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A thematic analysis of causes attributed to weight gain: A female slimmer's perspective.

Background

Obesity prevalence has shown a marked increase in recent years. Strategies designed to manage the trend are not always effective in the long term. This qualitative study investigated perceived causes of weight gain in a group of female slimmer's. Understanding beliefs about causes of a problem can help explain behaviour and find solutions. It is therefore justified and timely to explore beliefs about causes of weight gain.

Method

A group of 11 (adult) slimmer's were interviewed using a semi structured approach, and data analysed thematically.

Results

Four main themes were identified; importance of habits, influence of learning early models about the world through food, eating beyond feeling full and use of food as therapy.

Conclusion

Behavioural causes were given to explain weight gain, perceived to be mediated by modern lifestyles or changes in circumstances. In addition, beliefs about food and its function related to personal history or childhood experience, and subsequently used negatively in adulthood. The potential contributions of these findings for practice are explored.

Introduction

The rising incidence of obesity is a potential global health threat (World Health Organisation, 2006). In 2008, 24% of UK adults were classified as obese (NHS, 2010). The causes of obesity are complex, and understanding the factors driving the current prevalence may be important for identifying solutions (Butland *et al*, 2007).

Current weight loss intervention strategies centre on redressing energy imbalance. Arguably, the success of any weight management or prevention programme may be impaired if it does not fit with the causal belief systems of those taking part. Causal attributions form a significant part in how people understand and explain illness, with 70-95% of people attributing a cause to their illness (Brogan & Hevey, 2009). As a way of dealing with ill-health people create their own belief systems, and such beliefs determine how a person copes with their illness and consequent behaviour (Warmsteker *et al*, 2005).

Beliefs about causes of illness have also been found to link with beliefs about how to cure or treat the illness (Ogden & Flanagan, 2008). For example, believing in a biological cause of weight gain, may link to believing in a biomedical solution, such as surgery or medication. However, beliefs about causes of illness and solutions can also be inconsistent, for example personal responsibility may be attributed to causation, but a belief in a medical solution may be held regarding treatment (Ogden, 2007). Arguably, if beliefs about causes of illness

influence treatment cognition and behaviour, there is wisdom in exploring beliefs about causes of obesity to inform approaches for addressing the issue.

Enquiry into causal beliefs attributed to weight gain from a health professional's perspective report that dieticians attribute behavioural and psychological causes for overweight and obesity, with physical inactivity an important causative factor. Mood, over eating, interpersonal factors and repeated dieting were also considered important. Beliefs about causes of overweight and obesity also influenced treatment practices. For example, the perception of the importance of mood in causing obesity was associated with increasing reports of recording weight regularly and referral to other health professionals (Harvey et al, 2002).

GP's have been found to endorse both behavioural and psychological causes over biological causes. Some studies have shown that GP's also believe a behavioural cause requires a behavioural solution (Ogden & Flanagan, 2008). In the same study members of the public were found to have inconsistent beliefs regarding causes and solutions (Ogden & Flanagan, 2008).

Research emphasis on causal attributions of obesity from the view point of the person who is overweight is limited. An early exploration of internal and external attributions of weight gain suggested that in addition to motivation, individual beliefs about causes of obesity were important predictors of weight loss and maintenance (Rodin *et al*, 1977). Beliefs on causes of weight gain have also been found to influence the amount of weight lost in a dieting population. Weight loss targets determined at the start of a weight reduction programme were influenced by perceived original causes of weight gain. For example, physical causes attributed to weight gain resulted in less weight reduction compared to attributing a behavioural cause (Warmsteker *et al*, 2005). Furthermore, weight loss maintainers have also been found to endorse fewer beliefs about medical causes of obesity (Ogden, 2000).

A recent study exploring links between perceived causes of weight gain in a group of obese people, found predominantly behavioural themes, focusing around interconnected acts of passive behaviours such as; less physical activity, over eating and comfort eating (Brogan and Hevey, 2009). Research has also found that whilst on the surface obese people attribute weight gain to a lack of self control or genetics, over eating is related to behavioural and emotional factors occurring in childhood. For example, food mediated control between child and parent (Goodspeed Grant & Boersma, 2005).

Obese people also report that childhood precursors to weight gain included; encouragement to over eat, a lack of exercise, trauma or rebelling over a perceived emphasis on weight control. Then in adulthood, weight gain occurred in response to significant triggers such as; comfort eating in response to adverse life events, relieving boredom, or busy lifestyles prevented control over diet and exercise (Bidgood and Buckroyd, 2008).

The importance of understanding early life influences is justified based on the rising trend in childhood obesity. Insecure attachments are common in eating disorders (Ward, 2000). Poor attachment histories relate to the use of food for mood regulation in later life (Buckroyd and Rother, 2008). Furthermore, negative childhood experiences in normal weight children or depression in adolescence are possible triggers for obesity in adulthood (Vamosi, Heitmann & Kyvik 2010).

The main purpose of this study is twofold; firstly, to our knowledge no study to date has explored in depth beliefs on causes of weight gain from slimmers' perspectives. Secondly,

methods of investigation on causal beliefs have previously taken a quantitative approach using questionnaire methods, thus limiting the degree of exploration of the topic, or chosen qualitative methods, focusing on specific groups or narrow influences such as life stage.

If current weight loss interventions are proving ineffective in managing the obesity trend, gaps in understanding this topic clearly exist, and it is therefore important and timely to explore the issue. The objective therefore is to offer a further contribution to this poorly researched area. The findings from this study may be used to help understand factors influencing eating behaviour and weight gain, offering a useful contribution in the planning of future research and weight loss management strategies.

Materials and Method

Participants

A slimming population was chosen to access relevant data. Fourteen slimming club organisers were contacted across the East Midlands. Five female members agreed to be interviewed from 3 slimming clubs. Other slimming club organisers expressed interest, however no members agreed to participate. A further 7 female participants belonging to slimming clubs in other areas of the UK were recruited by acquaintances known to the researcher. No Participant was known to the researcher prior to the interview.

One person withdrew prior to interview because the reasons contributing to her weight gain were too personal. In total 11 female volunteers were recruited and interviewed for the study. The ages ranged between 28 and 72 years. All participants were professionals and two had retired. No specific selection criteria were included in the recruitment process.

Procedures

Interviews took place between May and June 2010 and were audio recorded. In total three interviews took place at two slimming club venues, and eight interviews were carried out over the telephone. Each interview took place on a one-to one basis. The duration of each interview ranged between 20 and 40 minutes. Participants were de-briefed following each interview.

A semi-structured interview schedule guided the discussion; however participants were encouraged to speak freely. Areas covered were derived from a literature search on causes of obesity. Topics included; day to day lifestyle behaviours, social environment, mood and emotions, the role of media, supermarkets or fast food chains, physiological factors such as genetics, hormones or prescription medications and life experiences.

Participants were asked to read an information sheet, and give written consent for face to face interviews or verbal consent for telephone interviews. Notification was given that interview data would be destroyed following completion of the study. A nominated code was given to each participant in order to preserve confidentiality and anonymity. The study was approved by The Faculty of Health and Life Sciences at Coventry University in accord with the ethical code of conduct published by the British Psychological Society.

Analytic procedure

Interview data were transcribed verbatim. Data were analysed using inductive thematic analysis (Braun and Clarke, 2006) whereby interesting features or patterns in the text were highlighted. Significant topics, recurring terms, statements or ideas were identified and organised into potential prospective categories and provisionally coded. An iterative approach was taken in which data and categories were systematically reviewed until the most commonly cited concepts were identified, and a logical and a clear pattern emerged. Themes identified from the data set appeared to be saturated by the tenth interview.

Results

Analysis provided four themes and these are shown in figure 1. It is important to note that although each theme has been presented and expanded on separately they are not mutually exclusive. The complexity of the topic and broad nature of the research question meant themes often interlinked. The extracts cited for the purpose of this paper include only a representative sample of participant responses.

The importance of habits

In one form or another, automatic behaviour patterns significantly featured as a perceived cause of weight gain. A number of discrete factors relating to habits were attributed, therefore three subthemes emerged from the interview data.

Triggers that changed habits

Participants perceived changes in personal circumstances to have caused weight gain. Life transitions and periods of vulnerability were significant. Food was the tool used to manage change, and either good or bad habits were established or lost.

“I think possibly a failed marriage and you know not feeling good about myself. It is much easier when you have someone in the house in fact. I eat well but I don’t snack as much the same way when there is someone else here. Just getting into bad habits” (psa)

“there have been periods of time when I have been static and then something else has happened and I have gained weight” (pkd).

The following quote offers an explanation why food was the tool used. The physical feeling of fullness provided some sense of comfort in situations that felt beyond control.

“I had an appalling personal event and a slipped disk. You get into the habit of eating and I suddenly realised I liked the feeling of feeling full” (phd).

Time constraints furnish bad habits

Time constraints imposed by modern lifestyles was a perceived barrier to establishing or initiating the formation of positive health behaviour habits. Busy schedules not only influenced dietary intake and activity, but they also influence the way food is used and experienced.

“I leave for work at 7.45 that is part of my problem because I am usually eating when I am driving. I eat my lunch at my computer and don’t stop for a lunch break. I need to sit down and do that”. “It has become a bit of a routine I think” (pkb).

“There is very little time to eat at work and I don’t think about food so much” (psa)

Associations between passive eating patterns and behaviour

The association between TV and passive food consumption, and not eating at the dinner table was another perceived cause of weight gain. The significance of sitting around a table represented something symbolic, suggesting a connection with food that is no longer part of modern life.

“We eat in front of the TV so we are not aware of what we are eating and putting in the mouth” (pdh)

“Not sitting at a table and having a proper meal is my biggest down fall as I forget what I have eaten when I am grazing, and eating between meals”(pjf)

Engaging in social activities also furnished conditioned eating behaviours.

“When you go and watch a movie it’s like you know, ‘have you got your hot dog and drink? If you haven’t we are not going to start for five minutes so you can go and get them’”. “It’s sort of habit forming, so that when you sit down and watch a movie at home that’s what you and the children expect as well” (pak).

Developing early models of thinking about the world through food

Childhood experience was widely endorsed as a precursor to eating behaviour in adulthood.

“I think it is more how you are brought up, and how we ate as children impacts on how we eat as adults as well” (pri).

Another perceived cause of weight gain related to the way food mediated expression of emotion and conveyed rules within the parent child relationship, through a system of positive or negative reinforcement.

“You know it’s not that we were starved of affection, it’s how our family showed affection” (pmg).

“Child led feeding is not encouraged. It is mother led. It encourages the idea that eating is a good thing to do and it pleases mummy, you know ‘one more spoonful for

mummy'. "We over feed our children and they grow up thinking that it is a good thing to eat" (pmj)

Weight gain was also perceived to be due to finishing children's leftover food. Food was used as a form of communication between child and parent.

"It is a big power struggle between us. I think it is about love. I have put love and care into preparing the meal that will nourish my child, and to have it refused is hurtful and so I negate that by eating it" (pjc).

The importance of eating everything on the plate before leaving the table built up early beliefs of what it means to be good and bad, enduring into adulthood

"Clearing up the plate was seen as being a good girl and waste was wicked" (pmj).

"this is still very much ingrained in me" (pri)

Food used as a tool to assign meaning and express emotion. The meanings attached to food during these formative years provided a rich set of enduring beliefs that in later life participants suggested were used negatively. Misrepresentation can arguably lead to conflict in adult behaviour. The last quote from this theme links in with the next major theme.

"That was definitely encouraged when I was younger to eat everything up. You go on to think your body is probably telling you that it is full, but because you are encouraged to do that as a child it is possible that you have eaten more than you actually need" (pkd).

Going beyond feeling full

Overriding physical cues of fullness was the third theme perceived to cause weight gain. Interesting comparisons were drawn between participant and their children's ability to override physical cues of fullness and weight gain.

"My youngest is much better at it she just says I am full, and then me and my oldest dive on her plate and finish her food. So I have transmitted more to my eldest than my youngest", "The eldest child has problems with her weight not the youngest" (pmg).

Overriding feelings of fullness was a way of dealing with feelings of hunger that was difficult to explain. Hunger was analogous to physical hunger in the sense there was an inner need that required filling, which also links into the following theme.

"When I over ate I was trying to feed a hunger that was not typical and I tried to do it with physical things, which means that although I may have been full I was never satisfied if that makes sense" (pmg).

Use of food as therapy

The fourth perceived cause of weight gain was attributed to ways food was used as a reward or punishment. Food was used a tool for resolving issues and inner conflict, working so well in the short term, it became automatic and habitual.

“I think we have these thoughts that run through our heads all the time but we don’t deal with them and ask why. So we eat, so we don’t have to think about them, but of course the next day the thought or feeling is back and the cycle goes round again” (pte).

Internal emotions represented hunger, and food was used to stop the hunger. In so doing food appears to be used destructively in a bid to take unwanted feelings away.

“There is a huge lack of respect when you put any substance in your body that it doesn’t require. I said at the start I can eat until it hurts that’s a punishment isn’t it, not a reward” (pmg).

“I definitely think people over consume on emotion” It’s not the way we think about food it’s the way we feel about ourselves (psf).

Food was also used as a reward after a period of hard work, as a way to justify and promote a sense of self worth and an accessible way of being good or kind to the self.

“I have done such and such and so let’s sit down and have a chocolate bar and a cup of tea and watch TV” (psa).

Discussion

A marked increase in the prevalence of obesity, combined with poor long term success rates for obesity treatments (Ogden & Flanagan, 2008) underpinned the rationale for this study. The aim was to qualitatively investigate a group of slimmer’s beliefs about significant causes of weight gain. The purpose was to gain a better understanding of beliefs relating to weight gain and explain behaviours, thus guiding future treatment programmes. The results found four significant themes emerging from the data; the importance of habits, the influence of learning early models about the world through food, eating beyond feeling full and the use of food as a therapy.

Overall the results endorse largely behavioural causes to explain weight gain, focusing around a number of interdependent social and psychological factors. Consistent with previous research suggesting coherence between causes and solutions (Ogden & Flanagan, 2008) participants in this study were currently slimming using a behavioural approach consistent with a behavioural belief to causality. Biological factors such as, genetics or life stage featured as distal influences.

The first theme, *the importance of habits* focused on having no established routine of positive eating behaviour, resulting in irregular and automatic eating patterns. Daily pressures and demands of life facilitated passive eating habits and over consumption, as did time spent in

sedentary leisure pursuits, especially watching television. The relationship between time spent watching television and increased risk of obesity is strong (Marshall, Biddle & Gorely, 2004). This is possibly due to reduced energy expenditure. However, television also increases exposure to advertising of energy dense foods and advertising (MRC, 2007).

The second theme, *the influence of learning early models about the world through food* also supports previous research. The influencing factors included; ways of communicating affection through food, internalising beliefs relating to being good or bad that endured into adulthood. Dietary intake has been found to be the most significant factor causing weight gain in children (Metcalf, Hosking, Jeffrey *et al*, 2009).

The third significant theme, *going beyond feeling full*, suggests as with previous literature a reduced sensitivity to satiety cues. Whilst a biological explanation accounts for this in some people (Wardle, 2009), a behavioural account was offered by participants of this study. For example, having to finish a meal when full, a learnt behaviour established in childhood. In addition, the suggestion of liking the feeling of being full implies an emotional explanation for overriding satiety cues, where by feeling full is analogous to comfort.

The fourth theme, *use of food as therapy* relates to developing significant relationships with food. Food helped participants cope with difficult situations and pressures of daily life. Food provided a medium to reward or punish via self medication, resulting in a cycle resistant to change. Emotions were interpreted as hunger in a similar way to a physical interpretation of hunger. Starving emotional hunger may arguably explain the failure of dieting.

Participants in this study believed weight gain was mediated by difficulty establishing and maintaining positive behavioural patterns, and embedded psychological beliefs about food relating back to early relationships. Current NHS guidelines for the management of obesity advocate the following; healthy eating, physical activity, drug therapy and managing co-morbidity. Whilst underlying causes are addressed, causation takes a biomedical perspective, for example pathological causes such as hypothyroidism. In addition the guidelines suggest 'only brief behavioural advice is given' (Department of Health, 2006).

Whilst GP's have been found to endorse behavioural and psychological causes for obesity (Ogden & Flanagan, 2008), only 3% of GP's refer obese patients for behavioural therapy, and 18% to a dietician (Cade & O'Connell, 1991). Solutions for the management of obesity and overweight may be best considered by adopting a collaborative multidisciplinary team approach (Frank, 1998). If control of health care funding becomes predominantly GP led in the UK, this could arguably have important implications for the future treatment of obesity.

The aim of this study was not to draw conclusions regarding causation of obesity, rather explore beliefs on causality. Participants in this study report talking about causes of weight gain made them think. Thinking about the issue could help identify individual factors contributing to weight gain or explain barriers to weight loss, and thus promote behaviour change. Furthermore, exploring individual explanations for causes of weight gain could form a useful contribution to clinical consultation, in light of previous research suggesting the relationship between beliefs about causes and solutions to obesity differ between health professionals and public (Ogden & Flanagan, 2008). There is good rationale for this, if patterns of behaviour are underpinned by existing beliefs and attitudes, it would be useful for both health professional and client to collaboratively explore beliefs underpinning causation prior to implementing any treatment programme.

There are limitations to the study design. The coding of the data was not independently verified to confirm or agree the themes. In planning this study the assumption was made that a population of slimmer's may have previously thought about causes of weight gain. This was not always evident, therefore a future study could provide access to the interview schedule in advance, giving more time to reflect on issues related to possible causes. In addition, this study recruited a small number of female professionals from slimming clubs and this may have reflected in the themes identified. Repeating the study with a larger, diverse population would determine whether the findings could be translated within the wider social context, and highlight other themes.

Participants in this study offered generous and candid accounts of their beliefs surrounding causes of weight gain. The issue of disclosing personal information to a stranger was highlighted by the decision of one participant to withdraw from interview, and leads to a number of explanations as why the uptake for interview was poor. Interviews require time, something that is a valuable commodity. Causes of weight gain may have been perceived as unimportant. Alternatively, talking about possible causes may have triggered unwanted emotions or memories.

In conclusion, weight gain was perceived to be caused by difficulty establishing routine eating behaviours, mediated by the pressures of modern lifestyles or changes in personal circumstances. In addition, beliefs relating to food and its function were perceived to relate to personal history and early learnt experience, enduring into adulthood and used negatively. Solutions to manage weight loss and maintenance may require additional behavioural strategies to support a reduced energy intake and increased energy expenditure model for treatment.

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