

A Review: Emotions Modulations and Loss of Control eating in Individual Obesity

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Abstract

It is the effect to over eat in response to change or modulations in emotions. People who are prone to emotional eating reach to food several times with slight emotions modulations also. They feel uncomfortable with this eating time and again due to modulations in emotion which lead to several hormonal changes and leads to weight gain, means that when a set of people eat a lot during emotion modulations are actually eating to cope up with the negative emotions, but that eating is not at all beneficial to their body and in turn results in low metabolism which leads to weight gain. Mostly negative emotions is assumed to create void that results in excessive eating.

Keyword: Binge Eating; Emotions; Eating Disorder; Emotional Distress; Emotional Eating; Emotion Modulation.

Introduction

It is been observed that negative emotions may lead to a feeling of emptiness or an emotional void. These people may even feel awkward or feel a sense of shame due to continuous eating that leads to excessive weight gain.¹⁻² Negative emotions are the reasons of this continuous eating which is assumed to fill up the void with continuous eating. Finding comfort in food is common and is part of practice called emotional eating. There are many reasons resulting to emotional eating it could be work stress, financial issues, health issues, relationship struggles etc, affecting both the category of sexes and is more dominant in female

category.³

Literature Review

Emotions Modulation

The study of emotion modulation is recently now a topic of research in which a great variety of physiological disciplines are involved. It is crucial to understand some aspects that emotions have. Gross characterizes an emotion process as a series of casually cascaded events. that occurs with a stipulated interval of time. An event or situation produces a divergence in the attention focus of a particular

subject developing in several emotions. Finally the emotions causes causal behavioral, experiential and physiological responses.^{4,19}

Negative emotions is described as any feeling that causes us to be miserable, confused, depressed and sad. These negative emotions make you dislike yourself and others, also it makes us feel negative entirely and because of this negative emotions we tend to percept each and everything in a negative way, reducing your confidence and self-esteem, and general life satisfaction. These negative emotions are situational based that creates void within self and the void is filled up with calories intake.²⁰ Emotions are complex reactions involves many biological and physiological processes within our bodies. Our brain responds to our thoughts by releasing hormones and chemicals, which send us into a state of arousal. All emotions come about in this way, whether positive or negative.^{4,20}

Emotional Eating

Emotional eating includes eating in response to any emotion, whether that be positive or negative. Most frequently, people refer to emotional eating as "eating to cope with negative emotions". In these situations, emotional eating can be considered a form of abnormal eating and is defined as "an increase in food intake in response to negative emotions" and can be considered a maladaptive strategy.²¹ More specifically, emotional eating in order to relieve negative emotions would qualify as a form of emotion-focused coping, which attempts to minimize, regulate, and prevent emotional stress. Research shows that emotional eating does not reduces stress but in fact it builds up a feeling of shame after excessive eating.⁵ Those who are having a habit of eating to cope up with negative emotions are more likely to develop or are at a high of developing binge eating disorder.²²

Most people experience emotional eating during many times a day, for example it could be eating just to mingle with friends even though you are not hungry, it could be eating chips because you are feeling bored or else eating a big bar of chocolate after a stress out day. If Emotional eating happens frequently or becomes the sole reason a person is dealing with emotion then their life, heath, happiness and weight can be negatively be affected.⁶

Contributing factors to emotional Eating

Effect of Negative Emotions

High levels of the negative affect trait are related to emotional eating. Negativity is a personality trait, involving negative emotions and poor self concept. Negative emotions include anger, sadness, guilt, de-

pression, anxiety and nervousness. It has been found that certain negative affect regulation scales predicts emotional eating.⁵ An individual not able to express and identify one's emotions makes him feel inadequate and uncomfortable to cope up with regulating negative effect and are more likely to engage in emotional eating. Further scientific studies regarding the relationship between negative affect and eating find that, after experiencing a stressful event, food consumption or calories intake is associated with reduced feelings of negative affect (i.e. feeling less depressed or sad) for those suffering from high levels of stress. This relationship between eating and feeling better suggests a self-satisfying cyclical pattern between high levels of stress and consumption of high calories foods as a mechanism to cope up with high level of stress resulting in negative emotions.⁶

Pattern Since childhood

For some people emotional eating is learned or habituated since childhood. Parents out of extreme love and emotions feed child time and again even when the body requirement is not there and from then child is habituated to eat time and again and that is continued till he is grown up. Even in many cases parents make a pattern to feed child with all junk food at time of occasions for example if a child scores well in examinations parents emotionally gives child a treat again in the form some calories (Junk food) or in some cases just to make child quite when he is crying or to make him feel pleasant in even of sadness or depression that emotional void is filled up with food. Actually it is assumed that food intake is an option in both positive and negative emotions since childhood. So parenting is also one of the major factors causing emotional eating and is continued till end leading in weight gain.⁷

Correlation between Emotional eating and Related Disorder

Emotional eating is assumed as a means to cope with emotions may be a reason to developing eating disorders such as binge eating or bulimia nervosa (It is a life threatening eating disorder). The relationship between emotional eating and other disorders is largely due to the fact that both emotional eating and these disorders share key characteristics. More specifically, they are both are focusing to cope up with emotions, not adjusting with natural strategies of coping up with stress, and a strong dislike to negative feelings. It is important to note that the causes which leads direction to emotional eating has not been definitively established. The latter hypothesis shows that emotional eating happens in response to another eating disorder which shows that emotional eating to

be more common among individuals already suffering from bulimia nervosa. It is also shown that hormonal changes due to the changes in emotions produces chemical changes in mind leading to binge eating and to different disorders in which one is bulimia nervosa.²¹ Bulimia Nervosa is physiological disorder in which a person experiences episodes of binge eating and if it is related with emotions modulations together will cause worst consequences.⁵

Biological and environmental factors influencing Emotional Eating

Stress is the main influential factors affecting the type of food intake.⁸ Many of the studies and research shows that emotional and physical distress increases the food intake that are high in calories, sugar, fats. It is been studied that when fats and sugars are ingested inside the body it suppresses the stress related responses and emotions and these high fats and sugar food releases dopamine and opioid (a chemical which evolves pleasure) that suppresses the effect of negative emotions.⁹ It is studied that these foods are comfort foods and it is assumed that these foods high in fats and sugar counteracts stress. But the studies done on rat shows that these foods high in fats and sugar when intermittently accessed will release opioid which can become neurologically addictive, hence we can see many people in event of emotion modulations are craving for sweet or some junk foods.⁹ Few examples from American diet includes food such as pizzas, burgers, French fries, sausages, pastries etc. The most common food craving preference are from decreasing order from sweet energy dense food, non-sweet energy dense food, fruits and vegetables.¹⁰

Different people response in different way in response to stress, it is individual based reaction and personal differences in physiological reactivity. If we compare both the sexes women's are more prone to emotional eating then men in coping up with emotional mechanism for stress.¹¹

In one study women's were exposed to an hour long social stress and a neutral to go condition. These women's were exposed to each condition on different days and after the task got completed women's were invited to a buffet which includes both healthy and unhealthy snacks. Women with high chronic stress consumed more calories rich in fats and sugars in the form of chocolate cake, than women with low level of chronic stress.¹²

(Cortisol, the primary stress hormone, increases sugars (glucose) in the bloodstream, enhances your brain's use of glucose and increases the availability of substances that repair tissues)

High cortisol levels, combined with high insulin

levels, may be responsible for stress induced eating, as research shows that high cortisol reactivity is associated with hyperplasia, it is an abnormally increased appetite for food, during stress. Furthermore, since glucocorticoids trigger hunger and specifically increase one's appetite for high fat and high-sugar foods, those whose adrenal glands naturally secrete larger quantities of glucocorticoids in response to a stressor are more inclined toward hyperplasia.¹³

Macht (2008)¹⁴ described a five-way model to explain the reason behind stressful eating: (1) Emotional control of food choice, (2) Emotional suppression of food intake, (3) Impairment of cognitive eating controls (attempting to restrict intake as a means of weight regulation) (4) Eating to regulate emotions, and (5) Emotion-congruent modulation of eating. These break down into subgroups of: Coping, reward enhancement, social and conformity motive. Thus, providing an individual with are stronger understanding of personal emotional eating.

Effect of emotional Eating on Positive Emotions

Geliebter and Aversa (2003) conducted a study comparing individuals of three weight groups: underweight, normal weight and overweight. Both positive and negative emotions were taken into account. When individuals were experiencing positive emotional states or situations, the underweight group were reported eating more than the other two groups.¹⁵

It is seen that underweight people eat less and eat even less during the time of stress. It is also been studied that people in positive emotional stress indulge themselves more in food then people in negative emotional stress. Research have also shown that people during negative emotions eat more than the requirement with their ongoing negative thought process and don't even realize it, which are more to be seen now in pandemic situation resulting in weight gain.¹⁵

Impact of Emotional Eating on Health

Emotional eating is qualified as one of the way of coping up with chronic level of stress.¹⁶ In Coping methods of negative emotions there are many categories but emotional eating comes under a category where it gives partial or time being suppression to stress and does not give sustainable solutions in fact it leads into negative impact on health.⁵

Additionally due to the consumption of foods rich in fats and sugar levels as a solution to the recovery of stress it triggers the secretion of glucocorticoids creates the enzymes that stores away the nutrients circulating in the bloodstream after an episode of the

emotional eating which will locate fats in the abdominal area. Therefore, those who struggle with emotional eating are at greater risk for abdominal obesity, leading to a greater risk for metabolic and cardiovascular disease.⁵

Discussion

Measures to combat with Emotional Eating

There are many ways in which individual can cope up with emotional distress without engaging in emotional eating. The most basic thing is to minimize unnatural things and to maximize natural strategies to balance with emotional distress. A study conducted by Corstorphine et al. in 2007 investigated the relationship between distress tolerances and disordered eating. These researchers specifically focused on how different coping strategies impact distress tolerance and disordered eating. They found that individuals who engage in disordered eating mostly try to avoid facing negative emotions rather are more focused on just suppressing the emotions for instant. If the individual faces negative emotions strongly they choose to avoid overeating by engaging themselves in different activities (playing, listening music, being with friends etc.) which balances their distress. The most obvious way to limit emotional avoidance is to confront the issue through techniques like problem solving. Corstorphine et al. showed that individuals who engaged in problem solving strategies boosts one's ability to tolerate emotional distress. Since emotional distress is correlated to emotional eating, the ability to better manage one's negative affect should allow an individual to cope with a situation without resorting to overeating.¹⁷

Mindfulness techniques is one way to combat emotional eating. An individual can judge himself whether the craving for eating is actually hunger or due to emotional distress, because emotional distress trigger spontaneous cravings for foods rich in fats and sugar and can avoid overeating.¹⁸ An individual can take time to note his/her bodily sensations hunger pangs, and coinciding emotions, like guilt or shame, in order to make conscious decisions to avoid emotional eating. Emotional eating can also be improved by evaluating physical facets like hormone balance. Female hormones, in particular, can alter cravings and even self-perception of one's body. Additionally, emotional eating can be exacerbated by social pressure to be thin. The focus on thinness and dieting in our culture can make young girls, especially, vulnerable to falling into food restriction and subsequent emotional eating behaviour.¹⁹

Emotional eating disorder predisposes individu-

als to more serious eating disorders and physiological complications. Therefore, combatting disordered eating before such progression takes place has become the focus of many clinical psychologists.

Conclusion

It has been seen that Emotions modulation are the basic reason of binge eating, many theories have also shown the way to combat with these emotion modulations and in general emotion eating but the main reason of concern is

- How to overcome this pattern of habituated eating in case of instantaneous emotion modulation both positive and negative.
- How to make people to imply the other methods to combat emotional eating.

References

1. Sapolsky Robert M.(1998). "Why Zebras don't Get Ulcers?" .W.H.Freeman. pp.39-42. ISBN 978-0716732105
2. Klitzing,R.;Baldassaro,A.;Hayden(2018), "The impact of chronic stress on the predictors of acute stress induced eating in women appetite". 123:343351.doi :101016/j.appet.2018.01.007. PMID29309852. S2CID3622058
3. Galan,Nicole(15February2018). "Emotional eating: How to overcome stress eating". Medical News Today. Retrieved 2018-10-11.
4. Yau, Yvonne H. C.; Potenza, Marc N. (2013). "Stress and Eating Behaviors". *Minerva Endocrinologica*. 38(3): 255-267. ISSN03911977. PMC4214609. PMID 24126546.
5. Adam, Tanja C.; Epel, Elissa S. (July 2007). "Stress, eating and the reward system". *Physiology & Behavior*. 91(4):449458. doi:10.1016/j.physbeh.2007.04.011. PMID 17543357. S2CID 4845263 Kontinen, Hanna; Mannisto, Satu; Sarlio-Lahteenkorva, Sirpa; Silventoinen, Karri; Haukkala, Ari (June 2010). "Emotionaleating, depressive symptoms and self-reported food consumption-A population-based study". *Appetite*. 54(3): 479. doi:101016/j.appet.2010.01.014. ISSN10958304. PMID20138944. S2CID27554287.
6. "Gender and Stress". American Psychological Association. 2010. Retrieved 7 April 2020
7. Tryon, M.S.; DeCant, Rashel; Laugero, K.D. (April 2013). "Having your cake and eating it too: A habit of comfort food may link chronic social stress exposure and acute stress induced cortisol hypo-responsiveness". *Physiology & Behavior*. 114115:3237 .doi:10.1016/j.physbeh.2013.02.018. PMID 23500173. S2CID 24971720.
8. Epel, Elissa; Lapidus, Rachel; McEwen, Bruce; Brownell, Kelly (January 2001). "Stress may add bite to appetite in women: a laboratory study of stress-induced cortisol and eating behavior". *Psychoneuroe*

- ndocrinology. 26 (1):3749. doi:10.1016/S03064530(00)000354. PMID 11070333. S2CID 4889400.
9. Macht, Michael (2008). "How emotions affect eating: A five-way model". *Appetite*. 50 (1):111. doi:10.1016/j.appet.2007.07.002. PMID 17707947. S2CID 2820934.
 10. Geliebter, Allan; Aversa, Angela (January 2003). "Emotional eating in overweight, normal weight, and underweight individuals". *Eating Behaviors*. 3 (4):341347. doi:10.1016/S1471-0153(02)00100-9. ISSN 1471-0153. PMID 15000995.
 11. "Emotional Eating as a Coping Mechanism". *The Huffington Post*. 2013-03-19. Retrieved 2016-04-18.
 12. Corstorphine, E.; Mountford, V.; Tomlinson, S.; Waller, G.; Meyer, C. (2007). "Distress tolerance in the eating disorders". *Eating Behaviors*. 8 (1): 91-97. doi:10.1016/j.eatbeh.2006.02.003. PMID 17174856.
 13. "Comfort Foods: Men Vs Women & 3 Ways to Curb Your Cravings". *Factfindersteph.com*. Retrieved 2016-04-18.
 14. Turton, Robert; Chami, Rayane; Treasure, Janet (2017-04-22). "Emotional Eating, Binge Eating and Animal Models of Binge-Type Eating Disorders". *Current Obesity Reports*. 6(2):217228. doi:10.1007/s1367901702658. ISSN 21624968. PMID 28434108. S2CID 3973000.
 15. Spence, S.; Courbasson, C. (2012). "The role of emotional dysregulation in concurrent eating disorders and substance use disorders". *Eating Behaviors*. 13 (4):382385. doi:10.1016/j.eatbeh.2012.05.006. PMID 23121793.

Web Source

1. <https://www.healthline.com/health/emotional-eating>
2. <https://www.betterhealth.vic.gov.au/health/healthyliving/negative-emotions>
3. <https://www.sciencedirect.com/topics/psychology/process-model-of-emotion-regulation>
4. <https://www.betterhealth.vic.gov.au/health/healthyliving/negative-emotions>

