

Dietary restraint theory



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Evaluate the success of dietary restraint theory in explaining the success or failure of weight control

During past few decades psychologists have been trying to explain dietary patterns in individuals which are being controlled with a purpose of weight management, even in a healthy body shape. The main theories that have been developed throughout these years are psychosomatic (emotional eating), externality (externally induced eating cues) and restraint. The last one can be well explained by Tuschl (1990), who suggested that restrain eaters are those who curb themselves from food intake to either lose weight or maintain it at the low, but constant level.

Restraint theory was initially developed by Herman and Mack (1975) who stated that people's eating behaviour is affected by physiological (pressure to eat) and non physiological factors (self imposed restraint to these pressures- Herman and Polivy 1985, pp. 192). Furthermore, Herman and Polivy found that restrain eaters adjust their eating behaviour cognitively which might lead to binge eating.

Restraint theory is a broadly researched area of dieting and overeating and it has been generally accepted that internal cognitive variables control eating behaviour. One method of testing the behaviour of restrained eaters is by using preloads and taste tests. Herman and Mack (1975) found that high calories meal (in this example strawberry milkshake) is consumed more by restrain eaters than unrestraint ones. This type of behaviour was well explained by Herman and Polivy (1984) who established disinhibition theory with Boundary Model of Eating Behaviour. The model implies that the consumption of food is driven by physiological factors; you start eating when

you are hungry (hunger boundary) and stop eating when you are full (satiety boundary). In addition, restrained eaters create these boundaries cognitively, which is determined by fixed number of calories. In addition, once the diet boundary is reached in the preload, which exceeds their defined calories acceptance, individuals will eat until they reach satiety boundary limit. This presents a failure of dietary restraint on the attempt of weight control. The disinhibition phenomena could be triggered by factors related to stress, fear or even social situation. As restrained eaters become more vulnerable to control their action, behaviour, hence, they tend to overeat as a response to circumstances. Spencer and Fremouw (1979), supported study of disinhibition effect in eating by conducting an experiment in which it was found that making a participant aware of calories contained in preloaded meal triggered his/her rigid patterns of consumption. Furthermore, Pasman, Saris et al (1999), claimed that unsuccessful dieting could be attributed to past dieting experiences such as chronic dieting being a consequence of predisposition toward overeating and weight gain.

Nevertheless, restraint theory met few criticisms. Herman and Polivy 's disinhibition hypothesis has been difficult to replicate using other restraint scales such as the Three Factor Eating Questionnaire and the Dutch Eating Behaviour Questionnaire (Westenhoefer, Broeckmann, Munch and Pudel; 1994). Moreover, there are issues with the measurement of dietary restraint. According to Heatherton, Herman, Polivy, King and Mc Cree (1988), the restraint scale is biased toward a number of restrained eaters who have a high tendency toward overeating (the restraint scale contains only items that reflect restrained eating, disinhibited eating and weight fluctuation). This is

also supported by Van Strein (1986) who claimed that the disinhibitory eating of restrained eaters is not related to restraint, but susceptibility toward disinhibition of restraint. In other words, not all dieters will show overeating in experimental conditions, but only a 'sub population' with a high tendency to overeating will do so. Therefore, restrained eaters consist of a subpopulation are either successful dieters (high restraint and low tendency to over eating) or unsuccessful dieters (high restraint and high tendency toward overeating). Westenhoefer, Broeckmann, Munch and Pudel (1994) supported the findings - in which dieters with a high tendency toward overeating actually showed disinhibited eating. They used a preload and taste test paradigm and found that participants with high scores on restraint and disinhibition (TFEQ- three factor questionnaire; Stunkard and Messick, 1985) consumed the least amount of food when compared to restrained eaters (with a low tendency toward overeating). This evidence shows that restraint theory is only valid for a sub population of dieters (dieters with high tendency towards overeating).

Westenhoefer et al (1994) had argued that the items on the TFEQ can be separated into two categories; flexible control of eating and, rigid control of eating. He proposed that rigid control increases vulnerability to eating difficulties and in long-term weight control' flexibility is less problematic strategy. Later in study, Westenhoefer and Pudel (1992) found that successful weight loss over one year period was accomplished by flexible eaters which tend to be more likely to develop symptoms of anorexia nervosa whereas rigid restrain eaters are more prone to bulimic eating disorders.

Another important influence on dietary restraint was assigned to Lowe (1993) and his three factor models of dieting that predicts or manipulate the eating behaviour of restrained eaters - from least to most successful. First, the frequency of dieting and over eating is a good predictor cause of disinhibited eating as measured by the restraint scale. Second, current dieting are individuals who are currently dieting to lose weight. Most current dieters usually have high scores on restrained eating scales, but not all report dieting at that time. Green and Rogers (1995) suggested that unlike restrained, non- dieters restrained dieters report negative concerns with body weight and shape, and may be more pre-occupied with food and eating. Lowe suggested that TFEQ and DEBQ select a great proportion of current dieters as they describe actual dieting behaviours. The third factor is weight suppression, and like current dieters is assumed to have dieted a lot in the past, but who have sustained eating and weight control for a lengthy period of time. Weight suppression is defined as the difference between a subject's heaviest weight and their current (lower) weight sustained for around twenty months. In short, Lowe had found that weight suppressors were the most successful in adapting and sustaining lower weights. Lowe (1993) suggested that predicting potential weight gain can be observed from previous analysis of dieting. He stated that if restrained eaters go on and off diets their vulnerability to counter-regulatory eating might depend on where the individual is in the ' dieting cycle'.

Most recent study published by Penas-Llenado et al (2008) aimed to examine the validity of Dietary Restrain theory to predict the success or failure of weight control. The purpose of this study was to observe the sub types of

participants who were either completely restraint or mix restraint with negative affection, or healthy unrestraint eaters. Penas-Llenado et al used measurements of the TFEQ, BITE (bulimic investigatory test; Henderson & Freeman, 1987) and BDI (Beck depression inventory; Beck, Rush, Shaw & Emery, 1979) scales. As a result, restrain eaters displayed more problematic eating pathology (involving binge eating) than the healthy unrestraint group. In addition to that, the mix group was more prone to overeating than any other group. In conclusion, the restraint theory could not predict the binge eating or other eating disorders symptoms, which might prevent successful weight control. The interaction of negative mood affect can significantly explain the binge eating pathology.

At this point it is worth introducing a study which aimed to investigate the effect of weight-maintaining restriction on weight control and bulimic symptoms. Subsequently, to see the relationship between dietary restraints with negative mood affect. The latter purpose was to examine the validity and reliability of previously restraint scale used to measure dietary restraints. The study was conducted by Eric, Katherine et al (2005) who invited adolescence girls to three sessions of promoting a balanced, healthy and perfect diet to enhance a body image. They were then encouraged to create their own healthy diet programme, discussing any problems with the experts. During one year period several factors were measured such as BMI, healthy eating checks, exercise intensity, bulimic symptoms (EDE- Eating Disorder Examination- by Fairburn & Cooper, 1993) and negative effects (PANAS- Positive and Negative Affect Schedule by Watson and Clark, 1992). The evidence showed significant decrease of the bulimic symptoms as a

result of weight control system conducted by participants. This is an important challenge for the previous findings done by Herman & Polivy in regards to disinhibition theory which not only leads to a failure of weight control, but also triggers eating disorders symptoms. The researcher also noticed that the use of restraint scale was unreliable to assess dietary restriction due to self-report method on calories intake (which might be biased). In addition, it was found that negative affects decreased significantly during the weight control attempts (negative moods occurred sporadically and lasted for short period of time, hence; there were insignificant). One of the explanations of the findings could be assigned to the success of lighter weight maintenance, in contrast to those used in previous studies which might have been less efficient. In summary, Eric, Katherine et al (2005) claimed that failure of weight control can be attributed to severe changes and expectations rather than a light and slow adjustment in dietary restrains schemas- presented in their study.

Lastly, it is worth mentioning a longitudinal study to establish whether dietary restrains have any impactions on predicting weigh gain over a period of 4 years. Van Strien, Leeuwe, Rutten, Laar, & Weel (2007) examined relationship between restrain eating and tendencies of overeating on weight gain. This study took 2 diabetic participants who received doctors' treatment in order to reduce their energy intake to enable weigh loss during the study. Participants were examined at the beginning of the experiment, 8 weeks after participation and in the fourth year. This involved height and weight assessment as well as food frequency questionnaire with variables on age, smoking habits and educational level. The findings showed overall reduction

in fat intake over short period of time. However, it was noted that participants experienced weight gain after longer period of 4 years. The explanation given to this outcome was attributed to the changes in metabolism system as a result of change in eating patterns, or the medication prescribed to participant which might have weight gain substitute. It was also found that relationship between emotional factor and external cues led to the increase of BMI quite significantly. This indicated that success of controlling weight cannot be predicted by dietary system. However, what was found successful is matching appropriate treatment to individual patients which can enhance and ensure a better outcome.

In conclusion, the stand on effectiveness of Dietary Restraint Theory as a factor of predicting the success of a failure of weigh loss seems to be quite popular in early years. More recent studies tend to challenge previous findings. One of the main reasons is unreliability of prospective restraint scales (Eric, Katherine et al, 2005). Additionally, lack of differentiation of eating styles in order to promote suitable schema is simply dismissed. Furthermore, more factors should be assessed when looking at dietary restraint, for example, tendency to overeating. Especially, when looking at longitudinal studies which showed that overall significant reduction in fat intake over short period of time in contrast to weight gain after longer episode (4 years). Further studies are needed to investigate the causes of findings. Moreover, some studies showed that participants seemed to lose their control in response to mood (showing anxiety, negative reactions) when exposed to external cues of food. Nevertheless, an assumption of tendencies in developing anorectic's symptoms in flexible eaters or bulimic disorders

rigid restrain eaters (Pudel and Westenhofer, 1992) had been challenged by Eric, Katherine et al, (2005) who found significant decrease of bulimic symptoms as a result of weigh control system. From studies completed in a laboratory setting Lowe (1993) suggests that predicting potential weight gain can be seen from analysing previous dieting as restrained eaters go on and off diet. Hence, it is crucial to measure where an individual is in the dieting cycle. More research needs to be conducted outside a laboratory setting, like the one of Pudel and Westenhofer. Restraint theory applied in everyday life is difficult to study, as it leads to underreporting and it is expected to be greater in restrained eaters who show increased concern with food and eating (Hill et al 1995). More research needs to be conducted into interventions of how to diet successfully, not just who are good and bad dieters or who are more susceptible to successful or unsuccessful dieting.

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