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Aggression and self-aggression syndrome in females suffering from bulimia nervosa

Abstract: *The current study is aimed at creating a psychological profile of characteristics of aggressive and self-aggressive behaviour exhibited by females with bulimia, as well as conducting a comparative analysis of the differences between bulimic females and individuals displaying no mental disorders in terms of the major characteristics of aggressive and self-aggressive behaviour. The methods: the Buss-Durkee Hostility-Guilt Inventory, the Psychological Inventory of Aggression Syndrome by Zbigniew. B. Gaś. The data analysis revealed significant differences between the females suffering from bulimia and the subjects displaying no mental disorders in terms of the level of aggressive and self-aggressive tendencies. It was discovered that the control participants exhibited an appropriate level of aggressive behaviour as opposed to the subjects with bulimia.*

Key words: *aggression, self-aggression, bulimia nervosa*

Introduction

A considerable amount of psychological literature has been published on psychological factors known to influence an individual's predisposition for aggression and self-aggression(Aronson, Wilson, & Akert, 1997; Berkowitz, 1978, 1989, 1993, 1998; Buss, 1961, 1963; Kornadt, 1984; Lindsay & Anderson, 2000; Marcus –Newhall, Person, Carlson, & Miller, 2000; Krahe, 2006; Gaś, 1988; Frączek, 2002; Kubacka-Jasiecka, 2006; Lipiński, 2002; Tedeschi, Smith, & Brown,1974).

Two major kinds of approach to aggression were identified in psychology: an objective one, which emphasizes a negative effect of aggressive behaviour on social environment; and a subjective approach, which focuses on the significance of intra-psychic regulatory structures, i.e. intentions and negative emotional responses such as anger or resentment, which are directed towards a particular object.

A number of theories have been constructed to explain the roots of aggression, and a considerable amount of research focused on multiple factors that trigger aggressive behaviour. The factors include biological, psychological and socio-cultural influences. In the psychoanalytic approach represented by Freud, an individual's aggressive behaviour is viewed as a response to frustration of primary needs (Buss, 1961,1963; Berkowitz, 1989; Krahe, 2006), and as an adaptive defense mechanism (Krahe, 2006; Kubacka-Jasiecka, 2006).Based on the aforementioned theories and the instruments appliedin this research to measure the main variables, aggression and self-aggression was referred to in the present study as an adaptive defense mechanism adopted by an individual in response to frustration of his or her emotional needs.

It is assumed that aggressive and self-aggressive behaviours exhibited by individuals diagnosed with bulimia should be viewed as a peculiar way of acting out emotions and frustrations which seem to be difficult to verbalize and express in some others traight forward way. It is believed that such behaviours may serve many functions. They are likely to release tension, fear, and anger, as well as help abulimic individual stay in closer touch with reality, and increase the feeling of autonomy and control. Aggressive and self-aggressive responses can also be regarded as a form of self-punishment which an individual inflicts on him or herself for failing to control certain disapproved impulses (e.g. aggressive or sexual ones). Aggressive and self-aggressive behaviours may serve as a means to punish others and remind them of the person's traumatic experiences. Aggression and self-aggression should also be interpreted as a form of communication with other people and exerting influence on them (Żechowski&Namysłowska, 2008).

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In clinical psychiatry, however, two main strategies of research into aggression can be distinguished. One of them involves examining impulsive forms of aggressive behaviour, which not always have antisocial characteristics. The other approach focuses on investigating non-impulsive forms of aggression in the context of enduring antisocial patterns ofbehaviour. Based on the DSM IV classification (1994, American Psychiatric Association), aggression is considered to be symptomatic of numerous mental disorders including psychosis, personality disorders, mental and behavioural disorders due to psychoactive substance use, and neurological disorders. According to the International Classification of Diseases ICD 10 (2000), aggressive responses are classified as a symptom of dissocial personality disorder, characterized by recurrent antisocial and virulent behaviour.

When investigating the symptomatology of bulimia nervosa, it is essential to refer it to self-aggression. In the psychoanalytic approach, self-aggressive behaviour is viewed as a manifestation of bulimic symptoms (Freud, 1974; Menniger, 1938; Fromm, 1973; Horney, 1993; Boyd, 1990; Markson, 1993;Klein, 2007;Kernberg, 1995). The assumption is consistent with the views posited by existential, social and cognitive psychologists (Ringel, 1987; Eckhard, 1998; Babiker& Arnold, 2002; Berglas& Jones, 1978; Lee, 1987; Kelly, 1985;Seligman, 1995, 1996). The aforementioned hypothesis was also presented in Polish references (Hołyst, 1983; Czapiński, 1992; Doliński, 1994;Kofta,1991;Suchańska, 1995, 1998, 2000, 2001). When investigating psychological determinants of self-aggressive behaviors, special focus should be placed on a psychological theory which posits that it is the process of development of a person's ego structures that underlies the mechanism of self-destructive behaviours exhibited by the individual (Suchańska, 1995,1998, 2000, 2001).

A psychological diagnosis of personality characteristics of individuals suffering from bulimia nervosa as well as their aggressive and self-aggressive responses has attracted little scientific interest. However, it is important to emphasize that bulimia nervosa is manifested by aggressive outburst (e.g. impulsive and violent behaviour in interpersonal relationships) as well as self-aggressive acts (e.g. episodes of impulsive, uncontrolled binge eating accompanied by compensatory behaviours and the feeling of guilt).

The major characteristics of bulimia nervosa include the fear of gaining weight and the so called "ravenous hunger". From a medical and psychological point of view, bulimia is classified as an eating disorder manifested by a variety of self-destructive behaviours which lead to physical and mental emaciation.

As a psychotherapist, the present author frequently works with patients suffering from bulimia nervosa, and thus has an opportunity to observe their aggressive and self-aggressive tendencies which are reflected in the individuals' interpersonal relationships and their attitude towards themselves and their bodies. The author's observations reveal that bulimia sufferers tend to engage in repetitive cycles of uncontrolled binge eating accompanied by compensatory behaviours such as inducedvomi ting, diuretic and laxative abuse, rigorous physical activity, restrictive dieting, enemas, drinking alcohol, or using drugs. The aforementioned behaviours prove to be harmful to the body and they deteriorate an individual's health, and what is more important, they are regarded as adirect threat to life. As a consequence of the feeling of guilt triggered by the cycles of binge eating and induced vomiting, bulimia sufferers experience an increased level of self-worthlessness and exhibit a tendency toward negative thoughts about themselves and their future life. The feeling of guilt deepens frustration of emotional needs such as security, emotional closeness, or social acceptance, and evokes self-disgust, which subsequently increases emotional strain and thus induces another bulimic cycle of compensatory behaviours. Therefore, it can be hypothesized that individuals suffering from bulimia nervosa (predominantly females) exhibit self-destructive behaviours which are directed against the body and psyche.

It is also observed that bulimia sufferers resort to impulsive and aggressive acts in interpersonal relationships, where by they release their emotional tension. It happens frequently that the members of an individual's social environment (e.g. family and friends) get involved in the process of treatment. They tend to focus on the compensatory behaviours exhibited by the bulimia sufferer, and make attempts at controlling the person by introducing a variety of prohibitions such as limited access to food, which is intended to diminish the risk of vomiting. However, all these actions usually lead to the reverse effect. They tend to trigger stronger impulsive and aggressive responses. As a consequence, the patient shows aggression towards the people who try to help him or her. Thus, a vicious circle is created: a bulimic cycle of binge eating and vomiting allows an individual to release emotional tension and brings temporary relief. The bulimic person is convinced that the behaviour which he or she engages in will allow him or her to achieve an ideal body shape and thus conform to well-defined standards of beauty. Simultaneously, the feeling of guilt increases, which subsequently heightens recurring emotional tension, and re-induces self-destructive responses directed against the body.

Due to the fact that aggression and self-aggression considerably affect the effectiveness of treatment for bulimia nervosa, a psychological diagnosis of personality traits and body image characteristics in patients suffering from this eating behaviour remains a significant element of scientific and therapeutic work conducted by the author of the present paper (Izydorczyk,2008,2011).

Little scientific research has been devoted to aggressive and self-aggressive behaviour exhibited by individuals suffering from bulimia nervosa.Lacey and Evans (1986) defined the notion of a "Multi-Impulsive Personality Disorder" and specified its characteristic behaviours (such as psychoactive substance abuse, repeated self-harm, compulsive dozing of substances, shoplifting and gambling), placing bulimia nervosa among them. Inadequate impulse control, present in bulimic patients, leads to regular episodes of binge eating, vomiting, using drugs, drinking alcohol,

compulsive smoking, repeated self-harm and indulging in a variety of impulsive, tension-releasing behaviours(e.g. attempted suicides, self-injury, binge eating or induced vomiting).Such behaviours are frequently accompanied by the feelings of self-loathing and disgust towards one's own body, guilt and shame. Such negative emotions tend to affect an individual's attitude towards his or her body. It should be emphasized that aggressive and self-aggressive behaviours (e.g. binge eating and purging characteristic of bulimia nervosa) are regarded as a coping strategy which an individual adopts in an attempt toalleviate tension and combat frustration, and thus regain mental balance as well as adapt to the life situation. A person's aggressive and self-aggressive behaviour towards his or her body is frequently interpreted as a method of regulating emotional tension. It also reflects the individual's desire to be loved and accepted, and frequently serves as a means to prove that the person is valuable, attractive, and conforms to the ideal promoted by the social environment.Kubacka-Jasiecka (2006) highlights certain significant aspects of self-aggression which she identifies as a strategy to cope with past or present stressful situations such as experiencing pain, shame or trauma (Kubacka-Jasiecka, 2006). The author maintains that self-aggressive and self-destructive tendencies are regarded as an example of an adaptive defense strategy, and the body is the means and target of socially approved aggression. The strategy is likely to reinforce an individual's ambivalent attitude towards his or her body, which the person treats as if it was an object "put out for auction". It also induces the individual's desire to change his or her shape, and thus to conform to socio-cultural norms of appearance (e.g. widely promoted standards of thinness).

As emphasized by Kubacka-Jasiecka (2006), self-aggression tends to co-occur with impulsivity (i.e. an inclination to act rashly in response to a sudden impulse) and self-regulation difficulties (e.g. very low tolerance to frustration, a lower tolerance for delayed gratification, inability to verbalize feelings). Impulsive behaviour is considered to be a significant symptom of bulimia nervosa The cardinal symptoms of this eating disorder includecycles of uncontrolled binge eating and compensatory behaviours, frequently followed by the feeling of guilt which is likely to increase the level of stress and induce a variety of passive and aggressive behaviours which develop in response to the symptoms that a bulimia sufferer is not able to control. A bulimic individual realizes that he or she cannot stop the urge to binge once it has begun or that one has difficulty in ending the eating episode even when being full. The initial tension relief is frequently followed by an increased feeling of guilt since the person feels a lack of control during his or her eating binges. The symptoms of bulimia nervosa are accompanied by low self-esteem, which subsequently provides the opportunity for the formation of aggressive and self-aggressive schemas.

The major objectives of the current study included: 1) creating a psychological profile of characteristics of aggressive and self-aggressive behaviours displayed by females suffering from bulimia nervosa; 2) performing a comparative analysis aimed at demonstrating the differences between bulimic females and individuals displaying no mental disorders in terms of the aforementioned variables; 3) detecting possible intra-group differences regarding the variables examined in this research; 4) demonstrating that psychological assessment of the level of aggression and self-aggression exhibited by patients suffering from bulimia nervosa supports psychological diagnostic techniques, and thus improves the effectiveness of therapy in patients exhibiting this kind of disorder.

As viewed in literature, aggression syndrome, which was examined in this study,is commonly understood to mean a set of experiences, attitudes and behaviours aimed at or resulting in deliberate or unintentional, direct or indirect, infliction of harm upon oneself or another person. The syndrome refers to conscious (intentional)as well as subconscious (unintentional) acts; to bothovert and covert aggressive tendencies, toself-directed as well as outward-directed aggression(Gaś, 1988; Kubacka-Jasiecka, 2006; Krahe, 2005; Stanik, 2006).

Whereas self-aggression syndrome was defined as voluntary behaviour which directly or indirectly endangers or impairs an individual's physical, emotional or social condition, or poses a hazard to his or her life (Kubacka-Jasiecka, 2006; Suchańska, 1998, 1995, 2000, 2001; Wycisk, 2004,2006). Self-destructive tendencies are characterized by an inclination towards externalization of inner states, and are dominated by overt and latent (covert) feelings and thoughts revolving aroundself-harm (Reber, 2002).

Based on the aforementioned theoretical conception, aggression was defined in the current studyas a form of behaviour manifested by both intentional acts as well as activities stemming from emotions and drives, which are aimed at inflicting pain and loss, or causing damage (Suchańska, 1988).

Anna Suchańska's definition of self-destructive behaviourwas adopted by the author of the present study to describe self-aggression, which is understood as any voluntary, intentional action that is undertaken by an individual less consciously, and which may endanger the person's health or life.

Selection of the instruments applied in this study to measure the main variable, i.e. aggressive and self-aggressive behaviours, was based on the definition of the aforementioned behaviours. Hence, the measuring instruments used in the current research included the Buss-Durkee Hostility-Guilt Inventory (BDHI) (Stanik, 2006) and the Psychological Inventory of Aggression Syndrome adapted by Zbigniew B. Gaś (PIAS-II).In reviewing subject literature, no information was found regarding application of the two recognized measures in the research conducted in a population of females diagnosed with bulimia. It was discovered that the aforementioned instruments had been most commonly used by Polish researchers who were investigating aggressive and self-aggressive behaviours displayed by individuals in various age groups, including youth, exhibiting antisocial behavior (Stanik, 2006). It was found out that the values of reliability indicators for the particular scales of the BDHI inventory, measured by Cronbach's Alpha, were high and ranged between 0.937

and 0.984. Similarly, the values of reliability indicators for the scales of the Psychological Inventory of Aggression Syndrome, adapted by Zbigniew B. Gaś (IPSA-II),seemed high and ranged between 0.751 and 0.947 in a population of females (Gaś, 1988). Taking into consideration high reliability ratios of the inventories, and the fact that they were devised to measure aggressive tendencies,they seem to be the most appropriate instruments for the present study.

The main variable in the current study was the syndrome of aggression and self-aggression. The fundamental components of the variable which were empirically examined in the research included:

1. Direct physical aggression –defined as a tendency towards using direct physical force againstanimate objects (people or animals); it refers to physical fighting, but does not include damaging inanimate objects; the level of direct physical aggression was measured using scale Iof the Buss-Durkee Hostility-Guilt Inventory (BDHI);
2. Direct verbal hostility – an inclination towards using vulgar language, shouting, quarreling, swearing, making threats and name-calling; the component was examined by means of scale VII of the BDHI;
3. Displaced aggression –refers to a person's disorderly conduct characterized by a tendency to express displeasure, as well as flashes of temper or anger; it is also understood as an inclination towards attacking inanimate objects (e.g. stamping one's feet, banging a fist against a table or throwing objects); displaced aggression may also refer to the behaviour which is communicated verbally (e.g. malicious jokes or gossip directed against other people); Scale II of the BDHI was applied to measure the level of displaced aggression among the study subjects;
4. Irritability – defined as a predisposition towards uncontrolled aggressive outbursts in response to weak stimuli, characterized by impetuousness, touchiness or coarseness; the behaviours were examined using scale III of the BDHI;
5. Negativism - a behavioral attitude characterized by resistance and opposition to power and authority, as well as a tendency to act in a contrary manner; the resulting response may be passive, such as immobile, rigid postures, or active struggle against the law and common, widely-held views and habits; the aforementioned patterns of behaviour were evaluated by means of scale IV of the BDHI;
6. Suspicion – commonly understood to mean a person's inclination to escalate hostility towards other people, express excessive disbelief and exercise caution, which eventually makes the person think that other people constantly intend to hurt him or her; this component was measured using scale VI of the BDHI;
7. Resentment –a tendency to experience as well as express excessive self- criticism, envy and self-hatred, which occurs in response to the feelings of bitterness and hostility towards the "whole world" that result from real or imaginary harm which has been done to the person; the behaviours mentioned above were investigated based on the data gathered using scale V of the BDHI.

The major components of self-aggression, which were examined in the current study included:

1. The feeling of guilt – which refers to a person's attitudes and emotional responses characterized by emotional conflict and a tendency to believe that he or she is worse than others, as well as an inclination towards excessive remorse that is disproportionate to the situation; the tendencies were measured using scale VIII of the BDHI;
2. Self-directed hostility – an individual's tendency to formulate negative opinions about oneself and to make negative self-assessment which is frequently based on an exaggerated sense of self-depreciation and self-humiliation; the aforementioned tendency was examined by means of scale VIIIof the Psychological Inventory of Aggression Syndrome by Zbigniew B. Gaś (PIAS-II).
3. Self-aggression – refers to a variety of behaviours which are aimed at inflicting painand suffering upon oneself (e.g. suicidal attempts, self-injury); scale II of the PIAS-II was applied to examine the level of self-aggression in the study subjects.

An additional control variable was body mass index BMI. It is usually used to estimate a healthy body weight based on a person's height. The BMI index value is calculated as the individual's body weight divided by the square of his or her height. It has been announced that individuals who fall into the BMI range of 19.5 to 24.5 have a healthy weight. A BMI of under 19.5 is usually referred to as underweight.A Body Mass Index reading over 24.5 is considered overweight.

Moreover, the data collected as a result of clinical interviews conducted among the females diagnosed with bulimia, as well as the onesdrawn from the females' medical records included additional information concerning the subjects' marital status,the level of their education,unlawful acts committed by the surveyed and reported in an anonymous questionnaire (e.g. thefts or other offences), chronic diseases, and the information regarding the subjects' experiences of mental, physical or sexual abuse. Analysis of the aforementioned variables was taken into consideration when constructing a profile of specific characteristics of aggressive and self-aggressive behaviours exhibited by the females diagnosed with bulimia.

Materials and Methods

60 Polish females participated in the research. A major study population comprised 30 women diagnosed with bulimia nervosa, aged 20-25. A mean age in the sample was 21.36 (*SD* = 2.697).A mean weight in the group was 54.8 kg (*SD* = 5.50). The females' mean BMI reached the value of 19.3, i.e. the lower limit of the norm (*SD* = 1.908).The

women comprising the major study population were selected intentionally. The selection criteria included symptoms of medically diagnosed bulimia nervosa (according to the ICD 10 F.50.2 criteria of psychiatric classification), and the subjects' willingness to give informed consent to participate in the research.

The criteria which excluded participation in the research included: productive psychotic symptoms, organic changes in the CNS, improper intellectual development, and chronic somatic conditions, eating disorders (e.g. anorexia nervosa, psychogenic binge eating), or other mental disturbances such as neurotic, personality, affective or psychotic disorders).The major study population consisted of individuals suffering from purging bulimia, characterized by self-induced vomiting, overusing laxatives, diuretics, or enemas; as well as females displaying the symptoms of non-purging type of this eating disorder, where by the sufferers engage in compensatory behaviours such as excessive physical workout or fasting, but they do not induce vomiting, or use laxatives, diuretics, or enemas (Józefik, 2006).

Clinical characteristics of a sample of females diagnosed with bulimia nervosa.

Analysis of demographic characteristics of the sample of females with bulimia nervosa demonstrates that 80 % of the subjects were unmarried female students without children, who reported that they had no permanent employment. 20 % of the individuals comprising the studypopulation were temporary employees who did not continue their education at the tertiary level. 50% of the surveyedwere in short-term relationships which they regarded as insignificant. The females also stated that they felt no urge to turn their short-term relationships into long-term ones, or to get married. 40 % of the study participants who made up the major research sample reported that the only relationships which they had established were the ones with their colleagues, and that they had not developed any strong social or emotional bonds. 10 % of the examined females were involved in relationships lasting longer than a year but not longer than 15 months.

When participating in the research process, all the subjects diagnosed with bulimia nervosa remained under medical care. They had no medical records (history of past treatment). As a result of clinical interviews conducted among the study participants, no data was collected concerning the females' prior regular medical or psychological treatment. However, it was discovered that due to worsening of their symptoms, and encouragement from family members and friends, the study subjects had frequently received periodic medical care from a variety of physicians (e.g. general practitioners, internists, gynecologists, or psychiatrists). The data collected as a result of clinical interviews demonstrated that 60 % of the study subjects had not received any form of psychological treatment for the symptoms of disordered eating. It was discovered that 20 % of the participants diagnosed with bulimia had been treated for depression during their adolescent years.20 % of the individuals reported suicide attempts and self-harm. The data drawn from the subjects' medical records can be supported by the outcomes of the studies described in the subject literature. A relationship between depression (especially during adolescent years) and bulimia has been addressed in several investigations (Perez et.al., 2004; Stice et al., 2002; Stice et al., 2004).The studies have reported that bulimic symptoms are believed to increase the risk of depression (Heatherton &Polivy, 1992). In 2005 Duncan et al. distinguished two subtypes of bulimia, related to different coexisting mental disturbances. The researchers discovered that the symptoms of one of the subtypes (prevailing among 70 % of the study subjects) included compulsive behaviour, depression, anxiety, impulsive behaviour and antisocial personality. Individuals suffering from this type of bulimia exhibit the inclination towards suicide and addictions. The other subtype of bulimia is believed to be triggered primarily by depressive disorders.

20% of the females comprising the major study population reported that they had had casual psychological and therapeutic consultations, and stated that they had started but had not completed various forms of group or individual therapy. During the research, the participants suffering from bulimia remained under complex treatment (i.e. the first stage, which had been lasting for at least 3 months) in medical centres, where the females were receiving regular medical care as well as group and/or individual psychotherapy. The mean duration of medical and psychological treatment in this sample reached 4 months.

Characteristics of a clinical population of females without bulimia or other eating disorders.

A clinical population consisted of 30Polish females without bulimia nervosa. A mean age in the sample was 23.23 (*SD* = 2.369).A mean weight in the group was 55.72 kg (*SD* = 5.865). The females' mean BMI reached the value of 20.59 (*SD* = 2.135).The selection criteria for this group of research participants included: the age between 20 and 25, the subjects' willingness to give informed consent to participate in the study, age-appropriate body mass index (i.e. ranging from 19.5 to 24.5), lack of productive psychotic symptoms, organic changes in the CNS, improper intellectual development, and chronic somatic conditions, eating disorders (e.g. bulimia or anorexia nervosa, psychogenic binge eating), or other mental disturbances such as neurotic disorders, personality disorders or depressive episodes, as well as no medical history of past treatment. The individuals who exhibited the symptoms of the aforementioned dysfunctions, had received recommendations concerning possible treatment, or had made attempts at undertaking therapy were excluded from the clinical group of research subjects (this applied predominantly to the females who had undergone hospitalization, received consultations and treatment for eating disorders in various mental healthcare centres, had been treated for neurotic disorders, or those who reported the feelings of anxiety, depression, or emotional over-arousal during clinical interviews). Additional exclusion

criteria for clinical participants included: using regular pharmacotherapy, foreign nationality, and adolescence which pointed to notyetfully developed personality structure.

The data mentioned above were gathered by means of clinical interviews conducted among the examined, and were also drawn from the subjects' medical records(in case of the females comprising the major study population), as well as were collected using questionnaires which consisted of the questions regarding the aforementioned issues (a clinical group).

A psychometric questionnaire was used to make a psychological diagnosis of the investigated variables.The measures applied in the study included:

- The Buss-Durkee Hostility-Guilt Inventory (BDHI) (Stanik, 2006)
- The Psychological Inventory of Aggression Syndrome adapted by Zbigniew B. Gaś (PIAS-II).

The BDHI is a self-rating scale with 75 true-false items, yielding 7 subscale scores that assess various forms of aggression, hostility and guilt. The inventory did not examine the reasons or intentions underlying aggressive behaviour. It served as an instrument for measuring the level of aggressiveness and self-aggressiveness, and identifying their forms (Stanik, 2006). The questionnaire conforms to Polish norms and proves to be a highly reliable measuring method. The values of reliability indicators for the particular scales of the inventory, measured by means of Cronbach'sAlpha, ranged between 0.93 and 0.98(Stanik, 2006).

Two scales of the Psychological Inventory of Aggression Syndrome, adapted by Zbigniew B. Gaś (IPSA-II),were applied to measure the indicators of self-aggression. They included scale VIII (self-hostility) and scale II (self-destructive tendencies). The values of reliability indicators for the aforementioned scales of the inventory ranged between 0.87 and 0.89 (Gaś, 1988).

Raw scores obtained by the study participants in the particular scales of both questionnaires were converted to stens, based on a "Standard-Ten" point scale. Low sten scores (1-4) indicate a low degree of aggressive and self-aggressive behaviour. Medium sten scores of 5 and 6 denote moderate aggression and self-aggression. Whereas sten scores ranging from 7 to 10 point to a high level of aggressive and self-aggressive tendencies among the study subjects.

During the research, the study participants suffering from bulimia remained under treatment at outpatients' clinics (e.g. outpatient mental health clinics, neurosis treatment centres,or day-stay wards for neurosis therapy).

The research was conducted in the years 2007-2011. It was partly inspired by the graduate seminar conducted by the author of the current paper on factors determining attitudes towards the body and eating in females exhibiting various types of eating disorders. The clinicalsample consisted of both full and part time female students in their first or further years of study. The group comprised arts, biology, medicine and science students. Informed consent was obtained from all study participants. The research was approved by the Ethics Committee of Silesian University.

Results

Statistical analysis of the data obtained as a result of this research was performed in two stages. The first step involved making comparisons between two sets of sample data, gathered in the population of females diagnosed with bulimia nervosa and in a clinical sample, and it was coupled with diagnosing the differences concerning the level of aggression in the two groups of the study subjects. The second stage of the analysis was aimed at specifying the intra-group differences in the population of bulimia sufferers, concerning the investigated variables, describing the characteristics of aggressive and self-aggressive behaviours among the aforementioned study participants.

The results of the comparative analysis of the data gathered in the two samples of the study participants weredescribed in the first part of the presentation of the research results.

Table 1 (*page 390)* displays the research data collected in the population of 60 females (30 subjects diagnosed with bulimia nervosa and 30 individuals with no mental disorders), concerning the levels of the females' aggression towards other people, objects as well as towards themselves.

Analysis of the data presented in Table 1 demonstrates that the healthy participants exhibit an appropriate (normal)level of aggression.It can be seen from the table that the mean sten values for all variable components among the examined individuals ranged between 3 and 6, which proved normal.The highest mean value of 6.19 was obtained by the healthy females in the scale of suspicion. From the figures it is apparent that the subjects' tendency towards excessive caution, and an inclination to treat other people with disbelief and hold a deep conviction that others intend to inflict harm on them reach the upper limit of a norm. This seems to indicate a slightly increased level of suspicion among theparticipants without bulimia, however, the mean value still proves normal. Thus, on the basis of the above data, it is possible to conclude that aggressive and self-aggressive behaviour among the females comprising a clinical population does not exhibit any pathological characteristics. The research data proves that the healthy individuals display no symptoms of excessive aggression or self-aggression.

The data gathered in the population of the femal esexhibiting no mental disorders were compared with the ones collected in the group of bulimic subjects. The comparative analysis of the research data aimed at investigating the main differences between the two groups of the subjects in terms of the level of their aggressive and self-aggressive tendencies.

Analysis of the data presented in Table 1, obtained in a group of 30 females diagnosed with bulimia nervosa, reveals an inappropriate (increased) level of self-

Table 1.Differences of the BDHI and the PIAS II questionnaires results between bulimic and non-bulimic research participants.

Characteristics of aggressive and self-aggressive behaviour	Mean value * A clinical sample of females without bulimia	Mean value* A group of females diagnosed with bulimia	T	Degreeof freedom (Df)	p-value
Physicalaggression	4.30 (5.1)	6.50(5.8)	-1.71	58	0.09
Verbalaggression	12.87(5.7)	14.40(6.20)	-1.00	58	0.32
Displacedaggression	4.83(4.5)	8.70(6.4)	-4.12	58	0.001
Irritability	10.33(4.4)	14.70(6.2)	-4.03	58	0.001
Negativism	4.43(5.7)	5.50(6.7)	-1.57	58	0.12
Resentment	4.40(5.3)	10.50(8.1)	-6.37	58	0.001
Suspicion	7.10(6.2)	9.80(7.5)	-2.72	58	0.009
Guilt	6.53(4.0)	12.10(7.1)	-4.55	58	0.001

**The figures displayed in brackets, concerning a group of bulimic and non-bulimic study subjects, denote mean sten values.*
Note:The main characteristics of the research data gathered as a result of the BDHI and the PIAS II questionnaires, aimed at making comparisons between two sets of sample data, gathered in the population of females diagnosed with bulimia nervosa (*N*=30) and in a clinical sample of women without bulimia (*N*=30), and diagnosing the differences concerning the level of aggression in the two groups of the study subjects; Statistical analysis of significant differences, performed using the t-Student test.

aggression and resentment among the study participants. The mean stenvalues above 8, received by the subjects in the aforementioned scales prove to be above a norm. This might suggest that the examined females exhibit a tendency towards inflicting harm and pain upon themselves, which is manifested by suicidal attempts or self-injury. A mean sten value of 7 received by the subjects with bulimia in the suspicion scale as well as in the scale of guilt was discovered to be high and above a norm.

The high mean sten value of 7, obtained by the bulimia sufferers in the scale of guilt points to the fact that the research participants tend to feel inferior to others, and experience the feeling of guilt over an imaginary wrong done.A slightly lower, though proven to be on the borderline between pathology and a norm, mean sten value of 6.60, received by the bulimic individuals on the scale of self-hostility indicates the females' increased inclination towards negative self-evaluation,which involves self-humiliation, self-derogation and exaggerating one's own defects.This denotes that individuals diagnosed with bulimia nervosa seem to be more inclined to believe that they are worthless and inferior, and that they have done something wrong, which the individuals feel guilty for. The study results indicate that bulimia sufferers tend to regard the symptoms of their disease (mainly binge eating and induced vomiting) as something wrong. Bulimic individuals are incapable of controlling them. Consequently, the females feel extreme guilt and shame over their behaviour. They exhibit the fear of negative social evaluation, and find it difficult to refer to their behaviour as a disease, which impedes the process of treatment since the individuals fail to seek specialist medical and psychological help. However, it is frequently the case that bulimia sufferers judge their own behaviour as negative, and therefore they are more likely to start seeking professional help sooner than individuals diagnosed with a restrictive type of anorexia nervosa, who fail to recognize their tendency towards excessive slimming and body emaciation as a disorder, and who are even proud of their condition.

The mean stenvalues for the other aggressive tendencies examined in the study were discovered to be within a norm. However, they all reached the value of 6, which is regarded as a borderline between a norm and pathology.

Analysis of the data obtained as a result of this study confirmed certain differences between bulimic and non-bulimic study participants in terms of the level of their self-aggressive tendencies. This refers primarily to the feeling of guilt, which was discovered to reach a clearly inappropriate level in the group of bulimia sufferers. The feeling of guilt was defined as a person's attitudes and emotional responses characterized by emotional conflict and a tendency to believe that he or she is worse than others, as well as an inclination towards excessive remorse that is disproportionate to the situation. Awareness of good and evil is believed to be the fundamental factor underlying the feeling of guilt which is said to arise as a consequence of the person's awareness of the fact that he or she performed an act which is regarded as inappropriate. The feeling of guilt is also likely to serve as a stimulus which motivates

an individual to change his or her behavior. Unpleasant experiences triggered by the feeling of guilt may be a powerful stimulus, effective in inducing reliable changes in the person's behavior.

The feeling of guilt arises not only as a consequence of the behavior which does not conform to commonly accepted norms such as legal, social, religious or individual ones. It may also accompany the situations in which a person is aware of the fact that he or she has done something wrong, or when an individual realizes that he or she failed to act the way the person had been supposed to. It is a common occurrence that making a mistake is what makes a person feel guilty. The feeling of guilt is also said to be a symptom of mental dysfunctions. This peculiar emotional state seems to be of great significance especially in case of females suffering from bulimia nervosa. Individuals diagnosed with this eating disorder experience guilt, which is frequently accompanied by such feelings as grief, shame, discouragement, anxiety, the fear of being punished, self-disappointment and self-condemnation. There are two basic categories of guilt which should be taken into consideration when examining the group of bulimic females: the subjective feeling of guilt, as well as objective guilt which refers to the fact that a person has done something wrong, e.g. violated social norms or the law(Jakubik,1975).

Analysis of the data collected as a result of interviews with the study participants revealed that 7 subjects diagnosed with bulimia (23.33%) had committed unlawful acts(primarily food shoplifting). This points to the fact that the females in this sample experience objective guilt. The bulimic subjects' tendency to engage in a variety of compulsive behaviours such as binge eating and induced vomiting, characteristic of this type of eating disorder, may stimulate the females to resort to food shoplifting, which is regarded as illegal, punishable and socially disapproved. Another specific category of guilt is theological, or spiritual guilt, which is referred to as breaking religious laws. Any act regarded as a violation of some religious principles is considered to be a sin, irrespective of whether or not it is accompanied by the feeling of remorse. The aspect of religion was not examined in the current research, however, it would be interesting to explore it in future studies.

Statistical comparative analysis was conducted using a parametric method (a student's t-test) in an attempt to identify the significant differences between the bulimic and non-bulimic study participants in terms of aggressive and self-aggressive behaviours. Analysis of the overall data concerning the aforementioned tendencies among the subjects with bulimia was performed using the k-means method (Stanisz, 2007),which was aimed at detecting any possible intra-group differences regarding the investigated variable.

The statistical comparative analysis revealed significant differences between the bulimic and non-bulimic participants of the study in terms of majority of the investigated aggressive and self-aggressive tendencies. The mean values in the scales of physical and verbal aggression, as well as in the scale of negativism,obtained in the clinical population and in the sample of bulimia sufferers were found out to be similar. However, analysis of the mean values for the level of other aggressive tendencies investigated in the current study demonstrated statistically significant differences between the two groups of examined females. As can be seen from the table, thatthe mean sten values for displaced aggression obtained in the group of clinicalsubjects and in the sample of females with bulimia are significantly different. Interestingly, however, the mean sten value received in the sample of females diagnosed with bulimia nervosa (6.4) and the one obtained in the clinical population (4.5) were interpreted as normal. Analysis of the research data demonstrated that the females with bulimia exhibit an increased tendency towards disorderly conduct characterized by an inclination to express displeasure, flashes of temper or anger;as well asa tendency to attack inanimate objects (e.g. stamping one's feet, banging a fist against a table or throwing objects), and engage in the behaviour which is communicated verbally (e.g. malicious jokes or gossip directed against other people).

Similarly, statistical comparative analysis conducted using a Student's t-test revealed significant differences between the two groups of examined females in terms of the level of their irritability. However, the mean sten values for the aforementioned tendency obtained in the major study population (6.2) and in the clinical sample (4.4) proved to be normal, which suggests that the participants comprisingthe study samples did not exhibit an increased level of irritability. This points to the fact that both bulimic and non-bulimic subjects exhibited no predisposition towards uncontrolled aggressive outbursts in response to weak stimuli, which is characterized by impetuousness, touchiness or coarseness.

It was discovered that, compared with the subjectsfrom the clinical population, the females diagnosed with bulimia nervosa exhibited a higher level of suspicion. The stenscores in the two groups had a mean of 6.2 and 7.5, respectively. Similarly, the level of resentment was discovered to be significantly higher among bulimic subjects (the mean sten values obtained in the major and clinical population were estimated to be 8.1 and 6.3, respectively).

Other significant differences between bulimic and healthy subjects were revealed in terms of the level of guilt. The high mean sten value of 7 for the aforementioned aggressive tendency, received in the sample of females suffering from bulimia nervosa, denotes the females' increased tendency to feel guilt. Whereas the mean sten value in this scale, obtained by the clinical participants, was calculated to be 4, which proved normal.

Statistical analysis of the data obtained as a result of a Student's t-test demonstrated significant differences between the healthy females and the bulimia sufferers in terms of a degree of self -directed hostility. The females diagnosed with bulimia proved to exhibit a significantly higher level of self-directed hostility than the healthy subjects. The mean sten value for the aforementioned tendency obtained in the population of bulimic females was calculated to be 6.6 (the upper norm). Whereas the mean scores received by the clinical participants reached the level of 3.7thsten, which is interpreted as normal.

The mean sten values in the self-aggression scale, obtained in the clinical population (5.9) and in the major study sample (8.5) revealed a considerable discrepancy between the two groups of examined females. Analysis of the research data indicated that the individuals suffering from bulimia nervosa tended to display considerably higher level of self-aggression than the healthy subjects.

No significant differences were observed between the two research samples in terms of negativism, physical or verbal aggression.

Discussion

Analysis of the research data showed significant prevalence of certain patterns of aggressive and self-aggressive behaviour among the females diagnosed with bulimia nervosa. The prevailing tendencies in this group of study subjects included: self-aggression, resentment, suspicion and the feeling of guilt. It was found out that the bulimic individuals were more inclined to use displaced "hidden" aggression directed at the body rather than direct physical or verbal aggression. Thus it can be concluded that induced vomiting, reported by the bulimia sufferers, is considered to be a subconscious form of expressing negative emotions which, among others, include anger.

Another finding to emerge from this study is that the subjects suffering from bulimia exhibited an increased, inappropriate level of guilt, which, accompanied by considerable tension and stress, can trigger increased self-destructive tendencies among the individuals.

It is worth mentioning here that based on theoretical assumptions included in the Buss-Durkee Hostility-Guilt Inventory (BDHI), the feeling of guilt has been defined as a person's attitudes and emotional responses characterized by emotional conflict and a tendency to believe that he or she is worse than others, as well as an inclination towards excessive remorse that is disproportionate to the situation (Stanik, 2006).

The mean value which the bulimic subjects showed for resentment points to the females' inclination to express an excessively critical attitude towards others. The finding was also confirmed by the mean scores which the individuals received in the scale of suspicion, i.e. a person's inclination to escalate hostility towards other people, as well as to express excessive disbelief and exercise caution, which eventually makes the person think that other people constantly intend to hurt him or her.

The aforementioned resultscan be supported by the outcomes of the studies described in the subject literature, which emphasize that individuals suffering from bulimia nervosa exhibit low self-esteem and experience fear of social evaluation (Garner, 2004). It is believed that caution, disbelief and distrust towards other people are inherent in the process of social adaptation of bulimia patients, which is frequently determined by the society's view of the disorder, as well as the sufferer's perception of his or her own symptoms. Cycles of binge eating and inducing impulsive compensatory behaviours such as vomiting frequently provoke negative social responses. An individual affected by disordered eating tends to feel ashamed and is often exposed to social anger. However, although the person's compensatory (aggressive)behaviour, directed against his or her body,draws an angry and critical response from the society, the individual is unable to control it due to his or her impulsivity.

The mean value in the scale of self-aggression, obtained by the clinical participants of the study, turned out to be the lowest. This proves that the females with bulimia nervosa display no symptoms of antisocial behaviour;they exhibit fear of social evaluation and do not want to be viewed as aggressive (although they frequently tend to exhibit impulsive behaviour). Compensatory behaviours (e.g. induced vomiting) allow bulimia sufferer to relieve their impulsivity.Lack of positive bodily sensations and perceiving one's own appearance as unattractive and unpleasant facilitates the person's"attack" against his o her own body (Suchańska,1998,2000,2001).

Interestingly enough, the mean values forall components of self-aggression syndrome proved to be above a norm. This applies mainly to self-aggressive tendencies. The mean value in this scale reached the level of 8thsten, which turned out to be the highest of all values obtained in the current study. The data suggest that the subjects suffering from bulimia nervosa exhibit an increased tendency towards self-inflicted pain and suffering (e.g. suicidal attempts and self-harm). Medical records and information obtained as a result of interviews with the clinical participants confirmed the tendency towards suicidal attempts and self-injury only in 20% of the subjects. Hence a question arises if it is likely that the bulimic females revealed a higher inclination to treat their bodies as objects than it was shown in their medical records or reported in the interviews. Is it possible that the females' impulsive behaviour is not aimed at inflicting self-injury or making suicidal attempts, but it involves binge eating, compulsive vomiting or other compensatory responses (e.g. using laxatives)?

Most classifications in the literature show two kinds of aggression:impulsive (exhibited in response to provocation) and instrumental (intentional, used as a means to achieve an external goal, but not perceived as a goal itself). In this context, aggressive and self-aggressive behaviorsdisplayed by individuals suffering from bulimia nervosa should on the one hand side be interpreted as a peculiar form of intrinsic, "self-induced" response to provocation. An inclination to act rashly in response to a sudden impulse (e.g. cycles of uncontrolled binge eating and induced vomiting) should be regarded as a coping strategy which an individual adopts in an attempt to alleviate tension and combat frustration. On the other hand side, impulsive (aggressive) behavior involves intentional, deliberate (conscious) acts which are intended to help the person regain mental balance (e.g. food shoplifting and other forms of aggression directed at other people in an attempt to gain access to food necessary for bingeing).

It can be stated then that the element of impulsivity, which is a dominant aspect of the psychopathology of bulimia nervosa, should be taken into account in the examination of the syndrome of aggression and self-

aggression. The results of scientific research described in psychological and psychiatric literature point to avariety of factors that contribute to development of bulimia nervosa. The most significant aspects of the psychopathology of this eating disorder include: impulse regulation disturbances, overstimulation, low frustration tolerance, neuroticism,perfectionism, obsessive-compulsive, borderline or histrionic personality disorders, dysphoric mood, social alienation and distrust (Lacey&Evans,1986 ;Mikołajczak&Samochowiec, 2004). The self-aggressive behaviours dominated by the feeling of guilt, as well as the aggressive (suspicious) tendencies, reported by the research subjects, may be regarded as a characteristic component of a psychological profile of an individual diagnosed with bulimia nervosa.

According to the fundamental assumptions of the object relations theory, a bulimic individual identifies him/herself by his or her symptoms with the false, perfectionist self,created under the influence of the person's narcissistic care-givers. Thus food becomes a substitute for the self-object. It is the bridge between the self and the self-object, and the significant transitional object whose role is to regulate the bulimic individual's affective states. The bulimic self (that is the body self) is expressed through body language and represents the primitive need for dependence and separation. Binge eating symbolically compensates for the need for care and dependence, and self-induced vomiting symbolizes the need for self-identity and separation from the object (Krueger, 2002; Izydorczyk, 2011).

The second stage of the research data analysis was aimed at specifying the intra-group differences in the population of bulimia sufferers, concerning the investigated variables, describing the characteristics of aggressive and self-aggressive behaviours among the aforementioned study participants. The results of cluster analysis, conducted using the k-means method, are presented in Table 2.

Cluster analysis of the data obtained as a result of this study allowed to distinguish two different clusters in the sample of females diagnosed with bulimia. The research data revealed certain significant differences between the examined bulimia sufferers in terms of the level and configuration of aggressive and self-aggressive tendencies, measured using the scales of the BDHI and PIAS-II. Cluster No. 1 was composed of 16 females, and Cluster No. 2 comprised 14 bulimic subjects. Significant differences between the examined females diagnosed with bulimia were revealed in terms of such characteristics of aggressive and self-aggressive behavior as: physical and verbal aggression, displaced aggression, and guilt. No significant partial differences between the bulimic participants of this research were detected in terms of other characteristics of aggressive and self-aggressive tendencies, which were investigated in the present study.

Examination of demographic variables revealed no intra-group differences in the sample of females with bulimia. It was discovered that the participants' marital status and education were not the factors underlying the intra-group differences in this sample of study subjects. Both clusters were predominated by unmarried females. Majority of the females comprising the two subgroups were childless

Table 2. Results of the cluster analysis conducted using the k-means method.

Characteristics of aggressive and self-aggressive behaviour	Mean value Cluster No. 1 Females with bulimia (n=16)	Mean value Cluster No. 2 Females without bulimia (n=14)	Degreeof freedom (Df)	F	P value
Physicalaggression	8.76	3.46	28	11.97	0.002
Verbalaggression	16.53	11.62	28	9.90	0.004
Displacedaggression	10.00	6.92	28	12.90	0.001
Irritability	15.29	13.92	28	2.72	0.110
Negativism	6.29	4.38	28	9.03	0.006
Resentment	10.88	10.00	28	0.37	0.548
Suspicion	10.00	9.46	28	1.11	0.302
Guilt	10.41	14.23	28	4.75	0.038
Self-aggressivetendencies	7.47	7.38	28	0.25	0.618
Self-directedhostility	3.76	4.00	28	0.00	0.986

Note: Specification of intra-group differences in the population of bulimia sufferers, concerning the characteristics of aggressive and self-aggressive behavioursin this sample of research participants (N=30).

(15 women in Cluster No.1 and 12 subjects in Cluster No.2, which accounted for 88.24% and 92.31%, respectively). 9 females in Cluster No.1(52.94%) and 8 study participants in Cluster No.2 (61.54%) had secondary education, which proved to be a vast majority in both subgroups. Overall, 17 study subjects diagnosed with bulimia were found out to have secondary education.

It was revealed that 5 females with bulimia had primary education, 4 of whom (23.53%) belonged to Cluster No.1, and 1 (7.69%) to Cluster No.2. Five of the examined females had higher education. Two of them (11.76%) were in Cluster No.1, and 3 (23.08%) in Cluster No. 2. Three bulimic subjects turned out to have post-primary vocational education . Two of them (11.76%) belonged to Cluster No.1, and 1 (7.69%) to Cluster No.2.

Cluster analysis of the data gathered as a result of this research revealed no significant differences between bulimic subjects in terms of other variables examined in this study such as traumatic experiences, unlawful acts (e.g. traffic offences, acts of violence, theft, armed robbery, mugging, etc.), and chronic diseases requiring permanent treatment (e.g. diabetes, chronic renal insufficiency, thyroid disorders, bronchial asthma, peptic ulcer, gastrointestinal disorders, cardiovascular diseases, polycystic ovary syndrome, migraines). This can be explained by the fact that the research was conducted in a relatively small sample of females. It is suggested that further investigation of the intra-group differences should be conducted in a lager sample, which is likely to produce more accurate and reliable results.

Analysis of the research data collected as a result of clinical interviews conducted among the females diagnosed with bulimia revealed that 7 out of 30 bulimic subjects, which accounted for 23.33%, admitted to having committed some unlawful punishable acts such as traffic offences, petty thefts (e.g. food shoplifting), verbal, mental or physical abuse. It was found out that 4 of the females belonged to Cluster No. 1 (23.53%), whereas 3 of them were in Cluster No.2 (23.08%). The unlawful acts reported by the examined females included predominantly food shoplifting as well as traffic offences, mainly exceeding the speed limit. There were no cases of physical and sexual abuse, assault, entering into scuffles, serious economic crime subject to penal sanctions, or murder.

A comparative analysis of the incidence rate of chronic diseases in females diagnosed with bulimia revealed no differences between the subjects comprising Cluster No. 1 and the individuals in Cluster No.2. Examination of the data collected as a result of clinical interviews conducted among the bulimic subjects, as well as the ones drawn from the females' medical records, demonstrated that 12 out of 30 examined females suffered from a chronic illness. It was found out that 8 of them belonged to Cluster No.1 (47.06%), and 4 subjects were in Cluster No.2 (30.77%). The data analysis revealed that 3 women in Cluster No.1(17.65%), and 1 individual in Cluster No.2 (7.69%) were diagnosed withdiabetes. It was discovered that 4 bulimic subjects in Cluster No.1 (23.53%) suffered from peptic ulcer and gastrointestinal disorders. Isolated cases of other chronic diseases were observed in the sample of bulimia sufferers . 1 woman in Cluster No.1 provedto suffer from arterial hypertension. 1 female in Cluster No.1 exhibited the symptoms of bronchial asthma, and 1 individual in the same subgroup,which accounted for 5.88%, was diagnosed with cardiovascular disorders. 4 subjects in Cluster No.2 displayed the symptoms of such diseases as diabetes, peptic ulcer, or gastrointestinal disorders.

Although the results of cluster analysis revealed no significant partial differences between the examined bulimia sufferers in terms of chronic diseases, it is worth noticing that it is predominantly the subjects in Cluster No.2 who were found to suffer from the aforementioned chronic conditions. A similar tendency was observed with respect to lifetime abuse experiences reported by the bulimic subjects (e.g. physical, mental, or sexual abuse).

4 females in Cluster No.1 (23.53%) and 2 subjects in Cluster No.2 (15.38%) admitted to having been physically abused by their close friends and relatives (e.g. corporal punishment). It was discovered that 9 women in Cluster No.1 (52.94%) and 5 females in Cluster No.2 (38.46%) had experienced verbal aggression (e.g. vulgar language, name-calling, or other forms of verbal abuse).

11 individuals in Cluster No.1 (64.71%) and 7 subjects in Cluster No.2 (53.85%) reported that they had been blackmailed emotionally by the people close to them (partners, parents, siblings, or other people who the study subjects were emotionally tied to). Emotional blackmail was defined by the examined females as the means for satisfying their needs by succumbing to the mental pressure exerted on them by their friends, relatives, or other people (according to the rule: "If you meet my expectations, your needs will be satisfied").

4 females in Cluster No.1 (23.53%) were discovered to have experienced sexual abuse, while no such cases were found in Cluster No.2.

The research findings described in the subject literature indicate that relational trauma (especially physical or sexual abuse experienced by an individual in a critical period of growthduring the early stages of the person's development) proves to be the factor which significantly contributes to the development of bulimia symptoms(Pope & Hudson, 1992; Waller, 1991; Rorty, Yager, & Rossotto, 1994; Kent, Waller & Dagnan, 1999; Wonderlich, 2001; Hartt & Waller, 2002).

It would be interesting to determine whether there is any possible link between the two clusters of bulimia subjects, identified as a result of cluster analysis of the data gathered as a result of this research, and two subtypes of bulimia nervosa differentiated by comorbid psychiatric disorders (Duncan et al., 2005). The results of the study conducted by the aforementioned researchers suggest that one of the two types (diagnosed in more than 70% of research subjects) is characterized by substance dependence, depression, impulsive behaviours, antisocial personality disorder and anxiety disorders. The other type is characterized solely by depression. As a result of the research carried out by Duncan et al. it was found out that the individuals diagnosed with the former type of bulimia

nervosa exhibit suicidal tendencies, are predominantly compulsive smokers, seek help for emotional problems, and their psychological functioning is likely to be poor.

It should be emphasized that the present study was conducted in a small sample consisted solely of female subjects, which was likely to affect the results of cluster analysis. The present researcher's choice of the study population was determined by the fact that the only group of adequate size which the author gained access to was that comprising females. Hence, it is important that further research should be conducted to verify the aforementioned findings.

As a result of cluster analysis conducted in a sample of 30 females diagnosed with bulimia, 2 groups of women were identified. The subjects comprising the 2 clusters revealed certain differences in terms of the level and configuration of the following characteristics of aggressive and self-aggressive behavior:

- direct physical aggression – defined as a tendency towards using direct physical force against animate objects (people or animals);
- displaced aggression – refers to a person's disorderly conduct characterized by a tendency to express displeasure, as well as flashes of temper or anger; it is also understood as an inclination towards attacking inanimate objects; displaced aggression may also refer to the behaviour which is communicated verbally (e.g. malicious jokes or gossip directed against other people);
- direct verbal hostility – an inclination towards using vulgar language, shouting, quarreling, swearing, making threats and name-calling;
- negativism - a behavioral attitude characterized by resistance and opposition to power and authority, as well as a tendency to act in a contrary manner;
- the feeling of guilt – which refers to a person's attitudes and emotional responses characterized by emotional conflict and a tendency to believe that he or she is worse than others, as well as an inclination towards excessive remorse that is disproportionate to the situation.

While discussing the factors affecting development of aggressive and self-aggressive (self-destructive) tendencies in people, it is necessary to take into consideration the psychological theories which hold that the aforementioned bahaviours are triggered by impairment in the development of ego functions. A conception developed by Anna Suchańska is a good case in point, since it focuses on the impact of the self-care (ego) functions on formation of a person's identity.

It is believed that the cognitive structures which an individual develops determine the way he or she explains the events that occur in the person's life. An individual's explanatory, or attributional style, that is to say, the tendency to interpret events in certain sorts of ways, shapes the person's positive or negative attitude towards him or herself and/or the surrounding world. The person's pessimistic or optimistic approach to liferesults from the functions of ego, which in turn affects the individuals' adaptation to life. The ego functions serve to warn, guide and protect an individual from hazardous involvements and bahaviour. Once the person perceives danger, he or she attempts to adopt an appropriate self-defense strategy in order to escape it (e.g. alienation),or decides against undertaking defense measures. The process of adaptation involves gaining a sense of security, which is related to the self-care ego functions (Suchańska, 1995).

The aforementioned approach highlights the impact of psychological factors on the development of aggressive and self-aggressive tendencies among people. The perspective presented by Anna Suchańska supports other recognized theories (e.g. cognitive or object relations approaches) which posit that the difficulties which an individual experiences when establishing close emotional bonds with other people trigger his or her self-destructive and aggressive behaviours. Traumatic experiences which bulimia sufferers are exposed to, combined with the difficulties they encounter in the process of forming and maintaining close relationships, are the factors which, as Anna Suchańska argues, are detrimental to the development of the self-care ego functions. Failures and impairments in the development of this function explain a range of self-aggressive behaviours which bulimic individuals resort to in response to frustration of their needs and emotions.

Conclusions

Analysis of the data gathered in this study points to an increased tendency towards aggressive bahavioursas well as self-aggressive tendencies (e.g. the feeling of guilt) among females diagnosed with bulimia nervosa. However, cluster analysis of the data gathered in this sample revealed partial differences between the subjects in terms of the aforementioned tendencies. It was discovered that the bulimic individuals comprising Cluster No.1 exhibited a significantly higher level of all forms of aggression, including verbal and physical aggression, as compared to the bulimic individuals belonging to Cluster No.2. This points tothe females' higher tendency towards using direct physical force and verbal hostility against animate objects (people or animals); and engage in disorderly conduct characterized by a tendency to express displeasure, flashes of temper or anger; as well as an inclination towards attacking inanimate objects. Moreover, the females in Cluster No.1 were found to reveal a significantly higher level of the feeling of guilt than the study participants belonging to Cluster No.2. The women displayed a tendency to believe that they are worse than others, as well as an inclination towards excessive remorse that is disproportionate to the situation. It was also discovered that Cluster No.1 was predominated by the bulimic females who had experienced various forms of physical, mental (emotional blackmail) and sexual abuse; and who suffered from a variety of chronic diseases.

The level of the aforementioned tendencies among the bulimia sufferers comprising Cluster No.2 proved to be considerably lower than that obtained in Cluster No.1. No cases of sexual abuse were observed among the subjects in Cluster No.2. The number of females who reported mental or physical abuse turned out to be significantly lower than

that in Cluster No.1.

However, no significant differences between the examined bulimic females were revealed in terms of the other aggressive tendencies which were investigated in this study. Thisindicates that the subjects display a similar level of irritability, and the same tendency to express flashes of temper or anger, as well as a similar inclination towards interpersonal distrust, excessive criticism, low self-esteem, suicidal behaviours and self-harm, aimed at releasing tension. It can be deduced that the similar level of the aforementioned aggressive and self-aggressive tendencies, discovered in both clusters of bulimia sufferers, is likely to result from the females' common feature referred to as impulsivity. The sample size can also affect the results of the research, which was already discussed in this paper.

Overall, it can be stated that a reliable psychological diagnosis of the aforementioned tendencies is likely to facilitate the process of treatment in a group of patients suffering fromthis eating disorder. Therapeutic work aimed at gaining insight into impulsive behaviours and cycles of binge eating seems to be of considerable significance.

Bulimia nervosa is an eating disorder which triggers frustration of numerous needs (e.g. the need for love, security, social acceptance, etc.) and leads to mental discomfort since the compensatory behaviours which the aforementioned condition is accompanied by tend to arouse anxiety and negative emotions such as disgust, shame and anger. In response to frustration of needs and emotions, a bulimia sufferer frequently engages in self-aggressive bahaviour directed against his or her body. An individual unintentionally intensifies the symptoms of destructive binge eating and provokes compensatory behaviours.

Therefore integrating individual therapy with psychodynamic group psychotherapy that is based on establishing an emotional bond with the other person seems to be an effective method of gaining insight into the self-destructive and aggressive tendencies exhibited by patients diagnosed with bulimia nervosa.The group environment provides an individual with an opportunity to display his orher impulsivebahaviour and express emotions. Group therapy focuses on interpersonal relationships and is geared toward examining the roles which a bulimic client takes on in the course of agroup-therapeutic process and acts out in everyday life. It is a therapy group that stimulates an individual to explore the roots of his or her self-destructive behaviour. Group dynamics coupled with support from other group members facilitates investigating the self-destructive and impulsive tendencies exhibited by a bulimic individual in the group environment. Thus a group can be interpreted as a special space which serves as a container of aggressive emotions (e.g. anger, or even rage, and helplessness), as well as negative and pessimistic thoughts about the world in which a bulimic individual would be able to function, posing no hazard to other people or their possessions.

Due to the psychosomatic and self-destructive character of bulimic symptoms,prior to commencing therapy, each person suffering from this disorderis requested tosign a patient-therapist contract under which the client is obliged to undergo regular medical examinations aimed at assessing the frequency and intensity of his or her compensatory symptoms. Considerable significance shouldbe attached to psycho-educational programmes informing about the negative effects of purging such as body emaciation and internal organ injury. Cognitive-behavioral therapy involves the use of practical self-help strategies, which are designed to bring about positive and immediate changes in the person's quality of life. CBT will help an individual with bulimia nervosa monitor his or her eating habits and avoid the situations that make the person want to binge. A therapist may ask a bulimic patient to keep a diary of behaviour, and thus make sure if the patient adheres to the recommendations concerning treatment (e.g. decreasing the frequency of induced vomiting, limiting the use of laxatives). The client is trained to use the practical strategies during the course of his or her daily life and report the results to the therapist.

In the course of group therapy,it is the group members that become responsible for the good mental and physical state of the patient, not reversely. A client is provided with an opportunity to "delegate" the task of performing self-control onto a therapist and the group members. This seems to resemble the phenomenon of reversal of the primary mother-infant relationship.It is a common occurrence that a patient is reluctant to follow the therapist's recommendations, especially the ones concerning the body. Therefore, the relationship which the therapist establishes with a bulimic patient should be based on empathy and understanding rather than on a constant "fight". Another crucial element of the group therapy is setting boundaries, which the patient had never experienced in the relations with his or her parents or caretakers.

Cognitive and behavioural therapeutic interventions, aimed at training a patient to identify a variety of environmental (situational) factors triggering overeating, as well as instructing the person on how to reduce (or eliminate)the cycles of binge eating and the accompanying compensatory behaviours (e.g. vomiting, the use of laxatives), seem to be of considerable significance.

The research findings suggest that a more eclectic approach to bulimia treatment is necessary. Psychodynamic psychotherapy coupled with the elements of cognitive and behavioral therapy (e.g.psycho-education, anger management training, psychodrama, family counseling and therapy, especially in case of adolescent patients) is proved to facilitate the process of gaining insight into psychological mechanisms underlying an increased level of aggressive and self-aggressive tendencies in individuals suffering from bulimia nervosa. Thus it might intensify and accelerate the treatment of the aforementioned eating disorder.

Taking into consideration the results of cluster analysis conducted in the sample of the research objects diagnosed with bulimia nervosa, it can be assumed that the process of treatment in this group of patients should include appropriate models and techniques of psychotherapy. An implication of the present study findings is that in case of the females comprising Cluster No.1, who proved to exhibit a significantly high level of aggressive and self-aggressive tendencies, therapeutic interventions should integrate such

elements as long-term psychodynamic psychotherapy, based on building an emotional bond; the therapeutic method aimed at developing the patients' cognitive and emotional insight into the psychological mechanisms underlying the eating disorder they suffer from, which should be gradually introduced in the process of treatment; as well as cognitive-behavioral therapy.

A reasonable approach to cope with the aforementioned disorderin the bulimic females comprising Cluster No.2, whose level of aggression and self-aggression turned out to be considerably lower, compared with cluster 1 subjects, would be to use psychodynamic insight therapy coupled with elements of cognitive-behavioral therapy (the length of treatment is likely to be shorter in this group of patients).

References

American Psychiatric Association. (1994). *Diagnostic and statistical manual of mental disorders(4thed.)*. Washington, D. C: Author

Aronson, E., Wilson, T. D., & Akert, M.R. (1997). *Psychologia społeczna. Serce i umysł.* [Social Psychology: The Heart and the Mind]. Poznań: Wydawnictwo Zysk i S-ka

Babiker, G., & Arnold, L. (2002). *Autoagresja, mowa zranionego ciała* [The Language of Injury: Comprehending self-mutilation.]. Gdańsk: Wydawnictwo Psychologiczne

Berglas ,S.,& Jones, E. (1978). Drug Choice as a self-handicapping strategy in response to non-contingent success. *Journal of Personality and Social Psychology, 36*, 405-417

Berkowitz, L.(1978).Whatever happened to the frustration – aggression hypothesis? *American Behavioral Scientists, 21*, 691-707

Berkowitz, L.(1989). Frustration -aggression hypothesis: Examination and reformulation. *Psychological Bulletin,106*, 59-73

Berkowitz, L.(1993). *Aggression: Its causes, consequences, and control.* Philadelphia, PA: Temple University Press

Berkowitz, L.(1998). *Affective aggression: the role of stress, pain and negative effect.* San Diego ,CA: Academic Press, 49-72

Boyd, H., S. (1990). Decisions suicydares. *Les del'analysistransactionelle, 2*, 59-69

Buss, A.H.(1961).*The psychology of aggression*. New York: Wiley and Sons

Buss, A.H. (1963).Physical aggression in relation to different frustrations. *Journal of Abnormal and Social Psyhcology,67*, 1-7

Cash, T. F., & Pruzinsky, T. (2004). Body image. *A Handbook of Theory, Research and Clinical Practice*. New York. London: The Guilford Press

Czapiński,J. (1992). *Psychologia szczęścia* [Psychology of happiness]. Warszawa: Wydawnictwo Instytutu Psychologii PAN

Doliński,D.(1994). *Orientacja defensywna* [Defensive orientation]. Warszawa: Wydawnictwo Instytutu Psychologii PAN

Duncan, A.E., Neuman, R.J., Kramer, J., Kuperman, S., Hesselbrock,V., Reich, T., & Bucholz, K.,K.(2005). Are there subgroups of bulimia nervosa based on comorbid psychiatric disorders? *International Journal of Eating Disorders ,37(1)*, 19-25.

Eckhard, A.(1988). *Autoagresja* [Self-aggression]. Warszawa: ABC

Fairburn, C.G., Cooper, Z. &Doll ,H.A.(2000). The natural course of bulimia and binge eating disorder in young women. *Arch. Gen. Psychiatry, 27,* 659-665

Fairburn, C.G. & Harrison, P.J.(2003). Eating disorders. *Lancet.1, Vol.361*, 9355,407-16

Frączek, A. (2002). Agresja interpersonalna: opis i analiza z perspekty psychologii społecznej [Interpersonal aggression: description and analysis from the perspective of social psychology]. In: Ł. Jurasz-Dudzik(Eds.), *Człowiek i agresja. Głosy o nienawiści i przemocy. Ujęcie interdyscyplinarne* [Human aggression. Comments on hatred and violence. An interdisciplinary approach]. Warszawa: Wyd. Sic

Freud, S.(1974). *Poza zasadą przyjemności* [Beyond the pleasureprinciple]. Warszawa: PWN

Fromm, E. (1973). *The Anatomy of Human Destructiveness*. New York: Holt, Rinehart & Wilson

Garner, D. M. (2004). *EDI-3. Eating Disorders Inventory-3.* USA:PAR Psychological Assessment Resources,Inc

Gaś, Z. (1988). Inwentarz psychologiczny Syndromu Agresji [The Psychological Inventory of Aggression Syndrome]. *Przegląd psychologiczny, 23,* 143-154

Hartt, J., & Waller, G.(2002). Child abuse, dissociation and core beliefs in bulimic disorders. *Child Abuse & Neglect, 26(9)*, 923-938

Heatherton ,T.F., & Polivy ,J. (1992). Chronic dieting and eating disorders. A spiral mode. In. J. H. Growther, S. E. Hobfoll, & M.A.P. Tennenbaum (Eds.). *The etiology of bulimia nervosa:The individual and familial contents* (pp.133-155). Washington: D.C.Hemisphere

Hołyst, B.(1983). *Samobójstwo –przypadek czy konieczność* [Suicide – a coincidenceornecessity] .Warszawa: PWN

Izydorczyk, B. Rybicka-Klimczyk, A.(2008). Poznawcze aspekty obrazu ciała u kobiet a zaburzenia odżywiania [Cognitive aspects of women's body image and eating disorders]. Endokrynologia Polska. *Polish Journal of Endocrinology, 60*, 4/2009, 1-8

Izydorczyk, B.(2011). A Psychological profile of the body self characteristics in women suffering from bulimia nervosa. In: P.Hay (Eds.). *New insights into the prevention and treatment of bulimia nervosa*, Croatia: InTech

Jakubik A., *Psychologia poczucia winy* [Feeling of guilt psychology]. Psychiatria Polska, 1975, t. 9(3), 297-305.

Kelly, K. (1985). Chronic Self-Destructiveness Conceptualisation Measurement and initial Validation of the Construct. *Motivation and Emotion, t.9, 2*, 135-151

Kent, A., Waller, G.,&Dagnan, D. (1999). A greater role of emotional than physical or sexual abuse in predicting disordered eating attitudes: the role of mediating variables. Int. J *Eating Disorders, 25, 2*, 159- 67

Kent, A.,& Waller, G. (2000). Childhood emotional abuse and eating psychopathology. *Clinical Psychology Review, 20(7)*, 887-903

Kernberg, O. (1995). *Związki miłosne: norma i patologia* [Love relations: normality and pathology]. Poznań:Wydawnictwo Zysk i S-ka

Klein, M.(2007). *Pisma Vol 1. Miłość, poczucie winy i reparacja* [Love, Guilt and Reparation]. Gdańsk: Gdańskie Wydawnictwo Psychologiczne

Kofta ,M., & Szutrowa, T.(1991). *Złudzenia, które pomagają żyć* [Illusions that let live]. Warszawa: Wydawnictwo Naukowe PWN

Kornadt, H.J. (1984) Motivation theory of aggression and its relation to social psychological approaches. In: A. Mummendey (Eds.) *Social psychology of aggression : from individual behavior to social interaction.* (pp.21-31). New York:Springer

Krahé, B. (2006) . *Agresja* [Aggression]. Gdańsk. Gdańskie Wydawnictwo Psychologiczne

Krueger, D., W. (2002). Psychodynamic perspectives on body image.In: T. F., Cash, T. Pruzinsky (Eds.), B*ody Image. A Handbook of Theory, Research, and Clinical Practice* (pp.30-37). New York, London: The Guilford Press

Kubacka-Jasiecka, D. (2006). *Agresja i autoagresja z perspektywy obronno-adaptacyjnych dążeń Ja.* [Aggression and self-destruction from defensive-adaptive self desire perspective]. Kraków: Wydawnictwo Uniwersytetu Jagiellońskiego

Lacey, J. H., & Evans, C. D. H. (1986). The impulsivist: A Multi – Impulsive Personality Disorder. *British Journal of Addition, 81(5)*, 641-649

Lee, D. (1987).The self deceptions of the self –destructive. *Perceptual and Motors Skills, t.65 (3)*, 975-989

Lindsay, J.A., & Anderson, C.A.(2000). From antecedent conditions to violent actions: A general affective aggression model. *Personality and Social Psychology Bulletin, 26,* 533-547

Lipiński, S. (2002). *Nasilenie skłonności agresywnych u osób resocjalizowanych i jego korelaty osobowościowe* [The level of aggression in criminals and its individual correlates]. Łódź: Wydawnictwo Uniwersytetu Łódzkiego.

Marcus –Newhall, A., Person, W.C., Carlson, M., & Miller, N. (2000). Displaced aggression is alive and well: A meta-analytic review. *Journal of Personality and Social Psychology, 78*, 670-689

Markson, E.R. (1993). Depression and moral masochism. *The International of Journal Psychoanalysis, 74,* 931-940

Mikołajczyk, E., & Samochowiec, J. (2004). Cechy osobowości u pacjentek z zaburzeniami odżywiania [Personality characteristics of females diagnosed with eating disorders.] *Psychiatria, 1(2),* 91-95, 147-167

Pope, H., G., & Hudson, J. (1992). Is Childhood Sexual Abuse a Risk

Factors for Bulimia Nervosa? *American Journal Psychiatry, 149(4)*, 455-463.

Perez, M., Thomas, E., Joiner, J., & Peter, M.Lewinsohn, P., M. (2004) Is major depressive disorder or dysthymia more strongly associated with bulimia nervosa? *International Journal of Eating Disorders ,36 (1)*, 55–61.

Rabe-Jabłońska, J., & Dunajska, A.(1997). Poglądy na temat zniekształconego obrazu ciała dla powstawania i przebiegu zaburzeń odżywiania [Body image distortion and eating disorders]. *Psychiatria Polska, 6,* 723-738

Reber, A. (2000). *Słownik Psychologii.* [Dictionary of Psychology] Warszawa: Wydawnictwo Naukowe Scholar

Ringel, E.(1992). *Nerwica a samozniszczenie* [Neurosis and self-destruction]. Warszawa: PWN

Rorty M., Yager J., & Rossotto, E. (1994). Childhood sexual, physical and psychological abuse in bulimia nervosa. *American Journal Psychiatry, 151, 8* , 401-12

Seligman, M. (1995). *Co możesz zmienić, a czegonie możesz* [What You Can Changeand What You Can't: The Complete. Guide to Successful Self-Improvement.] Poznań: Media Rodzina

Seligman, M. (1996). *Optymizm u można się nauczyć* [Learned Optimism: How to Change Your Mind and Your Life]. Poznań: Media Rodzina

Stice, E., Presnell K., & Shaw, H.(2005). Psychological and behavioral riskfactors for obesity onset in adolescent girls: a prospective study. *Journalof Consulting and Clinical Psychology, 73*, *2*, 195-202.

Stice, E, Presnell, K, Spangler, D. (2002). Risk factors for binge eating onset in adolescent girls: A 2-year prospective investigation. *Health Psychology, 21(2)*, 131–138

Stice, E. Risk and maintenance factors for eating pathology: a meta-analytic review. *Psychological Bulletin, 2002; 128,* 825–848. doi-10.1037//0033-2909.128.5.825

Stanik, J. M.,Roszkowska, A., &Kucharewicz, J. (2006). Psychologiczna diagnoza zachowań agresywnych w świetle badań Skalą Agresji Buss-Durkee (SABD) - wyniki i normalizacja testu [Psychological diagnosis of aggressive behaviors in the light of tests based on the Buss-Durkee Scale (SABD) - research results and test normalization.] In: J. M. Stanik (Eds.), *Zastosowanie wybranych technik diagnostycznych w psychologicznej praktyce klinicznej i sądowej* [Application of selected diagnostic techniques in psychological clinical and forensic practice] (pp.81-99). Katowice: Wydawnictwo Uniwersytetu Śląskiego

Suchańska, A.(1995). Behawioralne wskaźniki pośredniej autodestruktywności a styl wyjaśniania zdarzeń [Behavioral indicators of displaced self-aggression and the style of explaining events]. *Czasopismo Psychologiczne, tom 1, 1-2*, 93-100

Suchańska, A. (1998). *Przejawy i uwarunkowania psychologiczne pośredniej autodestruktywności* [Symptoms and psychological determinants of displaced self-aggression]. Poznań: Wydawnictwo Naukowe Uniwersytetu im. Adama Mickiewicza.

Suchańska, A. (2000). Anoreksja, jako przejaw syndromu autodestrukcji [Anorexia as a symptom of self-aggression] In: A. Suchańska (Eds): *Podmiotowe i społeczno – kulturowe uwarunkowania anoreksji* [Individual and socio-cultural determinants of anorexia]. Poznań, Wydawnictwo Fundacji Humaniora

Suchańska, A. (2001). Autodestruktywność pośrednia- samoagresja czy deficyt ochrony? [Displaced self-destructiveness – self-aggression or defense deficit?] In: M.Binczycka-Anholcer (Eds.) *Agresja i przemoc a zdrowie psychiczne: praca zbiorowa* [Aggression and violence and mental health.]. (p.153-230). Warszawa, Poznań: Polskie Towarzystwo Higieny Psychicznej.

Sugarman,A., (1991). Bulimia: A. Displacement from Psychological Self to Body Self. In: J. Craig(Eds.). *Psychodynamic Treatment of Anorexia Nervosa and Bulimia*. London: The Guilford Press.

Tedeschi, J. T., Smith R.C., & Brown R.C.(1974). A reinterpretation of research on aggression. *Psychological Bulletin,81*, 540-562

Thompson, J. K.(1996). Introduction: body image, eating disorders, and obesity – an emerging synthesis. In: J.K.Thompson J.K.(Eds.), *Body image, eating disorders, and obesity. An integrative guide for assessment and treatment* (pp.1-20).Washington: American Psychological Association DC, 923-38

Thompson, J.K. (2004) *Handbook of Disorders and Obesity*. New York: Wiley: John Wiley/Sons 95-514.

Waller, G.(1991). *Sexual abuse as a factor in eating disorders. Br J Psychiatry, 159*, 664-71

Wilson, C.P. (1985). *Fear of Being Fat. The Treatment of Anorexia and Bulimia*. New York: Jason Aronson Inc

Wilson, G. T., Fairburn, C. C., Agras, W. S., Walsh, B. T., & Kraemer, H. (2002). Cognitive-behavioral therapy for bulimia nervosa: Time course and mechanisms of change. *Journal of Consulting and Clinical Psychology, 70,* 267–274.

World Health Organization (2000). *International Statistical Classification of Mental and Behaviour Disorders (10th.ed.)*. Kraków –Warszawa: Uniwersyteckie Wydawnictwo Medyczne „Vesalius", Instytut Psychiatrii i Neurologii

Wonderlich, S.A.(2001). Eating disturbance and sexual trauma in childhood and adulthood. *International Journal of Eating Disorders, 30,* 4010-12

Wonderlich, S. A., & Mitchell, J. E (2001). The role of personality in the onset of eating disorders and treatment implications. *Psychiatric Clinics of North America, 24,* 249-258.

Wonderlich, S. A., & Swift ,W. J. (1990). Borderline versus Personality Disorders in the Eating Disorders: Clinical Description. *International Journal of Eating Disorders, 9,* 629-638

Wycisk, J. (2004) *Okaleczanie ciała. Wybrane uwarunkowania psychologiczne* [Self-mutilation. Selected psychological determinants.]. Poznań: Bogucki Wydawnictwo Naukowe

Wycisk, J. (2006). Psychologiczne funkcje samouszkodzeń umiarkowanych [Psychological functions of moderateself-mutilation] In.: A. Suchańska A, Wycisk J.(Eds.) *Samouszkodzenia. Istota, uwarunkowania, terapia*.[The phenomenon of Self-mutilation. Determinants and therapy]. Poznań: Bogucki Wydawnictwo Naukowe

Żechowski, C. & Namysłowska, I. (2008). Kulturowe i psychologiczne koncepcje samouszkodzeń [Culture and Psychological concepts of self-harm] , *Psychiatria Polska,Vol. XLII*, *5*,47–657