indicate the comorbidity of BN, impulsivity and depression. Some studies have even postulated that EDs may be secondary to a mood disturbance in women with parasuicidal (deliberate self-harm) histories (Wildman et

al. 2004). In AN self-injurious behaviour has been connected with the uncontrollable changes of the body during puberty and with the fundamental need to control the body (Favaro and Santonastaso 2000).

Although attempted suicides were rare in this study consisting of adolescent ED patients, suicide attempts have previously been found to be equally common in women with ED and with depression (Bulik et al. 1999, Youssef et al. 2004). While in AN suicide is the second most common cause of death (Sullivan 1995) and more frequent among AN patients when compared with the general population (Pompili et al. 2004), in this study girls having AN exhibited less suicidal behaviour than the BN group. The fairly early phases of ED may explain this, while in AN risk for suicidality and especially suicide attempts increases with longer duration of AN (Favaro and Santonastaso 1997, Stein et al. 2003).

6.4 Psychosocial functioning

The findings of Study IV suggest difficulties in psychosocial functioning already in the early phases of adolescent EDs and also differences between the two types of ED. The overall psychosocial functioning was considerably impaired in both ED groups measured by GAF. There were no statistically significant differences either in GAF or in the distribution between slightly or moderately impaired and severely impaired between AN and BN. There was also considerable impairment in separate psychosocial domains. In the BN group unsatisfactory relationship with nuclear family was crucial, while difficulties in autonomy development and loneliness in social contacts were emphasized in the AN group. Although those with BN reported more disability in work or school, the reported overall working ability in both ED groups was rather good. In multivariate analyses high GSI in addition to BN was associated with unsatisfactory relationships with nuclear family, which further underlines the importance of evaluating general psychopathological distress in ED adolescents. AN was still associated with difficulties in autonomy development while longer duration of illness was associated with disability in work/school.

In earlier studies longstanding difficulties in psychosocial adjustment and functioning have been found both in AN and BN in spite of remissions of ED symptoms (Herpertz-Dahlman et al. 2001, Quadflieg and Fichter 2003, Striegel-Moore et al. 2003). In contrast to this study consisting of outpatient adolescents, most of the earlier studies have been carried out among adult ED inpatients (Fichter et al. 2006, Steinhausen et al. 2000, Steinhausen 2002). This may cause bias towards more serious illnesses and thus towards protracted recovery findings. Psychosocial functioning in the early phases of EDs has been studied less (Fisher 2003, Steinhausen et al. 2000). Concurrent with present results Deter and Herzog (1994) also showed that 60% of adolescent anorectics reported poor social relations and few social activities right at onset of the disorder and later Striegel-Moore et al. (2003) reported psychosocial dysfunction (e.g. meagre social network, little support from the family) already during adolescence in young women with ED. Isolation from social activities and contacts has also been regarded as one of the first symptoms of AN (Wentz et al. 2001).

Family dynamics and interpersonal relationships in EDs have earlier interested family researchers. Independence should increase during adolescence, although maintenance of good parent-adolescent relationships serves to buffer adolescents against the development of psychological and behavioural difficulties (Joronen 2005, Resnick et al. 1997). These results, too, connect difficulties in autonomy development especially with AN (concurrent with e.g. Bruch 1962, 1982), and more confusion and high expressed emotion in families with BN (concurrent with e.g. Eisler 1995, van Engeland et al. 1995). Although there is still no decisive evidence about the causal relationships between ED and family issues (le Grange 2005, Polivy and Herman 2002), the presence of an ED has been demonstrated to have a great impact on family life (Nielsen and Bara-Carril 2003). The present results also emphasize the importance of psychological distress in family relationships. Impaired family relationships may cause lack of important developmental support in adolescence, and lacking and insufficient peer relations may exacerbate difficulties in autonomy development.

6.5 Strengths of the study

The strength of this study is the focus on adolescent outpatients mainly in the early phases of AN and BN. The majority of earlier studies have been based on retrospective design including adult patients. In Finland this study is the first to be based on a prospective study design among adolescent ED patients. The study group consisted of girls fulfilling both typical and atypical AN and BN criteria according to ICD-10, thus including the milder forms of AN and BN commonly encountered in general adolescent psychiatry. This is in contrast to many earlier studies carried out in special ED services, often in inpatient settings, and thus rather selected cases. The majority of the girls in this study were in the early phases of EDs and did not have any previous treatments for EDs. The adolescents were interviewed personally by a semi-structured interview conducted by an experienced clinician and also studied by structured self-reports. The diagnoses were made based on the information gathered from the patient, family and somatic doctors, and confirmed in a multidisciplinary adolescent psychiatric team. The participation rate at study entry was good.

The measures used in this study are widely used in ED research and have been selected by an international study group (COST B6) in order to gather information comparable between different European countries (Kordy 2005, Kordy and Treasure, 1999). This study focused not only on the ED symptoms but especially on impact of adolescent onset EDs on the adolescent development, an aspect of EDs which has not previously been studied much, although the developmental nature of EDs has been recognized. While TAUH was responsible for the whole adolescent psychiatric assessment and treatment in Pirkanmaa region during the time of the study, the results may be generalized to adolescent psychiatric ED patients in Finland.

6.6 Limitations of the study

The major limitation of this study is the small size of the study group. The small study group was due to the fairly small incidence rates of ED patients, although in adolescent psychiatry

EDs are commonly encountered while EDs are one of the typical mental disorders in adolescence and often require intensive treatment efforts and utilities. Because the small size of study group complicated the statistical analyses and created a risk for type 2 error in analyses also the borderline significances are pointed out. The study group also consisted solely of girls, because none of the boys attending our clinic during the study period fulfilled the diagnostic criteria. Thus the results may not be entirely generalized for boys and men with EDs. A further limitation is the lack of structured diagnostic interviews which might have yielded more information of lifetime psychiatric comorbidity.

7. Summary

The purpose of this study were first to evaluate the similarities and differences in psychosexual state, suicidal behaviour, body image and psychosocial functioning between adolescent onset AN and BN patients and second to evaluate how age, age at menarche, BMI, duration of illness, depression or general psychopathological distress modify the associations between ED and these developmental elements.

All adolescent patients attending the clinic between 1 January 1996 and 16 July 1998 and meeting the inclusion criteria were recruited for the study. The inclusion criteria for this study were 1. referred to the clinic because of eating problems or 2. referred for other reasons but diagnosed with eating disorder during initial psychiatric assessment. Participation in the study was voluntary and non-participation did not affect the normal assessment and treatment. Informed consent was obtained from all participants. The Ethical Committee of Tampere University Hospital approved this study design. The original sample consisted of 62 adolescent girls attending for treatment because of AN (F50.0 typical and F50.1 Atypical), BN (F50.2 typical, F50.3 Atypical) and ED-NOS. All the patients were girls, because none of the boys fulfilled the recruitment criteria. The ED-NOS group consisted of only 5 girls and was thus excluded from further analyses. The study group at study entry thus consisted of 57 girls.

The measures used in this study were derived from Action COST B6. COST B6 was originally planned to study the outcome of EDs in Europe and aimed at improving the empirical base for the development of treatment programmes (Kordy 2005, Kordy and Treasure 1999). The age distribution in this study differed from the original COST B6, covering adolescent ages 14 – 22 years in our clinic. Those with AN were younger and had shorter duration of illness than those with BN. BMI was significantly higher in the BN group.

The results of this study suggest the relationship of early puberty and ED pathology, especially BN, as the age at menarche was low in both ED groups and significantly lower in the BN group compared with the mean age at menarche in Finland. The psychosexual difficulties in EDs were also confirmed, especially the more negative general attitude towards psychosexual matters in the AN group compared with the BN group. These two ED groups seem to react differently to emerging sexuality, which points to the basic differences between these two ED groups. In AN sexual development may be received with more timidity compared with BN. The consequent malnutrition also leads to hormonal retardation, which may further protect these girls from inner pressure towards maturing sexuality. Although girls with BN were earlier maturing, they seemed to regard sexuality more positively than girls with AN. However, early maturing and bulimic type of eating behaviour has been connected with early sexual experiences, which was not taken under consideration in this phase of the study. It may be that adolescents with BN drift into earlier dating and sexual encounters, while still psychologically immature for these. In clinical practice girls with BN seem to try to handle intolerable emotions and experiences by bingeing and purging, while, at least superficially, reacting more positively to the maturing body and sexuality. Early maturing generates further disharmony between psychological and physical maturing and the environment, too, may misjudge early maturing girls by their physical appearance often leading to age-inappropriate comments and expectations. The great amount of reported body dissatisfaction among girls having BN may also reflect these inner experiences of the early maturing body, while increase in adipose tissue has been found to constitute one of the major risks for body dissatisfaction – and thus for EDs. In AN being underweight and even severe malnutrition may protect girls from this maturing of the body, and thus lead to greater satisfaction with one's body in spite of the obvious starvation.

Girls with BN also showed more suicidal behaviour in the acute phase of their disorder, which concurs with many earlier studies. This does indeed demand attention, especially while these girls were mainly in the early phases of their illness. Suicidal behaviour can be seen as a continuum from suicidal thoughts to suicidal acts and completed suicides. Although deliberate self-harm does not necessarily reflect the adolescent's wish to die, it is a serious sign of mental problems – often of difficulties in dealing with unbearable emotions. It may also reflect the negative experiences towards one's body evidenced by body dissatisfaction reported in the BN group. In a new Finnish adolescent population study deliberate self-mutilation has been especially associated with depression, alcohol and drug misuse, loneliness and interpersonal conflicts (Rissanen et al. 2006) concurring with many earlier studies. In EDs, too, suicidal behaviour can be understood as a need to "acting out" intolerable or unrecognised emotions analogous with ED symptoms.

Many recent studies have emphasized the necessity of both good relationships with parents and functioning peer relationship for favourable developmental progress in adolescence (Goldstein et al. 2005, Joronen 2005, Meeus et al. 2002). This present study finds difficulties in both psychosocial domains; the focus being on the relationship with parents in BN and on autonomy development and relationship with peers in AN. Major conflicts with parents during adolescence may continue even till adulthood and cause longstanding difficulties in interpersonal relationships, while well functioning peer relationships help to loosen the infantile bonds with parents and to facilitate the separation-individuation development. Lacking peer relationships may complicate this process of autonomy. We do not know, however, if the difficulties with parents and peers are rather a consequence or a cause for EDs. The present results strengthen the experiences in clinical practice where AN patients often report lacking peer relationships, and AN seems to cause withdrawal towards a more infantile relationship with parents (such as needing continuing monitoring and help in eating practices) instead of more age - appropriate arguments related to peers, dating or home-coming times in the evenings, while in BN peer relationships seems more functioning and conflicts focus on parents.

General psychopathological distress emerged as having a great impact on adolescent EDs. It must be taken under meticulous inspection when planning treatment for adolescent ED patients. In addition to having a great impact on body dissatisfaction and suicidality in the early phases, psychiatric comorbidity has been found to have implications for the overall presentation of ED and for treatment utilities and needs for services (Ebeling et al. 2003, Treasure 2006). These results, too, point to the essentiality and importance of psychopathology in heightening the ED symptoms and even in perpetuating them.

8. Clinical implications

1. Although AN and BN may share a common core psychopathology this study indicates differences in entering into and progressing through adolescent development among girls having AN and BN.

2. Early treatment interventions should be targeted not only at ED symptoms but also at developmental issues, especially family and peer relationships and psychosexual issues, in order to release progressive development.

3. The assessment of general psychological distress will help in indentifying those adolescents needing most intensive treatment interventions.

9. Implications for future research

There are not many studies focusing on developmental aspects during adolescence. We need more studies on adolescent EDs in the early phases of the disorder based on prospective long-term follow-up design, in order to ascertain the effects of EDs on adolescent development, to recognize the risk for deleterious outcome and to find relevant and effective interventions to help the progressive development during adolescence. The girls participating in this study are to be followed up further in order to see the long - term course and effects of adolescent onset ED. This study also points to the importance of studying comorbid disturbances in EDs and their effect on the EDs in adolescence.

This study also faced the problem caused by the rather low incidence of EDs among boys compared to girls; the study groups included no boys at all although the data collection period lasted 2.5 years. In order to obtain more information on the course and background of EDs in boys in future more extensive studies are needed.

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11.Figures in the text

12.Tables in the text

13.References

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14. Appendices

Appendix 1. TIB

Appendix 2. PQB

Appendix 3. SCL-90

Appendix 4. EDI

Appendix 5. SAS

Appendix 6. GAF

Appendix 1. TIB

ALKUARVIOINTI

Hoitava henkilö

COST-projekti

Lomakkeen suomennos Ann-Mari Westerlund, Pia Charpentier ja Jaana Suokas 1995.
HYKS -Psykiatrian Klinikka

HAASTATTELIJAN NIMI JA YKSIKKÖ: _____
HUOM! ON TÄRKEÄÄ, ETTÄ TÄYTÄT LOMAKKEEN **KAIKKI** KOHDAT!

PERUSTIEDOT

PÄIVÄMÄÄRÄ: _____

1.Potilaan nimi: _____

Henkilötunnus: _____

Tutkimusnumero: _____

Sukupuoli: Nainen ☐ Mies ☐

Osoite: _____

Kansallisuus: _____

Hoitopaikka (5): _____

Hoidon alkamispäivä: _____

2. Aikaisemmat hoitopaikat (5)

Onko potilas ollut aikaisemmin avohoidossa? Ei ☐ Kyllä, ☐
Jos kyllä, montako kertaa? _____
kuinka pitkään yhteensä? _____vkoa / kk / vuotta

Onko potilas ollut aikaisemmin sairaalahoidossa syömishäiriön tai muun psyykkisen ongelman vuoksi? Ei ☐ Kyllä, ☐
Jos kyllä, montako kertaa? _____
kuinka pitkään yhteensä? _____vkoa / kk / vuotta

Onko häntä hoidettu aikaisemmin tässä sairaalassa? Ei ☐ Kyllä, ☐

Onko potilas ollut psykoterapiassa? Ei ☐ Kyllä, ☐
Jos kyllä, montako kertaa / vko? _____
kuinka pitkään? _____vkoa / kk / vuotta
milloin?
_____

3. Kenen aloitteesta potilas on hakeutunut hoitoon?

tullut itse ☐
puolison ☐
sukulaisen ☐
lääkärin ☐
erikoislääkärin ☐
yksityisen terapeutin ☐
sairaalan ☐
muu? _____

Kenen lähettämänä potilas on täällä hoidossa? _____

4. Kuinka oma-aloitteisesti potilas on hakeutunut hoitoon?

täysin omasta aloitteestaan ☐
osittain omasta aloitteestaan ☐
täysin muiden aloitteesta ☐

5. Onko kyseessä jatkohoito?

Ei ☐
Kyllä, ☐ mille hoidolle _____
Missä hoidettu? _____

6. Oliko potilas hengenvaarassa hoidon alussa? Ei ☐ Kyllä ☐
Jos kyllä, miksi? _____

7. Lääkitys hoidon alkaessa?

☐ ei ollut ☐ oli, mitä
- ☐ rauhoittavia lääkkeitä
- ☐ neuroleptejä
- ☐ kipulääkkeitä
- ☐ mielialalääkkeitä
- ☐ muuta? _____

Lääkkeen nimi: _____

8. Muita diagnooseja (ICD 10) (Esim. kroonisia sairauksia ja vakavia sairauksia viimeisen 6 kk:n aikana. Mainitse sairauden nimi ja ICD-10 -koodi)

☐ ei ole ICD-numero
☐ on, _____ _____
_____ _____
_____ _____

KLIININEN ARVIOINTI

Päivämäärä: _____

Vastaa huolellisesti jokaiseen kysymykseen kliinisen tietämyksesi pohjalta. Jos ei erikseen mainita, kysymykset koskevat viimeistä 6 kuukautta.

1a. Syömishäiriön alkaminen

Alkamisikä _____ ☐ ei tietoa

Syömishäiriön luonne

☐ anoreksia
☐ bulimia
☐ anoreksia ja bulimia
☐ tarkemmin määrittelemätön syömishäiriö
☐ liikalihavuus

1b. Minkä ikäisenä potilas laihdutti ensimmäisen kerran? _____

2. Potilaan painon vaihtelu nykyisen pituisena

Onko potilas joskus painanut selvästi nykyistä enemmän?

☐ ei

☐ kyllä,_____vuoden ikäisenä_____kg

Onko potilas joskus painanut selvästi nykyistä vähemmän?

☐ ei

☐ kyllä,_____vuoden ikäisenä_____kg

3. Tämän hetkiset mitat (ilman kenkiä)

Tämän hetkinen paino: _____kg

Tämän hetkinen pituus: _____cm

4. Paino

Arvioidaan potilaan painoa viimeisen 6 kk:n aikana . Painon katsotaan olevan normaali silloin, kun potilaan BMI on 18 - 25. Tilanne katsotaan huolestuttavaksi silloin kun potilaan BMI on alle 16 tai yli 30.

Alipaino

Paino ollut aina huolestuttavan matala BMI <16	Paino ollut aina matala, mutta vain ajoittain huolestuttavasti. Yleensä BMI 16-18 joskus alle 16	Paino ollut yleensä lähellä normaalia, mutta tilapäisesti huolestuttavan matala Yleensä BMI 18-25 joskus jopa alle 16.	aina normaali BMI 18-25
1. ☐	2. ☐	3. ☐	4. ☐

Ylipaino

Paino ollut aina huolestuttavan korkea BMI <30	Paino ollut aina korkea, mutta vain ajoittain huolestuttavasti Yleensä BMI 25-30 joskus yli 30	Paino ollut yleensä lähellä normaalia, mutta tilapäisesti huolestuttavan korkea Yleensä BMI 18-25 joskus jopa yli 30.	aina normaali BMI 18-25
1. ☐	2. ☐	3. ☐	4. ☐

5. Ihannepaino

Potilaan toivoma paino? _____kg

Potilas ei halua ylittää _____kg:n rajaa

6a. Kuinka tärkeää laihduttaminen on potilaalle.

ei lainkaan tärkeää	jonkin verran tärkeää	selvästi tärkeää	hyvin tärkeää	äärimmäisen tärkeää	ei arvioitavissa
1. ☐	2. ☐	3. ☐	4. ☐	5. ☐	6. ☐

6b. Potilas pelkää painonnousua:

ei yhtään	hieman	merkittävästi	voimakkaasti	erittäin voimakkaasti	ei arvioitavissa
☐	☐	☐	☐	☐	☐

7. Kuinka paljon potilas ajattelee ruumiinsa muotoa ja painoaan.

koko ajan (päivittäin)	yli puolet ajasta (ainakin 4x/vko)	noin puolet ajasta (n. 3x/vko)	alle puolet ajasta (alle 2x/vko)	ei lainkaan
1. ☐	2. ☐	3. ☐	4. ☐	5. ☐

8. Ahmimiskohtaukset / ahmimis-oksentamiskohtaukset viimeisen 6 kuukauden aikana

a) Onko potilaalla ollut ahmimiskohtauksia?

1. ei ☐ 2. ☐ kyllä

Jos kyllä, kuinka usein?

☐ vain satunnainen kohtaus

☐ vähemmän kuin 2 kertaa viikossa

☐ 2 - 3 kertaa viikossa

☐ 4 kertaa viikossa tai päivittäin

☐ useita kertoja päivässä

b) Onko potilaalla ollut ahmimis-oksentamiskohtauksia?

1. ei ☐ 2. ☐ kyllä

Jos kyllä, kuinka usein?

☐ vain satunnainen kohtaus

☐ vähemmän kuin 2 kertaa viikossa

☐ 2 - 3 kertaa viikossa

☐ 4 kertaa viikossa tai päivittäin

☐ useita kertoja päivässä

9. Kuinka merkittävää oli pyrkimys säädellä painoa viimeisten 3 kuukauden aikana seuraavien keinojen avulla (merkitse rasti jokaiselle riville).

	ei tietoa	ei ole	lievää (vähemmän kuin 2 kertaa viikossa)	kohtalaista (2-3 kertaa viikossa)	voimakasta (4 kertasta viikossa päivittäiseen)	äärimmäisen voimakasta (useita kertoja päivässä)
oksentamalla	☐	☐	☐	☐	☐	☐
laksatiiveja käyttämällä	☐	☐	☐	☐	☐	☐
laihduttamalla / vähäkalorisella ruokavaliolla	☐	☐	☐	☐	☐	☐
ahmimiskohtaukset	☐	☐	☐	☐	☐	☐
harrastamalla liikuntaa painonsäätelytarkoituksessa	☐	☐	☐	☐	☐	☐

muu keino; mikä _____

10. Käyttääkö potilas hormonilääkitystä? kyllä ☐ ei ☐

11. Kuukautiskierto

Ei ole alkanut primaari amenorrea	Satunnaista vuotoa, ei varsinaista kiertoa	Epäsäännöllistä vuotoa, jonkin asteinen kierto kuitenkin havaittavissa	Säännöllinen vuoto, selkeä kierto
1. ☐	2. ☐	3. ☐	4. ☐

Kuukautisten alkamisikä: _____

12. Suhtautuminen kuukautisiin (jos eivät palanneet)

Iloinen, ettei ole palannut	tyytyväinen tai ei ole kiinnostunut	ei ole kiinnostunut	harmissaan, ettei ole palannut
1. ☐	2. ☐	3. ☐	4. ☐

13. Suhtautuminen kuukautisiin (jos ovat palanneet)

selkeä inho	inhoaa tai ei ole kiinnostunut	ei ole kiinnostunut	tyytyväinen, että on palannut
1. ☐	2. ☐	3. ☐	4. ☐

14. Suhtautuminen seksiin liittyviin asioihin

selkeä inho	inhoaa tai ei ole kiinnostunut	ei ole kiinnostunut	mielihyvän sävyinen (normaali)
1. ☐	2. ☐	3. ☐	4. ☐

15. Sukupuolinen käyttäytyminen

1. ☐	2. ☐	3. ☐	4. ☐
välttää seksuaalisia kontakteja	satunnaisia pinnallisia suhteita ilman tyydyttävää seksuaalista kanssakäymistä	satunnaisia pinnallisia suhteita, joissa mukana tyydyttävää seksuaalista kanssakäymistä	rakkaussuhteita, joissa mukana tyydyttävää seksuaalista kanssakäymistä (myös avioliitto ja lapset luetaan tähän)

16. Suhtautuminen perheen perustamiseen

a)

1. ☐	2. ☐	3. ☐	4. ☐
haluaa pysyä naimattomana	haluaisi mennä naimisiin (solmia läheisiä suhteita), mutta pelkää tehdä niin	haluaisi mennä naimisiin (solmia läheisiä suhteita), mutta ei ole ollut mahdollisuutta tehdä niin	haluaa ehdottomasti naimisiin / avoliittoon tai on jo naimisissa tai avoliitossa

b)

1. ☐	2. ☐	3. ☐	4. ☐
ei halua lapsia	haluaa lapsia, mutta pelkää hankkia niitä	haluaa lapsia, mutta ei ole ollut mahdollisuutta hankkia niitä	haluaa ehdottomasti lapsia tai on jo saanut lapsia

17.

a) Suhteet ydinperheeseen

Koska suhteet eri perheenjäseniin voivat olla erilaisia, täytetään tämä kohta huonoimman suhteen mukaan riippumatta siitä onko kyse suhteesta sisaruksiin vai vanhempiin. Jos potilaan lisäksi on haastateltu muita perheenjäseniä, suoritetaan arvio molempien haastattelujen keskiarvona.

erittäin epätyydyttävät	epätyydyttävät	yhdentekevät	hyvät
1. ☐	2. ☐	3. ☐	4. ☐

b) Suhde kumppaniin (jos on)

erittäin epätyydyttävä	epätyydyttävä	yhdentekevä	hyvä
1. ☐	2. ☐	3. ☐	4. ☐

18. Irroittautuminen perheestä (autonomian aste, ilman riippuvuutta)

1. ☐	2. ☐	3. ☐	4. ☐
monia vaikeuksia. Ei näe itsenäistymisen mahdollisuuksia tyydyttävässä määrin	kuten kohdassa 1, mutta toisinaan kokee, että vaikeudet olisivat voitettavissa	joitakin vaikeuksia, mutta kokee niiden olevan voitettavissa	ei vaikeuksia

19. Sosiaaliset kontaktit (muut kuin perheenjäseniin ja partneriin)

ei ole	harvoja pinnallisia ja/tai läheisiä	monia, mutta pinnallisia	monia sekä läheisiä, että pinnallisia
1. ☐	2. ☐	3. ☐	4. ☐

20. Sosiaaliset harrastukset (olosuhteet huomioiden)

ei perheen ulkopuolisia sosiaalisia harrastuksia	perheen ulkopuolella ilman seuraa tapahtuva toiminta	pääasiassa ilman seuraa tapahtuvaa toimintaa, mutta myös hieman ryhmässä tapahtuvaa toimintaa perheen ulkopuolella	riittävästi ryhmässä tapahtuvaa perheen ulkopuolista toimintaa: pystyy toimimaan hyvin ihmisten parissa
1. ☐	2. ☐	3. ☐	4. ☐

21. Työtilanne (edeltäviltä 6 kuukaudelta)

ei ole ollut palkallisessa työssä (tai on ollut sairaslomalla)	alle puolet ajasta ollut palkallisessa työssä tai satunnaisessa palkattomassa työssä	yli puolet ajasta, mutta ei koko aikaa ollut palkallisessa työssä	ollut säännöllisessä palkallisessa työssä ilman poissaoloja
1. ☐	2. ☐	3. ☐	4. ☐

22. Alla lueteltujen lääkkeitten tai huumausaineiden väärinkäyttö viimeisen 6 kuukauden aikana

	ei tietoa	ei ole	lievää (vähemmän kuin kerran viikossa)	kohtalaista (2-3 kertaa viikossa)	voimakasta (4 kerrasta viikossa päivittäiseen)	äärimmäisen voimakasta (useita kertoja päivässä)
alkoholi (pullo viiniä tai vastaava määrä alkoholia)	☐	☐	☐	☐	☐	☐
nikotiini (20 savuketta)	☐	☐	☐	☐	☐	☐
huumeet, mitkä _____ _____	☐	☐	☐	☐	☐	☐
rauhoittavia lääkkeitä	☐	☐	☐	☐	☐	☐
unilääkkeitä	☐	☐	☐	☐	☐	☐
särkylääkkeitä	☐	☐	☐	☐	☐	☐
piristäviä lääkkeitä	☐	☐	☐	☐	☐	☐
muita, mitä _____ _____	☐	☐	☐	☐	☐	☐

yhtä viinipullollista vastaa			
väkevät alkoholijuomat	*väkevät viinit*	*A- olut*	*keskiolut*
4 snapsia à 4-5 cl	*8 lasia à 5-6 cl*	*4,5 pulloa*	*6 pulloa*

23. Onko potilaalla ollut vasten tahtoaan intiimejä kontakteja aikuisten kanssa hänen ollessaan alaikäinen?

1. ☐ ei
2. ☐ epävarmaa
3. ☐ on minkä ikäisenä? _____ vuotiaana

24. Onko potilas ollut yhdynnässä vasten tahtoaan alaikäisenä?

1 ei ☐
epävarmaa ☐
2 on ☐ minkä ikäisenä? _____ vuotiaana
Onko hän ollut insestin uhri? on ☐ ei ☐

25. Onko muilla perheenjäsenillä syömishäiriöitä?

☐ ei
☐ on, kuinka monella _____
kenellä? _____

MUISTITHAN TÄYTTÄÄ LOMAKKEEN **KAIKKI** KOHDAT!

ALKUARVIOINTI

Potilas

COST-projekti

Lomakkeen suomennos Ann-Mari Westerlund, Pia Charpentier ja Jaana Suokas 1995.

HYKS -Psykiatrian Klinikka

OSA 1

PERUSTIEDOT

Nimi: _____ Päivämäärä: _____

Rastita seuraavista vaihtoehdoista sinulle sopivin. Jos useampi väittävä sopii sinuun, voit rastittaa myös ne. Vastauksiasi käsitellään luottamuksellisesti.

1. Henkilökohtaiset tiedot

Nimi: _____

Henkilötunnus: _____

2. Siviilisääty

naimaton	☐		
naimisissa	☐	Mistä lähtien?	_____
avoliitossa	☐	Mistä lähtien?	_____
eronnut	☐	Mistä lähtien?	_____
asumuserossa	☐	Mistä lähtien?	_____
leski	☐	Mistä lähtien?	_____

3. Lapset

	Sukupuoli			**Ikä**
Tyttö	☐	Poika	☐	_____ vuotta
Tyttö	☐	Poika	☐	_____ vuotta
Tyttö	☐	Poika	☐	_____ vuotta

4. Asuminen

yksin	☐	adoptiovanhemman / -vanhempien kanssa	☐
parisuhteessa	☐	muun huoltajan / huoltajien kanssa	☐
lapsen / lasten kanssa	☐	sukulaisten kanssa	☐
vanhemman / vanhempien kanssa	☐	ystävien kanssa	☐
uusperheessä,	☐	soluasunnossa / jaetussa asunnossa	☐

johon kuuluvat? _____

muu, mikä? _____

5. Koulutus

	suoritettu	kesken
peruskoulu	☐	☐
ammattikoulu	☐	☐
lukio	☐	☐
opisto	☐	☐
korkeakoulu / yliopisto	☐	☐
muu ammatillinen koulutus	☐	☐
muu, mikä _____	☐	☐

6. Ammatti

Nykyinen ammattisi _____ Ei ammattia ☐

Ammatti, johon tähtäät _____

Vastaako nykyinen työsi koulutustasi? Kyllä ☐ Ei ☐

7. Työllisyystilanne
(viimeisen 6 kk:n aikana)

- täysipäiväisessä ansiotyössä ☐
- osapäiväisessä ansiotyössä ☐
- työtön ☐
- opiskelija ☐
- kotiäiti tai -isä ☐
- eläkkeellä ☐
- armeijassa ☐
- muu, mikä? ☐

8. Taloudellinen tilanne
Miten elätät itsesi?

- ansiotyöllä ☐
- opintotuella ☐
- sosiaaliavustuksilla ☐
- sairauseläkkeellä ☐
- vanhempien / sukulaisten / puolison tuella ☐
- muulla tavalla, miten?

_____

_____

9. Onko sinulla ystäviä/ sosiaalisia kontakteja perheen ulkopuolella?

- ☐ ei
- ☐ muutama pinnallinen
- ☐ useita pinnallisia
- ☐ läheisiä sekä pinnallisia
- ☐ useita läheisiä

10. Kuinka vietät vapaa-aikaasi?

- ☐ yleensä perheen parissa
- ☐ yleensä yksin
- ☐ yleensä ystävien kanssa
- ☐ muuten, miten?

11. Oletko hakenut aiemmin hoitoa syömishäiriöiden tai muiden mielenterveysongelmien vuoksi?

En ☐ Kyllä ☐

Jos ei, siirry kysymykseen 15.

Jos kyllä, millaisessa hoidossa?

	MILLOIN?	KÄYNNIN KESTO	KUINKA USEIN / VKO tai KK	HOIDON PITUUS	MONTAKO ERI KERTAA OLLUT HOIDOSSA?
☐ käynnit sairaanhoitajan luona					
☐ käynnit yleislääkärin luona					
☐ käynnit psykiatrin luona					
☐ käynnit psykologin luona					
☐ käynnit mielenterveystoimistossa					
☐ käynnit koulu- / työpaikkalääkärin luona					
☐ käynnit neuvonta-asemalla					
☐ yksilöterapia					
☐ ryhmäterapia					
☐ avioliittoneuvonta					
☐ perheterapia					

☐muu hoito, millainen? _____

12. Millaista hoito on ollut?

keskustelua ammattiauttajan kanssa ☐

psykoterapiaa ☐

keskustelua ammattiauttajan kanssa sekä tehtäviä ja kotitehtäviä ☐

fyysisiä tai muita harjoituksia tunteiden ilmaisemiseksi ☐

rentoutusta ☐

muuta, mitä? _____

13. Oletko osallistunut itsehoitoryhmiin?

1.En ☐

Olen ☐

2.vain syömishäiriön vuoksi ☐

kuinka usein? _____

kuinka kauan? _____

oliko hoito maksullista? ei ☐ kyllä, ☐

3.muihin itsehoitoryhmiin (kuten AA, Painonvartiat, OA, Nyyti ym.) ☐

kuinka usein? _____

kuinka kauan? _____

oliko hoito maksullista? ei ☐ kyllä, ☐

14. Oletko ollut sairaalahoidossa syömishäiriöiden vuoksi?

En ole ☐ Olen ☐

Jos olet, milloin ensimmäinen hoito alkoi?_____

Milloin viimeinen hoito päättyi?_____

Olitko tavallisessa sairaalassa? En ☐ Kyllä, ☐

Jos kyllä, montako kertaa?_____kertaa, yhteensä _____kuukautta

Olitko psykiatrisessa sairaalassa En ☐ Kyllä, ☐

Jos kyllä, montako kertaa?_____kertaa, yhteensä _____kuukautta

Onko sinua hoidettu aikaisemmin tässä sairaalassa? Ei ☐ Kyllä, ☐

15. Tietoja vanhemmistasi

	syntymävuosi	ammatti	jos ei enää elossa, minkä ikäinen olit hänen kuollessaan?
äiti			
isä			
äitipuoli			
isäpuoli			

vanhemmat ovat naimisissa ☐

vanhemmat ovat avoliitossa ☐

" asuvat erillään ☐

" ovat eronneet. ☐

Jos ovat eronneet, niin

onko äiti uudelleen naimisissa ☐ ei ☐ on, vuonna _____

onko isä uudelleen naimisissa ☐ ei ☐ on, vuonna _____

16. Jos vanhempasi asuivat yhdessä kun olit lapsi, oliko kumpikaan pitkiä aikoja poissa kotoa (terveydellisistä, ammatillisista tai muista syistä)?

☐ ei ☐ kyllä,

jos äiti, mikä aiheutti hänen poissaolonsa? _____

kuinka kauan hän oli poissa _____

minkä ikäinen olit silloin? _____

jos, isä, mikä aiheutti hänen poissaolonsa? _____

kuinka kauan hän oli poissa? _____

minkä ikäinen olit silloin? _____

17. Sisarukset ja sisaruspuolet

	sisarus 1	sisarus 2	sisarus 3	sisarus 4
syntymävuosi				
sukupuoli				
ammatti / koulutus				

Onko kukaan sisaruksistasi kuollut? ☐ ei ☐ on

Jos on, minkä ikäisenä ja mihin hän kuoli? _____

_____

	sisaruspuoli 1	sisaruspuoli 2	sisaruspuoli 3	sisaruspuoli 4
syntymävuosi				
sukupuoli				
ammatti / koulutus				

Onko kukaan sisaruspuolistasi kuollut? ☐ ei ☐ on

Jos on, minkä ikäisenä ja mihin hän kuoli? _____

_____

18. Sairastaako joku vanhemmistasi tai sisaruksistasi jotain pitkäaikaista, vakavaa fyysistä tai psyykkistä sairautta?

ei ☐ kyllä ☐

Jos kyllä, niin kuka? _____

Mitä sairautta? _____

19. Onko muilla perheesi jäsenillä syömishäiriöitä tällä hetkellä tai onko ollut aikaisemmin?

ei ☐ on ☐

Jos on, niin kenellä? _____

Milloin? _____

20. Oletko ollut poissa työstä tai koulusta syömishäiriön vuoksi viimeisen puolen vuoden aikana?

en ☐ olen ☐ kuinka kauan? _____

OSA 2

Kysymyksissä viitataan viimeiseen puoleen vuoteen.

1. Tämänhetkinen painosi (ilman vaatteita) _____**kg**

Tämän hetkinen pituutesi _____cm

2. Mikä on ihannepainosi? _____ **kg**

Mikä on suurin paino, minkä olisit valmis nyt saavuttamaan? _____kg

3. Pelkäätkö painon nousua?

- ☐ en pelkää
- ☐ pelkään toisinaan
- ☐ pelkään koko ajan
- ☐ ajatus saa minut paniikkiin
- ☐ mieluummin kuolisin, kuin antaisin painoni nousta

4. Minkä on ollut *suurin* painosi nykyisellä pituudellasi? _____kg.

5. Koska?
- ☐ nyt
- ☐ _____viikkoa sitten
- ☐ _____kuukautta sitten
- ☐ _____vuotta sitten

6. Mikä on ollut *alhaisin* painosi nykyisellä pituudellasi? _____kg.

7. Koska?
- ☐ nyt
- ☐ _____viikkoa sitten
- ☐ _____kuukautta sitten
- ☐ _____vuotta sitten

8. Miten koet ruumiisi (laita rasti kullekin riville lähimmäs itseesi sopivaa vaihtoehtoa)**?**

normaalina	☐	☐	☐	☐	☐	epänormaalina
aivan liian laihana	☐	☐	☐	☐	☐	aivan liian lihavana
viehättävänä	☐	☐	☐	☐	☐	vastenmielisenä
lihaksikkaana	☐	☐	☐	☐	☐	velttona
naisellisena (naisille)	☐	☐	☐	☐	☐	epänaisellisena
miehekkäänä (miehille)	☐	☐	☐	☐	☐	epämiehekkäänä

9 a. Kuinka monta ahmimiskohtausta sinulla on ollut keskimäärin viimeisen puolen vuoden aikana?

- ☐ Ei yhtään
- ☐ _____ kertaa päivässä
- ☐ _____ kertaa viikossa
- ☐ _____ kertaa kuukaudessa

9 b. Kuinka usein olet keskimäärin käyttänyt seuraavia painonsäätelykeinoja viimeisen puolen vuoden aikana?

	ei lainkaan	1x/vko tai vähemmän	2-3x/vko	päivittäin	monta x /päivä
oksentaminen	☐	☐	☐	☐	☐
ulostuslääkkeet	☐	☐	☐	☐	☐
dieetti/vähäkalorinen ruoka	☐	☐	☐	☐	☐
runsas liikunta	☐	☐	☐	☐	☐

Muita keinoja, mitä?_____

10. Kuvaile keskivertopäiväsi ateriat

Aamupala

Lounas

Välipala

Päivällinen

Iltapala

Vain naisille kysymykset 11 & 12.

11. Onko sinulla ollut kuukautisvuotoa viimeisen neljän viikon aikana?

☐ kyllä ☐ ei

Jos kyllä, ovatko kuukautisesi olleet säännölliset? ☐ ovat ☐ eivät ole

Jos ei, oletko raskaana? ☐ en ☐ kyllä

Minkä ikäinen olit kun kuukautisesi alkoivat? _____

12. Käytätkö ehkäisypillereitä?

☐ kyllä ☐ en

13. Mitä aluetta elämässäsi syömishäiriö häiritsee eniten?

	voimakkaasti	melko voimakkaasti	jonkin verran	hieman	ei lainkaan
	1	2	3	4	5
arkielämä	☐	☐	☐	☐	☐
elämänilo	☐	☐	☐	☐	☐
työ / koulu	☐	☐	☐	☐	☐
keskittyminen	☐	☐	☐	☐	☐
ihmissuhteet	☐	☐	☐	☐	☐
parisuhde	☐	☐	☐	☐	☐
seksuaalielämä	☐	☐	☐	☐	☐
häiritsee aiheuttamalla sairaudenpelkoa	☐	☐	☐	☐	☐
häiritsee aiheuttamalla huolta tulevaisuudesta	☐	☐	☐	☐	☐
häiritsee aiheuttamalla mielialan laskua	☐	☐	☐	☐	☐
häiritsee aiheuttamalla liiallista mielialan nousua	☐	☐	☐	☐	☐

muuta, mitä? _____

Jos rajoitat syömistäsi, parantaako se mielialaasi? ☐ kyllä ☐ ei

14. Käytätkö parhaillaan jotain lääkitystä?

1 ☐ en 2 ☐ kyllä

Jos kyllä, mitä? (voit rastittaa useita ruutuja)

1 ☐ rauhoittavia lääkkeitä
2 ☐ unilääkkeitä
3 ☐ kipulääkkeitä
4 ☐ mielialalääkkeitä
5 ☐ piristäviä lääkkeitä
6 ☐ muuta, mitä? _____

Lääkkeen nimi: _____

Kauanko sinulla on ollut tämä lääkitys? _____

15. Onko sinulla koskaan ollut itsemurha-ajatuksia? ☐ ei ☐ on

Jos on, niin koska? _____

_____

_____

16. Oletko koskaan yrittänyt itsemurhaa? ☐ en ☐ olen

Jos olet, niin

kuinka monta kertaa? _____

koska? _____

miten? _____

17. Oletko koskaan yrittänyt muuten tarkoituksellisesti vahingoittaa itseäsi?

☐kyllä ☐en

Jos olet, niin koska? _____

Miten? _____

HUOMAUTUKSIA, KOMMENTTEJA, VIESTEJÄ TAI MUUTA:

Appendix 3. SCL-90

Lomakkeen numero: _____ No.: _____

(Tutkija täyttää) (Tutkija täyttää)

SCL- 90 - OIREKYSELYLOMAKE

TÄYTTÖOHJEET

Seuraavilla sivuilla on esitetty luettelo ongelmista ja vaivoista joita ihmisillä esiintyy ajoittain.

Luettuanne kunkin kysymyksen huolellisesti **merkitkää ympyröimällä vastausvaihtoehto**, joka parhaiten kuvaa sitä, kuinka paljon kyseinen asia on **viimeisen kuukauden** aikana vaivannut tai ahdistanut Teitä.

ESIMERKKI:

MISSÄ MÄÄRIN TEITA ON **VIIMEISEN KUUKAUDEN** AIKANA VAIVANNUT

		Ei lainkaan	Melko vähän	Jonkin verran	Melko paljon	Erittäin paljon
1.	Päänsärky.....	(1)	(2)	(3)	(4)	(5)

Vastatkaa jokaiseen kysymykseen.

Merkitkää **vain yksi kohta** kustakin kysymyksestä.

Merkitkää tähän lomakkeen **täyttöpäivämäärä**: _____

KYSYMYKSIÄ SAATTAA TUNTUA OLEVAN PALJON. SILTI ON TÄRKEÄTÄ, ETTÄ JAKSATTE VASTATA HUOLELLISESTI LOPPUUN SAAKKA.

KIITOS JO ETUKÄTEEN VAIVANNÄÖSTÄNNE

MISSÄ MÄÄRIN TEITÄ ON VIIMEISEN KUUKAUDEN AIKANA VAIVANNUT	Ei lainkaan	Melko vähän	Jonkin verran	Melko paljon	Erittäin paljon
1. Päänsärky	(1)	(2)	(3)	(4)	(5)
2. Hermostuneisuus tai sisäinen rauhattomuus	(1)	(2)	(3)	(4)	(5)
3. Ajatukset, sanat tai mielikuvat joita ette saa mielestänne	(1)	(2)	(3)	(4)	(5)
4. Heikotuksen tai huimauksen tunne	(1)	(2)	(3)	(4)	(5)
5. Seksuaalisen mielenkiinnon tai nautinnon tunteen väheneminen	(1)	(2)	(3)	(4)	(5)
6. Toisia kohtaan tuntemanne arvostelunhalu	(1)	(2)	(3)	(4)	(5)
7. Ajatus, että joku voi säädellä ajatuksianne	(1)	(2)	(3)	(4)	(5)
8. Tunne siitä, että muut ovat syypäitä useimpiin vaikeuksiinne	(1)	(2)	(3)	(4)	(5)
9. Vaikeus muistaa asioita	(1)	(2)	(3)	(4)	(5)
10. Pelko, että olette huolimaton tai piittaamaton	(1)	(2)	(3)	(4)	(5)
11. Tunne, että ärsyynnytte tai suututte helposti	(1)	(2)	(3)	(4)	(5)
12. Sydän- tai rintakivut	(1)	(2)	(3)	(4)	(5)
13. Pelontunne avoimilla paikoilla tai kaduilla	(1)	(2)	(3)	(4)	(5)
14. Tarmokkuuden puuttuminen tai väheneminen	(1)	(2)	(3)	(4)	(5)
15. Ajatukset elämänne lopettamisesta	(1)	(2)	(3)	(4)	(5)
16. Se että kuulette ääniä, joita muut eivät kuule	(1)	(2)	(3)	(4)	(5)

MISSÄ MÄÄRIN TEITÄ ON VIIMEISEN KUUKAUDEN AIKANA VAIVANNUT	Ei lainkaan	Melko vähän	Jonkin verran	Melko paljon	Erittäin paljon
17. Vapina	(1)	(2)	(3)	(4)	(5)
18. Tunne, ettei useimpiin ihmisiin voi luottaa	(1)	(2)	(3)	(4)	(5)
19. Huono ruokahalu	(1)	(2)	(3)	(4)	(5)
20. Itkuherkkyys	(1)	(2)	(3)	(4)	(5)
21. Ujous tai vaivautuneisuus vastakkaisen sukupuolen seurassa	(1)	(2)	(3)	(4)	(5)
22. Tunne, että olette umpikujassa tai loukussa	(1)	(2)	(3)	(4)	(5)
23. Pelästyminen äkillisesti ilman mitään syytä	(1)	(2)	(3)	(4)	(5)
24. Tunteenpurkaukset, joita ette pysty hillitsemään	(1)	(2)	(3)	(4)	(5)
25. Se, että pelkäätte lähteä yksin ulos kotoa	(1)	(2)	(3)	(4)	(5)
26. Itsesyytökset	(1)	(2)	(3)	(4)	(5)
27. Kivut ristiselässä	(1)	(2)	(3)	(4)	(5)
28. Tunne, että olette lukossa, ettekä saa asioita hoidetuksi	(1)	(2)	(3)	(4)	(5)
29. Yksinäisyys	(1)	(2)	(3)	(4)	(5)
30. Alakuloisuus	(1)	(2)	(3)	(4)	(5)
31. Liika asioiden murehtiminen	(1)	(2)	(3)	(4)	(5)
32. Kiinnostuksen puute lähes kaikkeen	(1)	(2)	(3)	(4)	(5)
33. Pelokkuus	(1)	(2)	(3)	(4)	(5)

MISSÄ MÄÄRIN TEITÄ ON VIIMEISEN KUUKAUDEN AIKANA VAIVANNUT	Ei lainkaan	Melko vähän	Jonkin verran	Melko paljon	Erittäin paljon
34. Se että loukkaannutte helposti	(1)	(2)	(3)	(4)	(5)
35. Se että toiset ihmiset ovat tietoisia yksityisistä ajatuksistanne	(1)	(2)	(3)	(4)	(5)
36. Tunne, että muut ihmiset eivät ymmärrä Teitä tai eivät tunne myötätuntoa Teitä kohtaan	(1)	(2)	(3)	(4)	(5)
37. Tunne, että ihmiset ovat epäystävällisiä tai eivät pidä Teistä	(1)	(2)	(3)	(4)	(5)
38. Se, että joudutte tekemään asiat hyvin hitaasti välttääksenne virheitä	(1)	(2)	(3)	(4)	(5)
39. Sydämentykytykset tai -jyskytykset	(1)	(2)	(3)	(4)	(5)
40. Pahoinvointi ja vatsavaivat	(1)	(2)	(3)	(4)	(5)
41. Huonommuudentunne	(1)	(2)	(3)	(4)	(5)
42. Lihassäryt	(1)	(2)	(3)	(4)	(5)
43. Tunne, että Teitä tarkkaillaan tai Teistä puhutaan	(1)	(2)	(3)	(4)	(5)
44. Unensaantivaikeudet	(1)	(2)	(3)	(4)	(5)
45. Tarve tarkistaa kerran tai useammin se mitä teette	(1)	(2)	(3)	(4)	(5)
46. Vaikeus tehdä päätöksiä	(1)	(2)	(3)	(4)	(5)
47. Se että pelkäätte matkustaa bussissa, metrossa tai junassa	(1)	(2)	(3)	(4)	(5)
48. Hengenahdistus	(1)	(2)	(3)	(4)	(5)
49. Kuumat tai kylmät aallot	(1)	(2)	(3)	(4)	(5)

MISSÄ MÄÄRIN TEITÄ ON <u>VIIMEISEN KUUKAUDEN</u> AIKANA VAIVANNUT	Ei lainkaan	Melko vähän	Jonkin verran	Melko paljon	Erittäin paljon
50. Se että joudutte välttelemään tiettyjä asioita, paikkoja tai toimintoja, koska ne pelottavat Teitä	(1)	(2)	(3)	(4)	(5)
51. Muisti- tai ajatuskatkot	(1)	(2)	(3)	(4)	(5)
52. Puutuminen tai pistely jossain ruumiinosassa	(1)	(2)	(3)	(4)	(5)
53. Palantunne kurkussa	(1)	(2)	(3)	(4)	(5)
54. Toivottomuus tulevaisuuden suhteen	(1)	(2)	(3)	(4)	(5)
55. Keskittymisvaikeudet	(1)	(2)	(3)	(4)	(5)
56. Heikkouden tunne jossain ruumiin osassa	(1)	(2)	(3)	(4)	(5)
57. Jännittyneisyys tai kiihtyneisyys	(1)	(2)	(3)	(4)	(5)
58. Painon tunne käsissä tai jaloissa	(1)	(2)	(3)	(4)	(5)
59. Ajatukset kuolemasta tai kuolemisesta	(1)	(2)	(3)	(4)	(5)
60. Ylensyöminen	(1)	(2)	(3)	(4)	(5)
61. Vaivautuneisuus toisten puhuessa Teistä tai katselles-saTeitä	(1)	(2)	(3)	(4)	(5)
62. Tunne ajatuksista, jotka eivät ole omianne	(1)	(2)	(3)	(4)	(5)
63. Halu lyödä tai muuten vahingoittaa jotakuta	(1)	(2)	(3)	(4)	(5)
64. Se, että heräätte aikaisin aamulla ettekä enää saa unta	(1)	(2)	(3)	(4)	(5)
65. Sisäinen pakko toistaa jotain toimintaa (esim. kosket-taminen, laskeminen tai peseminen)	(1)	(2)	(3)	(4)	(5)

MISSÄ MÄÄRIN TEITÄ ON VIIMEISEN KUUKAUDEN AIKANA VAIVANNUT	Ei lainkaan	Melko vähän	Jonkin verran	Melko paljon	Erittäin paljon
66. Levoton ja katkonainen uni	(1)	(2)	(3)	(4)	(5)
67. Pakonomainen halu rikkoa tai paiskoa esineitä	(1)	(2)	(3)	(4)	(5)
68. Ajatukset tai uskomukset, joita muut eivät ymmärrä	(1)	(2)	(3)	(4)	(5)
69. Häiritsevä tietoisuus omasta olemisesta toisten ihmisten seurassa	(1)	(2),	(3)	(4)	(5)
70. Epämukavuuden tunne ollessanne ihmisten keskellä, esim. kaupoissa tai elokuvissa tms	(1)	(2)	(3)	(4)	(5)
71. Tunne, että koko elämä on jatkuvaa ponnistelua	(1)	(2)	(3)	(4)	(5)
72. Pelon tai pakokauhun puuskat	(1)	(2)	(3)	(4)	(5)
73. Epämukavuuden tunne ollessanne ateriomassa tai kahvilla julkisella paikalla	(1)	(2)	(3)	(4)	(5)
74. Joutuminen usein väittelyihin	(1)	(2)	(3)	(4)	(5)
75. Hermostuneisuus jäädessänne yksin	(1)	(2)	(3)	(4)	(5)
76. Tunne, etteivät toiset anna tarpeeksi arvoa saavutuksillenne	(1)	(2)	(3)	(4)	(5)
77. Yksinäisyyden tunne silloinkin, kun olette toisten seurassa	(1)	(2)	(3)	(4)	(5)
78. Levottomuuden tunne, joka estää rauhassa istumisenkin	(1)	(2)	(3)	(4)	(5)
79. Arvottomuuden tunteet	(1)	(2)	(3)	(4)	(5)
80. Tunne, että tutut asiat ovat outoja tai epätodellisia	(1)	(2)	(3)	(4)	(5)
81. Halu huutaa tai heitellä esineitä	(1)	(2)	(3)	(4)	(5)

MISSÄ MÄÄRIN TEITÄ ON VIIMEISEN KUUKAUDEN AIKANA VAIVANNUT		Ei lainkaan	Melko vähän	Jonkin verran	Melko paljon	Erittäin paljon
82.	Pelko, että pyörtyisitte yleisellä paikalla.....	(1)	(2)	(3)	(4)	(5)
83.	Tunne, että ihmiset yrittävät hyötyä kustannuksellanne, jos annatte siihen tilaisuuden.....	(1)	(2)	(3)	(4)	(5)
84.	Seksuaalisuutta koskevat, häiritsevät ajatukset.....	(1)	(2)	(3)	(4)	(5)
85.	Ajatus, että teitä pitäisi rangaista synneistä.....	(1)	(2)	(3)	(4)	(5)
86.	Tunne, että Teitä painostetaan tekemään tehtävänne.....	(1)	(2)	(3)	(4)	(5)
87.	Tunne, että jotakin on vakavasti vialla ruumiissanne.....	(1)	(2)	(3)	(4)	(5)
88.	Tunne, ettette koskaan ole ollut läheinen kenenkään kanssa.....	(1)	(2)	(3)	(4)	(5)
89.	Syyllisyydentunteet.....	(1)	(2)	(3)	(4)	(5)
90.	Tunne, että "päässänne on jotain vikaa".....	(1)	(2)	(3)	(4)	(5)

Tarkistaisitteko vielä ystävällisesti, että olette muistaneet vastata jokaiseen kysymykseen.

KIITOS VAIVANNÄÖSTÄ !

EDI

Eating Disorder Inventory *by David M. Garner, 1990.* Suomennos *Pia Charpentier, 1994.*

Päivämäärä: _____

Nimi: _____

Syntymäaika: _____

Sukupuoli: Nainen ☐ Mies ☐

Tämänhetkinen paino:	_____	kg
Pituus:	_____	cm
Suurin aikaisempi paino (lukuunottamatta raskauden aikaista):	_____	kg
Kuinka kauan sitten?	_____	kuukautta
Kauanko painoit tämän verran?	_____	kuukautta
Alhaisin aikuisiän paino:	_____	kg
Kuinka kauan sitten?	_____	kuukautta
Kauanko painoit tämän verran?	_____	kuukautta
Mitä pidät ihannepainonasi?	_____	kg
Missä iässä paino-ongelmasi alkoi?	_____	

Ohjeet:

Tämän kyselyn tarkoituksena on mitata asenteitasi, tunteitasi ja syömiskäyttäytymistäsi, sekä muita persoonallisuutesi osa-alueita. Kysymyksiin ei ole olemassa oikeita tai vääriä vastauksia. Saat käyttää vastaamiseen niin paljon aikaa kuin tarvitset.

Lue kysymys ja ympyröi sopiva kirjain. Jos väittämä pitää kohdallasi paikkaansa aina, ympyröi **A**; jos melkein aina toimit tai ajattelet väittämän mukaisella tavalla, ympyröi **B** jne.

Esimerkkitehtävä:

Väittämä pitää kohdallani paikkaansa	aina	melkein aina	usein	joskus	harvoin	ei koskaan
Kuuntelen mielelläni radiota.	A	(B)	C	D	E	F

Vastaa *jokaiseen* kysymykseen huolellisesti ja mahdollisimman rehellisesti.

Kiitos!

A = AINA
B = TAVALLISESTI
C = USEIN
D = JOSKUS
E = HARVOIN
F = EI KOSKAAN

	Väittämä pitää kohdallani paikkaansa	aina	tavalli-sesti	usein	jos-kus	har-voin	ei kos-kaan
1.	Syön makeisia ja hiilihydraatteja tuntematta oloani hermostuneeksi.	A	B	C	D	E	F
2.	Vatsani on mielestäni liian iso.	A	B	C	D	E	F
3.	Toivoisin, että voisin palata takaisin turvalliseen lapsuuteen.	A	B	C	D	E	F
4.	Syön silloin, kun olen poissa tolaltani.	A	B	C	D	E	F
5.	Ahdan itseni täyteen ruokaa.	A	B	C	D	E	F
6.	Toivon, että voisin olla nuorempi.	A	B	C	D	E	F
7.	Ajattelen laihduttamista.	A	B	C	D	E	F
8.	Pelästyn, jos jokin asia herättää minussa voimakkaita tunteita.	A	B	C	D	E	F
9.	Reiteni ovat mielestäni liian paksut.	A	B	C	D	E	F
10.	Tunnen itseni hyödyttömäksi ihmisenä.	A	B	C	D	E	F
11.	Tunnen voimakasta syyllisyyttä ylensyötyäni.	A	B	C	D	E	F
12.	Vatsani on mielestäni juuri sopivan kokoinen.	A	B	C	D	E	F
13.	Vain loistavia suorituksia pidetään perheessäni kyllin hyvinä.	A	B	C	D	E	F
14.	Lapsuus on elämän onnellisinta aikaa.	A	B	C	D	E	F
15.	Ilmaisen tunteeni avoimesti.	A	B	C	D	E	F
16.	Painoni nouseminen kauhistuttaa minua.	A	B	C	D	E	F
17.	Luotan ihmisiin.	A	B	C	D	E	F
18.	Tunnen olevani yksin maailmassa.	A	B	C	D	E	F
19.	Olen tyytyväinen vartalooni.	A	B	C	D	E	F

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	Väittämä pitää kohdallani paikkaansa	aina	tavalli-sesti	usein	jos-kus	har-voin	ei kos-kaan
20.	Tavallisesti pystyn hallitsemaan asiat, joita elämässäni kohtaan.	A	B	C	D	E	F
21.	En aina ymmärrä tunteitani.	A	B	C	D	E	F
22.	Olisin mieluummin aikuinen kuin lapsi.	A	B	C	D	E	F
23.	Pystyn keskustelemaan toisten kanssa helposti.	A	B	C	D	E	F
24.	Toivoisin olevani joku toinen ihminen.	A	B	C	D	E	F
25.	Liioittelen tai suurentelen painon merkitystä.	A	B	C	D	E	F
26.	Ymmärrän hyvin tunteitani.	A	B	C	D	E	F
27.	Tunnen itseni riittämättömäksi.	A	B	C	D	E	F
28.	Minulla on ollut hetkiä, jolloin olen syönyt niin, etten ole pystynyt lopettamaan.	A	B	C	D	E	F
29.	Lapsena varoin tarkoin, etten tuottaisi pettymyksiä vanhemmilleni tai opettajilleni.	A	B	C	D	E	F
30.	Minulla on läheisiä ihmissuhteita.	A	B	C	D	E	F
31.	Olen tyytyväinen takamukseni muotoon.	A	B	C	D	E	F
32.	Mielessäni pyörii jatkuvasti halu olla hoikempi.	A	B	C	D	E	F
33.	En ymmärrä mitä minussa tapahtuu.	A	B	C	D	E	F
34.	Minun on vaikea ilmaista tunteitani muille.	A	B	C	D	E	F
35.	Aikuisuuden vaatimukset ovat liian suuret.	A	B	C	D	E	F
36.	Haluan olla aina paras siinä mitä teen.	A	B	C	D	E	F
37.	Luotan itseeni.	A	B	C	D	E	F
38.	Ajattelen ylensyömistä.	A	B	C	D	E	F
39.	Olen onnellinen siitä, etten enää ole lapsi.	A	B	C	D	E	F

A = AINA
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	Väittämä pitää kohdallani paikkaansa	aina	tavalli-sesti	usein	jos-kus	har-voin	ei kos-kaan
40.	En aina tiedä olenko nälkäinen vai en.	A	B	C	D	E	F
41.	En arvosta itseäni.	A	B	C	D	E	F
42.	Uskon, että saavutan tavoitteet, joihin pyrin.	A	B	C	D	E	F
43.	Vanhempani ovat odottaneet minulta aina parasta mahdollista suoritusta.	A	B	C	D	E	F
44.	Pelkään, etten pysty hallitsemaan tunteitani.	A	B	C	D	E	F
45.	Lantioni on mielestäni liian leveä.	A	B	C	D	E	F
46.	Toisten läsnäollessa syön vain hiukan ja heidän lähdettyään ahmin itseni täyteen ruokaa.	A	B	C	D	E	F
47.	Minulle tulee turvonnut olo syötyäni normaalin aterian.	A	B	C	D	E	F
48.	Minusta tuntuu, että ihmiset ovat onnellisimpia lapsena.	A	B	C	D	E	F
49.	Jos lihon kilon, minua huolettaa, että lihomiseni jatkuu edelleen.	A	B	C	D	E	F
50.	Tunnen olevani tarpeellinen ihminen.	A	B	C	D	E	F
51.	Kun olen poissa tolaltani, en tiedä olenko surullinen, peloissani vai vihainen.	A	B	C	D	E	F
52.	Tunnen, että minun on tehtävä asiat täydellisesti tai sitten jätettävä ne kokonaan tekemättä.	A	B	C	D	E	F
53.	Olen ajatellut oksentaa, jotta saisin painoni putoamaan.	A	B	C	D	E	F
54.	Haluan pitää ihmisiin etäisyyttä (minulle tulee epämukava olo, jos joku yrittää päästä liian lähelle minua).	A	B	C	D	E	F

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C = USEIN
D = JOSKUS
E = HARVOIN
F = EI KOSKAAN

	Väittämä pitää kohdallani paikkaansa	aina	tavallisesti	usein	joskus	harvoin	ei koskaan
55.	Reiteni ovat mielestäni juuri sopivan kokoiset.	A	B	C	D	E	F
56.	Minulla on henkisesti tyhjä olo.	A	B	C	D	E	F
57.	Pystyn puhumaan henkilökohtaisista ajatuksistani ja tunteistani.	A	B	C	D	E	F
58.	Elämän parhaita vuosia ovat ne, jolloin tullaan aikuiseksi.	A	B	C	D	E	F
59.	Takamukseni on mielestäni liian suuri.	A	B	C	D	E	F
60.	Minulla on tunteita, joita en osaa pukea sanoiksi.	A	B	C	D	E	F
61.	Syön tai juon salaa.	A	B	C	D	E	F
62.	Lantioni on mielestäni juuri sopivan kokoinen.	A	B	C	D	E	F
63.	Asetan tavoitteeni äärimmäisen korkealle.	A	B	C	D	E	F
64.	Kun olen poissa tolaltani, pelkään, että alan syödä.	A	B	C	D	E	F

Appendix 5. SAS

Potilasnumero:

SAS

Interventionumero: 0/alku

Täyttöpäivämäärä

Olemme kiinnostuneita toiminnastasi kahden viime viikon aikana. Haluaisimme sinun vastaavan seuraaviin kysymyksiin, jotka koskevat työtäsi, vapaa-aikaasi ja perhe-elämääsi. Näihin kysymyksiin ei ole oikeita eikä vääriä vastauksia. Valitse kunkin kysymyksen kohdalla vastausvaihtoehto, joka parhaiten kuvaa tilannettasi **viimeksi kuluneen kuukauden aikana.**

ANSIOTYÖ/ TYÖ KODIN ULKOPUOLELLA

SAS 1. Mikä seuraavista kuvaa parhaiten tämänhetkistä tilannettasi?
Olen

1 työssä
2 kotiäiti tai -isä; hoidan kotia
3 opiskelija
4 eläkkeellä
5 työtön

SAS 2. Teetkö tavallisesti ansiotyötä yli 15 tuntia viikossa?

1 Kyllä
2 En

SAS 3. Teitkö ansiotyötä viimeksi kuluneen kuukauden aikana?

1 Kyllä, ainakin joitakin tunteja
2 En

Seuraavat kysymykset koskevat ansiotyötäsi viimeksi kuluneen kuukauden aikana.
Valitse parhaiten sopiva vastausvaihtoehto kunkin kysymyksen kohdalla.

SAS 4. Kuinka monta päivää olet ollut poissa työstä viimeksi kuluneen kuukauden aikana?

1 en yhtään päivää
2 yhden päivän
3 noin puolet työajasta
4 yli puolet työajasta, mutta olin työssä ainakin päivän
5 kaiken työajan

0 olin lomalla koko kuukauden ajan

Jos et ollut lainkaan työssä viimeksi kuluneen kuukauden aikana, siirry suoraan kysymykseen 10

SAS 5. Miten olet pystynyt suoriutumaan työstäsi viimeksi kuluneen kuukauden aikana?

1 erittäin hyvin
2 suoriuduin hyvin lukuunottamatta joitakin vähäisiä vaikeuksia
3 tarvitsin apua työssäni ja suoriuduin heikosti noin puolet ajasta
4 suoriuduin työstäni heikosti suurimman osan ajasta
5 suoriuduin työstäni heikosti koko ajan

SAS 6. Oletko joutunut viimeksi kuluneen kuukauden aikana häpeämään sitä, miten olet tehnyt työsi?

1 en kertaakaan
2 kerran tai kaksi olin hiukan häpeissäni
3 olen tuntenut häpeää noin puolet ajasta
4 olen tuntenut häpeää suurimman osan ajasta
5 olen tuntenut häpeää koko ajan

SAS 7. Onko sinulla ollut riitoja tai erimielisyyksiä työpaikallasi viimeksi kuluneen kuukauden aikana?

1 ei kertaakaan; olen tullut toimeen erittäin hyvin
2 olen yleensä tullut hyvin toimeen lukuunottamatta vähäisiä erimielisyyksiä
3 minulla on ollut joitakin riitoja
4 minulla on ollut useita riitoja
5 minulla on ollut jatkuvasti riitoja työpaikallani

SAS 8. Oletko tuntenut olosi hermostuneeksi, huolestuneeksi tai epämukavaksi ollessasi työssä viimeksi kuluneen kuukauden aikana?

1 en koskaan
2 kerran tai pari
3 puolet ajasta
4 suurimman osan ajasta
5 olen tuntenut oloni hermostuneeksi tai epämukavaksi koko ajan

SAS 9. Onko työsi tuntunut sinusta mielenkiintoiselta viimeksi kuluneen kuukauden aikana?

1 on melkein koko ajan
2 kerran tai pari työni ei tuntunut kiinnostavalta
3 työni tuntui puolet ajasta mielenkiinnottomalta
4 työni on tuntunut mielenkiinnottomalta suurimman osan ajasta
5 työni on tuntunut mielenkiinnottomalta koko ajan

KOTITYÖ

SAS 10. Kuinka monena päivänä olet tehnyt kotitöitä tai hoitanut kotiaskareita viimeksi kuluneen kuukauden aikana?

1 päivittäin
2 lähes päivittäin
3 noin puolet ajasta
4 en ole tehnyt kotitöitä juuri lainkaan
5 olin täysin kykenemätön tekemään kotitöitä
0 olin poissa kotoa viimeksi kuluneen kuukauden ajan

SAS 11. Kuinka hyvin olet suoriutunut kotitöistäsi viimeksi kuluneen kuukauden aikana?

1 erittäin hyvin
2 suoriuduin hyvin lukuunottamatta joitakin vähäisiä vaikeuksia
3 tarvitsin apua ja suoriuduin huonosti noin puolet ajasta
4 suoriuduin huonosti suurimman osan ajasta
5 suoriuduin huonosti koko ajan

SAS 12. Oletko joutunut viimeksi kuluneen kuukauden aikana häpeämään sitä, miten olet hoitanut kotityösi?

1 en kertaakaan
2 kerran tai kaksi olin hiukan häpeissäni
3 olen tuntenut häpeää noin puolet ajasta
4 olen tuntenut häpeää suurimman osan ajasta
5 olen tuntenut häpeää koko ajan

SAS 13. Onko sinulla ollut riitoja tai erimielisyyksiä kaupan myyjien, naapurien tms. kanssa viimeksi kuluneen kuukauden aikana?

1 ei kertaakaan; olen tullut toimeen erittäin hyvin
2 olen yleensä tullut hyvin toimeen lukuunottamatta vähäisiä erimielisyyksiä
3 minulla on ollut joitakin riitoja tai erimielisyyksiä
4 minulla on ollut useita riitoja tai erimielisyyksiä
5 minulla on ollut jatkuvasti riitoja

SAS 14. Oletko tuntenut itsesi hermostuneeksi tehdessäsi kotitöitä viimeksi kuluneen kuukauden aikana?

1 en koskaan
2 kerran tai pari
3 puolet ajasta
4 suurimman osan ajasta
5 koko ajan

SAS 15. Ovatko kotityöt tuntuneet sinusta mielenkiintoisilta viimeksi kuluneen kuukauden aikana?

1 ovat melkein koko ajan
2 kerran tai pari kotityöt eivät tuntuneet kiinnostavilta
3 kotityöt tuntuivat puolet ajasta mielenkiinnottomilta
4 kotityöt ovat tuntuneet mielenkiinnottomilta suurimman osan ajasta
5 kotityöt ovat tuntuneet mielenkiinnottomilta koko ajan

OPISKELIJAT

Vastaa kysymyksiin 16 - 22, mikäli opiskelet vähintään puolipäiväisesti.
Muut voivat siirtyä suoraan kysymykseen 23.

SAS 16. Mikä seuraavista kuvaa parhaiten opintojasi?

1 opiskelen kokopäiväisesti
2 opiskelen 3/4-aikaisesti
3 opiskelen puolipäiväisesti

Valitse vaihtoehto, joka kuvaa parhaiten tilannettasi viimeksi kuluneen kuukauden aikana.

SAS 17. Kuinka monena päivänä jäit pois opinnoistasi viimeksi kuluneen kuukauden aikana?

1 en yhtenäkään
2 parina päivänä
3 noin puolet ajasta
4 olin poissa yli puolet ajasta, mutta opiskelin kuitenkin vähintään yhden päivän
5 en opiskellut lainkaan

0 olin lomalla koko viimeksi kuluneen kuukauden ajan

SAS 18. Kuinka hyvin olet suoriutunut opinnoistasi viimeksi kuluneen kuukauden aikana?

1 erittäin hyvin
2 suoriuduin hyvin lukuunottamatta joitakin vähäisiä vaikeuksia
3 tarvitsin apua opinnoissani ja suoriuduin huonosti noin puolet ajasta
4 suoriuduin opinnoistani huonosti suurimman osan ajasta
5 suoriuduin opinnoistani huonosti koko ajan

SAS 19. Oletko viimeksi kuluneen kuukauden aikana joutunut häpeämään sitä, miten olet suorittanut opintojasi?

1 en kertaakaan
2 kerran tai kaksi olin hiukan häpeissäni
3 olen tuntenut häpeää noin puolet ajasta
4 olen tuntenut häpeää suurimman osan ajasta
5 olen tuntenut häpeää koko ajan

SAS 20. Onko sinulla ollut riitoja tai erimielisyyksiä opiskelupaikassasi viimeksi kuluneen kuukauden aikana?

1 ei kertaakaan; olen tullut erittäin hyvin toimeen
2 olen tullut yleensä toimeen hyvin lukuunottamatta vähäisiä erimielisyyksiä
3 minulla on ollut joitakin riitoja
4 minulla on ollut useita riitoja
5 olen ollut jatkuvasti riidoissa

0 en ole ollut opiskelupaikassani; kysymys ei sovellu minulle

SAS 21. Oletko tuntenut olosi hermostuneeksi opiskelupaikassasi viimeksi kuluneen kuukauden aikana?

1 en koskaan
2 kerran tai pari
3 puolet ajasta
4 suurimman osan ajasta
5 olen tuntenut oloni hermostuneeksi koko ajan

0 en ole ollut opiskelupaikassani; kysymys ei sovellu minulle

SAS 22. Ovatko opintosi tuntuneet sinusta mielenkiintoisilta viimeksi kuluneen kuukauden aikana?

1 ovat melkein koko ajan
2 kerran tai pari opintoni eivät tuntuneet kiinnostavilta
3 opintoni tuntuivat puolet ajasta mielenkiinnottomilta
4 opintoni ovat tuntuneet mielenkiinnottomilta suurimman osan ajasta
5 opintoni ovat tuntuneet mielenkiinnottomilta koko ajan

VAPAA-AIKA.

Kaikki vastaavat kysymyksiin 23-31.

Ympyröi kunkin kysymyksen kohdalla sen vaihtoehdon numero, joka vastaa parhaiten tilannettasi viimeksi kuluneen kuukauden aikana.

SAS 23. Kuinka monen ystäväsi kanssa olet keskustellut - joko tavannut häntä tai puhunut hänen kanssaan puhelimessa viimeksi kuluneen kuukauden aikana?

1 vähintään 9 ystävän kanssa
2 5-8 ystävän kanssa
3 2-4 ystävän kanssa
4 yhden ystävän kanssa
5 en yhdenkään ystävän kanssa

SAS 24. Oletko pystynyt puhumaan tunteistasi ja ongelmistasi ainakin yhden ystäväsi kanssa viimeksi kuluneen kuukauden aikana?

1 pystyn aina puhumaan sisimmistä tunteistani
2 olen yleensä pystynyt puhumaan tunteistani
3 pystyin puhumaan tunteistani noin puolet ajasta
4 useimmiten en ole pystynyt puhumaan tunteistani
5 en pystynyt koko aikana puhumaan tunteistani

0 minulla ei ole ystäviä; kysymys ei sovellu minulle

SAS 25. Kuinka monta kertaa viimeksi kuluneen kuukauden aikana olet viettänyt aikaa yhdessä (ollut sosiaalisessa kanssakäymisessä) muiden ihmisten kanssa? (Esimerkiksi käynyt ystävien luona käynyt elokuvissa, keilaamassa, kirkossa, ravintoloissa tai kutsunut ystäviä kotiisi?)

1 vähintään neljä kertaa
2 kolme kertaa
3 kaksi kertaa
4 kerran
5 en yhtään kertaa

SAS 26. Kuinka paljon aikaa olet käyttänyt harrastuksiisi viimeksi kuluneen kuukauden aikana?
(Esimerkiksi käsitöihin, keilailuun, puutarhanhoitoon, urheilu- tai liikuntaharrastuksiin tai lukemiseen)

1 suurimman osan vapaa-ajastani melkein joka päivä
2 osan vapaa-ajastani muutamina päivinä
3 käytin harrastuksiin vain vähän vapaa-ajastani
4 en ole harrastanut juuri lainkaan, mutta televisiota olen katsellut
5 en ole harrastanut mitään, en edes television katselua

SAS 27. Onko sinulla ollut ilmiriitoja ystäviesi kanssa viimeksi kuluneen kuukauden aikana?

1 ei kertaakaan ja tulin toimeen erittäin hyvin
2 olen yleensä tullut hyvin toimeen lukuunottamatta joitakin vähäisiä erimielisyyksiä
3 minulla on ollut joitakin riitoja
4 minulla on ollut useita riitoja
5 olen ollut jatkuvasti riidoissa

0 minulla ei ole ystäviä; kysymys ei sovellu minulle

SAS 28. Jos joku ystävistäsi loukkasi tunteitasi viimeksi kuluneen kuukauden aikana,
miten suhtauduit siihen?

1 en pahoittanut mieltäni tai tällaista ei tapahtunut lainkaan
2 pääsin sen yli muutamassa tunnissa
3 pääsin sen yli muutamassa päivässä
4 pääsin sen yli viikossa
5 tulee menemään kuukausia, ennen kuin toivun siitä

0 ei sovellu minuun; minulla ei ole ystäviä

SAS 29. Oletko tuntenut olosi araksi tai epämukavaksi ihmisten seurassa viimeksi kuluneen kuukauden aikana?

1 olen tuntenut oloni koko ajan miellyttäväksi
2 olen tuntenut oloni joskus epämukavaksi, mutta olen vapautunut hetken kuluttua
3 olen tuntenut oloni epämukavaksi noin puolet ajasta
4 olen tuntenut useimmiten oloni epämukavaksi
5 olen tuntenut aina oloni epämukavaksi

0 ei sovellu minuun; en ollut lainkaan ihmisten seurassa

SAS 30. Oletko viimeksi kuluneen kuukauden aikana tuntenut itsesi yksinäiseksi ja toivonut, että sinulla olisi enemmän ystäviä?

1 en ole tuntenut oloani yksinäiseksi
2 olen muutaman kerran tuntenut oloni yksinäiseksi
3 olen tuntenut noin puolet ajasta oloni yksinäiseksi
4 olen tuntenut useimmiten oloni yksinäiseksi
5 olen tuntenut oloni koko ajan yksinäiseksi ja toivoin, että minulla olisi enemmän ystäviä

SAS 31. Oletko tuntenut itsesi ikävystyneeksi vapaa-aikanasi viimeksi kuluneen kuukauden aikana?

1 en koskaan
2 en yleensä tuntenut oloani ikävystyneeksi
3 olen tuntenut oloni ikävystyneeksi noin puolet ajasta
4 olen tuntenut oloni ikävystyneeksi suurimman osan ajasta
5 olin koko ajan ikävystynyt ja kyllästynyt

SAS 32. Oletko naimaton, leski tai eronnut etkä asu yhdessä vastakkaista sukupuolta olevan henkilön kanssa

1 Kyllä. Vastaa kysymyksiin 33. a 34.
2 En. Voit siirtyä suoraan kysymykseen 35

SAS 33. Kuinka monta kertaa olet viimeksi kuluneen kuukauden aikana ollut ulkona vastakkaista sukupuolta olevan henkilön kanssa (ravintolassa, elokuvissa, tanssimassa tms.)?

1 vähintään neljä kertaa
2 kolme kertaa
3 kaksi kertaa
4 kerran
5 en yhtään kertaa

SAS 34. Oletko ollut kiinnostunut seurustelusta vastakkaista sukupuolta olevan ihmisen kanssa? (Jos et ole seurustellut, olisitko halunnut seurustella?)

1 olen ollut koko ajan kiinnostunut seurustelusta
2 olen ollut suurimman osan aikaa kiinnostunut
3 puolet ajasta olen ollut kiinnostunut
4 suurimman osan ajasta en ole ollut kiinnostunut
5 en ole tuntenut kiinnostusta seurustelua kohtaan

SUKULAISET

Kysymykset 35-43 koskevat vanhempiasi, sisaruksiasi, puolisosi sukulaisia ja niitä lapsiasi, jotka eivät asu kotona.

SAS 35. Oletko ollut tekemisissä sukulaistesi kanssa viimeksi kuluneen kuukauden aikana?

1	Kyllä	Vastaa kysymyksiin 36 - 43.
2	En	Siirry kysymykseen 42.

SAS 36. Onko sinulla ollut ilmiriitoja sukulaistesi kanssa viimeksi kuluneen kuukauden aikana?

1 olemme tulleet hyvin toimeen keskenämme koko ajan
2 olemme tulleet hyvin toimeen joitakin vähäisiä erimielisyyksiä lukuunottamatta
3 minulla on ollut joitakin riitoja ainakin yhden sukulaiseni kanssa
4 on ollut useita riitoja
5 olen ollut jatkuvasti riidoissa

SAS 37. Oletko pystynyt puhumaan tunteistasi ja ongelmistasi ainakin yhden sukulaisesi kanssa viimeksi kuluneen kuukauden aikana?

1 pystyn aina puhumaan tunteistani ainakin yhden sukulaiseni kanssa
2 pystyn yleensä puhumaan tunteistani
3 tunsin kykeneväni puhumaan tunteistani noin puolet ajasta
4 en ole juuri pystynyt puhumaan tunteistani
5 en ole pystynyt lainkaan puhumaan tunteistani

SAS 38. Oletko välttänyt yhteydenpitoa sukulaistesi kanssa viimeksi kuluneen kuukauden aikana?

1 olen pitänyt yhteyttä sukulaisiini säännöllisesti
2 olen pitänyt yhteyttä ainakin kerran johonkin sukulaisistani
3 olen odottanut sukulaisteni ottavan yhteyttä minuun
4 olen välttänyt yhteydenpitoa, mutta sukulaiseni ovat ottaneet yhteyttä minuun
5 minulla ei ole ollut mitään yhteyttä sukulaisiini

SAS 39. Oletko joutunut turvautumaan **sukulaistesi** apuun, neuvoihin, taloudelliseen tukeen tai seuraan viimeksi kuluneen kuukauden aikana?

1 en ole ollenkaan joutunut turvautumaan
2 en ole yleensä joutunut turvautumaan
3 olen joutunut turvautumaan heihin noin puolet ajasta
4 suurimman osan aikaa olen joutunut turvautumaan heihin
5 olen lähes täysin riippuvainen heistä näiden suhteen

SAS 40. Oletko halunnut toimia vastoin sukulaistesi tahtoa suututtaaksesi heitä viimeksi kuluneen kuukauden aikana?

1 en ole koskaan halunnut toimia vastoin heidän tahtoaan
2 halusin kerran tai kaksi toimia vastoin heidän tahtoaan
3 halusin vastustaa heitä noin puolet ajasta
4 halusin vastustaa heitä suurimman osan ajasta
5 vastustin heitä koko ajan

SAS 41. Oletko viimeksi kuluneen kuukauden aikana ilman erityistä syytä ollut huolissasi sukulaisistasi ?

1 en ole ollut
2 olen ollut kerran tai kaksi
3 olen ollut noin puolet ajasta
4 olen ollut suurimman osan ajasta
5 olen ollut koko ajan

0 kohta ei sovellu minulle; minulla ei ole sukulaisia

Kaikki vastaavat kysymyksiin 42 ja 43, vaikka sukulaisesi eivät olisi enää elossa

SAS 42. Oletko viimeksi kuluneen kuukauden aikana kokenut jättäneesi jonkun sukulaisesi pulaan tai ollut epäreilu häntä kohtaan?

1 en ole
2 en ole yleensä
3 noin puolet ajasta olen
4 olen suurimman osan ajasta
5 olen koko ajan

SAS 43. Oletko viimeksi kuluneen kuukauden aikana kokenut sukulaisesi jättäneen sinut pulaan tai olleen epäreiluja sinua kohtaan?

1 en ole koskaan kokenut heidän jättäneen minua pulaan
2 olen kokenut että he eivät yleensä ole jättäneet minua pulaan
3 noin puolet ajasta olen kokenut heidän jättäneen minua pulaan
4 suurimman osan ajasta olen kokenut heidän jättäneen minua pulaan
5 olen hyvin katkera siitä, että sukulaiseni ovat jättäneet minut pulaan

PUOLISO/ASUINKUMPPANI

SAS 44. Asutko yhdessä puolisosi kanssa tai vastakkaista sukupuolta olevan henkilön kanssa vakituisessa suhteessa?

1 Kyllä Vastaa kysymyksiin 45 - 53.
2 Ei Siirry kysymykseen 54.

SAS 45. Oletko riidellyt kumppanisi kanssa viimeksi kuluneen kuukauden aikana?

1 emme ole riidelleet, olemme tulleet hyvin toimeen keskenämme
2 olemme kaiken kaikkiaan tulleet hyvin toimeen muutamia kahnauksia lukuunottamatta
3 riitelimme useammin kuin kerran
4 riitelimme usein
5 riitelimme jatkuvasti

SAS 46. Oletko pystynyt puhumaan kumppanisi kanssa tunteistasi ja ongelmistasi viimeksi kuluneen kuukauden aikana?

1 olen koko ajan pystynyt puhumaan tunteistani
2 olen yleensä pystynyt puhumaan tunteistani
3 olen pystynyt puhumaan tunteistani noin puolet ajasta
4 en ole yleensä pystynyt puhumaan tunteistani
5 en ole lainkaan pystynyt puhumaan tunteistani

SAS 47. Oletko viimeksi kuluneen kuukauden aikana vaatinut, että asiat tehdään kotona juuri haluamallasi tavalla?

1 en ole vaatinut, että asiat tehdään aina haluamallani tavalla
2 en ole yleensä vaatinut, että asiat tehdään haluamallani tavalla
3 noin puolet ajasta olen vaatinut, että asiat tehdään haluamallani tavalla
4 vaadin tavallisesti, että asiat tehdään haluamallani tavalla
5 vaadin aina, että asiat tehdään haluamallani tavalla

SAS 48. Onko kumppanisi määräillyt sinua viimeksi kuluneen kuukauden aikana?

1 ei juuri koskaan
2 silloin tällöin
3 noin puolet ajasta
4 suurimman osan ajasta
5 koko ajan

SAS 49. Kuinka riippuvaiseksi kumppanistasi olet tuntenut itsesi viimeksi kuluneen kuukauden aikana?

1 olen ollut itsenäinen
2 olen enimmäkseen ollut itsenäinen
3 olen ollut jossain määrin riippuvainen
4 olen yleensä ollut riippuvainen
5 olen ollut riippuvainen kumppanistani kaikessa

SAS 50. Millaiset ovat tunteesi kumppaniasi kohtaan olleet viimeksi kuluneen kuukauden aikana?

1 olen koko ajan tuntenut pitäväni hänestä
2 olen enimmäkseen tuntenut pitäväni hänestä
3 olen yhtä usein tuntenut pitäväni hänestä kuin en pitäväni
4 enimmäkseen en ole pitänyt hänestä
5 en ole koko aikana pitänyt hänestä

SAS 51. Kuinka usein olet ollut sukupuoliyhdynnässä kumppanisi kanssa?

1 yli kaksi kertaa viikossa
2 kerran tai kaksi viikossa
3 joka toinen viikko
4 harvemmin kuin joka toinen viikko, mutta ainakin kerran viime kuussa
5 en lainkaan kuukauteen tai pitempään aikaan

SAS 52. Onko sinulla ollut ongelmia yhdynnässä (esim. kivun tuntemuksia) viimeksi kuluneen kuukauden aikana?

1 ei ole
2 kerran tai kaksi
3 noin puolet ajasta
4 suurimman osan ajasta
5 aina

0 ei sovellu; en ole ollut yhdynnässä viimeksi kuluneen kuukauden aikana

SAS.53. Miltä sukupuoliyhdyntä on tuntunut sinusta viimeksi kuluneen kuukauden aikana?

1 olen nauttinut siitä aina
2 olen nauttinut siitä yleensä
3 olen nauttinut siitä puolet ajasta
4 en ole yleensä nauttinut siitä
5 en ole nauttinut siitä kertaakaan

LAPSET

SAS.54. Onko kanssasi kotona asunut viimeksi kuluneen kuukauden aikana omia tai puolisosi lapsia tai kasvattilapsia? (Tässä ei tarkoiteta naimisissa olevia lapsia.)

1	Kyllä	Vastaa kysymyksiin 55 - 58
2	Ei	Siirry kysymykseen 59.

SAS 55. Oletko ollut kiinnostunut lastesi tekemisistä - koulunkäynnistä, leikeistä tai harrastuksista viimeksi kuluneen kuukauden aikana?

1 olen ollut kiinnostunut koko ajan ja osallistunut niihin aktiivisesti
2 olen yleensä ollut kiinnostunut ja osallistunut niihin
3 olen ollut kiinnostunut noin puolet ajasta
4 en ole yleensä ollut kiinnostunut
5 en ole ollut koskaan kiinnostunut

SAS 56. Oletko pystynyt puhumaan lastesi kanssa ja kuuntelemaan heitä viimeksi kuluneen kuukauden aikana. (Kysymys koskee vain yli 2-vuotiaita lapsia.)

1 olen aina pystynyt puhumaan heidän kanssaan
2 olen yleensä pystynyt puhumaan heidän kanssaan
3 olen pystynyt noin puolet ajasta puhumaan heidän kanssaan
4 en ole yleensä pystynyt puhumaan heidän kanssaan
5 olen ollut täysin kykenemätön puhumaan heidän kanssaan

0 ei sovellu; ei yli 2-vuotiaita lapsia

SAS 57. Kuinka olet tullut toimeen lastesi kanssa viimeksi kuluneen kuukauden aikana?

1 emme ole riidelleet, olemme tulleet hyvin toimeen keskenämme
2 olemme kaikenkaikkiaan tulleet hyvin toimeen muutamia kahnauksia lukuunottamatta
3 riitelimme useammin kuin kerran
4 riitelimme usein
5 riitelimme jatkuvasti

SAS 58. Millaiset ovat tunteesi lapsiasi kohtaan olleet viimeksi kuluneen kuukauden aikana?

1 olen koko ajan tuntenut pitäväni heistä
2 olen enimmäkseen tuntenut pitäväni heistä
3 puolet ajasta olen tuntenut pitäväni heistä
4 enimmäkseen en ole pitänyt heistä
5 en ole koko aikana pitänyt heistä

PERHE

SAS 59. Oletko ollut koskaan naimisissa, elänyt yhdessä vastakkaista sukupuolta olevan kanssa tai onko sinulla lapsia?

1 Kyllä Vastaa kysymyksiin 60 - 62.
2 Ei Siirry kysymykseen 63.

SAS 60 Oletko ollut ilman selvää syytä huolissasi puolisostasi tai lapsistasi viimeksi kuluneen kuukauden aikanaa (vaikka ette tällä hetkellä asuisikaan yhdessä)?

1 en ole ollut huolissani
2 olen ollut huolissani kerran tai kaksi
3 olen ollut huolissani noin puolet ajasta
4 olen ollut huolissani suurimman osan ajasta
5 olen ollut koko ajan huolissani

0 ei sovellu; puolisoni eivätkä lapseni ole enää elossa

SAS 61. Oletko viimeksi kuluneen kuukauden aikana kokenut toimineesi väärin puolisoasi tai lapsiasi kohtaan?

1 en ole
2 minusta ei yleensä ole tuntunut sellaiselta
3 tunsin noin puolet ajasta toimineeni joskus väärin heitä kohtaan
4 tunsin suurimman osan ajasta toimineeni joskus väärin heitä kohtaan
5 tunsin koko ajan toimineeni joskus väärin heitä kohtaan

SAS 62. Oletko viimeksi kuluneen kuukauden aikana kokenut puolisosi tai lapsesi jättäneen sinut pulaan tai toimineen muuten väärin sinua kohtaan?

1 en ole
2 en ole yleensä
3 noin puolet ajasta olen
4 olen suurimman osan ajasta
5 olen kokenut koko ajan

TALOUDELLISET ASIAT

Jokainen vastaa kysymykseen 63.

SAS 63. Onko sinulla ollut viimeksi kuluneen kuukauden aikana käytettävissäsi riittävästi rahaa sinun tai perheesi taloudellisiin tarpeisiin?

1 rahaa on ollut riittävästi
2 rahaa on yleensä ollut riittävästi vaikka pieniä ongelmia onkin ollut
3 rahani ovat riittäneet vain noin puolet ajasta, mutta en ole joutunut lainaamaan
4 rahani eivät ole riittäneet ja olen joutunut lainaamaan muilta
5 minulla on ollut suuria taloudellisia vaikeuksia

Appendix 6. GAF

Arvioi nuoren toimintakykyä arviointihetkeä edeltävän viikon alimman tason mukaisesti. Huomio psykologinen ja sosiaalinen toimintakyky kuvitellulla jatkumolla, missä psyykkinen terveys ja sairaus ovat äärikohdissa. Somaattisista tai ympäristösyistä johtuvia toimintakyvyn laskuja ei huomioida.

100-91	Erittäin hyvä toimintakyky useilla alueilla (kotona, koulussa, tovereiden kanssa), elämän ongelmat eivät näytä aiheuttavan vaikeuksia. Toiset haluavat mielellään olla tämän lapsen tai nuoren kanssa hänen monien positiivisten ominaisuuksiensa takia. Ei oireita.
90 – 81	Ei oireita tai vähäiset oireet (esim. lievä hermostuneisuus ennen kokeita), kaikissa suhteissa hyvä toimintataso, kiinnostunut monista asioista ja paneutuu niihin, sosiaalisesti pärjäävä, yleensä elämäänsä tyytyväinen, ainoastaan arkipäiväisiä ongelmia ja huolia (esim. tilapäisiä ristiriitoja muiden perheenjäsenten kanssa).
80 – 71	Jos oireita esiintyy, ne ovat tilapäisiä ja psykososiaalisiin stressitekijöihin nähden odotettavissa olevia (esim. keskittymisvaikeuksia perheriidan jälkeen), vain vähäinen toimintakyvyn heikentyminen sosiaalisissa suhteissa tai koulussa tai opiskelussa (esim. tilapäisesti jäljessä koulutyössä).
70 – 61	Joitakin lieviä oireita (esim. mielialan lasku tai lievä nukahtamisongelma) tai joitakin vaikeuksia kyvyssä toimia sosiaalisissa suhteissa koulussa tai opiskelussa (esim. tilapäistä koulupinnausta tai varastelua oman perheen piirissä); pääasiallisesti suhteellisen hyvin toimiva, on merkityksellisiä suhteita muutamiin henkilöihin.
60 – 51	Kohtalaisia oireita (esim. lattea tunteiden ilmaisu tai monimutkainen puhe tai yksittäiset paniikkikohtaukset) tai kohtalaisia vaikeuksia kyvyssä toimia sosiaalisissa suhteissa tai koulussa tai opiskelussa (esim. vain vähän ystäviä tai ristiriitoja tovereiden kanssa koulussa tai työssä).
50 – 41	Vakavia oireita (itsemurha-ajatuksia tai vaikeita pakko-oireita tai toistuvia näpistelyjä) tai vakavasti alentunut kyky toimia sosiaalisissa suhteissa tai koulussa tai opiskelussa (esim. ei ole ystäviä tai keskeyttää koulunkäynnin tai opiskelun, ei pysy työssä).
40 – 31	Joitakin häiriöitä realiteettitestauksessa ja kommunikaatiokyvyssä (esim. ilmaisee ajoittain itseään epäloogisesti tai epäselvästi tai epäasiallisesti) tai selviä toiminnan häiriöitä useilla alueilla, kuten koulussa tai opiskelussa tai suhteissa perheenjäseniin tai arvostelukyvyssä tai ajattelussa tai mielialassa (esim. masentunut lapsi välttelee ystäviään tai laiminlyö velvollisuuksiaan perheessä tai ei suoriudu koulu- tai opiskelutehtävistään tai ryhtyy jatkuvasti tappelemaan itseään nuorempien lasten kanssa tai epäonnistuu koulussa tai on kotona uhmainen ja torjuva)
30 – 21	Harhaluulot ja aistiharhat vaikuttavat merkittävästi käyttäytymiseen tai vakavasti alentunut kommunikaatio- tai arvostelukyky (esim. ajoittain hajanainen tai käyttäytyy hyvin epäasiallisesti tai jatkuvia itsemurha-ajatuksia) tai kyvytön toimimaan lähes kaikilla alueilla (esim. makaa sängyssään kaiket päivät, tai ei käy koulua tai ei opiskele tai ei ole harrastuksia tai ei ystäviä).
20 – 11	On jnkl vaara, että lapsi tai nuori vahingoittaa itseään tai muita (esim. itsemurhayritys ilman selvää kuolemantoivetta tai usein väkivaltainen tai maanisesti kiihtynyt) tai ei kykene ajoittain huolehtimaan omasta siisteydestään (esim. tuhrii ulosteella) tai vakava kommunikaatiokyvyn häiriö (esim. enimmäkseen sekava, tai mutistinen, puhumaton).
10 – 1	Jatkuva vaara, että lapsi tai nuori aiheuttaa itselleen tai muille vahinkoa (esim. toistuva väkivaltaisuus) tai jatkuvasti kykenemätön huolehtimaan omasta siisteydestään tai vakava itsemurhayritys, johon liittyy kuolemantoive.

15. OriginalCommunications

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ORIGINAL CONTRIBUTION

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Abstract This study examined puberty and psychosexual state in a clinical sample of adolescents attending for assessment because of eating disorders (ED). A total of 57 adolescents (girls) aged 14–21 years (mean age 16.9 years) having either anorexia nervosa (AN) or bulimia nervosa (BN) were studied by semi-structured interviews and structured self-report questionnaires considering the timing of menarche, dating and attitudes to sexuality. The age at menarche did not differ statistically significantly between AN and BN. It was significantly lower in the BN group than in the normal population, but no statistically significant difference was found between the AN group and normal population. The general attitudes to sexuality were more negative in the AN group than in the BN group. In the AN group, there were also fewer dating experiences and interest in dating than in the BN group. After controlling for the effect of age, age at menarche and duration of ED, negative attitudes to sexuality and no dating experiences were still best predicted by AN. The results suggest different ways of coping with the developmental challenges in sexuality in AN and BN during adolescence.

Key words adolescent – puberty – sexuality – eating disorders

Introduction

Eating disorders begin mostly in adolescence and may hinder or delay adolescent development. They have long-standing physical and psychosocial effects in adulthood. The incidence rates of eating disorders have increased in recent decades, the age of onset, however, has not changed. The peak onset of eating disorders is at 15 years of age, corresponding to the time of great adolescent challenges [15]. For 16- to 24-year-old females the 1-year incidence rate of anorexia nervosa has been estimated at 43/100 000, and of bulimia nervosa at 65/100 000, in a population study [5]. In bulimia nervosa, the incidence rate varies in different studies, and it also seems to be increasing in younger adolescents [17]. Eating disorders rarely begin in pre-puberty [31].

Puberty development starts the adolescent process during which adolescents have to adapt to a changing body and to new demands of maturing sexuality. The age at menarche has been considered a reliable way of estimating the timing of puberty in adolescent girls in a nationwide adolescent Finnish survey [28]. Individual variations in puberty development may be great, and puberty timing may affect adolescent behavior and psychiatric risk. Very early puberty predisposes especially to depressive and delinquent symptoms [3, 13] and increases the risk for negative body experience and, thus, to eating pathology. Cultural pressure for slimness, especially for women, may be especially strong for early maturers because they gain weight when others are still thin [11, 12, 26, 34]. This further complicates young girls' adjustment to bodily changes and maturing sexuality during the pubertal process.

The role of pubertal timing in eating disorders has so far been debated [4, 10, 19, 32, 24]. Leon [23] found no association between early menarche and increased risk for eating disorders, though Fairburn [8], Crisp [6] and Kaltiala-Heino [18] have suggested that early puberty is a risk factor for bulimic type of eating pathology. Normally, interest in sexuality arises during adolescent development. Adolescents begin to be interested in the opposite sex and dating and physical contacts (kissing, petting) start. Phinney [27] found that early maturing girls are likely to engage in dating and sexual intercourse at earlier ages than their later maturing peers. According to Phinney's study, girls begin dating about 2.5 years after menarche. The first kiss is experienced approximately in the middle of adolescent development and first intercourse about 4 years after this [1]. Dating is a way of establishing and strengthening sexual identity [22] and a way of establishing intimate relationships. In a longitudinal Finnish school health survey, 18 % of girls aged 14–15 (in the eighth grade) and 41 % of girls aged 17–18 (in the second grade of upper secondary school) were dating regularly [21].

Problems with sexuality (shame and disgust) seem to trigger the onset of anorexia nervosa [31]. Schmidt [30] found attitudes to sexuality less positive in anorexia nervosa than in other eating disorder groups, although all groups have delays in psychosexual development. However, these studies have been carried out in adult samples. Bulimia has been associated with early advancing sexual behavior among adolescents in population level [18]. In clinical experience, bulimia nervosa also often seems to be associated with premature and uncontrolled sexual relationships, whereas anorexia nervosa seems to be linked with more denying, timid and negative attitudes to sexuality.

The aim of this study was to evaluate the associations of eating disorders with pubertal timing and attitudes to sexuality in a clinical group of adolescent girls suffering from anorexia nervosa or bulimia nervosa. Our study, in contrast to most of the earlier studies, focused on adolescents who were still in the early phase of puberty development and of the eating disorder, and mostly coming to treatment for the first time. The age distribution of our sample matched the adolescent developmental time (14–21 years), and the longstanding effects of eating disorder (malnutrition, longstanding psychosocial and psychological difficulties) could be regarded as minimal. More precisely, we sought to find answers to the following questions:

1) Are adolescents with eating disorders early maturers, and is pubertal timing similar in anorexia nervosa and bulimia nervosa?
2) Does the psychosexual state differ between anorectic and bulimic adolescents?
3) How do age, age at menarche and duration of eating disorders (ED) modify the associations between ED and dating experiences/attitudes to dating and sexuality?

Methods

Setting and sample

The study was carried out in Tampere University Hospital Adolescent Psychiatry Clinic. The clinic is responsible for specialist adolescent psychiatric services in the Tampere Region (35 municipalities). The adolescent (14–19 years) population of the catchment area is approximately 33 000. Adolescents attend the clinic mostly on referral from primary health care or the school health services, but also on referral from other clinics in Tampere University Hospital, from private doctors or on their own initiative. During the time of the study, 489 new adolescents attended the outpatient clinic.

All adolescent patients coming to the clinic between 1 January 1996 and 16 July 1998 and meeting the inclusion criterion were recruited for the study. The inclusion criterion for this study was coming to the clinic because of eating problems. Those adolescents who were referred for other reasons but who were diagnosed with eating disorder during initial psychiatric assessment were also asked to participate. Participation in the study was voluntary and non-participation did not affect the normal assessment and treatment. Informed consent was obtained from all the participants. The Ethical Committee of Tampere University Hospital approved this study design. The sampling procedure is described in Fig. 1. During the study period, 88 adolescents (84 females and 4 males) who met the inclusion criteria were referred to our clinic. Of these, 82 were invited to participate, and 62 participated; all of them were females, since none of the male adolescents fulfilled the diagnostic criteria. The diagnostic group classified eating disorders not otherwise specified (ED-NOS) was excluded because it consisted of only five cases and was considered to be too small for statistical analysis. The final sample thus consisted of 57 adolescent females.

Measures

The diagnoses were made by the first author. We used the ICD-10 diagnostic classification, which is the official diagnostic classification in Finland (WHO 1992) [16]. The consensus diagnoses were then confirmed in a multi-professional team, where information from parents and from the somatic assessment was also available. Eating disorders were classified into anorexia nervosa (AN, F50.0 typical and F50.1 atypical), bulimia nervosa (BN, F50.2 typical and F50.3 atypical) and eating disorder not otherwise specified (ED-NOS, F50.9). In this ar-

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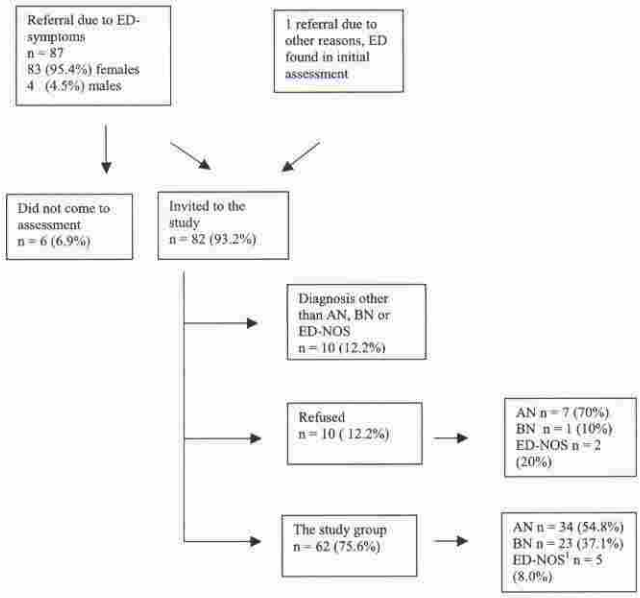

Fig. 1 The sample (*ED* eating disorder; *AN* anorexia nervosa; *BN* bulimia nervosa; *ED-NOS* eating disorders not otherwise specified)
[1] not included in the present study

ticle, we use the main diagnostic groups AN and BN. Those who declined to participate in the study were also diagnosed using the ICD-10 classification as a part of normal adolescent psychiatric assessment.

Data concerning pubertal timing and psychosexual state were collected using a semi-structured interview with an experienced clinician and with self-report questionnaires. The interview was conducted and the questionnaires were distributed at the beginning of the assessment phase, in the first two sessions. The adolescents were weighed in the first session and the body mass index (BMI = kg/m^2) was calculated by the weight and reported height.

The timing of menarche was elicited in the interview by the question: "How old were you when you had your first period (age/years)?". The duration of ED was estimated in the semi-structured interview from the reported beginning of eating problems (age/years) and the assessment time.

The psychosexual state was assessed targeting dating and general attitude to sexuality. Dating behavior was elicited in the structured self-report questionnaire [35] by asking: "How many times during the last month have you been out with someone of the opposite sex (in a restaurant, movies, dancing etc.)?". The response alternatives were: 1 "at least four times"; 2 "three times"; 3 "two times"; 4 "once"; 5 "not at all". In the analyses, these alternatives were dichotomized to "dating" (1, 2, 3 and 4) and "not dating" [5]. The attitude to dating was elicited in the structured self-report questionnaire by "Have you been interested in dating a person of the opposite sex? (If you have not been dating, would you like to have been dating?)". The response alternatives were: 1 "I have been interested in dating all the time"; 2 "I have been interested in dating most of the time"; 3 "I have been interested in dating about half of the time"; 4 "Most of the time I have not been interested in dating"; 5 "I have not been interested in dating". In the analyses, these alternatives were dichotomized to "interested in dating" (1, 2 and 3) and "not interested in dating" (4 and 5).

In the semi-structured interview with the clinician, an open-ended question about the adolescent's general attitude to sexuality led the discussion to sexual matters based on the adolescent's opinion and thoughts about dating, thoughts or experiences of physical contact (kissing, petting) with boys, possible intercourse and thoughts of her own and other adolescents' sexual behavior. Based on this discussion in total the respondent's general attitude to sexuality was classified by the interviewer as: 1 "clear disgust"; 2 "disgust or not interested"; 3 "not interested"; 4 "pleasurable (normal)". The classification of the responses in the semi-structured interview was made according to the guidelines of the EU multi-center study of the treatment of eating disorders, COST Action B6 [20]. In the final analyses the responses were dichotomized to "disgust or not interested" (1, 2 and 3) reflecting negativity in the general attitude to sexuality and "pleasure" (4) reflecting positivity in the general attitude to sexuality. The classification of the general attitude to sexuality was made taking into account the age-appropriateness of the adolescent's reflections on the topic.

Statistical analysis

The data were described using means and standard deviations (SD) or median, minimum (Min) and maximum (Max) for continuous variables and percentages for categorical variables. Differences between ED groups in background variables and psychosexual state were tested using independent samples t-test for normally distributed continuous variables, Mann-Whitney U-test for continuous variables with skewed distributions and χ^2 tests for categorical variables. Comparison of the mean menarche age to the population menarche age was made using one-sample t-test. To evaluate if factors other than type of ED were associated with the psychosexual state, multivariate logistic regression analyses were done. Type of ED, age at assessment, age at menarche and duration of ED were used as independent factors and interest in dating, dating experiences and attitudes towards sexuality as dependent variables. The data were analyzed using SPSS for Windows version 10.1 statistical software.

Results

The group description

The patients with BN were older and had a longer median duration of ED than those with AN. Patients with BN also had a greater BMI (Table 1).

Menarche

The mean age at menarche did not differ statistically significantly between the AN and BN groups (Table 1). The mean age at menarche of the BN group differed significantly ($p = 0.008$) from the mean menarche age in Finland (13.03 years) [28]; in the AN group the difference was of borderline significance ($p = 0.105$). In the whole ED group, three subjects had primary amenorrhea.

Dating and attitude to dating

In the AN group, significantly fewer dating experiences during the last month were reported than in the BN group. In the AN group, there was also less interest in dating than in the BN group (Table 2).

General attitude to sexuality

Between the ED groups, there was a statistically significant difference in the general attitude to sexuality. In the AN group, there was more disgust or lack of interest compared with BN (Table 2). In four cases (7%) in the ED group, the information about the attitude was missing, all of them had AN.

Table 1 Age, BMI, duration of the illness, and menarchal status

	AN (n = 34)	BN (n = 23)	Total (n = 57)	p
Age (years)				
Mean	16.2	17.9	16.9	< 0.001
SD	1.3	1.5	1.6	
BMI (kg/m^2)				< 0.001
Mean	16.8	22.7	19.2	
SD	1.4	5.0	4.4	
Duration of the illness (years)				0.029
Median	1.5	4.2	2.0	
Min	0.44	0.69	0.44	
Max	9.7	6.4	9.7	
Menarche (years)				0.291
Mean	12.7	12.3	12.5	
SD	1.3	1.2	1.3	
n	32	22	54	

AN anorexia nervosa; *BN* bulimia nervosa; *SD* standard deviation

Table 2 Attitude to dating and general sexuality

	AN		BN		Total		p
	n	%	n	%	n	%	
Dating/last month							0.019
Dating	8	28.6	12	63.2	20	42.6	
Not dating	20	71.4	7	36.8	27	55.8	
Attitude to dating							0.031
Interested	17	60.7	17	89.5	34	72.3	
Not interested	11	39.3	2	10.5	13	25.0	
General attitude to sexuality							0.006
Pleasure	7	23.3	14	60.9	21	39.6	
Disgust or not interested	23	76.7	9	39.1	32	60.4	

AN anorexia nervosa; *BN* bulimia nervosa

Multivariate analysis

In multivariate analysis, the age at the time of assessment, age at menarche and the duration of ED were added to the model to find out if other factors rather than ED were associated with the psychosexual state. This was done, on the one hand, because the AN and BN groups differed regarding age and duration of ED and, on the other hand, because age at menarche may influence both the development of ED and the psychosexual state during adolescence. In these analyses, no dating experiences during the last month and negative attitude to sexuality persisted as predicted best by AN. Instead, the association between type of ED and interest in dating vanished, and age at assessment had the strongest association with no interest in dating, younger adolescents having less interest in dating (Table 3).

Discussion

Pubertal timing did not differ statistically significantly between AN and BN groups. The age at menarche was significantly earlier in the BN group compared with the mean age at menarche in the general adolescent population in Finland. In the AN group, the difference was of borderline significance. In other studies, early puberty has been linked with increased risk for eating problems [8, 9, 13, 36], especially for bulimic type of eating pathology [6, 8, 18], as also for maturity fears [14, 33] and psychosomatic problems [2]. The association of early puberty with AN has not been clear [8]. Our results concur with the findings between early puberty and bulimic

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Table 3 Dating and general attitude to sexuality (multivariate analysis)

	No dating experience			No interest in dating			Negative general attitude to sexuality		
	OR	CI 95%	p	OR	CI 95%	p	OR	CI 95%	p
Age (years)	0.98	0.53–1.79	0.945	0.46	0.21–1.03	0.059	1.03	0.59–1.81	0.916
Menarche (years)	0.75	0.43–1.30	0.299	1.08	0.58–1.99	0.817	0.99	0.58–1.68	0.965
Duration of the illness (years)	1.03	0.71–1.50	0.887	1.15	0.71–1.85	0.569	0.85	0.59–1.21	0.357
ED			0.051			0.332			0.047
AN	4.95	1.00–24.60		2.61	0.38–18.23		4.72	1.02–21.78	
BN	1	reference		1	reference		1	reference	

OR Odds Ratio; *CI 95%* 95% Confidence Interval; *ED* Eating Disorder; *AN* Anorexia Nervosa; *BN* Bulimia Nervosa

type of eating pathology. The results regarding early menarche and AN remain unclear, although our results also suggest a trend towards early maturing in the AN group compared with the general population. Given the relatively small sample size, we consider it relevant to pay attention to the borderline significant p-value here.

The psychosexual state differed between AN and BN. In multivariate analyses controlling for age, age at menarche and duration of ED, diagnosis of AN predicted negative general attitude to sexuality and having no dating experiences. These multivariate analyses confirmed that the differences between AN and BN groups were not due to differences between the two groups in age, age at menarche or duration of ED. However, no interest in dating in multivariate analysis was no longer predicted by type of ED but by younger age at assessment.

In adolescent development, dating has been considered as a way of practicing intimate relationships and disengaging from parents [1, 22]. It is associated with sexual maturing and with the development of sexual identity, which is seen as a central developmental task in adolescence. Psychosexual delays have been suggested in earlier studies in all ED groups [30, 31], though problems with sexuality have been linked especially with AN. It has not, however, been clear if the sexual problems trigger AN, or if they are consequences of its longstanding effects (such as malnutrition). In BN, risk of premature sexual experiences has also been found [18], which in turn can cause other psychological problems (delinquency, depression).

Our results suggest that those having BN seem to approach and experience sexual development more positively than those having AN. In our study, adolescents were still in the early phases of ED. The results were also controlled for the effect of the duration of ED. The negative general attitudes to sexuality in AN seem to be linked more with problems in meeting developmental challenges from the developing body and developing sexuality than to the secondary effect of AN on sexuality. Our results suggest that especially those adolescents who develop anorectic symptoms may not have been ready for the developmental demands in adolescence to make close relationships with peers of the opposite sex as a part of maturing sexuality, or for sexuality as a whole. They seem to enter this developmental phase later, more carefully and slowly, even inhibitedly, than those having BN.

Our study concurs with the theories of developmental stress emanating from puberty. This stress may be especially strong when puberty starts early. However, adolescents react to pubertal development differently and many adolescents seem to go through adolescent development normally even when puberty starts early. Developing sexuality is seen as the great and even most important task in adolescent development. ED may occur when puberty and maturing bring problems with the pressure for sexual development. AN especially seems to be strongly associated with negative general attitudes to sexuality, which may represent the need to reject sexuality as needless, frightening or disgusting. In BN, an attempt to solve the sexuality pressures by premature sexual relationships may appear, as observed in earlier studies. The results point to the adolescents' needs for developmental support during puberty changes, but the exact triggering and especially protecting factors related to eating disorders in early maturing girls are not clear and need further study.

The study group comprised adolescents attending specialist level services for ED. Non-attending adolescents with ED were not studied and, thus, the results are not directly applicable to the adolescent population. However, compared to many other clinical samples, our sample is fairly homogeneous considering age distribution, and represented the whole adolescent developmental phase. The duration of ED was still quite short, which made the secondary changes due to the chronic course of the disease smaller. The onset of puberty was near, and we consider the evaluation of menarche age in this group easier and more reliable. Part of this study was conducted by semi-structured interview during the initial assessment, which may cause interdependency effects, but this made interviews possible even with those adolescents who were most ambivalent and reluctant to

attend the assessment. The evaluation of general attitude to sexuality was made regarding the age in years and the age-appropriateness of the responses. We were also careful to classify conservatively and avoid excessive interpretation towards pathology, so that responses reflecting "some interest", for example, were classified as pleasurable. The non-participating adolescents were mostly anorectics.

In our study, the diagnosis in the ED group was considered to be reliable, because it was based on clinical interviews with adolescents and parents and confirmed in a multi-professional team also taking into account the information from pediatricians or internists. We used the diagnostic classification ICD-10, which is the official diagnostic classification in Finland. Our study group consisted of adolescent outpatients and the eating disorder symptoms were milder than in inpatient samples. In our study, the main diagnostic groups AN and BN also covered the atypical AN and BN cases which in DSM-IV are often diagnosed as having ED-NOS [25]. When scrutinized according to the DSM-IV criteria [7], 82.4% in the AN group and 87% in the BN group fulfilled strict DSM-IV criteria for AN or BN, respectively. Although our study group consisted of milder cases, sometimes remaining below the strictest diagnostic criteria, our findings show that differences in the psychosexual state exist between the ED groups even in the early and atypical phases of the disorders.

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ORIGINAL RESEARCH PAPER

Are there differences in the attitudinal body image between adolescent anorexia nervosa and bulimia nervosa?

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ABSTRACT. Objective: *Body image dissatisfaction is as well a risk factor for eating disorders (ED) and a central feature of ED. The exact nature of body image in adolescent ED is still debated. This study examined attitudinal body image in adolescent anorexia nervosa (AN) and bulimia nervosa (BN), and the association of age, maturational timing, duration of eating disorder, actual weight and general psychological distress with the attitudinal body image in ED.* **Methods:** *The study group consisted of an outpatient clinical sample of adolescents attending for assessment because of eating disorders. The attitudinal body image of 57 adolescents (girls) aged 14-21 years was studied at the beginning of the treatment. The attitudes to body shape, body size, appearance, tone and femininity were studied by a Likert format scale and by the body dissatisfaction (BD) and drive for thinness scales (DT) from EDI-2 inventory.* **Results:** *Bulimics reported more body image dissatisfaction than anorectics. In multivariate analyses BN and higher general psychological distress had strong associations with body image dissatisfaction. Longer duration of ED and earlier menarche were also associated with negative body image.* **Discussion:** *Attitudinal body image differs between adolescent AN and BN. The psychological distress has a great impact on body image in ED, which should be taken into account in assessment and in treatment interventions.*

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Key words:
Adolescence, anorexia nervosa, bulimia nervosa, body image, eating disorders.

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INTRODUCTION

Body image is a multidimensional phenomenon generally considered to consist of perceptual and attitudinal components (1, 2). Perceptual body image reflects the accuracy of an individual's body size estimations. Attitudinal body image reflects satisfaction/dissatisfaction with one's body size, shape, or with some other aspect of body appearance or with overall appearance. Body dissatisfaction arises from discrepancy between the experienced and the ideal body shape, weight, global appearance or body parts (3, 4). In epidemiological studies high rates of dieting and body dissatisfaction have been found even in young boys and girls (3). Body image can be considered as a determinant of self-esteem (5-7). In adolescence body image is an important aspect of psychological and interpersonal development (8). Normative developmental challenges influence and are influenced by body image. Adolescents are especially vulnerable to sociocultural pressures to be thin. In early adolescence the importance of physical appearance, weight concerns and dieting increase, as the adolescents have to cope with rapid changes in the body. Increase in adipose tissue during puberty development moves girls away from thin ideal body (8-11). Physical growth in puberty also causes changes in the inner world of adolescents. Changing body offers both feelings of self-confidence and changes that are experienced as negative (12, 13).

Body image disturbances have been associated with eating pathology (6, 7, 14-17), and body image disturbance is one of the diagnostic criteria in eating disorders (ED) in DSM-IV (18) and ICD-10 (19). However, the true nature of body image in ED is not very well understood (20). Body image dis-

tortion as a symptom of anorexia nervosa (AN) was first postulated by Bruch (12, 21), and body image disturbance is believed to be an important risk factor for the development of AN (22). The association of body dissatisfaction with AN has been subsequently debated (6, 23). Although body image disturbance is considered as one of the most common clinical features attributed to AN by many authors, others have argued that it is largely culture bound and should not be considered essential for diagnosis (22). Concerns with body shape and size have been especially suggested to increase the risk for bulimic symptoms and thus bulimia nervosa (BN) (12, 24, 25). Bulimics have also been found to feel even greater body-image dissatisfaction and distortion relative to anorexics (6). In ED there seems to be a disturbance in the emotional aspect of body image, rather than in body perception (26). Although body dissatisfaction seems to precede ED (18, 27), it is not alone a sufficient factor for developing ED (28, 29) and not all those with ED suffer from body-image disturbance (30, 31).

Wide ranges of measures have been developed for the assessment of body image in adolescents and adults (e.g. visuospatial measures, questionnaires, body part analysis and multidimensional body image scales) (2, 3, 32). While body dissatisfaction and negative attitudes towards one's body have been associated with ED, the impact of other factors on body image and body dissatisfaction in ED is not clear. The need for further studies considering other factors possibly explaining the relation of ED and body image has lately been expressed (6, 32). These factors may include age, menarche timing, actual weight and negative affects. In some studies early maturing girls have been found to be at increased risk for dieting and for eating pathology (8, 12, 14, 33), while others indicate no predictive value of early maturing in increasing body dissatisfaction (12, 29). Body mass has been considered to increase the risk for weight concerns and body dissatisfaction (12, 22, 34, 35). However, body mass seems to have less impact on body dissatisfaction and eating problems than perceived weight (11, 35, 37). The association of psychopathological symptoms with body dissatisfaction is more complicated. In some studies psychological factors (especially depression and personality factors such as perfectionism) and negative mood (25) have been found to predict body dissatisfaction (12, 27, 38-40), though in others psychological factors have been considered more to be a result of eating pathology or to predict the outcome in eating disorders (41, 42).

In clinical adolescent psychiatric practice eating disorders seem to have an impact on adolescent development as a whole or on one or more of the developmental tasks. This study aimed at evaluating the impact of ED on the changing body image during adolescent development and to assess whether body image disturbance is always associated with adolescent AN or BN. We evaluated the attitudinal features of body image (as measured by body shape, body size, appearance, tone, femininity, the body dissatisfaction (BD) and drive for thinness (DT) (43, 44) in a female adolescent group suffering from AN or BN. More precisely we sought to find answers to the following questions:

1. Are there differences in body image in adolescent AN and BN?
2. Are other factors (age, maturational timing, duration of the illness, BMI and global psychological distress) associated with increased risk for negative body image or is the greatest risk associated with the type of ED (AN/BN)?

METHODS

Setting and sample

The study was carried out in Tampere University Hospital Adolescent Psychiatry Clinic. The clinic is responsible for specialist adolescent psychiatric services in the Tampere Region (35 municipalities). The adolescent population of the catchment area was approximately 33,000 at the time of the study. Adolescents attend the clinic mostly on referral from primary health care or the school health services but also on referral from other clinics in Tampere University Hospital, from private doctors or on their own initiative. At the time of the study 489 new adolescents attended the outpatient clinic.

All adolescent patients coming to the clinic between 1 January 1996 and 16 July 1998 and meeting the inclusion criterion were recruited for the study. The inclusion criterion for this study was 1. referred to the clinic because of eating problems or 2. referred because of other reasons but diagnosed with ED during initial psychiatric assessment. Participation in the study was voluntary and non-participation did not affect the normal assessment and treatment. Informed consent was obtained from all the participants. The Ethical Committee of Tampere University Hospital approved this study design.

Measures

We used the ICD-10 diagnostic classification, which is the official diagnostic classification in Finland (WHO 1992) (Diagnostic criteria in

appendix) (19). The first author made the diagnoses. The consensus diagnoses were then confirmed in a multi-professional team, where information from parents and from the somatic assessment was also available. ED were classified into AN (F50.0 typical and F50.1 atypical), BN (F50.2 typical and F50.3 atypical) and eating disorder not otherwise specified (ED-NOS, F50.9). In this article we use the main diagnostic groups AN and BN. Those who declined to participate in the study were also diagnosed using the ICD-10 classification as a part of normal adolescent psychiatric assessment.

The data collection was carried out using a semi-structured interview with an experienced clinician (the first author) and with self-report questionnaires. The interviews were conducted and the questionnaires distributed at the beginning of the assessment phase, in the first two sessions. The measures were derived from the EU multi-center study of the treatment of eating disorders, COST Action B6 (45).

The timing of menarche was enquired in the interview by the question: "How old were you when you had your first periods (age/years)?" The adolescents were weighed at the first session and the body mass index (BMI = kg/m^2) was calculated by the weight and reported height.

The body image was measured according to a multidimensional body image model, which has been found to be the most effective predictor among the alternative affective/attitudinal scales of body image disturbances (2). We used two self-report questionnaires: Five-point Likert format items measuring attitudes to body shape, size, appearance, tone and femininity and the subscales Body Dissatisfaction (BD) and Drive For Thinness (DT) from the widely used Eating Disorder Inventory (EDI -2). EDI has also been validated among adolescents (43, 44) and in Finland (Charpentier P, Lang F, Machado P, Norring C, 2003, unpublished data).

The Likert format measure was derived from the EU multi-center study of the treatment of ED, COST Action B6, which also standardized it (45). After presenting the question "How do you feel about your body?" the respondents evaluated their feelings on five dimensions with Likert format response alternatives. The five dimensions were body shape (0 normal – 4 abnormal), body size (0 much too thin – 4 much too fat), appearance (0 attractive – 4 disgusting), tone (0 muscular – 4 flabby) and femininity (0 feminine – 4 unfeminine). In the analyses these scales were dichotomized as follows: body shape: normal=0 (0,1 and 2) – abnormal = 1 (3 and 4), body size: satisfied =0 (2) – dissatisfied =1 (0,1,3,4), appearance: attractive =0 (0,1 and 2)– disgusting =1 (3 and 4), tone: muscular =0 (0,1 and2) – flabby =1 (3 and 4) and femininity: feminine =0 (0,1 and 2) – unfeminine =1 (3 and 4).

EDI is a 64-item quantitative measure of ED symptoms consisting of eight subscales (drive for thinness, bulimia, body dissatisfaction, ineffectiveness, perfectionism, interpersonal distrust, interoceptive awareness and maturity fears). Each item is rated on a 6-point scale ("always", "usually", "often", "sometimes", "rarely", or "never") with higher scores indicating greater symptomatology. Scale scores are the summation of all item scores for that particular scale (43, 44). From the EDI the subscale body dissatisfaction (BD) and drive for thinness (DT) were used. BD consists of 9 items reflecting the belief that specific parts of the body associated with shape change at puberty are too large, and thus measures largely weight-related dissatisfaction. DT consists of 7 items reflecting excessive concern with dieting, preoccupation with weight and entrenchment in an extreme pursuit of thinness. For statistical analysis we dichotomized BD and DT using upper quartile as cutoff (16 points in BD and 14 points in DT).

The Symptom Checklist –90 (SCL-90) was used to measure global psychopathological distress. SCL-90 is a 90-item self-report inventory designed to measure the outcome or status of psychopathology in adolescent and adult samples. It includes scores for 9 components of psychopathology (somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) rated by the patient on a 5-point Likert scale of distress ranging from 0 (not at all) to 4 (extreme) and a Global Severity Index (GSI), which is a mean of all items. SCL-90 has been considered to measure a global psychological distress better than nine independent symptom subscales (46, 47).

Statistical analysis

The data were described using means and standard deviations (SD) or median, minimum (Min) and maximum (Max) for continuous variables and percentages for categorical variables. Differences between ED groups in background variables and body image modalities were tested using independent samples t-test for normally distributed continuous variables, Mann-Whitney u-test for continuous variables with skewed distributions and chi-square tests for categorical variables. To evaluate if factors other than type of ED were associated with the attitudinal body image modalities, multivariate forward stepwise logistic regression analyses were done. Type of ED, age at assessment, age at menarche, duration of ED, BMI and GSI were used as independent factors and reported

TABLE 1
Group description.

		AN	BN	Total	p
Age (years)	Mean	16.2	17.9	16.9	<0.001
	SD	1.6	1.3	1.6	
	Min	14.0	15.4	14.0	
	Max	18.7	21.1	21.1	
	N	34	23	57	
Menarche (years)	Mean	12.7	12.3	12.5	0.291
	SD	1.3	1.3	1.30	
	Min	10.0	10.0	10.0	
	Max	16.0	15.0	16.0	
	N	32	22	54	
Duration of the illness (years)	Median	1.5	4.2	2.0	0.029
	Min	0.44	0.69	0.44	
	Max	9.7	6.4	9.7	
BMI (kg/m^2)	Mean	16.8	22.7	19.1	<0.001
	SD	1.4	5.0	4.4	
	Min	14.0	17.2	14.0	
	Max	21.3	41.8	41.8	
Global Severity Index (GSI)	Median	1.22	1.41	1.34	0.264
	Min	0.11	0.33	0.11	
	Max	2.57	2.37	2.57	
	N	34	21	55	

AN = Anorexia Nervosa; BN = Bulimia Nervosa; SD = Standard Deviation; BMI = Body Mass Index

attitudes to body shape, body size, appearance, tone, femininity, body dissatisfaction (BD) and drive for thinness (DT) as dependent variables. The data were analyzed using SPSS for Windows version 10.1 statistical software.

Group description

During the study period 88 adolescents (84 females and 4 males) who met the inclusion criterion were referred to our clinic. Of these 88 cases, 6 (6.9%) did not come to the assessment, 82 came to the initial assessment and were invited to participate. Of these 82 cases, 10 (12.2%) had diagnosis other than AN, BN or ED-NOS and were thus excluded. 10 (12.2%) refused to participate to the study. Of these 7 (70%) had AN, 1 (10%) BN and 2 (20%) ED-NOS. Those who refused were assessed by the normal adolescent psychiatric assessment and did not exhibit strikingly different clinical picture than the participants, but due to ethical reasons, those who refused the study are not described any further. The sample participating in the study comprised 62 cases, which is 86% of the eligible sample (62/72). All of them were females, since none of the male adolescents fulfilled the diagnostic criterion. The diagnostic group classified as ED-NOS was excluded because it consisted of only 5 cases and was considered to be too small for statistical analysis. The final analyzable sample thus consisted of 57 adolescent females (48). Those having BN were somewhat older and had a longer median duration of ED than those with AN. The mean age at menarche was 12.7 years in AN and 12.3 years in BN. The difference in the mean menarche age between AN and BN was not statistically significant (p=0.291). GSI scores did not differ statistically significantly between AN and BN (Table 1).

RESULTS

Attitudinal body image modalities in AN and BN

Bulimics perceived significantly more abnormality in the body shape (p=0.041) and dissatisfaction with body size (p=0.007) modalities. They also had significantly higher scores in the BD (p= 0.004) and DT (p=0.001) scales in EDI. In the BN group there was almost significantly more reported dissatisfaction in the appearance modality (p=0.088). Anorectics tended to perceive their bodies to be unfeminine more often than bulimics (p= 0.054) (Table 2).

Multivariate logistic regression analysis

In multivariate analysis the age at the time of assessment, age at menarche, duration of illness (years), BMI and GSI were added to the

TABLE 2
Different modalities of the attitudinal body image.

	AN	%	BN	%	Total	%	p
	n=34		n=21		n=55		
Body shape							0.041
Satisfied	24	70.6	9	42.9	33	60.0	
Dissatisfied	10	29.4	12	57.1	22	40.0	
Body size							0.007
Satisfied	15	44.1	2	9.5	17	30.9	
Dissatisfied	19	55.9	19	90.5	38	69.1	
Appearance							0.088
Satisfied	21	61.8	8	38.1	29	52.7	
Dissatisfied	13	38.2	13	61.9	26	47.3	
Tone							0.316
Muscular	18	52.9	14	66.7	32	58.2	
Flabby	16	47.1	7	33.3	23	41.8	
Femininity							0.054
Feminine	17	50.0	16	76.2	33	60.0	
Unfeminine	17	50.0	5	23.8	22	40.0	
BD/scores							0.004
Low	26	78.8	9	40.9	35	63.6	
High	7	21.2	13	59.1	20	36.4	
N	33		22		55		

AN = Anorexia Nervosa; BN = Bulimia Nervosa; BD = Body Dissatisfaction scale in EDI (Eating Disorders Inventory); DT= Drive for Thinness scale in EDI (Eating Disorders Inventory)

TABLE 3
Odds ratios for negative attitudinal body image modalities*.

		OR	95% C.I.	p
Body shape	Duration of ED (years)	1.72	1.20 - 2.47	0.003
Body size	BMI	1.54	1.11 - 2.13	0.010
Appearance	GSI	7.46	2.23 - 25.00	0.001
Tone	Duration of ED (years)	1.35	0.99 -1.83	0.058
BD	ED			0.014
	AN	Ref		
	BN	5.06	1.40 - 18.35	
	GSI	2.87	0.97 - 8.43	0.056
DT	Age at menarche	0.19	0.06 - 0.66	0.009
	ED			0.006
	AN	Ref		
	BN	17.69	2.30 - 140.48	
	GSI	8.99	1.52 - 53.00	0.015

*only significant predictors from stepwise logistic regression are reported

model stepwise to find out if other factors rather than AN or BN were associated with negative body image. Body dissatisfaction (BD) was predicted best by BN and by GSI. DT was predicted by BN, lower age at menarche and GSI. Negativity towards appearance was predicted best by GSI and dissatisfaction with body size by actual weight. Negativity regarding body shape and tone were predicted best by duration of the illness (Table 3).

DISCUSSION

Negative attitudes to body shape and body size as well as body dissatisfaction (BD) and drive for thinness (DT) were significantly more common in the BN group than in the AN group. Adolescents in the BN group also tended to show dissatisfaction in the appearance modality more often than adolescents in the AN group, although due to the small sample size this difference failed to reach statistical significance. Lately Fairburn (49) found that patients move between AN and BN states over time suggesting that the two disorders share similar psychopathological processes. According to our results these states seem to have differences between the attitudinal body image, bulimics being more dissatisfied with their bodies and body parts than anorectics. These results concur with earlier studies, where body dissatisfaction has been especially associated with BN either as a risk factor or preceding the onset of BN (6, 11, 14, 33, 50).

The association of body dissatisfaction and body disturbance with AN has been debated earlier (6, 23). Our results point to the ambivalent nature of AN. Adolescents having AN may have reached the "thin-ideal", and thus they are more satisfied with their bodies, whereas those having BN are still struggling with the desperate alternations of binges and purging when trying to achieve the idealized thin body. In clinical experience, too, adolescent anorectics often describe satisfaction with their very underweight bodies and at the same time they are strikingly unable to allow any increase in weight. Their conception of self and feeling of self-worth seem to be strongly bound to and determined by the body.

In the AN group there was almost significantly more negative attitude in the femininity modality than in the BN group. We first thought that this could be explained by the younger age in the AN group as compared with the BN group. However, in the multivariate analysis age did not have a stronger association than other variables with the risk for unfeminine attitudes in ED.

Multivariate analyses suggested that in adolescent ED other factors than the type of ED play most important role in attitudinal body image. While BN persisted, together with GSI, as associated with BD, DT was best predicted by younger age at menarche, BN and GSI negativity towards body shape and tone by duration of ED, and negativity in attitude to appearance by GSI. In earlier studies anxiety traits, depression and "neurotic profile" in SCL-90 have been connected with overestimation of own body dimensions ("body distortion") in AN (11, 41, 51). Stein (52) has shown the association of body image disturbance and self-destructive tendencies in AN. Depression and negative affect have been found to mediate the relation between body dissatisfaction and BN (12, 27, 53). According to our results attitudinal body image dissatisfaction and BN had a strong association. Our results also confirm the strong association of psychological distress with body dissatisfaction in ED and further suggest a mediating role of psychological distress for negative body image in ED. By increasing body dissatisfaction and negative body image, psychological symptoms may trigger the development of ED. The association of younger age at menarche with DT may reflect adolescent's behavioral reaction to the changing body mass during puberty development, while peers of same age still have more child-like bodies.

As far as we know the association of the duration of ED with different body image modalities has not been studied much, especially in adolescent samples, in spite of the fairly

wide range of body image studies. Most earlier studies have only evaluated the effect of the duration on the outcome in ED. Longer duration before any treatment interventions has been shown to predict poorer outcome (54). Our findings link longer duration of ED with more negative attitudes to body image although our sample consisted of adolescents with fairly short median duration of ED. The results strongly emphasize the importance of early diagnosis of ED in order to avoid long-standing negative impact on the developing and changing body image in adolescence.

Our study group comprised adolescents attending for specialist level treatment for ED. Non-attending adolescents with ED were not studied and thus the results are not directly applicable to the adolescent population. In our study the diagnosis in the ED group can be considered reliable, because it was based on clinical interviews with adolescents and parents and confirmed in a multi-professional team, also taking into account information from pediatricians or internists. We used the diagnostic classification ICD-10, which is the official diagnostic classification in Finland. Our study group consisted of adolescent outpatients and the eating disorder symptoms were milder than in inpatient samples. In our study the main diagnostic groups AN and BN also covered the atypical AN and BN cases which in DSM IV are often diagnosed as having ED-NOS (55). When scrutinized according to the DSM IV criteria (19), 82.4% in the AN group and 87% in the BN group fulfilled strict DSM IV criteria for AN or BN respectively. Our sample is also fairly homogeneous considering age distribution compared to many other clinical samples of ED patients, and represented the whole adolescent developmental phase. The onset of puberty was near, which increases the reliability of the information of menarche age in this group. As far as we know, studies concerning the multivariate associations of different relevant factors with body image in ED are scarce, especially among adolescent samples. We were able to study the interrelationship of AN/BN and body image during adolescent development, where body image normally changes and thus forms an important developmental task for the adolescents.

We are well aware of the difficulties of defining the concept of body image and of the multidimensional nature of body image. It has been proposed that perceptual body image distortion consists of inaccurate judgements of one's body size and attitudinal component of body image consists of dissatisfaction with one's body size, shape or some other aspect of body appearance. Most of the earlier studies have focused on perceptual distortion, although body dissatisfaction reflecting the attitudinal modality of body image has been found to discriminate better between bulimic and anorexic groups (6, 56). Significantly fewer studies have examined the attitudinal component of body image than the perceptual component (6). In our study we were interested in the differences between AN and BN in the different attitudinal aspects of body image in adolescence and we considered the attitudinal body image component to be most relevant in our study among adolescent ED patients.

There is a large amount of different measures for body image. There also seems to be controversial opinions about the validation and also about the comparability of different measures. The Likert format is widely used and has been found useful and reliable (2, 5, 6). Many kind of Likert measures have been developed earlier (3). In our study the measures for the evaluation of the body image were derived from the International Cost Action B6 study for Eating Disorders where this kind of measure had suggested relevant and also comparable between different countries in the international study committee (45). In this Likert measure every body image modality we consider important during adolescent development was measured separately in order to find the possible differences in body image. We dichotomised the items in order to find out those adolescents who were most unsatisfied with just the exact body image modality in question. We wanted also to use the measure as categorical variable and as the limitation of our study is the rather small sample size it was not possible to use each value as separate category. Also due to the relatively small sample size, we want to draw attention to the trend towards more unfeminine attitudes in the AN group than in the BN group in order to avoid type 2 error.

CONCLUSION

Our study aimed to add the knowledge of the body image and body image disturbances in adolescent AN and BN. Our main interest is in adolescent development and the impact of ED on developmental tasks. According to our results those having BN report more dissatisfaction with their bodies than those having AN in adolescence. Of the other variables studied global psychopathological stress and also longer duration of ED predicted body dissatisfaction, giving emphasis to the early treatment interventions and throughout psychiatric assessment of ED patients.

APPENDIX

ICD-10 criteria for anorexia nervosa

F50.0 Typical Anorexia Nervosa

A. Body weight at least 15% below a mean level for height or body mass index (BMI) (calculated as weight in kilograms/height in meters^2) equal or below 17.5. In prepuberty there may be failure to make expected weight gains (while growing in height instead of weight loss). Weight reduction is self-imposed by avoiding fattening foods. In addition the patient may use purging (self-induced vomiting, laxatives, excessive exercise and diuretics) or appetite restraining medicine.
B. The individual considers her/himself fat and intensely fears becoming fat, which makes her/him to set a low weight goal. It is a question of distorted body image, which forms a special psychopathology. The fear of becoming fat becomes an overvalued idea.
C. An extensive disturbance in hypothalamus–hypophysis-gonadal axis, which manifests as amenorrhea in women and weakening virility in men (except menorrhea induced by hormonal replacement). Puberty development is typically delayed or stopped.
D. The criteria A and B in BN are not fulfilled.

F50.1 Atypical Anorexia Nervosa

A. The clinical picture is rather typical, but one or more of the key symptoms of typical AN are missing (for example amenorrhea or intense fear of weight gain). This diagnosis suits also when all of the key symptoms appear milder.

The ICD-10 criteria for bulimia nervosa

F50.2 Typical Bulimia Nervosa

A. Recurrent binge eating (at least twice per week during three months), when the patient eats large amounts of food over a short time.
B. Eating and an intense desire or a compulsive need to eat overwhelms the patient.
C. The patient tries to prevent the "fattening" effects of eating (typically by self-induced vomiting, by laxatives, by occasionally refusing to eat, by appetite restraining medicine, by thyroxin or diuretics misuse).
D. The patient considers her/himself fat, fears becoming fat, which often leads to underweight.

F50.3 Atypical Bulimia Nervosa

A. Disorders, which correspond by some features BN, but the clinical picture does not fulfill the diagnostic criteria or is milder.

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Psychopathological distress predicts suicidal ideation and self-harm in Adolescent Eating Disorder outpatients

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Abstract *Objective* This study evaluated the differences in suicidal behaviour between adolescent anorexia nervosa (AN) and bulimia nervosa (BN), and the association of age, menarche timing, duration of eating disorder (ED), depression and general psychopathological symptoms (GSI) with suicidal behaviour in adolescent ED. *Methods* The study group comprised 57 adolescent outpatients (girls) attending for assessment because of eating disorders. Suicidal ideation, deliberate self-harm and suicidal attempts were assessed in self-report questionnaires. *Results* In both ED groups, one adolescent had attempted suicide before assessment. Suicidal ideation and/or deliberate self-harm were reported in over half of the cases. Bulimics had significantly more suicidal ideation and deliberate self-harm than anorectics. In multivariate analysis, BN and depression predicted suicidal ideation, but only GSI persisted as predicting deliberate self-harm. *Conclusions* Suicidal behaviour is common in adolescent ED. Type of ED (BN), depression and higher GSI are strongly associated with suicidal ideation and deliberate self-harm. Our results point to the need to evaluate psychopathological symptoms in adolescent ED, especially in BN, in the initial assessment to prevent severe suicidal behaviour.

Key words adolescent – eating disorder – suicidality – deliberate self-harm

Introduction

Suicidal behaviour can be divided into direct and indirect forms. Direct suicidal behaviour means suicidal ideation, attempted suicide and completed suicide, and indirect suicidality other risk-taking behaviours without intended suicide. In the literature, a number of different terms have been used to describe suicidal behaviour. Some authors talk about self-injurious behaviour (SIB), which means repetitive, deliberate, direct physical self-harm without a conscious suicidal intent that does not lead to obviously life-threatening injuries [20]. Others use the term deliberate self-harm, which means an act with a non-fatal outcome, including, for example, self-mutilation, hitting oneself or self-poisoning [30]. Individuals displaying suicidal behaviour can also be distinguished into individuals who want to die, individuals who do not care whether they live or die and individuals who do not want to die. Because of this terminological confusion, the term "parasuicide" has also been used including behaviours from "suicidal gestures" to more serious, but unsuccessful, attempts at suicide [16]. In our study, we use the terms suicidal ideation, deliberate self-

harm and suicidal attempts in order to describe suicidal behaviour. According to the epidemiological studies, suicidal behaviour including suicidal attempts increases during adolescent development compared with childhood [18, 27, 32]. In adolescence, the prevalence rate of suicidal ideation has been estimated at 10–15 % [32], suicidal attempts at 0.2 % and deliberate self-harm at 5.1 % [30]. Suicidal behaviour has been connected with mental disturbances even in adolescent population-based studies [2], especially with depression [12, 14, 18, 23, 30] and anxiety disorders [18, 23, 30], and also with eating disorders (ED) [15, 20]. Suicidal behaviour is still more common in clinical samples [17]. Lewinsohn [27] found a suicidal ideation rate of 40.7 % in purely adolescent depression compared with a rate of 5.4 % in a pure anxiety disorder group, and also proposed that suicidal ideation rarely occurs in a no-disorder control group.

Patients with ED have been found to be at risk for suicidal behaviour [31]. In ED, suicidal behaviour has been connected especially with bulimia nervosa (BN) [5, 9, 10, 15, 31, 37] and with binge-eating/purging type of anorexia nervosa (AN) [4, 5, 10, 37]. Favaro et al. [10] reported slightly more lifetime suicide attempts in BN than in AN (10 % vs. 9 %), as well as more suicidal ideation (62 % vs. 54 %). Paul et al. [31] reported similar results of self-injurious behaviour (34.3 % in BN vs. 41.7 % in AN). Favaro, however, did not find any differences between BN and AN groups considering lifetime self-injurious behaviour (37 % in BN vs. 37 % in AN). In other long-term follow-up studies, elevated suicide and attempted suicide rates have been found in AN patients resembling the risk in depressive groups [21, 36]. Herzog [21] reported no suicides in BN vs. a mortality rate at 58.1 times the expected rate for suicide in AN. Underlying personality risk factors in suicidal behaviour among ED patients have also been studied [10, 11, 35, 37]. A lack of awareness towards emotions and body sensations, greater obsessionality and a tendency towards impulsive behaviour have especially been found to increase the risk for suicidal behaviour in ED [10, 11, 35, 37]. However, these studies consisted mostly of adult patients with long duration of ED.

Puberty exposes adolescents to great developmental demands regarding identity, sexuality and body image. Favaro [11] has stated that puberty implies uncontrollable changes of the body, which expose adolescents to the risk of self-injurious behaviour. Suicidal behaviour can be understood as reflecting a failure to resolve developmental stages positively [14, 30] and difficulties in identity formation and intimacy [8]. Laufer and Laufer [24–26] introduced the concept of "adolescent breakdown" and they proposed that, in adolescence, suicidal behaviour, as also ED, is a sign of this developmental breakdown showing the adolescent's inability to cope with his or her sexually maturing body. This results in the rejection by the adolescent of his/her sexual body. Laufer has stated that "the suicidal adolescent believes he must attack or remove what he/she believes is the source of the pain or anxiety or shame" [25]. ED itself, resembling suicidal behaviour, may be a way of rejecting the body that is experienced as negative, compelling and confusing.

In our research, we were especially interested in adolescent development and the impact ED has on this. As far as we know, suicidal behaviour in the early phases of ED and the multivariate associations of other variables with ED and suicidality in adolescent outpatients have not often been studied. Only a few of the earlier studies have been made prospectively (34, 39), and the majority of studies on suicidality in ED focus on adults or young adults in inpatient settings [7, 10, 11, 35]. The aims of our study were to evaluate suicidal behaviour (as measured by suicidal ideation, deliberate self-harm and attempted suicide) in the initial assessment in adolescent ED outpatients. From earlier studies, we know that early menarche increases the risk of depression and problem behaviour in adolescence [3, 19]. We also know that longer duration of ED [31, 36], as well as psychiatric disturbance [17, 27], increases the risk of suicidal behaviour and suicides. In our study, we wanted to examine the multivariate associations of type of ED, age at assessment, timing of menarche, duration of ED, depression and general psychopathological symptoms (GSI) with suicidality in adolescent ED patients. More precisely, we aimed to address the following questions:

1. Are suicidal ideation, deliberate self-harm or suicide attempts more common in BN than in AN in adolescence?
2. Do other possible risk factors [age at assessment time, menarche timing, duration of illness, depression, or general psychopathological symptoms (GSI)] rather than type of ED (AN or BN) explain suicidality in adolescent ED?

Methods

Setting and sample

The study was carried out in Tampere University Hospital Adolescent Psychiatry Clinic. All adolescent patients attending the clinic between 1 January 1996 and 16 July 1998 and meeting the inclusion criteria were recruited for the study. The inclusion criteria for this study were: (i) referred to the clinic because of eating problems, or (ii) referred for other reasons, but diagnosed with eating disorder during initial psychiatric assessment. Participation in the study was voluntary and non-participation did not affect the normal assessment and treatment. Informed consent was obtained from all the participants. The Ethical Committee of Tampere University Hospital approved this study design.

Measures

The first author made the diagnoses. We used the ICD-10 diagnostic classification, which is the official diagnostic classification in Finland (WHO 1992) [40]. The diagnoses were then confirmed in a multi-professional team, where information from parents and from the somatic assessment was also available. Eating disorders were classified into anorexia nervosa (AN, F50.0 typical and F50.1 atypical), bulimia nervosa (BN, F50.2 typical and F50.3 atypical) and eating disorder not otherwise specified (ED-NOS, F50.9). In this article, we use the main diagnostic groups AN and BN. Those who declined to participate in the study were also diagnosed using the ICD-10 classification as a part of normal adolescent psychiatric assessment [33].

Data concerning pubertal timing, duration of illness, suicidality and psychological distress were collected using a semi-structured interview with an experienced clinician (JR) and with self-report questionnaires. The interviews were conducted and the questionnaires were distributed at the beginning of the assessment phase, in the first two sessions.

The timing of menarche was elicited in the interview by asking: "How old were you when you had your first period (age/years)?". The duration of ED was estimated in the interview from the reported beginning of eating problems (age/years) and the assessment time.

Suicidal ideation, deliberate self-harm and attempted suicide were elicited in a self-report by: "Have you ever had thoughts of suicide?", "Have you ever otherwise tried to injure yourself?" and "Have you ever attempted suicide?". The response alternatives were "yes" or "no". Psychopathological symptoms were studied using the structured Symptom Checklist-90 (SCL-90) [6], which has also been validated in Finland [22]. SCL-90 is a 90-item self-report inventory designed to measure the outcome or status of psychopathology in adolescent and adult samples. It includes scores for nine components of psychopathology (somatization, obsessive-compulsive disorder, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism) rated by the patient on a 5-point Likert scale of distress ranging from 0 (not at all) to 4 (extreme) and a Global Severity Index (GSI), which is a mean of all items [6]. In our analyses, we used the depression item (in order to find out if depression especially is associated with suicidal behaviour) and GSI (as a measure of overall psychopathology) from the SCL-90.

Statistical analyses

Differences between ED groups in suicidal ideation, deliberate self-harm and attempted suicide were first analysed using cross-tabulation and chi-square tests. Differences in SCL-90 items between ED groups were analysed using Mann-Whitney U-test. To evaluate if factors other than type of ED (age, age at menarche, duration of ED, depression and GSI) predicted suicidality, multivariate logistic regression analyses with forward stepwise method were performed.

Results

Group description

During the study period, 88 adolescents (84 females and 4 males) who met the inclusion criteria were referred to our clinic. Of these 88 cases, 6 (6.9%) did not come to the assessment, 82 came to the initial assessment and were invited to participate. Of these 82 cases, 10 (12.2%) had a diagnosis other than AN, BN or ED-NOS and were, thus, excluded. Ten (12.2%) refused to participate in the study. Of these, 7 (70%) had AN, 1 (10%) BN and 2 (20%) ED-NOS. Those who refused were assessed by the normal adolescent psychiatric assessment, but, due to ethical reasons, those who refused to participate in the study are not described any further. The study group thus comprised 62 adolescents; all of them were females, since none of the male adolescents fulfilled the diagnostic criteria. The diagnostic group classified eating disorders not otherwise specified (ED-NOS) was excluded because it consisted of only 5 cases and was considered to be too small for statistical analysis. The final analyses thus comprised 57 adolescent females (AN = 34, BN = 23) [33].

Those having BN were older and had a longer median duration of ED than those with AN. The mean age at menarche did not differ between AN and BN (Table 1).

In the SCL-90, those having BN had statistically significantly higher depression scores. The other SCL-90

Table 1 Group description

		AN	BN	Total	p
Age (years)	Mean	16.2	17.9	16.9	< 0.001
	SD	1.6	1.3	1.6	
	Min	14.0	15.4	14.0	
	Max	18.7	21.1	21.1	
	n	34	23	57	
Menarche (years)	Mean	12.7	12.3	12.5	0.291
	SD	1.3	1.3	1.30	
	Min	10.0	10.0	10.0	
	Max	16.0	15.0	16.0	
	n	32	22	54	
Duration of the illness (years)	Median	1.5	4.2	2.0	0.029
	Min	0.44	0.69	0.44	
	Max	9.7	6.4	9.7	

AN Anorexia Nervosa; *BN* Bulimia Nervosa; *SD* Standard deviation

items and GSI scores did not differ statistically significantly between AN and BN (Table 2).

Suicidal ideation, deliberate self-harm and suicidal attempts

Both suicidal ideation (p = 0.011) and reported deliberate self-harm (p = 0.047) were more common in the BN than in the AN group. In both groups, one girl had attempted suicide once before the assessment (Table 3).

Because there was only one case in both ED groups who reported having attempted suicide, suicide attempts were excluded from the logistic regression analyses assessing risk for suicidality according to the type of ED and other independent variables. In multivariate analysis, age at the time of assessment, age at menarche, duration of ED, depression and GSI were added to the model stepwise to ascertain if other factors rather than type of ED predicted suicidality. BN and depression best predicted suicidal ideation [for BN odds ratio (OR) 4.6, 95 % confidence interval (CI) 1.1–20.3, p = 0.043, for depression OR 4.2, 95 % CI 1.6–11.1, p = 0.003]. Only GSI persisted as predicting deliberate self-harm (OR 8.7, 95 % CI 1.9–39.2, p = 0.005).

Table 3 Suicidal ideation, deliberate self-harm and suicide attempts in adolescent eating disorders (AN and BN)

	AN		BN		Total		p
	n	%	n	%	n	%	
	34		21		55		
Suicidal ideation							0.011
Yes	14	41.2	16	76.2	30	54.4	
No	20	58.8	5	23.8	25	45.5	
Deliberate self-harm							0.047
Yes	5	14.7	8	38.1	13	23.6	
No	29	85.3	13	61.9	42	76.4	
Suicidal attempts*							
Yes	1	3.1	1	4.8	2	3.8	
No	31	96.9	20	95.2	51	96.2	

AN Anorexia Nervosa; *BN* Bulimia Nervosa
* n = 32 for AN and n = 21 for BN, total = 53

Discussion

Suicidal ideation and deliberate self-harm were more common in BN than in AN among our adolescent ED outpatient sample. This concurs with earlier studies connecting suicidal behaviour especially with BN [4, 5, 10, 11, 35, 38], even if some researchers have also proposed that suicidal behaviour is equally common in both AN and BN [31]. Although completed suicide has been found to be a major cause of death in AN [21], our results show greater suicidal ideation and behaviour in BN than in AN. Our results point out the need for follow-up studies on the risk of suicide in BN. The amount of reported suicidal ideation and suicidal behaviour in this sample was greater than in many adolescent population studies [18, 23], resembling the rates found in adolescent major depression [17, 27]. Even among adolescent ED outpatients, who are likely to have milder forms of ED than inpatients, suicidal ideation and self-harm are very common, and more common in the BN group than in the AN group. This may be due to the tendency towards impulsive behaviour in BN, which is also seen in the core bulimic symptoms (bingeing/purging) in contrast to the over-controlling behaviour frequently seen in AN.

In addition to type of ED (BN), suicidal ideation in adolescent ED was predicted by depression. Deliberate self-harm in adolescent ED was only predicted by global severity of psychopathology when type of ED, depression, GSI and other relevant independent variables were

Table 2 The Symptom Checklist SCL-90 in AN and BN

	AN (n = 34)			BN (n = 21)			Total (n = 55)			p
	Median	Min	Max	Median	Min	Max	Median	Min	Max	
SCL-90										
GSI	1.22	0.11	2.57	1.41	0.33	2.37	1.34	0.11	2.57	0.264
Somatization	0.79	0.00	2.33	1.00	0.17	2.50	0.92	0.00	2.50	0.435
Obsession-compulsion	1.30	0.10	3.20	1.70	0.10	2.50	1.60	0.10	3.20	0.157
Interpersonal sensitivity	1.67	0.11	3.11	1.78	0.44	2.44	1.67	0.11	3.11	0.842
Depression	1.64	0.00	3.23	2.08	0.54	3.23	1.85	0.00	3.23	0.039
Anxiety	0.85	0.10	2.80	1.20	0.30	2.30	1.20	0.10	2.80	0.225
Hostility	1.00	0.00	2.50	1.50	0.17	3.00	1.00	0.00	3.00	0.371
Phobic anxiety	0.50	0.00	2.43	0.71	0.00	1.71	0.57	0.00	2.43	0.644
Psychoticism	0.95	0.10	2.30	1.20	0.30	2.50	1.10	0.10	2.50	0.371
Paranoid ideation	1.17	0.00	2.83	1.33	0.00	3.17	1.17	0.00	3.17	0.828

AN Anorexia Nervosa; *BN* Bulimia Nervosa; *SD* Standard deviation; *SCL-90* Symptom Checklist; *GSI* Global Severity Index

used simultaneously. This concurs with the earlier studies [11, 12]. Our results emphasize the importance of evaluating the psychopathological symptoms in the assessment of ED adolescents in order to find those patients who are at greater risk of suicidal behaviour. Adolescent suicidal behaviour has been found to predict suicide attempts during young adulthood especially among females [28]. Suicidal ideation and attempts are associated with mental disturbances, especially major depression, both in clinical and epidemiological studies [13, 17, 27], and co-morbid psychopathology is also likely to increase the risk of suicidal behaviour in adolescent ED. During adolescence, one has to cope with the growing and sexually maturing body. Eating pathology itself includes severe self-harm and impulsive behaviour aspects "hiding" in the eating difficulties and malnutrition, and is also a way of rejecting the body as a sign of developmental breakdown. With the present results, we wish to emphasize the importance of not forgetting the greatly increased risk for more direct suicidal behaviour in adolescent ED. Assessing general psychopathology in ED is central in identifying these adolescents.

Our study group consisted of adolescent outpatients attending specialist outpatient adolescent psychiatric services. Most of the previous studies have been carried out among ED inpatients and among adults who usually already have longer duration of ED, and, therefore, a lot of potential confounding by chronicity has to be taken into account. The present study adds to the knowledge on suicidality in ED by focusing on the early stages of ED. However, there were some limitations in our study. Firstly, because our study deals with the early phase of ED, there is a risk of losing some information about suicidal behaviour due to co-operation problems. Secondly, we did not extend our analyses to the association of the severity of eating symptoms with suicidal behaviour, which could be one relevant focus of ED studies. Thirdly, due to the rather small sample size, we have quite a large confidence interval in our analyses, which must be taken into account when generalizing and interpreting the results. Our study, however, focuses on the adolescent developmental phase in contrast to studies with adult samples.

The diagnoses were made according to ICD-10, but we had also earlier scrutinized the ED diagnoses in this sample according to DSM-IV [1, 33]. Recent studies concerning childhood and adolescent ED have acknowledged the risk of missing clinically significant AN or BN if only the strict diagnostic criteria of the disorders in DSM-IV are used [29]. ICD-10 classification can be seen as relevant for diagnosing adolescent ED in order also to find the milder and atypical forms of AN and BN. Our sample also included the milder forms of ED perhaps not fulfilling the strict ED criteria (DSM-IV) in contrast to many earlier clinical studies of ED. However, even in these groups, there was reported suicidal ideation or self-harm in over half of the cases. The age distribution in our sample was fairly homogeneous and covered the whole adolescent phase (14–21 years). Most of our cases were at the beginning of ED without previous major treatment interventions. We consider this to make our sample fairly valid in order to make comparisons at the beginning of the assessment between these two ED groups (AN and BN).

Conclusion

Suicidal behaviour increases during adolescence and can lead to fatal outcomes during adolescent development, or in young adulthood. In clinical practice, we tend to think that depressive mood in ED patients is due to malnutrition, but it is important to remember that there may be more severe suicidal problems behind it. Our results point to the importance of noticing and taking account of the psychopathological distress in the assessment of adolescent ED in order to identify suicidal ED patients. In treating adolescent ED, we must not only focus on the eating problems, but also plan the treatments individually taking account of the whole adolescent development and psychopathology behind the ED symptoms.

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