

Subjective experience of positive emotions and impact of disordered eating behaviors in individuals with bulimia nervosa

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Abstract

Background: Quantitative research and systematic reviews have long supported the pivotal role of emotions in the development and maintenance of bulimia nervosa (BN). However, few are the qualitative studies examining the relationship between affect and the bulimic cycle.

Aims: The current study aims to gain an in depth understanding of the experienced positive emotions and their interaction with beliefs and behaviors of bulimic individuals. It is focused on the experiences of women in order to achieve sample homogeneity and attempts to explore the perceived positive emotions and their association with different parts of the bulimic cycle, as well as their impact on various aspects of the disorder.

Method: Qualitative data were collected through semi-structured interviews with 5 women who have been diagnosed with BN and were undergoing treatment for their disorder. Transcripts of the interviews were analyzed using Interpretative Phenomenological Analysis (IPA) methods.

Results: Participants interpreted binge eating as a practice to fill the void they felt from the absence of positive emotions and situations. It also served as a transformation technique to concretize these situations into something manageable by them. Self induced vomiting and extreme exercise provided comfort and catharsis as short term results but also instilled faith, hope and optimism for the future. Bulimia as a whole was experienced as a valuable companion and friend, allowing freedom for the true self to emerge and provided a sense of normality to self and others.

Conclusion: Bulimia was conceptualized as the bearer of many positive attributes into bulimic individuals' lives and disordered eating behaviors seemed to play a significant role to the resilience, perpetuation and secretive nature of BN.

Key-words: eating disorders, bulimia nervosa, positive emotions.

INTRODUCTION

Emotional functioning is theorized to play a pivotal role in the development and maintenance of eating disorders [1] along with overall course of the disorders and treatment outcome [2]. Individuals with eating disorders (ED) experience significant difficulties in emotional regulation, leading to maladaptive behavioral strategies in order to cope with emotional intolerance [3]. Evidence indicates that pathological eating behaviors may result from these maladaptive strategies and coping patterns [4]. Although emotional regulation difficulties seem to reside in the core of ED, there seems to be a paucity of studies and reviews focusing on the experiential part of emotions, the perception and interpretation of emotional states by bulimic individuals and their possible interaction with beliefs and behaviors of the bulimic cycle of [5].

Eating disorders maybe characterized as “cognitive disorders”, having in the core of their psychopathology shape and size overvaluation but are also conceptualized as dysfunctional emotion coping strategies [6, 7]. Fairburn et al. [8] introduced a transdiagnostic model for eating disorders, emphasizing the complex relationship between binge eating and emotions by acknowledging mood intolerance as a key factor of eating psychopathology. The later statement is supported by a number of theoretical models suggesting that maladaptive eating behaviors are the result of unsuccessful affect regulation strategies [1, 9, 10]. Binging episodes are associated with negative affect alleviation [11], reduction of aversive emotional self-awareness [12] and serve as a dissociating mechanism for painful emotions [9]. Both binging and purging are considered emotion blocking/suppressive strategies, simply utilized at different moments during the bulimic cycle [13].

Despite the fact that disordered eating behaviors are mostly associated with negative affective states, particularly anger, depression and anxiety (e.g. [14, 15, 16, 17, 18]), positive affects also seem to contribute in eating psychopathology. Disordered eating behaviors may be heralds of positive emotions such as mastery and control [19] while pride is associated with maladaptive eating patterns in anorectic individuals [20]. Positive emotions such as euphoria that is generated by accomplishing

food restriction and weight loss are significant incentives and motivational reinforcement for the perpetuation of the bulimic and anorectic cycle [21]. Elevated levels of euphoria may also serve as a mechanism to reduce anger awareness, thus maintaining and reinforcing disordered eating behaviors [7].

In addition, studies have shown that bulimic individuals use their body as a means of regulation and self definition due to absence of a clear self perception and identity disturbance. Physical bodies serve as a metaphor for the self until they are able to grow an independent sense of identity. Binging and purging behaviors are used to transform intolerable negative affect and situations into something more concrete and thus more manageable [22]. Thus, BN also serves as an attempt for constructing a coherent sense of self to individuals lacking structure or constructive resources to deal with personal crisis [23, 24]. Refocusing attention to certain traits (shape, weight, eating) allows bulimic individuals to gain a sense of emotional control and some gratification from the ability to restrict food consumption at times. Unattainable goals such as building the perfect body figure offer some kind of meaning, emotional fulfillment and coherence which their lives are lacking of. Investing in total control over body and eating generate thoughts of possible control over different aspects of their lives [25].

Dieting and maintaining certain weight and shape is a compensation strategy to gain a sense of self-worth and identity while challenging feelings of worthlessness and ineffectiveness [8]. Weight and shape are used as a medium in order for bulimic individuals to gain self acceptance but also to elicit acceptance by others [9]. Pleasing others is an important factor of getting approval and self worth for bulimic individuals since positive feedback and support by others generate positive emotions and improvement in the perceived sense of self [26]. Being in control and being special are also positive qualities attributed to BN in the conceptualization of self by bulimic individuals [27].

Binge eating is a strategy utilised by bulimic individuals to self soothe and manage interpersonal dysfunction and negative affect [28]. Shame seems to be one of these negative emotional states, occurring both prior to binge eating, but afterwards

as well. Shame prior to binge eating may be related to body weight and shape but also associated to external and situational factors. Shame may be accompanying the binge episode and trigger compensatory behaviors such as purging to eliminate the effect of physical and emotional dysphoria [29]. Shame is also related to external criticism, leading to feelings of inferiority and worthlessness about the self [30], motivating the instinctual urge to prevent further exposure and result in hiding [31]. BN, as a secret kept close to the self, seems to provide the safe place bulimic individuals need in order to soothe themselves and regroup.

Loneliness is one of the negative affects bulimic individuals try to numb through binge eating. Women utilize overeating when there are issues of real or imaginary abandonment [32] while bingeing and purging are used as coping strategies when confronted with feelings of loneliness, stress, boredom and humiliation [33]. Loneliness is affected by the quality of interpersonal relationships and not only by their number. Bulimic women seem to live in families with poor marital relationship and poor communication and affection by the parents [34]. The sense of loneliness is elevated in women with bulimia despite having friends and family around [35] while high levels of loneliness usually are present at the beginning of the bulimic cycle and remain high throughout, until purging subsides them by elevating levels of relief and happiness [36].

Although binge eating is a paradoxical pattern of behavior, since it undermines efforts to achieve desired shape and size, it also serves the desire of bulimic individuals to escape from painful self awareness. According to the escape model bulimic individuals are characterized by high expectations and are extremely sensitive to demands by others [12]. When high expectations by self and others are not met, aversive patterns of self awareness along with emotional distress, most commonly depression and anxiety, emerge. Binge eating provides an escape from this negative emotional state by narrowing attention to food consumption and restricting meaningful thinking.

Self-induced vomiting is present in more than 90% of cases of BN [37] due to instant relief from food consumption. A study by Johnson and Larson [38] support the aforementioned claim,

highlighting the fact that bulimic individuals were happy by the prospect of getting away with something they shouldn't be doing plus the fact that food became their closest companion over the years.

Hsu [16] found that during the first part of a bingeing episode, there was a decrease in dysphoric feelings and also feelings of happiness, relaxation, relief and oblivion. At the end of the episode, when participants felt full, although negative emotions increased, there were still some that experienced relief and oblivion. During self-induced vomiting, negative feelings decreased while the sense of relief was the dominant emotion. Further negative affect reduction continued after purging while positive emotions of relief, relaxation and happiness were vividly present. In addition, statements supporting the end of disordered eating behaviors by allowing one last binge, enabled bingeing to result in self-induced vomiting, driven by the motivation of achieving a clean slate for a new start.

The aim of the current study is to explore and gain an in-depth understanding of how positive emotions are perceived by women with BN within the context of the disorder. While there is a number of studies providing substantial evidence to support the link between symptoms of eating disorders and emotions (e.g. [39, 17, 40, 41]), in most cases emotions are treated as unitary phenomenon across eating disorders, something that they are clearly not (Ioannou & Fox, 2009). There is a paucity of studies concerning positive emotions and how they are linked with eating disorders [39] and currently there are no studies directly exploring subjective experience of positive emotions in either anorexic or bulimic individuals [5].

METHOD

Although there are a number of quantitative studies regarding emotional processes in BN, qualitative research seems somehow neglected. Qualitative methodology attempts to understand the interviewees' perspective considering an experienced phenomenon [42]. The unique advantage of employing an inductive approach provides in depth and detailed exploration of the subject matter while retaining the ambiguity and subtlety of it, possibly addressing knowledge gaps considering

research over the examined phenomena [43]. Interpretative Phenomenological Analysis (IPA) is a qualitative research method aiming to explore participants' interpretation and assigned meaning of particular experiences, states and events concerning their personal and social world [44]. IPA support the notion that an individual is an expert concerning its own experiences and tries to explore all aspects and views of held by the participant about the observed phenomenon [45]. Research is focused on making sense of the individuals' attempt to make sense of the world [46]. It is an excellent tool to provide insight on how bulimic individuals perceive and shape emotions in order to fit into their unique world and how these emotions are linked with different parts of the bulimic cycle. It allows research to actively explore new or understudied concepts (e.g. positive affect in bulimic individuals) since pre-established framework and theoretical constraints are not an operational prerequisite [47].

Research design

A cross case analysis research design was used for the purposes of this study. The sample selected was small (five participants) and purposeful. Smith et al. [44] suggest that 3-6 participants construe a reasonable sample for an IPA study. These numbers provide sufficient cases in order to achieve homogeneity, enable detailed case by case analysis for developing meaningful points but also allow micro analysis for similarities and differences between cases [48].

Semi structured interviews relevant to the aims of the study were conducted, audio recorded, verbatim transcribed and analyzed by the first author (DB) according to IPA guidelines and procedures. Semi structured interviews are the preferred means of data collection concerning detailed life experience narratives, thoughts, feelings and participants' interpretation of the investigated phenomena [47].

Participants

Participants had been diagnosed with BN, purging or non purging, were adult females, of Greek origin and residency. Sample homogeneity was served by recruiting individuals from one specific eating disorder and only from one gender. Nationality was chosen due to lack of research concerning the

specific population, as well as the accessibility of the sample. Adult participants were preferred for the advantage of richer self-narratives due to longer life histories over minors.

Psychologists and dieticians were given a summary of the research's goals and procedures in order to be aware of suitable and possibly interested clients. Participant Information Sheet was given to potential volunteers in order to thoroughly explain the procedure, aims and goals of this research. It provided information about the researcher, along with contact methods and participants' obligations and prerogatives. It also included information about data accessibility and data storage. All interviews conducted in a private practice office and participants who were interested made direct contact in order to make an appointment for an interview and attain additional details.

Five participants volunteered to take part in this study. All participants were Caucasian female of Greek ethnicity and residency, age ranging from 29 to 40 years old. All of them were receiving some form of therapy for their disorder and one of them with also comorbid depression with prescribed medication. Two of them were married with children while all were currently employed at full time jobs.

Table 1: Participant characteristics and demographics

Participant's pseudonym	Age	Diagnosis	Length of the ED	Marital status	Time in therapy
Melissa	29	BN Purging	10yrs	Single	5 yrs
Adrianna	30	BN Purging	16yrs	Single	4 yrs
Delilah	39	BN Purging	23 yrs	Married	6 months
Cassandra	38	BN Restrictive	15yrs	Single	4 months
Dimitra	40	BN Purging	21yrs	Married	1 ½ yrs

Ethics

The present research was conducted as partial fulfillment of the first author's MSc Thesis on Cognitive Behavioral Psychotherapies from the University of Bolton. Ethical approval was gained through the Research Ethics Committee by both University of Bolton and New York College. Informed consent was safeguarded on appointment by ensuring that participants have read and fully understood all the material on the Participant Information Sheet. Prior to the interview, participants were asked to sign a written Consent Form. Questions related to the recordings and confidentiality matters were explained and agreed, along with the fact that participation in the study was voluntary without being offered any reward of any kind. Risks of potential distress were minimized by informing participants beforehand about the content of the interview, the ability to take a break during the interview, not to answer specific questions and withdraw from the study at any time, if they wished to. The interview was conducted in the most subtle possible way and during debriefing period interviewees were checked about mood and distress. They were also given a debriefing form containing the necessary information and support needed after the interview.

Procedure

Participants were contacted and interviews arrangements were planned. All interviews took place in a private office setting. Before starting the interview, there was a verbatim briefing concerning information about the researcher and purpose of the study while relevant questions were answered. Participants were given the opportunity to go through the interview agenda and they were also informed about the interview procedure. Additional information was given about the recordings, material handling and confidentiality issues. Participants information sheet was handed and emerging questions were addressed. Consent and demographics form were filled and the interview begun. Questions were asked according to the interview agenda but subsequently modified to fit participants' answers and explore emerging data. Prompts were used when deemed necessary, questions were asked with openness and in a reflective manner while extreme caution was present to avoid questions, prompts and attitudes that might be consid-

ered leading. Participants were given time to answer questions and encouraged to be thorough and elaborative presenting their life experiences. A wheel of emotion was given as aid when asked further about experienced emotions and empathy was evident when sensitive matters were investigated. At the end of each interview, participants were thanked, checked about their emotional state and well-being and were given a debriefing form including supporting information.

Data collection

Information by relevant research, semi structured interview guidelines, prior experience in IPA research and extended discussions with supervisor led to the development of a semi structured interview with questions and probes according to the relevance of the study's aims. The questions were used in a flexible manner in order to explore experiences and cover possible unanticipated areas that might emerge during the interviews. Interviews lasted between 53 and 76 minutes. They were audio recorded and transcribed verbatim, having all identifying information removed.

Data analysis

IPA was the qualitative approach used in order to analyse the data. Interviews were conducted and verbatim transcribed by the first author (DB) while recordings were listened at least once for every case. Each recording went through an in-depth analyses individually while initial noting and exploratory comments took place on the right side of text margin. Additional reading in order to overview initial notes, text deconstruction and conceptualization of comments allowed research to investigate the material in both emic and etic perspectives [48] and developed themes' emergence [44]. Supervision was obtained by a psychologist/researcher specialised in eating disorders as well as in qualitative methods (MK). Supervision and IPA guidelines were used in every step of the analytic process to safeguard validity and quality of the current research. Reduction of detail volume by shifting analytic work from transcript to initial noting allowed focus on discrete parts of the transcript, leading to identification of emergent themes [44]. Super ordinate themes were developed by clustering similar emergent themes into one under a new name (abstraction), identifying contextual or

narrative elements in the analysis (contextualization), identifying important themes by taking into account the frequency of their appearance (numeration) and how these themes function within the transcript (function) [44]. Cross case analyses was used in order to identify patterns across cases, clustering similar themes into master themes, not exclusively by prevalence within the data but also by contextual richness and subject matter illumination [49]. Although early qualitative works lack the validity and reliability criteria met in quantitative studies, a number of guidelines and appropriate in relation criteria are produced in order to assess validity and quality in quantitative research [44]. Yardley's [50] four broad principles, sensitivity to context, commitment and rigour, transparency and coherence and impact and importance, were chosen as the most suitable guidelines to address validity in IPA research studies [44]. In order to minimize potential research bias in the current study, a set of strategies were utilized: field preparation prior to participant recruitment, including research topic exploration and carefully designed and role played semi structured interviews. Sample was purposefully gathered while ethical and reflective stance was evident during interviews. Transcripts were read and reread while time was allowed between each case analysis in order to contextualize each case in its own terms. Emergent themes were subjected to continuous peer and external evaluation, refining outcome and minimizing potential research bias. A reflective diary was kept from day one, identifying and deconstructing prior held information and beliefs on the investigated phenomenon while supervision was utilized in every step of the process, benefiting results through experienced guidance, constructive criticism and an unbiased overview.

RESULTS

Three master themes emerged concerning the positive interaction between different aspects on BN and participants' emotions:

- Positive aspects of participants regarding food and binge eating
- The role of self-induced vomiting and exercise, in both

present and the future.

- Participant's views of BN and the impact on their sense of normality and feelings of loneliness.

These themes did not cover all the experiences held by the participants about BN but were selected according to the relevance of the research question and interpretative focus of the researcher. Although themes were common across the five cases, different life experiences of each participant produced divergence at some points in narrative and perception, mostly highlighted and addressed through data analysis. Verbatim extracts might have gone through some minor changes and alterations in order to make more sense when presented in written form and all identifying information have been removed, safeguarding the anonymity of the participants. Utterances (such as hmm, ermm, etc), minor pauses and some word repetitions have been removed, dotted lines prior or afterwards the extract indicate the presence of omitted verbatim content due to irrelevance and brackets indicate added material such as explanatory comments. Emergent master themes and superordinate themes are illustrated in the table below (table 2)

Table 2: Master Themes and Superordinate Themes

Master Themes	Superordinate Themes
Perception of food consumption/ binge eating	Absence of positive emotions - Filling the void
	Replacing negative emotions and situations into a manageable problem
The role of self-induced vomiting in both present and the future	Positive aspects with immediate effect
	Positive aspects related to future expectations
Positive attributes of BN as a concept	Freedom – release from “perfect self”
	Perception of normality to self and others through BN
	BN as companion

1. Perception of food consumption/binge eating

This master theme aimed to explore the possible positive aspects related to food consumption and binge eating. Despite binge eating viewed by participants as the primary situation to overcome in order to transform themselves into their concept of ideal self, food consumption seemed to be the first line of defense against intolerable negative affect.

1.1 Absence of positive emotions - Filling the void

All participants described various negative situations which preceded excessive food consumption. Responses to the question of "a brief history of bulimia" present an array of real life losses (father, mother), negligence by caregivers, abandonment (perceived or real), strict and demanding rules concerning dietary regimens or performance expectations. Melissa's extract provides the impact of loss, neglect and pin points the importance of body weight in her family:

I was eleven years old when my mother passed away, something that had a deep impact in me and led to depression when I was around thirteen... I was an individual with normal weight, a role model and an object of admiration within my family until that age, then, I gained 10 kilos in nine months... I asked my father to help me, take me to a psychologist but he didn't believe in all that stuff so he never did...

Adrianna shared a different kind of loss since her mother was away from her due to weight related health issues until she was 7 years old. Until that age, she was separated from her older sister (raised by grandparents) and Adrianna lived with her father, a man rigid and perfectionist described as:

...he had very strict criteria to what was right and wrong, it was just these two conditions, there was nothing in the middle...at one point he was forcing me to eat fried stuff he made for me and on the other hand he would say "eat, eat and you will become fat like your mother", food was my only shelter back then!"

Delilah and Dimitra shared the same strict family dietary rules and obsession with healthy lifestyles while they both started binge eating as a mean to counter the excessive pressure of entrance exams for the university. Dimitra recalls:

...my father grounded me for almost a year, permitting me to go

outside only once per week, in order to study harder and succeed the second time. There was not one positive feeling about this situation. My only indulgence in this captivity was coming from listening to music and eating.

Cassandra explained the meaning of binge eating in direct correlation with absence of positive emotions:

Why binge eating? Because for some reason I miss some flavors in my life, because some flavors are relieving. I know that some of the food I am craving is full of serotonin, they contain all things missing from my life, joy, comfort, tranquility and security...

Absence of positive affect and accumulated negative experiences seem to create a sort of existential void, manifested in a form of boredom, unexplainable dissatisfaction and lack of motivation. Binge eating provides a desperate mean to fill that void through sort lived numbness. Melissa and Dimitra shared some commonalities in their descriptions:

Melissa: ...boredom, I am bored, isn't this new chocolate great?!... lets eat 5-6 of them watching television for the next 8 hours...I have nothing to do in my life and I don't know how to fill my emptiness.

Dimitra: I used to sit for hours in front of the television, filled with boredom, eating all sort of junk, vomiting and then eating again. This happened much more than once per day. And I wasn't even watching anything; I just kept changing the channels. I felt so empty inside, like there was none and nothing to comfort me than the food stuffed in my mouth.

Cassandra expressed feelings of emptiness through lack of motivation. Boredom was also present at her thoughts but the existential struggle and clinical perfectionism made the possible correlation between food consumption and boredom somehow blurry in her eyes:

...there are no ups and downs in my life, I am financially secure, I have achieved so much at work and received the much needed credit for them...maybe my ambitions touched the ceiling and there is nothing more I want to achieve, maybe I am bored and I want to do something else, I feel that there is no more joy left...ev-

everything is almost perfect, I have my boyfriend, nothing is missing. Why is this happening to me? (Refers to binge eating).

1.2 Replacing negative emotions and situations into a manageable problem

All the aforementioned situations and experienced emotions, including hardships not mentioned due to irrelevance with the study, besides being unbearable, they also were out of participants' control. This superordinate theme explores how bulimic individuals turned conditions beyond their reach into a more manageable problem that of binge eating.

Cassandra: It is comforting; it provides me the security of something that I can eventually control, I know that I can do it! So, let's do it, eat, hit rock bottom and then start over again; like a new beginning every time, like something, I don't know

Besides what Cassandra mentioned as new beginning, a concept further explored at the next master theme, Melissa enriches negative emotions replacement with the aspect of buying time in order to become stronger and resolve all the loose ends in her life:

I tried to ask help about all these negative emotions that I was experiencing but that was not possible, they (family and father denying help from a health care specialist regarding the passing of her mother) could not help me, nobody could. This is how binge eating begun, this is how the bulimic cycle begun; and with that new beginning I took all my emotions, locked them up in a drawer and said, "ok, remind me to deal with them at some point when I will be able to do so!"

Adrianna had a very difficult time growing up, since there was an intense fear about the deteriorating health of her mother, bullying from the rest of the family towards mother's eating habits and Adrianna's shape and size, she concluded:

Adrianna: I have never felt compassion, understanding, recognition and love in my own home. Nobody was ever proud of what have I achieved; there was never joy in my home.

DB: how did you deal with all these negative emotions?

Adrianna: all things were revolving around food at that time.

There were a lot of things going on but I had no other way of managing these emotions apart from binge eating.

Delilah utilizes excessive food consumption as an immediate relief to stress deriving from work, family obligations and even depression related issues, always resulting in vomiting for the last twenty years of her life. When asked about the role of binge eating in her life her answer was staggering:

It is a way out but it is something that needs to be resolved. There is a hope and an obligation to yourself and your family that you will fix this. This is what keeps me alive! If it wasn't for that hope, that I will be able at some point to fix this problem I would have jump off a terrace!

Control is an important factor in order for Cassandra to feel the much needed safety and security in her life. Experiencing negative situations and emotions out of her control is something that she is not able to fully comprehend yet, turning even binge eating into something voluntary and almost manageable:

I have control over food consumption, I have achieved even that! I let it slip out of my hands on purpose, deliberately. Nothing happens without my knowledge! Why I want to let control slip is something I yet don't know...there is an inner struggle but in the end I choose to let it go, so I am still in control!

Dimitra described the constant fighting of her parents as something unbearable which somehow included her involvement. Trying her best but not being able to restore love, happiness and tranquility among her parents, made her transform the negative external states and affect into a more manageable problem, relying solely on herself for its resolution:

It was something I could not stand! I tried and tried but nothing seemed to work. At some point I said "I don't care anymore about your problems, you are adults, find it out yourselves". I have never looked back ever since, well, that's not entirely true but anyhow, and by that time I had my own life to live and my own problems to solve: and being able to control my binge eating and acquire the desired shape and size was a full time responsibility!

2. The role of self-induced vomiting in both present and the future

This second master theme emerged, reflected participants' perceptions about the compensatory strategy of purging after binge eating, in order to keep their body weight under control. Cross case analysis revealed that self-induced vomiting produced a number of positive outcomes to all participants whether correlated with immediate benefits or linked with sorts of future expectations. It is worth to be noted that no participant perceived the purging procedure or equivalent compensation strategies (laxatives, extreme exercise, intense fasting) as something out of the ordinary or alien to their own daily routine until they realised that they have an eating disorder years later since the onset of it.

2.1 Positive aspects with immediate effect

Most of the times, binge eating was perceived as a process which did not offer any pleasure or if it did, it was very brief. There was an array of negative emotions experienced, which were perceived as intolerable and needed to be dealt with right away. Self-induced vomiting was the immediate response, providing comfort and catharsis to both physical and psychological symptoms and effects. Delilah's extract emphasizes the aforementioned claims as well as the absolute necessity of purging:

Delilah: ... when you are stressed or angry, well, you are going to eat. There is no satisfaction from eating; you eat as a coping strategy for what is going on.

DB: what about the self induced vomiting?

Delilah: at that moment, yes! It is absolutely not possible to continue living if you don't purge right away! Vomit at that point is an instant relief and comfort. You can't live if you don't do it, that's a fact!

Shame seemed to be the most prevalent feeling accompanying binge eating for Adrianna. Self-induced vomiting may not be endearing to her but was necessary to alleviate shame induced from not being strong enough to carry out her strict dietary schedule:

I was never as thin as I wanted and binge eating brought forth all feelings of shame, guilt and remorse. Purging was there to rescue me from these feelings. It was not something I enjoyed doing but I needed salvation: salvation and relief.

Melissa was experiencing a wide range of negative emotions after her binges. Purging not only alleviated painful emotions, doubts and self criticisms but also served as a weight controlling strategy:

... too much guilt from excessive eating, I ate too much, why have I done that? It is really ugly what have I done and very, very wrong. I am so stupid, I am fat, I am disgusting, I must lose weight. Self induce vomiting was established as a mean to manage all that stress and pressure. It provided a form of catharsis, a clean state if you want to start anew; plus it was an excellent way to keep my weight in order.

Dimitra during her narrative summed most of the previous claims about the positive qualities of purging, while Cassandra described similar situations, only she was imploring means of self starvation and extreme exercise. Both strategies used to such extend which were harmful for her (no menstruation, fall of hair and nails, physical deterioration) at some period of her life:

... Everything is about the caloric balance. I have to go to the gym even though I am exhausted because if I don't, I will experience intense levels of stress and anger towards myself; and guilt, excessive guilt for breaking up the pact I had done with myself; it is mandatory because if I don't I will be caught in the vortex of a downward spiral and this is something I cannot stand.

2.2 Positive aspects related to future expectations

Beside the immediate positive affects linked with self induced vomiting, purging also served as a springboard for a more optimistic future regarding the abolishment of bulimic practices but also the materialization of the ideal self. A vivid paradigm of how purging restored faith and confidence in both is portrait in the following extract by Melissa:

... the interesting part (of purging) is that at the same time there were positive emotions such as hope. Hope that this will be the last

time, ok I might have slipped (binge eating) but now I will purge and take laxatives and everything will be over! It won't happen again! When I wake up tomorrow I will have a toast and a cup of coffee and my eating habits will be different from now on! Not only that but when I will reach the ideal weight, boys will like me more and I will definitely be coolest person in my gang!

Self-induced vomiting may produce a range of diverse emotions. Amidst intense and intolerable negative ones, hope and faith about resolving this situation offered the optimistic stance necessary for bulimic individuals to continue endeavoring in order to become what they really aspired to be:

Dimitra: I remember looking myself at the mirror with mixed emotions. Sometimes it was with pity and self loathing but most times it was guilt and disgust about myself and what have I done, disgust and some kind of silent rage, accompanied with a perverse grin! Self soothing in order not to lose my mind from all this negative intensity was the promise that this would be the last time, tomorrow there is going to be a new Dimitra and none of these will ever happen again! A new strong Dimitra which will include all that ever imagined but never had thus far.

Adrianna held similar views about self induced vomiting and its ability to reset negative affect. Her paradigm, besides the hope of a new found strength to stop the bulimic cycle, it also included promises of greater endurance (of all negatives to come) and redemption for what she already bared responsibility.

Cassandra perceived the presence of extreme exercise, along with absence of almost any food consumption, as an indicator of experiencing and relying positive emotions. For her, there was no hope for positive future aspirations without the ability to perform her extreme workout schedule.

Delilah was the only participant not directly relating purging with future expectations. It is worth mentioning though that in order to reach the ideal shape and the desired size for her body she didn't mind practicing self induced vomit for the rest of her life.

3. Positive attributes of BN as a concept

This final master theme attempted to explore how BN is perceived as a term by participants and possible positive impact it may reflect in their lives. Three superordinate themes emerged related to issues of freedom, normality to self and others, along with the importance of BN as a companion in times of need.

3.1 Freedom – release from “perfect self”

All participants in this study encountered a number of difficult situations at the time of their upbringing which continued in their adult lives. Strict rules abided not only to dietary constrain but seems like both familial and societal high expectations were perceived as unbroken rules to be followed with reverence. To their understanding, they were not allowed to be anything less than what others wanted to see in them. In order to be able to constantly abide to those expectations, BN provided a safe place where participants' could enjoy in secrecy the privilege of expressing what they really were and how they really felt.

Adrianna was raised by a father who allowed no weakness to be expressed or experienced. Adrianna should have always been strong since signs of weariness and tears were signs of cowardness. Talking about emotions and BN as a concept, Adrianna provided the following extract:

Adrianna: for me, bulimia and purging were a safe place, my shelter! There were periods where I felt so much guilt and so much shame for not being strong enough, shame that I could not do everything. Purging was the only place I could be real, the only place I was allowed to show my weakness and be real.

Cassandra was also dealing with the concept of weakness. She was the one needing perfection in everything, something which was imposed to herself by her and not externally developed. As illustrated below, clinical perfectionism and control issues create ambivalence about the elusiveness of the bulimic cycle and BN as concept:

...I was so perfect in everything and this is the only thing that I cannot be! There are times that I realize the importance of slowing down and make a mistake once in a while but most times it is infuriating; infuriating and frustrating at the same time.

Melissa was experiencing BN as an indicator of independence and rebellion, replacing negative affect and frustration with the concept of freedom as to decisions concerning her own body and health:

My best friend was yelling at me about my eating habits and the my low caloric income per day but she basically is jealous because when I lose this kilos; she is just jealous, she doesn't understand... and I don't care about what my father criticizes the way I eat, he is an idiot and knows nothing!

Melissa though, was experiencing some form of freedom not only from other people's restrains and but also within the context of BN:

I like the ability to live as I want and at that time I was living on edges. I can starve and go to the gym and vomit or I can eat a packet of biscuits, four packages of chips and five ice creams, why do the middle thing? Why compromise? I can have both!

For Delilah, binge eating and purging came as a result of her new found freedom during high school and university years. Strict dietary habits and obsession with healthy food consumption, weight watching and restriction of certain foods as forbidden by her mother, produced the opposite effect for Delilah as she grew up. Acquiring imbalanced eating habits seemed to state the independence she needed:

This entire food obsession was very intense, very restricting. This is the reason I gained all that weight, because food was something forbidden until then. But when you become independent during the end of high school, well, you have the freedom to do whatever you want and this was what I chose!

Dimitra, who was also forced to follow strict dietary rules along with an over concern about body and shape from both parents, presented similarities with Delilah concerning the new found freedom when she was able to change her eating habits. She distinctively mentioned how she avoided healthy snacks and based her entire nutrition on junk food and sweets for more than a decade. She also shared Melissa's opinion about living on the edges and described how liberating it felt at times to eat as much as you could and preserve your desired weight

by purging or exercise.

3.2 Perception of normality to self and others through BN

According to participants' experiences, BN seems to provide a needed sense of normality to themselves in order to project it to family members or wider social environment. Situations and emotions that were perceived as beyond repair and insufferable had a profound negative impact on their sense of self. By relocating this self-distorted image to body shape and weight, BN transformed it to something concrete, thus allowing a more acceptable view of their self, self-perception by others and social interactions.

Having not realized the impact of negative affects on her at that time, Melissa presented an ideal world she had created, aided by BN, in order to cope with difficult and unresolved problems she went through at that time:

DB: if I asked you about your emotions back then, what would you tell me?

Melissa: back then? I am very happy, I feel really good, everything in life is going great! I have an excellent relation with my father, my mother; lets not talk about that, an excellent relationship with my brother, my boyfriend and our relationship is great, everything is perfect!

Melissa also describes the BN as something that gave her a boost of confidence to interact with her social circle. She was perceived by others as being perfect and hoped that she will become everything that she aspired of at some point in the future.

Dimitra was not able to cope with the constant feuds between her parents and she tried to regain her sense of self by distancing herself from them. She was able to define her identity by adopting BN's distorted but yet much better perceived adversities. Furthermore, BN provided the tools not only to retain her social image as a strong and independent woman but also to appear in acceptable ways towards her family's values:

I should be perfect all the time, never sad or angry...or at least

not in front of anyone else...I am strong, I can deal with anything, I can do anything.

Adrianna's previous extract about freedom also describes the ability to redefine herself through the disorder. In addition, BN was enabling her to appear normal to her family and abide by their standards:

I didn't realize how much I was hurting myself (refers to self-induced vomiting). But there was no other way. For my family, weakness is shame, you should not need anything, it is shameful when you bent, it shameful when you break. I was not able to tell him how tiring and exhausting this was for me, physically and mentally.

Delilah used BN as means of appearing normal to herself, her husband and her children. She was married and had her first child right after school. Her pregnancy was followed by post-partum depression, eventually turning to depression, something neither she nor her husband acknowledged for many years. Delilah seemed more comfortable adopting BN's traits over depression even when she went through multiple hospitalizations during her second pregnancy due to self-induced vomiting. BN also relieved her from constant anxiety and stress, allowing her to perform adequately to her familial and social duties while keeping it secret contributed to the semblance of normalcy by others.

Cassandra also utilized bulimic strategies to normalize encountered adversities. Experiencing situations of intense domestic violence, physical abuse by spouse, a terminated pregnancy and the loss of her father, Cassandra resolved to BN in order to displace control and to create a sense of normality for herself and how she was perceived others. Repressing her negative emotions in order to maintain a normal and acceptable façade by everyone else is an ongoing practice:

DB: all these negative emotions, do you feel them outside your disorder?

Cassandra: I don't feel them anywhere else! I am not going to take them out on someone else, I am not going to be mad or aggressive with someone else. Whatever is related with these kinds

of emotions it is corresponding to food consumption and exercise.

3.3 BN as companion

Loneliness is one of the emotions experienced and shared in narratives by all participants to a great extent, to some even valid until today. Feelings of neglect and inability of caregivers to adequately be present and address certain difficult situations only amplified this isolation and BN was somehow chosen as something to be resolved on their own and in complete secrecy by all others.

While everyone else seemed unavailable to participate in perceived and experienced life difficulties, BN somehow replaced them and provided a sort of stable relationship. In participants' eyes, BN was always there for them, always ready to help them overcome adversity. Melissa was able to call BN a friend who provided a helping hand at her times of need:

DB: is there something positive that comes to mind when you hear the word bulimia today?

Melissa: yes, first of all it has been a very good friend of mine because she helped me all these years! And I don't mention that as a mean to control my weight. I mean that she helped me and made me able to cope with all the hardships I experienced all these years. There was none else but it was there for me and for that I thank her very much.

Dimitra described similar feelings with Melissa, considering BN as a very good companion, probably the only one she had as "loyal and always present when things got rough". Although Dimitra maintains an excellent relationship with her husband, at times she experienced an "unexplained form of loneliness" and anxiety which only BN seemed to alleviate until recently.

Talking about emotions experienced back then, Adrianna mentioned an array of negative affects such as fear of uncertainty, loneliness and ever-present shame. Everybody was demanding something of her, "built to endure, built to be strong, that was my signature trait", but when difficult moments emerged, "food was the only companion I ever had". BN was there for her, although feelings of shame and fear of social rejection refrains her from revealing her condition even today.

Delilah and Cassandra may not directly correlate BN and possible qualities of companionship but they still experiencing loneliness, with nowhere to turn to. Delilah has performed sincere efforts to make her disorder and her struggles known to her husband but he doesn't seem to be on board: "I try to explain to him that I am not ok, that something serious is going on but he always undermines the subject; and doesn't realize the importance of what I am saying to him".

Cassandra on the other hand made no attempt to relay her disorder since a part of her still thinks that it is something she can control. At the same time, she feels none of her family members nor her boyfriend close enough to share or even able to contribute to the "stagnation my minds suffers from". BN is the only thing that is challenging her intellect: "chasing my own tail provides the necessary alertness, something intriguing in order to drag my full time attention, since none else is able to do it for me".

DISCUSSION

The aim of the present study was to explore and gain an in depth understanding of positive emotions and beliefs bulimic individuals may experience within the context of their disorder. There is a paucity of studies examining the concept of positive aspects of BN and this study contributes to the literature by describing how participants view the relation between emotions and different parts of the bulimic cycle. Results present the complexity and controversy generated by the presence of positive emotions in disordered eating behaviors.

Theory suggests that difficulties in affect regulation are a significant factor in adopting bulimic behaviors [9, 10, 51]. Consistent with existing theory and literature about BN [11, 13], participants of this study discussed their engagement in maladaptive eating habits as a coping strategy in order to regulate or alleviate negative affect. This study aimed to explore positive emotions and beliefs held behind these disordered behaviors which possibly contribute to their continuation and resilience in time and therapy. Some of the emergent themes explored understudied concepts within the bulimic disorder while some suggested new concepts such as freedom and optimism asso-

ciated with different parts of bulimic circle and perception of the disorder as a whole.

The first superordinate theme explored how participants ascribe a positive interpretation of food consumption as a mean to fill the void they fill due to absence of positive emotions and situations in their lives. Consistent with the literature, findings revealed experiences of loss, including bereavement and separation from significant family members [52], real or imaginary abandonment [53], poor communicative skills and lack of affection within participants' families [34] and emotional abuse in the form of invalidation and neglect [54, 55]. Intolerable negative emotions were replaced by less severe and more acceptable one, such as boredom, general dissatisfaction and lack of motivation while food was utilized in order to get brief indulgence and satisfaction due to absence of support and other positive cues. One participant correlated binge eating with positive emotions of joy, comfort, security and tranquility. Food consumption and binge eating were served as a means of mind numbing and negative affect coping strategies but it was also a necessity for participants in order to be able to carry on with their lives.

Binge eating also seemed to serve as a replacement to negative situations and emotions that were beyond participants' reach, such as poor relationship with parents [34] and parental marital conflict [52] into a concrete problem to focus, deal with and try to resolve. Refocusing attention to body shape and food restriction provided a sense of life meaning goal while lack of control of other life aspects reduced its impact by concentrating efforts in managing a problem depended totally by themselves [25].

Positive influences of self induced vomiting were explored in the second master theme. There are a number of studies associating purging with instant relief and comfort (e.g. [38, 56]) from physical and psychological distress. Levels of guilt/shame, anxiety/worry and anger/frustration are elevated prior and during binging episodes [36] and self-induced vomiting seems to be act as a negative reinforce by alleviating most of these affective states [57].

Positive affects linking self induced vomiting and future expectations included hope and an optimistic stance towards their future selves and the resolution of the disorder. Almost all participants experienced purging as the ability to reset and restore faith in changing every unwanted part of their lives. Most times vomit served as catharsis, not only promising new found strength in order to end disordered eating behaviors but also incorporating hopes for ideal shape and size, greater endurance and even whole concepts such as the emergence of a whole new self. Implications for the aforementioned findings were reported only in a study by Hsu [16].

BN as a concept, including all aspects of bulimic behaviors and impact on participants' lives were investigated in the third master theme of this study. BN was associated with various types of freedom, personal, familial and social. It was interpreted as a state in which individuals were allowed to be and feel what were not able to express in the outside world. Depending on what intolerable restrictions were imposed in their lives, participants found shelter in BN, giving different meanings to different behaviors. Purging was a place where weakness could be experienced as part of the true self, binge eating served as freedom from self perfectionism, high expectations from others and liberation from obsessive dietary restrains. For some participants, BN was the "perfect" solution in living their lives to the fullest, materializing the ability to binge as much as they wanted to escape from negative affect and at the same time maintain body weight and shape in control by purging and exercise. Hsu [16] in his study presented some cues related to the findings described in this superordinate theme.

The second concept linked to BN by participants was a sense of normality, not only considering their own selves but also significant others. Normality to themselves included rationalization, acceptance or avoidance of insufferable negative emotional states and conditions which would make them feel worthless and ineffective [8]. Utilization of BN led to extremes, from considering perfection in all aspects of life or even in total withdrawal from the situation at hand. Positive feedback and approval by others generated positive emotions in women with eating disorders since self-worth and identity were largely

depended by them [26]. In order to achieve self and social acceptance, negative affect such as anger, shame and even clinical conditions such as depression were contained within the disorder allowing bulimic individuals to present themselves in a suitable and positive manner [58].

Loneliness was one of the most vivid negative emotions presented by all participants. Research has shown that binge eating is related with cues of abandonment and loneliness [32] and the sense of aloneness contributes in the perpetuation of the bulimic cycle [59]. Participants reported loneliness despite the presence of family and friends [35] while BN was considered as a loyal companion, a good friend and a helper which enable them to get through hardships over the years. BN may also be a challenging friend who requires constant attention but most importantly, BN was always available and accessible to participants when no one else was.

Limitations

This study is not without limitations. Sample size was appropriate according to IPA guidelines but small nonetheless. Selected method and procedure was an excellent tool to gain in-depth knowledge of the subject matter but findings are not applicable to the general population. It was also restricted only to Greek Caucasian female participants while long term experience with the disorder was a prerequisite in order to ensure the experience needed for reflection upon asked questions. Verbal responses of participants were translated and slightly modified in order to be understood in written English language. Although all necessary precautions were used to minimize researcher bias, there is the possibility that participants' narratives and experiences may be interpreted according to personal constructs of the interviewer. Interview protocol and researcher personality may have shaped answers while it is possible that current living conditions and situations along with general participants' knowledge about BN may have influenced recalled experiences and the emotional reflection towards them.

Another possible limitation is that participants received psychotherapy from different traditions and this may have affected their language and interpretations of the disorder. Perceptions

and responses considering the subject matter may were also influenced by the fact that participants were at different stages of their individual therapy. Among the sample, one participant was diagnosed with depression and was under medication, another potential bias considering her perceived experience of the disorder.

Suggestions for future research

Future research should address the aforementioned limitation of bulimic individuals receiving different types of psychotherapy and the potential impact of co morbidity with other mental disorders on research results.

It seems that existing literature review and theoretical models are mostly preoccupied with elaborating negative notions of BN and the implications they have on perpetuating the bulimic cycle. The current study presented an in depth exploration of the positive aspects of the disorder as perceived and experienced by people living with it. BN goes untreated for many years since onset because, after a certain point, bulimic individuals cannot separate the disorder from themselves, they are unified. BN offers the means to cope with intolerable affect and situations, to be functional within familial and social context and to regain a sense of self, control and freedom. Important concepts which seem somehow neglected thus far. Future research and therapy should further investigate the benefits of BN since it seems to affect lives in their entirety, rooting in almost every cognitive, behavioral, social and emotional aspect. Discovering positive associations between BN and bulimic individuals may provide a better understanding of the disorder. In addition, it will enable more effective treatment planning and the opportunity to actively decrease symptomatology by replacing these associations with more functional ones, thus reducing stressful physical sensations and misplaced positive interpretations.

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Conflict of interest statement :

We declare that we have no conflict of interest.

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