REVIEW

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A review on eating disorders and adolescence

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Eating disorders in adolescence are a public health concern with both personal costs and a financial burden for the community health services. This paper is a review of incidence and gender differences of eating disorders; comorbid psychopathology, including substance abuse, mood disorders, anxiety disorders and personality disorders; developmental and intellectual factors; family, socio-cultural functioning and birth order; self-injury and suicidal behaviour with health outcome and therapy success rate. We have also asked severeal questions from our clinical experience and tried to answer them with our clinical knowledge and based on literature review. Overall, there is an indication that therapy success is significantly correlated with (low) externalisation, specifically for social problems and aggressivity. Due to the complexity of factors involved in the manifestation of eating disorders, the inclusion of cognitive-behavioural therapy as well as family-oriented therapeutic concepts coupled with medical treatment would appear to offer an intervention inventory, which would be most effective in offering adolescents optimal treatment programmes. The implications of our review is discussed in terms of psychotherapeutic treatment plans for adolescents in clinical care.

Key words: **Adolescence - Eating disorders - Outcome assessment (health care) - Personality - Germany - Israel.**

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Eating disorders represent a serious and threatening class of psychological disorders with diverse forms of manifestation. The various international forms of health classification, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV) of the American Psychiatric Association and the World Health Organisation's International Classifications of Diseases (ICD-10) distinguish between *anorexia nervosa*, *bulimia nervosa* and the eating disorders not otherwise specified, the latter presenting a group of less differentiated eating disorders.

Despite the heterogeneity in the phenomenology of eating disorders, they all have their origins in dietary and regimented eating behaviour. In the subsequent development of the disorder, the changes in life-important

nutritional intake lead to enormous psychosomatic problems with somatic, psychological and social implications. There is evidence that the psychological similarities between eating disorders *e.g. anorexia nervosa* and *bulimia nervosa* are more pronounced than the differences.[1]

In addition to the enormous personal costs of eating disorders also the financial burden for the community health services has to be taken into account. For 2001 the direct cost of a patient receiving 12 week's specialist inpatient British NHS treatment was estimated as approximately 25 000 pounds, with private patient costs for the same period ranging between 24 500-45 500 pounds.[2] In a German adolescent clinic an average 10-11 week hospitalisation would cost approximately 22 500 euro (the majority of these patients were either still at school or doing apprenticeships, hence there are scarce additional financial costs incurred through loss of working time). These are conservative estimates with the problem of relapse being high and the cost of repeated treatment programme being substantially higher.

Incidence and gender differences

In 2004, the Royal College of Physicians published a report concerning the disturbingly high rates of eating disorders. There were three times as many women as men who displayed a body mass index (BMI) of less than 20 (8.1% and 2.4% respectively).[3] At the same time there has been an almost obsessive preoccupation in Western culture concerning the idealisation of a thin female or muscular male physique, suggesting that the concern over body image is not restricted to women. Furthermore, consequences of self-perceived attractiveness are important. There is evidence that young adolescents, who were being teased about their weight are likely to be more dissatisfied with their bodies and were more likely to contemplate or attempt suicide compared to those who had not been teased.[4]

Cash [5] found in a large scale survey that 34% of men and 38% of women expressed dissatisfaction with their overall physical appearance. There had been a marked increase in body image satisfaction in the period from 1972 to 1986. A substantial proportion of men and women report dissatisfaction with their body weight even when they are within the healthy weight region. Sixty percent of women and 25% of men who had normal weight perceived themselves as being too fat and/or exhibited self-disparaging thoughts and feelings about their appearance. Moreover, there is a wealth of research suggesting that a prevalence of clinical symptoms such as social anxiety, depression and sexual dysfunction are frequently found in association with negative body image, and this is particularly evident in such eating disorders such as *anorexia* and *bulimia*.[6]

It has generally been asserted that only a minority of the population [7, 8] will display eating disorders (both *anorexia* and *bulimia nervosa*) though estimates inevitably differ.[9] For young females, van Hoeken *et al.* [10] provide typical rates of *anorexia* from between 2 and 8 per 1 000 (0.2-0.8%). In a review of the literature, Palmer [11] suggested that the incidence rate of *anorexia nervosa* in health service, including primary care, is around 4-10 cases per 100 000 inhabitants per year. More recently, Teachman *et al.* [12] reported that the incidence rate of *anorexia nervosa* among young women (late adolescence and early adulthood) in America is between 0.4-1%. The rate of *bulimia nervosa* among college students is significantly higher, about 3-4%.[13] As mentioned, it is a mistaken assumption that males are never prone to *anorexia*, as clinical samples have 10-20% of anorexic males. This figure seems inflated compared to others, *e.g.* Jacobi *et al.* [14] who also cited studies suggesting males account for less than 10% of the cases of *anorexia nervosa*. The incidence of *anorexia nervosa* among susceptible age groups (women between 15-30 years) is around 1% and the figure for *bulimia* is at least 2-3%.

The US National Institute for Mental Health [15] cites estimates of between 0.5% and 3.7% of females suffering from *anorexia nervosa* and estimated 1.1-4.2% have *bulimia* during their lifetimes. In contrast, 2-5% of Americans

experience binge-eating in a 6-month period.[16] There is some evidence that a higher prevalence of homosexuality among men with *bulimia nervosa* exists, which may be attributable to greater dysfunction in psychosexual development than among females.[17]

In a South Australian Survey of eating disorder behaviour, Hay [18] reported figures of 3.2% of respondents who had regular episodes of binge eating, 1.6% having professed to fasting regularly or using a strict diet, 0.8% purging, 0.3% had *bulimia nervosa* and 1.0% binge eating disorder. Strict dieting was less common for those persons who were married or cohabiting, may be because living with someone can inhibit extreme dieting behaviour or mediates behaviour, or it had been suggested that the behaviour is mediated through things such as emotional support and/or improved self-esteem.

Causes of *anorexia nervosa*

Contemporary research studies have not been able to clearly identify the main causes of *anorexia nervosa* so that currently a multidimensional aetiological model of the disorder prevails, incorporating biological, individual, familial and socio-cultural factors.[19, 20] As a result of the complex aetiology and a more favourable prognosis for those individuals with a shorter history of the disorder (time between onset of illness and the onset of therapy), there has been increased effort for researchers to focus their attention on the identification of those pathogenic mechanisms which lead to a maintenance of the disorder and a subsequent deterioration of health.

The multidimensional model of eating disorders is clearly due to eating being controlled by diverse factors including appetite, availability of nutritional resources, family and cultural practices, peer pressures and attempts at voluntary control.[15]

Comorbidity and individual differences

Eating disorders are frequently associated with other psychological disorders such as substance abuse, anxiety and depression disorders.[21] The most prevalent disorders are anxiety and affective disorders as well as anxious-fearful-obsessive personality disorders.[22] There are suggestions that *anorexia* is a manifestation of obsessive-compulsive disorder (OCD). Anorexics for example display "stereotypically rigid, ritualistic, perfectionist and meticulous" attributes with an "obsessional concern with food and focus on control" personality traits. Less specific features of OCD are negativism, rebelliousness and intense dedication to physical activity.[23] Some studies [24] have reported that approximately 10% of female patients with OCD had displayed a history of *anorexia*.

Teachman *et al.* [12] reported individual factors that exert a role in children and adolescents with anorexic disorders include high expectations and perfectionism, extreme desire to conform, high degree of restraint and inhibition, avoidance of risk taking and dependence on outward rewards and compliments. In addition to high expectations, bulimics are characterised by interpersonal sensitivity, an outgoing personality coupled with impulsivity, emotional lability and low self-esteem.

There is some evidence that personality factors associated with *anorexia nervosa* include social isolation, low self-esteem and perfectionism. High rates of avoidant personality disorders were reported among eating disordered individuals, but anorexics showed greater compulsivity ("serious and rule conscious") than did bulimics.[25] Wonderlich *et al.* [26] found a common phenotype in the restricting-type *anorexia nervosa* characterised by high restraint, obsessionality and perfectionism. They found evidence that variability in the anorexic diagnostic type could be related to personality traits. Milos *et al.* [27] examined comorbidity and eating disorder inventory (EDI) profiles in eating disordered patients. It has been suggested that some EDI subscales are influenced by other psychiatric disorders such as depression, OCD or personality disorders. The psychological subscales of the EDI seem to be associated with problems in intrapersonal and interpersonal relationships that can

result particularly from anxious and affective disorders.[25]

Marano [28] refers to Kaye's finding that 2/3 of people suffering from eating disorders exhibit some source of clinical anxiety such as OCD or social phobia. For those eating disordered individuals who did not show a clearly diagnosable anxiety disorder, they had anxiety-related traits such as generalised anxiety, anxiety-avoidance and perfectionism.

Some researchers *e.g.* Schmidt *et al.* [29] argued that maladaptive eating behaviour represents a way of coping with stress, particularly negative emotions. Individuals with eating disorders are assumed to have difficulties expressing their feelings (alexthymia). *Anorexia* is frequently associated with the trait of "autistic" or "lacking empathy".[30] Crisp [31] claimed the single-minded rejection of food characterizing *anorexia nervosa* is a biologically based avoidance behaviour propelled by a phobia of normal bodily weight.

Some researchers [32] argue that despite the cooccurrence of eating disorder and depression, there would seem little empirical support that either *anorexia* or *bulimia nervosa* represents an underlying depressive disorder. Therapeutic outcome studies have shown that bulimic patients who have improved during their treatment generally exhibit a disappearance of the co-occurring psychiatric disorder indicating that the depression was a secondary consequence of the eating disorder.

Developmental and intellectual factors

Eating disorders generally begin between early adolescence, 13-18 years and early adulthood. In instances of early onset (7-12 years) features of depression and/or obsessional behaviour are apparent. Selvini-Palazzoli *et al.* [33] reported the average age of outbreak of *anorexia* among their patients was 16 years, with symptoms initially appearing between 12 and 18 years, most frequently at 14 years of age. *Anorexia nervosa* has an age-adjusted incidence of 14.6 per 100 000 for females in the age group 15-24 years.[34]

Walitza *et al.* [35] found that among 140 adolescents in a German university clinic suffering from eating disorders, the anorectic patients were higher than average on intelligence quotient, as well as their revealing more enmeshment and overprotectiveness in family relations, greater separation anxiety and inferior communication skills. The bulimic patients showed inferior scholastic performance and more disciplinary difficulties at school. Other researchers have shown that anorexics are more intelligent but also high-achievers.

Many descriptive cross-sectional studies have tended to neglect contemporary theories of neurobiological developmental psychology which have been shown useful in addictive research. It has, for instance, been observed that youths and adolescents are inclined to display dependency disorders in this period of their development, suggesting that adolescence represents a critical phase of vulnerability.[36] Moreover, the disorder *anorexia nervosa* typically emerges during early and middle stages of puberty and adolescence.[37] Cortical developmental processes have been shown to undergo changes during this period which are associated with motivation, impulsivity and dependency,[36] which in turn appear related to intentional behaviour and executive functions.[38] Patients exhibiting eating disorders during this phase develop a potent functional cycle coupled with dysfunctional eating behaviour in which both psychological as well as physiological reinforcing mechanisms are established and maintained.[39]

Among the psychological factors, self-assuredness and self-efficacy seem to play a major role, and among individuals suffering from *anorexia nervosa*, they are likely to implement diverse methods of newly acquired behaviours including nutritional habits and manipulating body weight as methods of influencing self-concept.

Family, socio-cultural functioning and birth order

Jacobi *et al.* [14] in a review of the literature focused on the extremely dominant position

of the mother or another female member of the family, and this in turn results in difficulties in the necessary identification the daughter has with her mother. Further, the communication structures within such families are frequently enmeshed and frequently characterised by rigid systems. The individual's development towards autonomy and self-sufficiency is inhibited by the family's reluctance to yield strivings towards independence which is perceived as threatening. The authors underline that, although these findings are common among eating disordered individuals, they are not specific for such young clinical groups. Indeed any observed pathological family relationship may be a reaction to the illness itself.

Palmer [11] asserted that the theories underlining (dysfunctional) family influences on eating disorders are not supported by empirical systematic research, and have frequently been counterproductive, imposing additional burden on the current family suffering. There is an indication, however, that recollections of childhood are inclined to feature diverse negative characteristics, common to other psychiatric disorders. Some specific recollections include low contact and higher expectations of parents. On the other hand, there is also evidence [40] that sufferers of *anorexia nervosa* report less overt difficulties in their childhood.

Men who display eating disorders are more inclined to equally display dependent, avoidant and passive aggressive personality styles. They have often experienced unfavourable reactions to their bodies from their peers during their development and did not conform to the cultural expectations for masculinity. They also more frequently reported feeling closer to their mothers than fathers. Overall their passive-dependency and tendency towards nonathleticism may result in increased feeling of social isolation and ridicule concerning their body.[41]

In a retrospective study of some 250 anorexic patients, Gowers *et al.* [42] focussed on family structure and birth order. There was little evidence of a relationship to birth order, nor was there evidence of a preponderance of female siblings within the families of anorexic patients. Selvini-Palazzoli *et al.* [33] found that there was a tendency for eating disorder patients with no siblings to display inferior general health feelings than those with sisters/brothers. On the other hand, having only sisters among their siblings did not affect subjective reports of well-being. They found that 54% of patients reported a favourable attitude towards their family and 32% were mixed with only 14% expressing negative feelings.

Twin studies suggest that biological factors do exert a significant role in eating disorders. For example, Schepank [43] and Kendler *et al.* [44] have shown a higher concordance for mono and indeed dizygotic twins. Kendler *et al.* [45] found that for the disorder *bulimia nervosa* a significant effect emerged for familial environmental factors as a predictor of the ailment. Kassett *et al.* [46] found higher rates of substance abuse and depression in first-degree relatives of patients with *anorexia* and *bulimia*.

Self-injury and suicidal behaviour

Eating disorders and suicide have also been examined by several researchers.[47, 48] Age of onset of eating disorder, comorbidity psychopathology, age of individuals at onset of study, duration of follow-up are all factors which influence the relationship between suicidal behaviour and eating disorder. They provided a meta-analysis of studies of suicide and eating disorders in adolescence and young adulthood. Overall suicide rates varied between 2.2% to a high of 15%. For *bulimia nervosa* rates were between 0.45% to 2.2%. Rates of mortality and suicide are significantly higher than for the general population, but how do these figures compare to other clinical populations?

Moreover, gender has also been shown to exert a major effect on suicidal behaviour. For instance, males with eating disorders had more than double the number of attempted suicides than females - as indeed was the number of completed suicides among males. Furthermore, bulimic and anorectic individuals both display elevated scores on depression and

anxiety. Malnutrition and emaciation may elicit symptoms which are difficult to distinguish from depression. There are problems of causality here because depression may be premorbid to the eating problem. The authors suggest that because eating disorders are related to higher incidences of comorbid psychopathology (*e.g.* mood disorders, substance abuse, anxiety disorders and personality disorders) it may be the coexisting clinical disorders which are associated with increase in suicidal behavior and suicidal ideation.

Health outcome and therapy success rate

For the area of specialisation of child and adolescent psychiatry, *anorexia nervosa* occupies a conspicuous position, in that it emerges predominantly during early adolescence and is mainly witnessed among females with a chronic progressive deterioration in physical and psychological well-being. The mean mortality rate "hovering" around 6%, raises *anorexia nervosa* to the heights of one of the psychological disorders with a high mortality rate.[49] Despite a particularly extensive and prolonged therapeutic treatment programme, some would argue that *anorexia nervosa* has a unfavorable prognosis rate.[50] Some current follow-up studies have asserted that only 1/3 of patients suffering from symptoms of eating disorders are symptom-free 2 years after completion of treatment.[51]

Personality factors have been shown to have an important impact on the success rate of therapy treatment, so that female patients who are less likely to comply with therapy are more anxious, and have lower scores on those factors associated with self-responsibility such as self-acceptance and tolerance.[52] Earlier onset of *anorexia nervosa* has been associated with higher recovery rates and a lower mortality. Herpertz-Dahlman [20] found that adolescent anorexic patients who overcame their eating problem did not differ from normal controls with regard to psychosocial functioning (partnership, family relationships and occupational status).

Fichter *et al*.[53] examined the long-term development of *anorexia nervosa* over a period of 12 years among just over 100 patients. They observed substantial improvement during the therapy, followed by a moderate decline during the 2 years after treatment, and further improvement between 3 to 12 years after treatment completion. The evaluation statistics over 12 years revealed 27.5% had a good outcome, 25.3% intermediate outcome, almost 40% had poor outcome and 7.7% had deceased. The major predictors of treatment outcome after 12 years were impulsivity, sexual difficulties, (long) duration of inpatient treatment and duration of eating disorder.

Selvini-Palazzoli *et al*.[33] reported that of 143 patients in their follow-up study, 89% were symptom free (anorexic symptoms), 4.3% showed restrictive *anorexia*, 5.3% *bulimia* and 1.4% had died. As regards global feeling of well-being, 56% were rated "good", a further 25% satisfactory, and 12% still had problems with 6% seriously incapacitated. In a previous study, Santonasto *et al.* [54] found just over 2-3 (68%) of their patients had recovered after a follow-up study 6.8 years later.

The National Institute for Mental Health [15] cite a mortality rate for anorexics of 0.56% per year or 5.6% over a decade, which would seem to correspond closely to the figures for Germany.[53] These fatalities are caused by complications due to the disorder including cardiac arrest, electrolyte imbalance and suicide.[47, 48, 55] Teachman *et al.* [12] reported studies suggesting that 80% of individuals suffering from *bulimia nervosa* and 73% of those with *anorexia nervosa* show full or partial recovery.

Cognitive behavioural therapies have demonstrated good maintenance of therapeutic change at 6 and 12 month follow-up. Fairburn *et al.* [56, 57] had conducted rigorous post-treatment assessment studies and found binge eating and purging had declined over 90% after one year, and over 1/3 (36%) of patients had ceased all binge-eating and purging.

In a review of the course and outcome of the eating disorders, Palmer [11] reports that, at about 5 years after treatment, the majority of individuals are recovered or nearly so, with some 25% still highly symptomatic (chronic course over many years). Outcome studies of *anorexia* show that recovery rates after 10

years range between 18-76% with death rates ranging from 0-6%.

Questions worth asking about eating disorders

In a clinical population in what aspects and concomitant symptoms will male and female adolescents differ in their clinical diagnoses?

What percentage of a clinical population will exhibit eating disorders?

Is suicidal and self-injurious behaviour higher among eating disordered compared to other clinical groups?

Will persons with *anorexia* display higher intelligence quotients compared to other groups?

Will persons with *anorexia* be more inclined to display negative affect, reflected in elevated anxiety and depression scores and social inhibition?

Will eating disorders be associated with compulsive and impulsive tendencies and inhibited overt aggression?

Will persons with eating disorders originate from dysfunctional families characterised by maladaptive intra-family communication?

Will the likelihood of therapy success be low among the eating disorder group compared to other clinical diagnoses?

Discussion

Gender differences

From the literature review and our clinical experience gender differences were observed across a variety of clinical diagnoses. Females were significantly more likely than males to exhibit eating disorders, as well as affective and personality disorders. Males were more commonly found among the acting out disorders such as hyperkinetic disorders, chemical abuse and emotional and social disturbances (ICD classifications). The statistics for eating disorders are consistent with many research findings [14] with substantially less than 10% of males showing such disorders.

From our clinical experience eating disorders are among the most common of the clinical groups, but the incidence rate in clinical care is lower than other groups such as neurotic and stress disorders and emotional and social disturbances. Previous research suggests figures between 0.2 and 3.7% [15] for the incidence of eating disorders among normal populations.

Suicide, self-injury and overt aggression

In our clinical experience compared to the other clinical groups *e.g.* affective and personality disorders, the incidence of suicidal behaviour in persons with eating disorders were low. Self-injurious and suicidal behaviour are found among individuals with eating problems, but such behaviour is not specific to the disorder itself. There are certainly other clinical disorders with a much higher rate of suicidal behaviour (and self-inflicting injury rates). Dancyger *et al.* [47] suggested figures range from 2.2-15%. Furthermore, the covert aggressive behaviour was much less frequent among adolescents with eating disorders. It is likely that the statistic if anything is an inflation of the rate of self-inflicted injuries because of the bias towards females, which are over-represented in the eating disordered patients. Other studies have found that females are much more likely to report suicidal attempts than males both in clinical and nonclinical samples.[58]

Intellectual competence and age

In our clinical experience we have found that the eating disordered group displayed significantly higher intelligence quotients than any of the other clinical categories. About 1 in 5 display an intelligence quotient in excess of 115 points. This cognitive superiority may be responsible for the high expectations (scholastic and otherwise) and desire for perfectionism frequently reported among anorexics.[12] It may serve as a propelling factor towards educational and personal striving, whilst counterproductive for normal daily functioning and social relationships. Whatever the reason, there does appear support for the claim that among female adolescents with

eating disorders exhibit higher scores on diverse tests of intelligence.

Personality factors

Adolescents displaying eating disorders are likely to display personality profiles that will distinguish them from other clinical groups, that is, in terms of physical ailments, schizoid-compulsivity, social inhibition and low overt aggression (delinquency). Insecurity, depression and compulsiveness were found in clinical samples [12, 25] as a result of low externalisation (and high internalisation) and preoccupation with their body image. The problems frequently reported to be associated with adolescents displaying eating disorders *e.g.* interpersonal relationships, may be explained by social anxieties manifested in elevated insecurity and social inhibition. In our clinical experience we have found little evidence that they were more anxious compared to other clinical groups, but we have found that they exhibit elevated depression scores and are socially more restrained.

Family functioning

In our clinical experience we have not found any indication that female adolescents with eating problems came from dysfunctional families, nor indeed were their parents/mothers seen as overprotective or was there evidence of problems in family communications. Palmer [11] found little empirical support showing a clear association between eating disorders and high dysfunctionality within their families. Jacobi *et al.* [14] suggested previous findings which had reported a significant relationship between family communication and functioning and eating disturbances were likely to be nonspecific, that is, not associated with eating disorders *per se*. Others [42] who explored sibling status found scarce support that status or birth order played a role in eating disorder. There was a tendency for adolescents with eating disorders to be the youngest member of the family. No attempt had been made to document the specific gender of other siblings, hence more detailed analyses are needed. Selvini-Palazzoli *et al.* [33] reported a tendency for eating disordered individuals to originate from families with several sisters among their siblings.

Health outcome

In contrast to Agras [50] in our clinical experience we have found relatively favorable (high) rates of therapeutic outcome. About 2/3 (66%) of our clinical sample revealed a significant or full improvement after their hospitalisation. Albeit some 1 in 6 showed no improvement or the condition deteriorated, which is consistent with Teachman [12] and Fichter *et al.* [53] being intermediate to their results of 73% and 53% for both studies respectively. Fichter's study was based on a follow-up study stretching over 3-12 years after treatment. Overall, these findings would appear to offer good chances of significant improvement in the condition of eating disordered subjects, rates of recovery that compare favourably with other clinical diagnoses. The treatment success rates may be attributable to a longer stay in the clinic; or more severe, chronic cases may avoid institutionalised care (or be self-selectively screened out of treatment, which in turn may account for inflated mortality rates among eating disordered), or to the early treatment onset.

Conclusions

Overall there is an indication that therapy success is significantly correlated with (low) externalisation, for specifically the scales social problems and aggressivity. This may suggest that negative emotions such as anger and aggressivity may cause patients to be less compliant to therapy programmes. These scales may be associated with nonconformity.[59] Adolescents expressing more social problems on the other hand are more likely to display improvements in their symptoms during the course of therapy.

Due to the complexity of factors involved in the manifestation of eating disorders, the inclusion of cognitive-behavioural therapy as well as family-oriented therapeutic concepts coupled with medical treatment would appear to offer an intervention inventory which

would be most effective in offering adolescents optimal treatment programmes.[60, 61]

Future studies may benefit from making clear distinctions between different groups of eating disordered patients. For example, using the model of personality postulated by Cloninger, German researchers [62] had reported distinct differences between adult patient samples with *anorexia* and those with *bulimia nervosa* as well as a healthy control population. In a second study with adolescent young females (12-18 years) with eating disorders, they were able to confirm that there are differential temperamental dimensions affording credence to the assumption that personality factors exert a significant role between eating disorders types. They used the German version of the Junior Temperament and Character Inventory (JTCI). Significant differences had been displayed between *anorexia nervosa* restricting types and *bulimia nervosa* patients, the latter group scoring higher on novelty seeking but lower on persistence, whereas binge eating/purging types revealed intermediate profile scores. In contrast to the restricting type of *anorexia*, both binge-eating/purging type and *bulimia nervosa* exhibited low scores on self-directedness.

Riassunto

Disturbi dell'alimentazione e adolescenza: una review

I disturbi dell'alimentazione dell'adolescenza rappresentano un problema di salute pubblica, che comporta costi sia personali sia per i servizi sanitari pubblici. Questo lavoro è una review sull'incidenza dei disturbi di alimentazione e sulle differenze legate al sesso; sulla psicopatologia da comorbidità, compreso l'abuso di sostanze stupefacenti, disturbi del tono dell'umore, disturbi ansiosi e della personalità; sui fattori intellettuali e legati allo sviluppo; sugli aspetti familiari, socio-culturali e sulla nativitá; sui tentativi anticonservativi e autolesionistici, con le relative ricadute sulla salute e sul tasso di successo della terapia. Ci siamo anche posti diverse domande, nate dalla nostra esperienza clinica, e abbiamo tentato di rispondervi sulla base della nostra conoscenza clinica e di una review della letteratura scientifica. In generale, esiste un'indicazione che il successo della terapia è significativamente correlato con l'esternazione (bassa), in modo specifico per i problemi sociali e di aggressività. A causa della complessità dei fattori coinvolti nella manifestazione dei disturbi dell'alimentazione, l'inclusione della terapia cognitivo-comportamentale, così come dei concetti terapeutici orientati sulla famiglia associati al trattamento medico, sembrerebbe offrire un modello di intervento, che dovrebbe essere più efficace nell'offrire agli adolescenti ottimi programmi di trattamento. Le implicazioni della nostra review vengono discusse in termini di piani di trattamento psicoterapeutico per gli adolescenti nell'ambito dell'assistenza clinica.

Parole chiave: Adolescenza - Disordini dell'alimentazione - Salute pubblica - Personalità - Germania - Israele.

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