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From Diathesis to Disorder: A Case Study of Adolescent Bulimia Nervosa through the Stress-Vulnerability Model

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Abstract

Eating disorders are a group of psychological disorders of special interest to young people, involving serious disturbances in eating behaviour together with intense concern about body weight and shape. This paper presents a case study of A.K., a sixteen-year-old female student who developed bulimia nervosa at the age of fourteen following repeated teasing and criticism about her weight. The case is analysed through the diathesis-stress model: a predisposed adolescent was exposed to pathogenic stressors at a developmental stage when body image is central to self-esteem, while behavioural reinforcement, in the form of relief experienced after purging, maintained the binge-purge cycle for nearly two years. The client was treated with Cognitive Behaviour Therapy over sixteen weekly sessions, following its bio-psychosocial approach: relaxation procedures at the biological level, behavioural techniques and cognitive restructuring at the psychological level, and environmental manipulations at the social level. The binge-purge episodes ceased by the final month of therapy, with marked improvement in mood, concentration, and academic performance. The case underlines that eating disorders are treatable illnesses, and highlights the importance of early identification, family support, and the therapeutic relationship in recovery.

CHAPTER 1
Introduction to Eating Disorders
1.1 What are Psychological Disorders?

The study of psychological disorders has intrigued and mystified all cultures for more than 2,500 years. Psychological disorders, or mental disorders as they are commonly called, involve behaviour that is deviant from social norms, distressing to the person or to others, dysfunctional in daily life, and sometimes dangerous to oneself or to other people. It is important to remember that a psychological disorder is not something to be ashamed of; it is an illness like any other, which can be understood, studied, and treated.

In order to understand, study, and treat psychological disorders, psychologists classify them into categories. The officially accepted systems of classification used today are the Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5), published by the American Psychiatric Association, and the International Classification of Diseases (ICD-10), prepared by the World Health Organisation. These systems describe the main clinical features of each disorder and help professionals communicate with each other and choose appropriate treatments.

1.2 What are Eating Disorders?

Feeding and eating disorders are a group of psychological disorders which are of special interest to young people. They involve serious disturbances in eating behaviour, such as extreme reduction of food intake, or severe overeating, together with intense distress and concern about body weight and shape. According to the DSM-5 classification, this group includes three main disorders: anorexia nervosa, bulimia nervosa, and binge eating.

In these disorders, food and eating, which are ordinarily simple and pleasurable parts of daily life, become sources of anxiety, guilt, and shame. The person's thoughts become preoccupied with body image, weight, and food, and her/his eating behaviour becomes maladaptive, i.e. it interferes with healthy functioning instead of supporting it.

1.3 Why Study Eating Disorders?

Eating disorders deserve special attention because they typically begin during adolescence, the very stage of life at which students of my age find themselves. Adolescents are especially sensitive about their appearance and are strongly influenced by the opinions of their peers, by their family, and by the images of 'ideal' bodies presented by society and the media. High levels of distress about body shape can quietly grow into a serious disorder that damages physical health, academic performance, and social relationships.

This project first presents the history, types, causes, symptoms, and treatment of eating disorders. It then presents a detailed case study of a sixteen-year-old girl suffering from bulimia nervosa, including her history, the treatment she received, and an interview with her.

CHAPTER 2

Brief History of the Disorder

2.1 Early Views of Abnormal Behaviour

To understand how eating disorders came to be recognised, we must first look at how psychological disorders in general have been viewed over the course of history. For thousands of years, abnormal behaviour was explained through supernatural and magical forces, such as evil spirits or the devil. In many societies, the treatment of such 'possessed' individuals involved exorcism and other harsh practices meant to drive the evil forces out of the body.

Gradually, a biological or organic approach developed, which held that abnormal behaviour has physical causes and can be treated the way physical illnesses are treated. In ancient times, Hippocrates had already proposed that psychological disorders arise from imbalances within the body. Much later, reforms in the eighteenth and nineteenth centuries led to more humane treatment of persons suffering from psychological disorders, and to the growth of scientific study of their causes. Modern psychological approaches then began to view abnormal behaviour as a result of psychological and social factors as well, and deinstitutionalisation encouraged treatment within the community rather than in asylums.

2.2 Recognition of Eating Disorders

Within this larger history, eating disorders came to be recognised step by step. Anorexia nervosa was the first eating disorder to be formally identified: the English physician Sir William Gull described the condition and gave it its name in 1873. For about a century afterwards, anorexia nervosa remained the only formally recognised eating disorder.

Bulimia nervosa was recognised as a distinct disorder much later, when the British psychiatrist Gerald Russell described it in 1979 as a variant characterised by episodes of binge eating followed by purging. Binge eating was recognised as a separate eating disorder most recently, in the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), published by the American Psychiatric Association in 2013. The DSM-5 places all three conditions together under the category of Feeding and Eating Disorders, which is the classification followed in this project

CHAPTER 3
Types of Eating Disorders

There are three main types of eating disorders: anorexia nervosa, bulimia nervosa, and binge eating. Each is described below.

3.1 Anorexia Nervosa

In anorexia nervosa, the individual has a distorted body image that leads her/him to see herself/himself as overweight, even when this is not the case. Often refusing to eat, exercising compulsively, and developing unusual habits such as refusing to eat in front of others, the person with anorexia may lose large amounts of weight and even starve herself/himself to death.

The central feature of this disorder is thus not a loss of appetite but a relentless pursuit of thinness driven by the distorted body image. The person's self-worth becomes tied almost entirely to body weight and shape, and eating comes to be experienced as a loss of control that must be resisted at all costs.

3.2 Bulimia Nervosa

In bulimia nervosa, the individual may eat excessive amounts of food, and then purge her/his body of the food by using medicines such as laxatives or diuretics, or by vomiting. The person often feels disgusted and ashamed when s/he binges, and feels relieved of tension and negative emotions after purging.

Bulimia nervosa therefore follows a repeating cycle. Emotional distress builds up and leads to a binge; the binge produces intense guilt, shame, and disgust; purging temporarily relieves this tension; and the relief itself reinforces the behaviour, making the cycle likely to repeat. Because the person's weight may remain close to normal, bulimia nervosa can remain hidden from family and friends for a long time, which often delays help. This is the disorder suffered by the client in the case study presented in Chapter 7.

3.3 Binge Eating

In binge eating, there are frequent episodes of out-of-control eating. The individual tends to eat at a higher speed than normal, and continues eating until s/he feels uncomfortably full. In fact, a large amount of food may be eaten even when the individual is not feeling hungry.

Unlike bulimia nervosa, binge eating is not followed by purging. The key feature is the sense of loss of control over eating, accompanied by distress about the behaviour.

CHAPTER 4
Causes of Eating Disorders

Psychology explains abnormal behaviour through several models or perspectives. No single factor by itself explains why a person develops an eating disorder; rather, biological, psychological, and socio-cultural factors act together. The main perspectives are described below in relation to eating disorders.

4.1 Biological Factors

The biological model holds that abnormal behaviour has a biochemical or physiological basis. Neurotra-

nsmitters, the chemical messengers of the brain, are involved in the normal functioning of mood, appetite, and behaviour, and faulty functioning of these can contribute to psychological disorders. Genetic factors have also been linked to a wide range of psychological disorders, which means that a person may inherit a predisposition, i.e. a tendency to develop a particular disorder.

4.2 Psychological Factors

Psychological models hold that psychological and interpersonal factors have a significant role to play in abnormal behaviour. According to the psychodynamic model, behaviour is determined by underlying psychological forces of which the person is largely unaware, and abnormal behaviour arises from unconscious conflicts, such as unresolved childhood fears and unfulfilled desires.

According to the behavioural model, both normal and abnormal behaviours are learned, and disorders result from the learning of maladaptive behaviours. In an eating disorder such as bulimia nervosa, the relief from tension experienced after purging acts as a reinforcement that maintains the maladaptive behaviour, exactly as the behavioural model would predict.

The cognitive model states that abnormal functioning results from cognitive problems, i.e. from irrational and inaccurate assumptions and attitudes, and from illogical thinking processes such as overgeneralisation, in which broad negative conclusions are drawn from a single insignificant event. The distorted body image at the heart of eating disorders, and thoughts such as ‘I am ugly’ or ‘everyone will like me only if I am thin’, are examples of such cognitive distortions.

4.3 Socio-Cultural Factors

According to the socio-cultural model, abnormal behaviour is best understood in the light of the social and cultural forces that influence an individual. Factors such as family structure and communication, social networks, societal conditions, and societal labels and roles shape behaviour. Certain family systems, such as enmeshed families in which members are overinvolved in each other’s activities, thoughts, and feelings, are more likely to produce abnormal functioning in individual members. People who are isolated and lack social support are also more vulnerable to psychological problems. In the case of eating disorders, societal ideals of thinness, comparison with peers, and teasing or criticism about one’s body act as powerful socio-cultural stressors, especially for adolescents.

4.4 The Diathesis-Stress Model

One of the most widely accepted explanations of abnormal behaviour is provided by the diathesis-stress model. This model states that psychological disorders develop when a diathesis, i.e. a biological predisposition to the disorder, is set off by a stressful situation. The model has three components: first, the diathesis or the presence of some biological aberration which may be inherited; second, the vulnerability that the diathesis carries, which means that the person is ‘at risk’ or predisposed to develop the disorder; and third, the presence of pathogenic stressors, i.e. factors or stressors that may lead to psychopathology. If such ‘at risk’ persons are exposed to these stressors, their predisposition may actually evolve into a disorder. Applied to eating disorders, a vulnerable adolescent who is exposed to stressors such as criticism about her body, academic pressure, or social comparison may go on to develop the full disorder.

CHAPTER 5

Symptoms of Bulimia Nervosa

Since the case study in this project concerns bulimia nervosa, the symptoms of this disorder are examined here in greater detail. The symptoms can be understood in three groups: behavioural, emotion-

al, and cognitive.

5.1 Behavioural Symptoms

The most characteristic behavioural symptom is the binge: the individual eats excessive amounts of food within a short period, usually rapidly and often in secret. The binge is followed by purging, in which the individual attempts to rid her/his body of the food by self-induced vomiting, or by using medicines such as laxatives or diuretics. Other behaviours include hoarding or hiding food, disappearing to the washroom immediately after meals, avoiding eating in front of others, and repeatedly weighing or examining oneself in the mirror.

5.2 Emotional Symptoms

The emotional life of a person with bulimia nervosa revolves around the binge-purge cycle. Before a binge, there is typically a build-up of tension and negative emotions. The binge itself is experienced as out of control, and it is followed by intense feelings of disgust, guilt, and shame. Purging brings a temporary relief from this tension and from the negative emotions, and it is precisely this relief that maintains the disorder, since the person learns to rely on the cycle to manage her/his feelings. Over time, secrecy and shame lead to social withdrawal and low self-esteem.

5.3 Cognitive Symptoms

Like other eating disorders, bulimia nervosa involves a distorted body image and an excessive concern with body weight and shape. The individual's self-evaluation depends heavily on her/his appearance, and thinking is dominated by negative automatic thoughts and cognitive distortions, such as 'I am ugly', 'I have no control over myself', or 'people will accept me only if I am thin'. Repeated occurrence of such thoughts deepens the individual's anxiety and distress, and keeps the disorder going. In addition, repeated purging is harmful to the individual's physical health, which makes early identification and treatment of the disorder very important.

CHAPTER 6

Treatment Methods

6.1 The Nature and Process of Psychotherapy

Eating disorders are treated mainly through psychotherapy. Psychotherapy is a voluntary relationship between two people, a trained therapist and a client who seeks help for psychological distress. It aims at changing the maladaptive behaviours, thoughts, and emotions of the client through psychological means, and requires a therapeutic alliance between therapist and client, characterised by trust and confidentiality. The process begins with the clinical formulation of the client's problem, through which the therapist understands the client's distress, identifies the areas to be targeted, and chooses the techniques of treatment.

6.2 Behaviour Therapy

Behaviour therapy postulates that psychological distress arises because of faulty behaviour patterns or thought patterns learned by the person, and it focuses on correcting these patterns in the present. Treatment begins with a behavioural analysis, which identifies the malfunctioning behaviours (in bulimia nervosa, the bingeing and purging), the antecedent factors that trigger them (such as anxiety and emotional distress), and the maintaining factors that cause them to persist (such as the relief felt after purging). The aim is to extinguish the faulty behaviours and substitute them with adaptive ones.

Useful behavioural techniques include positive reinforcement, in which an adaptive behaviour such as eating regular meals is rewarded to increase it; token economy, in which the client receives tokens for

wanted behaviour which can be exchanged for rewards; and relaxation procedures such as progressive muscular relaxation, in which the client learns to tense and release muscle groups until the whole body can be relaxed, thereby reducing the anxiety that triggers the faulty eating behaviour.

6.3 Cognitive Therapy

Cognitive therapy locates the cause of psychological distress in irrational thoughts and beliefs, which makes it especially relevant to eating disorders, in which the client holds a distorted body image. In Albert Ellis's Rational Emotive Therapy (RET), the irrational beliefs that mediate between antecedent events and their consequences (for example, 'I must be thin for people to love me') are identified through the antecedent-belief-consequence (ABC) analysis, and are then refuted by the therapist through gentle, non-directive questioning, so that a rational belief system gradually replaces the irrational one.

In Aaron Beck's cognitive therapy, childhood experiences provided by the family and society develop core schemas in the individual. A critical incident, such as being ridiculed about one's appearance, triggers the core schema and produces negative automatic thoughts, such as 'I am ugly', which involve cognitive distortions. Through gentle, non-threatening questioning, the therapist helps the client gain insight into these dysfunctional schemas and alter them. The aim is cognitive restructuring, which reduces the client's anxiety and distress. Cognitive therapy is open, problem-focused, and short, lasting between ten and twenty sessions.

6.4 Cognitive Behaviour Therapy (CBT)

The most popular therapy at present is Cognitive Behaviour Therapy (CBT). Research into the outcome and effectiveness of psychotherapy has conclusively established CBT to be a short and efficacious treatment for a wide range of psychological disorders. CBT adopts a bio-psychosocial approach: it addresses the biological aspects of the client's distress through relaxation procedures, the psychological aspects through behaviour therapy and cognitive therapy techniques, and the social aspects through environmental manipulations. This makes it a comprehensive technique, applicable to a variety of disorders including eating disorders, and it was the therapy used in the case study presented in the next chapter.

6.5 Humanistic-Existential Therapy

Humanistic-existential therapies postulate that psychological distress arises from feelings of loneliness, alienation, and an inability to find meaning and genuine fulfilment in life. The therapy provides a permissive, non-judgmental, and accepting atmosphere in which the client's emotions can be freely expressed. In Carl Rogers's client-centred therapy, the therapist shows empathy and unconditional positive regard, i.e. total acceptance of the client as s/he is, allowing the client to heal through a process of personal growth. Such acceptance is particularly valuable for clients with eating disorders, who commonly experience intense shame and self-disgust.

6.6 Alternative Therapies and Family Support

Alternative therapies such as yoga and meditation may be used to support the main treatment, as they calm the mind and reduce anxiety and stress. Since family factors influence both the development and the maintenance of eating disorders, involving the family in treatment and building a supportive home environment are also important parts of recovery.

CHAPTER 7
Case Study

7.1 Name of the Client

A.K. (only the initials of the client are used, to protect her identity and privacy).

7.2 General Information

Age: 16 years. Gender: Female. Education: Student of Class XI. Family: Lives with her parents and elder brother. Diagnosis: Bulimia Nervosa. Duration of the disorder: Approximately two years at the time of seeking treatment.

7.3 Family History

A.K. lives in a nuclear family with her father (aged 46, employed in a private firm), her mother (aged 43, a school teacher), and her elder brother (aged 19, a college student). There is no history of any psychological disorder in the immediate or extended family. As for medical illness, her father has high blood pressure and her maternal grandmother suffers from diabetes; both are under treatment. The family environment is caring and stable, though academic achievement and discipline are highly valued at home.

7.4 Detailed History of the Disorder

A.K. was a healthy and academically strong child with no history of psychological problems. Her difficulties began at fourteen, when she gained some weight, as is normal during adolescence. A relative joked about her weight at a family function, and classmates soon began teasing her with nicknames. A.K. reported that these incidents made her feel humiliated, and she began to believe that she was 'fat and ugly' and that people would like her only if she became thin. She responded with strict dieting, skipping meals and avoiding all foods she considered fattening, while constantly comparing herself with classmates and with images on social media.

The strict dieting left her intensely hungry, and within weeks she lost control over her eating. One evening, alone at home, she ate a very large quantity of food rapidly, without being able to stop, until she felt uncomfortably full. Overwhelmed by guilt, shame, and fear of gaining weight, she forced herself to vomit. The purging brought a powerful sense of relief from her tension and guilt, and this relief reinforced the behaviour. A regular binge-purge cycle soon established itself, with self-induced vomiting and the occasional misuse of laxatives.

For nearly two years, A.K. hid her condition. Since her weight remained close to normal, her family suspected nothing, but the disorder steadily affected her life: she became irritable and withdrawn, avoided eating with the family, refused invitations from friends, felt weak and dizzy, and her academic performance declined. The disorder came to light when her mother noticed that she disappeared into the washroom immediately after every meal and eventually discovered her purging. On the advice of the school counsellor, her parents consulted a clinical psychologist, who diagnosed A.K. with bulimia nervosa and began treatment.

7.5 Treatment Method

A.K. was treated with Cognitive Behaviour Therapy (CBT), which research has conclusively established to be a short and efficacious treatment for a wide range of psychological disorders. The therapy extended over sixteen weekly sessions. It began with a clinical formulation of her problem: the behavioural analysis identified the malfunctioning behaviours (bingeing and purging), the antecedent factors (emotional distress, criticism about her body, and hunger caused by strict dieting), and the maintaining factor (the relief from tension and guilt experienced after purging).

In line with the bio-psychosocial approach of CBT, treatment proceeded at three levels. At the biological level, A.K. was taught relaxation procedures, including progressive muscular relaxation, to manage her anxiety without purging. At the psychological level, regular meals were re-established and reinforced positively, while cognitive techniques helped her identify her negative automatic thoughts, such as 'I am ugly', trace them to the core schema triggered by the teasing, and dispute them through gentle questioning, leading to cognitive restructuring. At the social level, her parents were counselled to remove comments about weight from family conversation, meals were taken together, and her exposure to social media promoting unrealistic body images was reduced. The binge-purge episodes declined steadily and stopped in the final month of therapy, and her mood, concentration, and academic performance improved.

7.6 Interview with the Client

The following interview was conducted with A.K. after her therapy was completed, with her consent and the consent of her parents.

Q: Can you tell me a little about yourself?

A: I am sixteen and studying in Class XI. I live with my parents and my elder brother. I like sketching, and I used to be in the school badminton team.

Q: When did you first start feeling worried about your weight or your body?

A: When I was fourteen. I had put on a little weight, and a relative joked about it in front of everybody at a family function. Then some classmates started calling me names. I laughed along, but inside I felt horrible. I started believing everyone was judging my body.

Q: What did you start doing differently around food?

A: I went on a very strict diet: skipping breakfast, eating very little, cutting out everything I thought was fattening. I was hungry all the time, but I felt proud when I ate less, like I was in control. Then one evening I was upset and alone at home, and I just could not stop eating. Afterwards I was so disgusted and scared of getting fat that I made myself vomit.

Q: How did you feel after purging?

A: Relieved, honestly. It felt like all the guilt and tension had been washed out. That relief is what trapped me. Whenever I was stressed or sad, the cycle would repeat: binge, shame, purge, relief. I hated it, but I could not stop.

Q: How did the problem affect your daily life?

A: It took over everything. My whole day revolved around food and how my body looked. I stopped eating with my family, avoided my friends, felt weak and dizzy in school, and my marks dropped. I felt very alone, because I could not tell anyone.

Q: How did you come to see a psychologist?

A: My mother noticed I always went to the washroom right after meals, and one day she found out. On the school counsellor's advice, my parents took me to a clinical psychologist. She explained that I had bulimia nervosa and that it was treatable. Hearing that it had a name and a treatment made me feel less like a freak.

Q: What happened in therapy, and what helped the most?

A: We met once a week. First she helped me see my own pattern, how stress led to bingeing and how the relief after purging kept the cycle going. She taught me relaxation exercises for my anxiety, we fixed regular meals, and later we worked on my thoughts. She would gently ask, why must I be thin for people to love me? Slowly I saw that my beliefs were not facts. What helped most was learning to question my

negative thoughts, and my family, who stopped all talk about weight at home and we started eating together again.

Q: How are you now, and what would you tell someone going through the same thing?

A: Much better. I eat normally, I have not binged or purged for several months, and I have started playing badminton again, because I enjoy it, not to burn calories. To anyone going through this: please do not hide it. It is not about willpower; it is a real, treatable disorder. Asking for help is not weakness; it is the bravest thing I have ever done.

7.7 Conclusion

The case of A.K. illustrates both how bulimia nervosa develops and how it can be successfully treated. Her disorder fits the diathesis-stress model: a vulnerable adolescent was exposed to pathogenic stressors, teasing and criticism about her body, at an age when body image is central to self-esteem, while socio-cultural forces such as media images strengthened her distorted body image, and the relief experienced after purging reinforced and maintained the binge-purge cycle, exactly as the behavioural model predicts.

"The diathesis loaded the gun, the stressors pulled the trigger, and behavioural reinforcement (the relief experienced after purging) kept it firing."

Her recovery, in turn, demonstrates the bio-psychosocial approach of Cognitive Behaviour Therapy, which addressed her problem through relaxation at the biological level, behavioural and cognitive restructuring techniques at the psychological level, and changes in her family environment at the social level. Above all, the case shows that psychological disorders are not a matter of shame or weakness, but illnesses that can be understood, treated, and overcome.

Summary

This project presented a study of eating disorders, a group of psychological disorders of special interest to young people, together with a detailed case study of bulimia nervosa. Eating disorders include anorexia nervosa, in which a distorted body image leads the individual to starve herself/himself; bulimia nervosa, in which binges of excessive eating are followed by purging through vomiting, laxatives, or diuretics; and binge eating, which involves frequent episodes of out-of-control eating.

Historically, abnormal behaviour was long explained through supernatural forces, and eating disorders were recognised only gradually: anorexia nervosa was named by William Gull in 1873, bulimia nervosa was described by Gerald Russell in 1979, and binge eating was recognised in the DSM-5 in 2013. The causes of eating disorders are best understood through a combination of perspectives (biological, psychological, and socio-cultural) brought together in the diathesis-stress model, in which a predisposition is set off by stressors such as criticism about one's body.

Treatment is mainly through psychotherapy. Behaviour therapy corrects faulty learned behaviours through techniques such as positive reinforcement, token economy, and relaxation procedures; cognitive therapy corrects irrational beliefs and dysfunctional schemas through cognitive restructuring; and Cognitive Behaviour Therapy, the most popular and well-established therapy, combines these with a bio-psychosocial approach.

The case study of A.K., a sixteen-year-old girl with bulimia nervosa, illustrated all of these ideas in a real life: the onset of the disorder following teasing about her body, the reinforcing binge-purge cycle, the two years of secrecy, and finally her successful treatment through sixteen sessions of CBT with the

support of her family. Her recovery demonstrates the central message of this project: psychological disorders are treatable, and seeking help is an act of courage, not weakness.

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