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“I didn’t want to do it on my own”: a qualitative study of women’s perceptions of facilitating and risk factors for weight control on a UK commercial community program

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Abstract

Overweight and obesity remain serious public health concerns. Outcomes from community based commercial weight management programmes vary, relapse is common and drop out is high. Outcomes could be improved by better understanding experiences on these programmes. The aim of our study was to generate accounts of people’s experience on a commercial weight-management program to identify what experiences were perceived as facilitating, and what posed risks, to programme effectiveness and compliance. We conducted individual, semi-structured interviews with eighteen Caucasian women (mean age 45.4y) who were members of nation-wide UK commercial, fee-paying, community weight management programme. Interview data was analysed via framework analysis. Participants’ experiences

indicated that the programme helped by triggering several intra- and interpersonal processes that catalysed change across psychological, physiological, dietary and behavioural areas of their life. Risks to program adherence and effectiveness spanned well-known risks such as self-regulation fatigue and the difficulty of recovering from negative self-criticism, as well as new factors such as the confusing nature of weight change, the relatively powerful impact of everyday events, and the difficulty in getting the balance right between personalised support vs. intrusion. The complexity of reported experiences challenges the linear, predictive pathways of change proposed by many health behaviour models of weight management. To improve effectiveness, programmes need to go well beyond behavioural and dietary support. It is recommended that community, commercial programmes educate people about the physiological and psychological tensions they will encounter, why people lose weight at different rates, the likelihood of weight relapse and strategies to manage these, including evidence-based support for managing self-criticism.

Keywords: weight loss; weight loss maintenance; commercial programmes; weight loss experiences; programme adherence; programme effectiveness

1. Introduction

Annually, large numbers of people around the world are trying to lose weight (42%) or maintain a weight loss (23%) (Santos et al, 2017). No matter how it is attempted, weight loss (WL) and its maintenance (WLM) is difficult and 80% of those who achieve clinically significant WL (≥5% of body weight) fail to maintain it beyond 12 months (Wing & Phelan, 2005). Obesity and overweight are therefore described as chronic relapsing conditions, characterised by difficulty across physiological, behavioural and psychological levels operating in diverse socioeconomic, cultural and geographical contexts (Stubbs & Lavin, 2013). Physiological changes present a major challenge as WL-induced changes in body composition and physiology drive body weight back to pre-WL levels (Stubbs et al., 2019) via increased appetite (Sumithran et al., 2013), food cravings (Fabbricatore et al., 2012) and reduced energy requirements (Liebel et al., 1995). Psychological tensions arise from self-regulation in the face of other needs (e.g. pleasure, comfort) and challenging contexts (e.g. social engagements, stress) (Greaves et al., 2017), and there are powerful behavioural and contextual pulls back to old habits.

People often turn to weight management programmes for help. The most popular programmes are multi-component behavioural or lifestyle programmes that incorporate diet, exercise, behavioural advice (e.g. how to plan meals) and social support offered by trained professionals. Evidence on the effectiveness of such programmes (both commercial and non-commercial) is limited (Dombrowksi et al., 2014), but they can outperform diet-only approaches (McEvedy et al., 2017), securing a mean WL of 5-9% (Franz et al., 2007) and sometimes with long-term benefits for weight and health (Galani & Schneider, 2007). Evidence-based commercial programmes are the most widely accessed public form of weight management support (Marketdata Enterprises, 2009; Gudzune et al., 2015) and tend to out-perform primary care programmes (Hartmann-Boyce, 2014; Madigan et al., 2014; Jolly, 2011;Stubbs et al., 2015). However, attrition, relapse and regain weight over time on these programmes is high and securing long-term outcomes, remains a challenge (Jensen et al., 2014; Johnston et al., 2014; Gudzune et al., 2015; McEvedy et al , 2017; Stubbs et al., 2011Tsai & Wadden, 2005). There is high individual variability in predictors and correlates of outcomes (Stubbs et al., 2011; Unick et al., 2014). In other words, these programmes work for some but not all.

Effectiveness evaluations alone have been inadequate in elucidating what happens in the "black box" of interventions (Craig et al., 2008), and reasons for attrition and relapse on such programmes remain poorly understood (MacLean et al., 2015; Stubbs et al., 2019). To date, only a few qualitative process studies have examined mechanisms of change, dropout and variability in outcomes (Garip and Yardley, 2011; Greaves et al., 2017; Rogerson et al., 2016; Thomas et al., 2008). Experiences of WL on a commercial programme have not been widely studied, as most evidence comes from primary care interventions (Allen et al., 2015; Stubbs et al., 2015). We need to 'get beneath the surface' of what happens to and for people on these commercial programmes (which are the most widely accessed form of support) to understand what changes are needed to improve outcomes. Our study aimed to identify and understand (i) what aspects of a community-based, commercial programme were experienced as enabling (thereby promoting programme adherence) and effective (thereby promoting effective weight management); (ii) which experiences heightened risked of relapse and / or dropout, and why; and (iii) whether being on a commercial programme attenuated the tensions typically experienced in weight management (Greaves et al., 2017).

2. Method

2.1 Design

This was a qualitative study nested within a non-randomised parallel group trial (see Buckland et al., 2018). The main trial examined the effect of a 14-week UK commercial weight management programme on satiation, hunger, satiety, meal and total day energy intake. Our interviews explored participants' experiences of the commercial programme, focusing on the 'complex conduct of everyday life' (Hansen et al., 2014) for individuals trying to achieve WL or WLM.

2.2 The commercial programme

Participants attended Slimming World, a community-based lifestyle programme offering dietary, behavioural and social support. Supporting approximately 800,000-900,000 members across the UK and Ireland, the programme meets the NICE (2014) recommendations for behaviour change for WL and WLM and has over 13,000 weekly community groups which members pay a weekly fee (£4.95) to attend. Approximately 98% of members are self-referrers, and they can join, leave and re-join as they wish. The programme encourages increased and free intake of appetising, low energy density foods as well as foods high in protein, carbohydrate and fibre, and limited intake of energy dense and less satiating foods (i.e. fats and sugars) (Stubbs et al., 2010). The programme incorporates evidence-based behaviour change techniques (e.g., goal-setting, action planning, contingent reinforcement, self-monitoring, weekly weigh-in, relapse management) (Dombrowksi et al., 2012; Stubbs et al., 2010; Stubbs et al., 2013; Teixeira et al., 2012). Social support is provided via group discussion, leader support and online forums.

2.3 Recruitment and participants

Ethical approval was obtained from the School of Psychology Ethical Review Committee at the University of Leeds (Ref: 15-0178). Potential participants from the main trial were approached and were provided with study information. The inclusion criteria for the main trial were: female (men were excluded to control energy requirements in the sample and because they make up less than 5% of programme participants); BMI within 28-42 kg/m² (which represents 95% of typical programme participants); interested in losing weight; a new member or a new returner (i.e. at least a six month gap since last being a member) of a given commercial WL programme, and attending a community group within three miles of the

research institution; able to provide informed consent; and aged 18-65 years. The main trial exclusion criteria were: presence of confounding health problems; receiving systemic treatment or taking medication that impacted on appetite or weight; having undergone bariatric surgery; pregnant, planning to become pregnant, or breastfeeding; having known food allergies or a history of anaphylaxis to food; smokers; attending an alternative commercial WL programme. Interested participants contacted the research institute to join the main trial. Participants who completed the trial were invited to take part in an interview, scheduled for after their final trial data collection point.

Eighteen women who participated in the main trial were recruited for our study [Mean (SD) age 45.4 (11.1) years]. All but two were still attending the commercial programme. Table 1 shows their self-reported weight management histories, attempts at other programmes, and reasons for joining this commercial programme this time. All bar four participants were repeat members of the programme, with several having left and re-joined multiple times. It was often unclear whether participants considered themselves to be trying to lose weight or to maintain (or recapture) a previous successful weight loss. During the 14-week main trial, participant WL ranged from 1.96% to 16.3% of initial body weight (mean 6.37%; SD 3.55; n=17). One participant remained weight stable weight (0.04%).

Table 1: Participant information taken from interviews on self-reported weight management history, use of other commercial programmes, reasons for joining this commercial programme and any previous engagement and (based on main trial data) percentage weight loss on the 14 week programme (n=18, all female).

	Self-reported in interview				**Measure in trial**
Participant Age	**Weight management history**	**Number of other commercial programmes attempted**	**New or repeat member of this commercial programme**	**Reason for joining the commercial programme (this time)**	**% weight loss (at 14 weeks) of starting weight**
57	Gained weight in pregnancy. Gradual weight gain over many years.	Two	Repeat	Got near size 16. Joined with husband and daughter.	-2.12
47	Gained weight in childhood.	None	Repeat	Wanting to 'get back on track'.	-3.92
62	Had lost 2.5 stone in this programme before. Job changes brought weight regain.	One	Repeat	Gained half a stone. Joined with friend.	-10.98
53	Weight problems started in early adulthood when she began a new job.	None	New	Joined with friend to support her. Wanted to maintain clothing size.	-3.92
44	Weight problems escalated in early adulthood after pregnancy. Cycles of weight loss and regain.	One	Repeat	Got to 14 stone. Wanted to maintain smaller clothing size.	-6.23
46	Weight problems throughout childhood. Escalated in early adulthood following marriage and pregnancy. Lifetime cycles of weight loss and gain.	One	Repeat	Got to 16.3 stone. Health reasons	-8.66
32	Lost 4 stone herself but weight 'crept back on'.	None	Repeat	Wanted weight loss support and motivation.	-3.11

34	Weight problems escalated in adulthood when she met her partner and after pregnancies.	None	Repeat	Got to 14st. Fear of regaining lost weight. Wanted support and inspiration.	-16.28
39	Lifetime of weight problems. Weight escalated with sedentary job.	One	New	Got to 23 stone. Health issues. Wanted guidance and support.	-7.89
45	Gained weight in childhood. Cycle of weight loss and regain.	Multiple	Repeat	Health and psychological reasons.	-7.68
48	Had started dieting as an adult as perceived imbalance between intake and exercise. Slow weight regain	One	Repeat	Motivated by and joined with friends.	-7.55
63	Gained weight following quitting smoking and pregnancies. Cycles of loss and gain.	Two	Repeat	Health reason.	-1.96
38	Weight gain during new relationships.	None	Repeat	Slow weight regain. Reached personal size 16 cut-off.	-6.54
24	Tried shake diets before but in general has not been interested in weight loss.	None	New	Pictures on holiday prompted her to join with mum, aunt and friend.	-6.27
63	Progressive weight gain that escalated in pregnancy and during child rearing.	Three	Repeat	Got to a size 12. Rejoined after holiday weight regain.	0.04
48	Felt unable to monitor intake alone.	One	Repeat	Weight ‘crept up’. Some distal health concerns.	-5.00
38	Since age 17, weight has been a concern; spent ‘half her life’ on a diet to manage weight regain	One	Repeat	Noticed needed bigger clothes. Not comfortable in own skin	-7.03
37	Weight gain when stopped exercising following a trauma. Had dieted before following a pregnancy.	None	New	Weight regain once homebound.	-3.25

2.4 Data collection

A semi-structured, in-depth interview explored: participants' motivation for joining the programme; their early experiences on the programme; factors felt to be effective for weight management; programme likes and dislikes; unanticipated aspects of weight management; and perceptions of mechanisms of change, if any. The first author, an experienced interviewer who was blind to the commercial programme and the main trial, conducted the interviews (n=17 in the research institute, n=1 in a participant's home). Interviews were conducted between Nov 2015- Jan 2016, lasted on average 60 minutes (range 52– 92 minutes), were audio-recorded and transcribed to playscript standard. Identifying details were removed from transcripts.

2.5 Data analysis

Data was analysed inductively, utilising a form of framework analysis without infringement of existing literature or theory (Gale et al., 2013). Stage 1 (familiarisation) involved multiple readings of transcripts. Stage 2 (developing a thematic framework) involved line-by-line labelling of text segments, from which provisional descriptive codes were generated (e.g. eating out) and then grouping similar codes into preliminary themes (e.g. external risks to adherence). Stages 1 and 2 were conducted by the first author and progressed interview-by-interview, shaping several iterations of the framework, until no additional codes emerged (achieved within seven transcripts), resulting in a beta version of the framework. Stage 3 involved indexing (systematic analysis of all transcripts, including the original seven) against the beta framework to refine the description of themes and sub-themes. The first and second author independently conducted Stage 3 on 50% of the transcripts each, making modifications to a shared live framework and charting indicative transcript extracts to substantiate themes/sub-themes. Three transcripts were selected at random for inter-coder reliability checks. Based on the first 50 codeable segments of texts from each of these transcripts, inter-coder agreement was very high (κ =.91). Stage 4 (charting) involved arranging the indexed sections from Stage 3 into charts of the themes before Stage 5 (mapping and interpretation) which involved final checks before collaborative production (by the first two authors) of a thick description of themes.

3**. Results**

Analytic outcomes are presented under two themes. Theme 1 (*Evolving a new self and a new way*) has five sub-themes representing facilitative experiences and Theme 2 (*A Fragile Mission)* has four sub-themes on unhelpful or difficult experiences. Participants talked about the programme without distinguishing between WL and WLM goals, suggesting they may not see them as distinct. Numbers in brackets refer to participant identifiers. Use of […] indicates that irrelevant or repetitive words have been removed from the extract.

Theme 1: Evolving a new self and a new way

Overall, facilitative experiences on the programme fed into an overarching benefit by which people felt they had fundamentally evolved in themselves and their ways of eating: *"my eating habits have completely changed and how I think about food has changed" (212)*; *"it's a change for life" (205).* The five sub-themes capture distinctive components of how people felt the programme triggered and enabled an evolution in their lives.

3.1. Psychological game changers

Participants were enthused by 'game changers' the programme had helped them develop, namely awareness, knowledge and a new intention to control. These were seen as cognitive strategies to support a change in their behaviour. Being encouraged and enabled to develop *awareness* of the amount and kinds of foods they were eating brought new insights for people: *"I noticed over the weeks as I was filling my diaries, how much bread I was eating" (228).* People felt able to re-boot or intensify this awareness to manage relapse: "*when I stop losing or I start putting on a little bit I think "right, get me food diaries back out" (210).* Gaining new *knowledge* was a second game changer, helping people stay alert to food content*:* "*knowing what was in it and what difference it made, made me think" (204).* The third game changer was a new *intention to control*, because otherwise "*it's a free for all when I'm not on [the programme]" (539).* Controlling referred to thoughts and choices ("*it's just controlling my brain to not let me have the food, because I know I'm not hungry", 212),* and acting with intention (*"I think if 'I'm going to be good' then I want to be good", 207).*

3.2 Building a personalised armamentaria

Via the programme, participants talked of building, over time, a set of customisable skills and practices. They felt that these protected them, as a type of armamentaria, from harmful

dietary practices: "*It's about me managing it and [the programme] giving me the tools" (215).* Tools and techniques differed to 'game changers' in that the latter were underpinning psychological processes whereas tools / techniques could be deployed at critical times.

One of the most powerful 'tools' reported by participants was planning – what to eat, when and how: *"planning […] that is the be all and end all" (223).* Planning was felt to protect people from poor choices but required daily investment *("you need to think about it while you're shopping", 236)* and scanning for risk (*"I just make myself step back and evaluate everything before I go in there, sort of like a boxing match, where I go in, check what my opponent is, if it is something that I can have", (212).* Planning was felt to be essential to enjoying 'permitted treats': *"if you want to have a bottle of wine with friends you […] you do need to forward think a bit" (212).* Thus, planning was primarily protection against unintended intake, rather than, for example, as a way to diversify intake or meet a fruit and vegetable quota.

A second 'tool' from the armamentaria was the use of goals and targets, which the programme prompted them to set, e.g. *"Two stone off for Christmas" (238).* Goals were personally relevant and "*very motivating" (227),* especially at times of relapse: *"don't give up […] see the bigger picture" (212).* However, not all participants talked about targets or goals.

Knowing *"the different options you have" (236)* was a further helpful programme tool reported by many. The programme's use of food diaries, the 'treat' system and food substitutions seemed particularly useful to people. Being 'permitted' to have any food in moderation seemed helpful as "*you still feel like you can live your life" (210).* Overall, having options meant the programme felt do-able to people: *"the flexibility of it [….] it gives you an alternative, don't have a pizza but you can have a wrap" (215).* The programme's app and social media were also types of armamentaria, providing "*inspirational*" (227) options for alternative food items or meals. Thus, developing a personalised armamentaria of strategies, options and practical resources via the programme were key ways in which participants felt supported and enabled.

3.3 New food preferences and practices

For many, being on the programme felt like being exposed to a powerful health campaign (mostly targeting the intake of fruit and vegetables, but also fish) which, over time changed individuals' food perceptions, taste preferences and choices. People talked about "*just making healthier choices really" (234)* and the programme as *"making you want those fresh things to eat" (229).* Adhering to the dietary programme also changed people's views on portion size: "*You don't need as much food as you think you do" (224).* Feeling able to eat well and not be hungry was a programme element that mattered to people: *"I hate the feeling of being hungry and so it works" (227).*

By trying new foods that were satiating, some people's preferences fundamentally changed: "*I just crave it [healthy food]" (212).* Surprise was reported by some in finding healthy food pleasurable and several described healthy eating as *"just normality now" (212)* which lessened some of the previous struggle over food choice. One participant felt she was in transition to this 'new normal': "*it's forever and it's getting the mindset of this" (223).*

3.4 Feeling understood and in it together

Most people felt that WL is easier with social support, not surprisingly given participants had chosen a group based programme: *"I didn't want to do it on my own […] I wanted to be able to turn to somebody and say 'actually, I'm really struggling with this and I need some advice" (205).* People felt *"you know you're gonna get some inspiration and support" (210)* and were motivated by shared experiences: *"everyone had obviously lost weight […] it was really encouraging and inspiring to hear them" (216); "if she can do it, I can do it" (236).* The group was also a forum for *"passing down" (216)* what members had learned and for spotting "*little things" (212)* you could do, because "*something somebody says might just be that trigger to make you lose a bit more weight" (223).* Gleaning know how from other members was *"inspirational" (227)* and *"motivating" (216).* The group was also perceived to have helped prevent relapse ("*[to stop you] going down a slippery slope and giving in", 205)* and to recognise one's achievements *("I wouldn't have realised how good [my loss] is if I hadn't been at the group", 216).* Thus, interpersonal and group processes seemed to help people feel understood, able to change and constantly renewed in their WL efforts in ways that could prevent relapse.

3.5 My personal trainer

A final way in which the programme appeared helpful to people was by acting as a type of personal trainer. Many participants wanted to be *"guided*" (212) and *"managed*" (215) in their eating by an expert, namely the group leader who can *"come up with suggestions" (215).* Seeing oneself as a 'trainee' seemed particularly useful when managing setbacks. Some reported that the leader had *"made a plan" (238*) with them to recover their setback. 'Trainee' roles permitted mistakes, acknowledged that it takes times to become more expert about oneself and about food: *"she [group leader] just says "What are you going to do differently?" (223).* Thus, the programme was experienced as a "*sort of safety net" (210)* for trainees in weight management.

Alongside guidance, the programme was felt to offer monitoring that *"keeps [you] on the straight and narrow" (236).* Without this, one can "*slip back into the same old routines" (238)*. Many felt unable to self-monitor or self-regulate "*I am not very good at limiting the amount of food I eat without going to [the programme]" (224).* Although imminent weighing was stressful for some participants (*"Have I gained? Have I gained? Have I gained?", 227*), knowing that *"you're going to go and get weighed" (236)* impacted intake: *"I can't just sit and eat what I want any more because I've still got to go and get weighed" (212).* Being weighed on the programme was perceived as a point of reckoning, (*"you can't cheat, can you"; 236*), confronting people with *"exactly what you've done" (229).* For many, being only accountable to oneself was insufficient to control intake ("*"I don't have enough motivation to do it myself", 224)* and the programme was experienced by many as an effective balance between autonomy, support and accountability: *"if you don't go then you know for a fact that you're going to put on weight" (215).*

Theme 2: A Fragile Mission

Whilst many participants experienced the programme as helpful and effective, most participants also reported experiences that threatened adherence and weight management, rendering it a 'fragile mission'. These experiences are represented as four sub-themes.

3.6 Weight management as confusing

Participants found it confusing and frustrating when there was no clear relationship between change in intake and change in weight. Many had gained weight when they felt they adhered to the programme and had lost weight when they had been "*naughty*" (229). One participant,

who felt *"really light […] and I think oh I've done so well this week"),* had *"a complete surprise" (207)* when the scales indicated she had 'only' lost one pound. These kind of experiences were mystifying: *"Are these scales right?" (223).* Some participants made sense of these discrepancies by taking personal responsibility (*"oh god, what is wrong with me! I know [the programme] works, I did it years ago"; 228)* and felt frustrated with themselves ("*I was really annoyed the week that I maintained"*; *216*), whereas others explored other explanations: *"Could it be water retention?" (207*). Some were confused by the progress of others: *"How has she lost more than me? […] maybe a metabolism thing?" (228).* Confusion led to doubts in their ability to achieve their weight goals: *"I thought I would just get on it and lose weight […] [that] it would be easier" (539).*

Participants also reported confusion about their personal relationship to food, and wanted *"some understanding"* (539) about the root cause of 'problems' with food *"and finding a way of fixing it" (539).* Another participant explained that it would have helped her to gain insight into why she did not *"care two hoots" (215)* about her intake whilst on holiday. One participant felt that not being able to get out of her car in a tight parking space should have made her *"determined"* to lose weight, but now, lacking in motivation again, she wanted to understand what she was *"doing wrong" (228).* Many believed there was more to be known about why they ate the way they did, and that persistent confusion about themselves became a further tension to manage.

3.7 An emotional and psychological tightrope

Fatigue from the psychological struggle of managing automatic and impulse eating, desires, and cravings was a risk factor for relapse and programme non-adherence: *"you just feel some days, "Oh, I just want to have a day off" (212).* These difficulties were often attributed to personal "*weaknesses*" (228) which then undermined confidence in their ability to adhere to the programme. The difficulty of self-regulation was also described as a battle between good and evil "*demons*" (212) which could turn to negative self-criticism: *"then I think, why have you done that, you're stupid […] it's the goodie, the baddie, all these thoughts are just going through your head all the time" (203).* External factors also created tensions. 'Bad days' made some people feel "*I'm just going to eat" (207)* and *"your best of intentions go out of the window" (229),* but this often led to self-criticism (*"I'm right annoyed with myself"*, 223) and sometimes extreme reactions: *"it does make you feel really bad, awful, I can't even describe, it's a horrible feeling"; "it's just thrown me completely and I've not gone back" (207).* It was

difficult for people to have what they craved and still to see themselves positively. It was also hard 'walking the tightrope' when other people were not: "*my daughter's getting something out of the naughty box […] then I want to take something as well" (207),* or when the setting invites opportunities to 'fall' off the tightrope: *"you have to sometimes be quite strong willed and really determined because I mean this week I've been to three parties" (216).* These times of tension might be isolated, but "*it might just take that one thing where it's triggered it and then it just all caves in and it is difficult to pick yourself back up again" (207).*

3.8 Stress and change

Many participants felt that programme success was possible only "*as long as life is straight forward […] but when everything else in my life is out of control […] there is no point in even trying" (539).* Everyday stress was a prevailing risk to adherence as it siphoned off personal resources, leaving little 'in the tank' for effortful self-control or planning: "*I'm struggling because of things going on outside of work […] so I've not been eating properly" (207)*; "*it were easier to sort of get a takeaway pizza and then diet fell apart again" (210).* Other risks to programme adherence included: small changes, including at work *("Everything changed in my world when they banned the toaster at work", 539);* travelling *("then went out in the evening for cocktails and I had a three-course meal", 204*); being too busy to eat at work (*"I just end up, whatever the first thing I can grab as I walk in the door", 207);* having to care for others ("*I've got to think about them",* 212); holidays ("*it all went hunky dory 'til I went away", (215);* and darker nights (*"it was easy enough to stop", 215).* Other everyday risks stemmed from the fear of the loss of fun (*"You can't go to bed every night at nine o'clock just so that you're not eating", 215)* leading some to feel *"Oh blow it […] just eat what you like" (215).*

3.9 Frustration with the programme

Some risks were programme specific and stemmed from unmet expectations. These included: perceived lack of enthusiastic staff, poor session time management *("too many of these same people would be talking about themselves, taking up all the time"; 207)* and fees for missed meetings (although the programme does permit holidays when no fee is paid). Other participants were sceptical of the programme commercialisation and viewed it as *"a money making machine" (539)* or that the support was impersonal: *"I have had one message […] but […] it was addressed to somebody else" (207).* Having joined the programme because they did not want to manage their weight alone, feeling unsupported (*"I was the only person*

that didn't get asked how much weight I'd lost"; 207) and unsupervised was described as dangerous: *"nobody's keeping an eye on me" (215).* Others felt overly scrutinised: one participant found it *"off putting"* that both WL and weight gain were, as she perceived it, *"broadcast*" by her leader *(212*). Others found it demotivating and even "*bizarre*" *(216)* to hear the confessions and the triumphs of others. Thus, interplay between the programme approaches and personal preferences seemed to threaten continued engagement.

4. Discussion

The present study contributes new insights into what facilitated or risked adherence to a community-based, commercial WL programme.

4.1 What were helpful and effective experiences on the programme?

Across our five themes, participants described five facilitative experiences that reflected intrapersonal (cognitive, affective and behavioural) and interpersonal change processes. Notably, despite concerns that group-based programmes foster dependency (Garip & Yardley, 2011), our data show the importance of the 'catalysing environment' of support groups (Stubbs et al., 2011) for the adoption of coping skills and strategies for weight management, including from setbacks. This is important given that response to lapses determines whether relapse occurs (Wing & Phelan, 2005). Whilst Stubbs et al. (2011) argue that group support should foster autonomy, our data suggest that access to personalised expert guidance was a significant facilitative programme experience for motivation, monitoring and accountability. Specialist support helped to relieve pressure on personal resources for self-regulation.

These five facilitative experiences appeared to work synergistically to generate an experience of change in thoughts, feelings and behaviours in relation to food and eating. Such accounts of change are partially represented in the field by concepts such as autonomous, self-motivated cognitive style (Teixeira et al., 2005), autonomous self-regulation and motivation (Teixeira et al., 2015; Varkevisser et al., 2019), readiness to change (Rogerson et al., 2016), and psychological preparedness to integrate weight management strategies into everyday life (Garip & Yardley, 2011). Although traditional behaviour change models present weight loss as a pathway of reasoned action in which pre-decisional factors lead to motivation, then intentions, then volitional action (Armitage et al., 2000; Sniehotta, 2009), our participants experienced change as a dynamic, non-linear, upward spiralling interaction

across their knowledge, awareness, intentions, self-efficacy, skill set, motivation, food preferences, eating behaviours and weight change. Our participants' accounts endorse the claim that to overcome psychological tensions and physiological compensation, successful weight control, no matter how one attempts to do it, requires a commitment to lifestyle change and via multiple means (Elfhag & Rossner, 2005; Hindle & Carpenter, 2011). It is possible that one's preparedness for a holistic 'evolution' across multiple aspects of one's life explains programme adherence and success, since processes underpinning this transformation were described as the most helpful and effective to people.

4.2 What were unhelpful and ineffective experiences on the programme?

All participants reported risks to adherence, leading to our conceptualisation of weight management as *'a fragile mission'*. A dominant risk was difficulty with self-regulation, which participants experienced as a psychological and emotional struggle to manage automatic and impulse eating, desires and cravings. These struggles often led to relapse, and reflects reports that relapsers find self-regulation as "such hard work" (Byrne et al., 2003), and that even minor lapses can trigger full relapse (Teixeira et al., 2005), prompted by 'all or nothing thinking' (Rogerson et al., 2016). However, our data also show that negative consequences of self-criticism (e.g., self-loathing) that arise because of 'falling off track' were an additional risk to adherence. Many people blamed lapses on personal weakness (also reported by Greaves et al., 2017) and consequently experienced a desire to leave the programme. Self-criticism is common even when people try to lose weight on their own (Thomas et al., 2008). Thus, WL success may depend as much as what people think as what they do (Duarte et al., 2017a; Duarte et al., 2017b); for example, Dibb et al. (2016) reported differences between weight loss maintainers and regainers in how they thought about 'mistakes' as well as their approach to problem-solving.

Participants reported that weight gain/loss was confusing. They often felt mystified and put-off by the way their weight did or did not change despite (reported) programme compliance or non-compliance. Our data suggest this risk may be amplified when people see others on the programme losing weight despite perceived low compliance. Feeling confused by weight loss is understandable as WL involves complex changes in energy balance. Prolonged WL attempts lead to a sustained increase in appetite in proportion to the weight that is lost, in the region of 100kcal/kg/day per kg of WL (Hall et al, 2017; Sanghvi et al., 2015). Such energy

balance changes are outside of the perceptual capabilities of most people. Offering education on the physiology of WL could be a helpful programme addition.

A third risk to adherence was *stress and change*, which are well-established high-risk factors for relapse (Stubbs et al., 2011). Although there is a neurophysiology underpinning stress and eating (Block et al., 2009), our participants' reported that stress siphoned off their personal resources for self-regulation. Stress often resulted from changes in participants' daily routine (e.g., food preparation areas at work, traveling / holidays and dark evenings), interrupting the use of weight management strategies, particularly planning. Supporting people to manage stress whilst managing their weight should remain a priority intervention focus.

The final theme captured participants' frustrations with the programme, which jeopardised adherence for some people. These largely reflected personal preferences for the level of support given, a finding also reported in other studies focused on commercial programmes (e.g. Garip & Yardley, 2011; Thomas et al., 2008). Scepticism about the commercial nature of the programme, and the fee structure were problems for a few participants. Some were disappointed that the programme did not help them understand their relationship to food. These data illustrate a central challenge for large scale weight management programmes, i.e. how personalisation can be offered at scale, and whether commercial programmes should help people to 'get beneath the surface' of their own relationship with food.

4.3 Comparison with a qualitatively informed conceptual model

Based on a synthesis of qualitative data, Greaves et al. (2017) proposed a conceptual model of WLM, based mostly on 'doing it alone' rather than on a programme. Their model posits a tension between the necessary behaviour changes for sustained weight loss, the pull of old habits and the use of food to fulfil psychological and social needs. Our findings, based on people who have cycled between WL, WLM and weight regain, corroborate the existence of psychological and behavioural tensions (*A Fragile Mission*) even on a well-established commercial programme that they mostly reported as helpful. Our first theme (*Evolving a new self and a new way),* reflect many of Greaves et al.'s tension-reducing factors, including meeting needs more healthily and changing beliefs / self-concept, learning and insight, self-regulation, managing influences, and willpower / motivation. The group and leader components on a programme can be seen as additional beneficial tension modifiers. However, being on programme may confer additional tensions, namely when *weight loss is*

confusing and where there are *frustrations with the programme.* Thus, there are both tension reducing and tension increasing factors when attempting WL on a commercial programme that may explain individual differences in adherence.

4.4 Study evaluation

A relativist approach (Sparkes & Smith, 2009) was used to assess study quality. Rigor was established by including a large sample and ample data to capture diversity of experience. Trustworthiness and transparency was achieved via documentation of the research and analytical process and participant extracts to support interpretations. Validity of coding was achieved via independent coders. The study has a number of limitations. Participants were all middle-aged, Caucasian women (purposively sampled to manage the energy balance requirement of the sample in the main trial). Women make up the overwhelming majority of commercial programmes members, and men may have different experiences of weight management (De Souza & Ciclitira, 2005). Dropout from the commercial programme was markedly lower than during the main study (Buckland et al., 2018; Stubbs et al., 2015). Thus, our participants may have been more motivated than average programme participants. We have not captured the experiences of people who dropout and never return to a commercial programme. Participant understanding of the commercial programme may not have been accurate.

4.5 Conclusions

Our study shows that WL on a commercial programme reduces some tensions in weight management but introduces new ones. Programmes could improve adherence and weight outcomes by better preparing people for the holistic change they may need to embark on and should offer education on the physiology of weight management, being explicit about the physiological pull back to pre-weight loss levels and to enable people to anticipate their appetite change (as advocated by Stubbs et al., 2019). Adherence may also be improved with more effective psychological strategies to mitigate negative self-criticism and to generate more creative solutions to the everyday 'little things' that constitute serious risks to adherence.

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Author contributions

SHJ**:** Conceptualization, Methodology, Data collection and analysis, Writing – Original Draft, Writing– Review & Editing. SB**:** Analysis, Writing – Review & Editing. RJS**:** Writing - Review & Editing

Declaration of competing interest

RJS consults for Slimming World through Consulting Leeds, a wholly owned subsidiary of the University of Leeds. None of the authors stood to gain from improving this programme. The commercial programme was not involved in the study design or analysis of the results. Slimming World did not influence the design, analysis or reporting of this study.

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