

Learning to eat intuitively: A qualitative exploration of the experience of mid-age women

Health Psychology Open
January-June 2019: 1–8
© The Author(s) 2019
Article reuse guidelines:
sagepub.com/journals-permissions
DOI: 10.1177/2055102918824064
journals.sagepub.com/home/hpo



Emma Louise Barraclough¹, E Jean C Hay-Smith²,
Sara E Boucher¹, Tracy Lynn Tylka³
and Caroline Christine Horwath¹

Abstract

Qualitative studies examining women's experiences of learning to eat more intuitively are scarce. We aimed to explore the experience of learning intuitive eating among mid-age women ($n = 11$) who participated in a web-based intuitive eating programme. Motivation to learn intuitive eating, perceptions of the experience of attempting to eat more intuitively, and facilitators and barriers to intuitive eating were explored using inductive thematic analysis. Findings suggest that women were able to learn to eat more intuitively; however, they encountered social and environmental barriers, and the 'unconditional permission to eat' aspect of intuitive eating was experienced as the most challenging.

Keywords

eating behaviour, experience, intuitive eating, qualitative research, women's health

Introduction

Deliberate food restriction (or dieting) has limited long-term success for weight management (Barte et al., 2010) and can contribute to increased food preoccupation, binge eating (Field et al., 2004; Polivy and Herman, 1985; Ward and Mann, 2000) and weight cycling (Field et al., 2004). Dieting has been shown to predict 5-year weight gain (Neumark-Sztainer et al., 2006) and increased activation of brain regions responsible for attention and reward in response to food (Stice et al., 2013). Consequently, a non-dieting approach referred to as intuitive eating (IE) was developed (Tribole and Resch, 2012) and has attracted increasing attention (Schaefer and Magnuson, 2014; Tylka et al., 2014; Van Dyke and Drinkwater, 2014). IE encourages eating in accordance with hunger and satiety cues, as opposed to emotional or externally triggered eating (Tribole and Resch, 2012; Tylka and van Diest, 2013). Furthermore, it shifts the focus from body weight to wellbeing, encourages letting go the idea of 'forbidden' or 'bad' foods and promotes unconditional permission to eat when and what food is desired.

IE interventions have produced improvements in well-being (psychological and physical) and behavioural outcomes (Schaefer and Magnuson, 2014). However, there appears to be a lack of qualitative research exploring women's experiences of learning to eat more intuitively. The design and implementation of effective IE interventions requires an in-depth understanding of women's experiences of learning IE skills and the challenges encountered.

This study addressed a gap in the literature by exploring women's experiences of learning IE skills. Women who had participated in web-based IE programme '*Mind, Body, Food*' were in a unique position to describe their experience of learning to eat more intuitively (Boucher et al.,

¹University of Otago, New Zealand

²University of Otago, Wellington, New Zealand

³The Ohio State University, USA

Corresponding author:

Caroline Christine Horwath, Department of Human Nutrition,
University of Otago, PO Box 56, Dunedin 9054, New Zealand.
Email: caroline.horwath@otago.ac.nz



2016). Mid-age women were the focus of the study due to their high risk of obesity and weight gain and lack of success in attempted weight control (Leong et al., 2016; Williams et al., 2007). A pilot study (Boucher et al., 2016) showed that most participants liked the ‘*Mind, Body, Food*’ intervention (88%), found it to be useful (77%) and easy to use (68%) and said they would recommend it to others (84%). ‘*Mind, Body, Food*’ led to a significant increase in total IE (and all subscale) scores (Boucher et al., 2016) as assessed by the Intuitive Eating Scale-2 (IES-2; Tylka and van Diest, 2013).

A unique feature of ‘*Mind, Body, Food*’ is the integration of teaching IE and Acceptance and Commitment Therapy (ACT) skills (Hayes et al., 2006). ACT interventions focus on improving psychological flexibility, which is the ability to be aware and accepting of one’s present moment experience (e.g. thoughts, emotions, cravings, sensations in the body), while also choosing to take action consistent with one’s values (e.g. choosing to eat to satisfy physical hunger). ACT skills may enhance the effectiveness of an IE intervention because the ability to recognise and accept aversive internal experiences (without reacting to them) is related to eating in response to physical cues instead of emotions (Sairanen et al., 2015).

This qualitative descriptive study aimed to explore the experience of learning IE among mid-age women who had participated in a 12-module online IE programme. The focus was specifically on women’s experience of learning IE skills, rather than on their experience of web-based learning.

Methods

Participants

Women who had participated in a 2014 pilot and post-intervention assessment ($n=26$) of the ‘*Mind, Body, Food*’ IE programme in Dunedin, New Zealand (NZ; Boucher et al., 2016), were eligible for inclusion in the qualitative study. Pilot study inclusion criteria were ability to communicate in English, body mass index (BMI) $>26.5\text{ kg/m}^2$, 40–50 years of age (inclusive), pre-menopausal, usually accessed the Internet ≥ 3 days per week, and below average levels of IE (defined as total IES (Tylka and Wilcox, 2006) scores ≤ 65 based on a nationwide study of mid-age NZ women; Madden et al., 2012). Exclusion criteria applied in the 2014 pilot study of ‘*Mind, Body, Food*’ were: hysterectomy and/or oophorectomy; pregnancy; taking hormone replacement therapy; reported diagnosis of diabetes, cancer, cardiovascular disease, or eating disorders; or current smoker (Boucher et al., 2016). Since the quantitative pilot study examined changes in BMI and IE, it had been important to exclude women with hormonal status or conditions that may affect their weight or appetite. Women taking a medication that may affect their appetite or who were enrolled in a weight loss programme were also excluded

(Boucher et al., 2016). Pilot study participants were recruited from a socioeconomically diverse group, inclusive of Māori (NZ’s indigenous population) and Pacific women. Socioeconomic status was measured using a NZ socioeconomic index (NZSEI06) based on occupation (Milne et al., 2013).

Of the 26 pilot study completers, 25 were still living in Dunedin and invited during February 2015 to participate in the qualitative study. Six declined (three gave no reason; three too busy) and one was unable to attend. Post-recruitment, four women did not attend interviews and were unable to be contacted and three withdrew (one had other commitments, one ill and one uncomfortable taking part). The resulting sample size ($n=11$) was deemed suitable for an in-depth exploration of women’s perceptions, feelings and experiences regarding IE (Sandelowski, 1995). Participants ranged in age from 41 to 51 years ($M=45.9$ years, standard deviation (SD)= 2.87 years) and came from diverse socioeconomic status and educational level groups. Included were nine NZ Europeans, one Māori and one Tongan woman. All had children and nine were married. The study was approved by the University of Otago Human Ethics Committee (approval number H13/057) and the Ngāi Tahu Research Consultation Committee (South Island Māori). Each woman provided written informed consent before participation.

Study design and data collection

Consistent with qualitative description (Sullivan-Bolyai et al., 2005), the study had two sources for data collection: semi-structured group ($n=4$, $n=3$) and one-on-one ($n=4$) interviews. Two group interviews enabled learning from the discussion and interaction arising among participants (Berg, 2004). Individual interviews with Māori and Pacific women and two New Zealand European women were also completed, as they permit greater depth in answers (Polkinghorne, 2005).

The female interviewer (E.L.B.), a Master of Dietetics candidate and novice qualitative researcher, was closely supervised by a co-author who is an experienced qualitative researcher. The interviewer held an undergraduate degree in Human Nutrition and was aware of her interest and knowledge concerning health and nutrition. Participants were aware of her role as a Master of Dietetics candidate; however, they were reminded there were no right or wrong answers and that the aim was to understand their perspective, in their own words. All interviews involved open-ended questions exploring motivation for learning IE, perceptions of the experience of learning to eat more intuitively and facilitators and barriers to eating intuitively. The interview was pilot-tested and probes were prepared for each question to generate conversation. During the two group interviews, a designated note-taker completed standardised field-notes, documenting key

phrases and non-verbal behaviour. Towards the end of all interviews, participants were presented verbally with the interviewer's summary of content, and responses were invited, as an initial form of respondent validation (Krueger and Casey, 2000).

All interviews were held in the Department of Human Nutrition, University of Otago. Group interviews lasted approximately 90 minutes. The interviewer and note-taker consulted immediately after each group interview to compare their initial impressions. One-on-one interviews had a mean duration of 55 minutes. After each interview, the interviewer's initial reflections were documented. All interviews were audio recorded and transcribed, and all transcripts were depersonalised. Participants 1 to 4 each took part in a one-on-one interview, and participants 5 to 8 (Group 1) and 9 to 11 (Group 2) in group interviews. As a further form of respondent validation, all participants were emailed a written summary of their interview. Comment was invited, and five women responded and all endorsed the interview summary.

Analysis

Congruent with qualitative description, the aim of the inductive analysis was to present a minimally interpretative, precise and recognisable account of the women's experiences of learning IE (Sullivan-Bolyai et al., 2005). We used the phases of thematic analysis described by Braun and Clarke (2006), in which the data drove the analysis, appropriate to the exploratory and descriptive purpose of the study.

E.L.B. manually analysed all data, reflexively using an audit trail to separate her opinions from analyses (Barry et al., 1999). Each transcript was read multiple times, while also consulting field-notes and the audio-recording to ensure reporting accuracy and to aid in data familiarisation (Braun and Clarke, 2013). Initial thoughts were noted and transcripts were broken into units of meaning in the form of phrases and sentences—each assigned a code—which provided a comprehensive description of the data. Some data were allocated multiple codes, and codes were refined as analysis progressed.

Themes were created by grouping codes with a central organising concept (Braun and Clarke, 2013). A thematic map provided a visual representation of the themes, sub-themes and their inter-relationships and the codes contributing to them. Data extracts were chosen to illustrate the themes. Some selected quotes were single words or short phrases that occurred repeatedly (not attributed), while other illustrative quotes were longer (attributed). Analysis was not a linear process and the entire dataset was revisited and discussed by three of the authors (including the experienced qualitative researcher) until consensus was reached, to ensure the coded extracts worked within the themes and

that the themes represented the whole dataset (Braun and Clarke, 2013).

Results

Six major themes are described in the following and presented in Table 1.

Theme 1: 'intuitive eating as an alternative to dieting'

Most women described that the 'deprivation' of dieting and the labelling of foods as 'good' or 'bad' often led to 'obsession', overconsumption, being 'naughty' and subsequent guilt and self-hatred. This created the 'yo-yo' and 'rollercoaster' nature of dieting. Dieting failure led women to feel 'frustrated' or 'depressed'. Participant 1 'always felt that it [dieting] was missing the psychological side of food'.

In contrast, women saw IE as the 'most healthy approach to food' and a 'gentle' way to 'break the [diet] cycle'. They expressed relief that it addressed emotional influences on eating and the realisation that 'you didn't have to diet', which resulted in decreased feelings of deprivation:

You can have what you want, when you want. You just have to pay attention to when it doesn't feel good any more and stop. (Participant 11)

During '*Mind, Body, Food*', Participant 9 was able for the first time to have chocolate in the house and not 'feel compelled to eat it'. Women also noticed a decrease in the inner critic which Participant 9 described as the 'little voices evaluat[ing] everything you eat, when you eat, how much you eat', and until it stopped, she 'didn't realise how constant it [the voice] was'.

When learning to 'trust' her body's signals, Participant 1 'immediately lost weight', while others 'went a wee bit crazy to start with' but 'brought it back' by asking how does eating 'actually make me feel?' Women began to 'eat for health', became more compassionate with themselves and accepted (e.g. not worrying if they had a 'wobbly belly') and valued the functionality of their bodies:

The most moving part for me was that meditation about accepting your body. I cried. It's a COMPLETELY different way of thinking about your body than the one our culture seeks. Just appreciating the health of your body. I'm a really fit, active person and I love being active. I really forget to value that. (Participant 5)

Some women adopted elements of IE (such as giving themselves permission to enjoy a wide range of foods), while retaining some dieting-type concepts such as 'good'/'bad' foods:

Table 1. Themes and sub-themes from exploration of women's experiences of learning to eat more intuitively.

Themes	Sub-themes	Illustrative quotes
Intuitive eating is an alternative to dieting	The diet cycle	'I love chocolate. My strategy before <i>'Mind, Body, Food'</i> – I'd avoid chocolate at all costs 'cos once I'd start on it, it's hard, I'd keep wanting it and then by the end of the day I'd eaten so much chocolate'. (Participant 1) 'You go through it [dieting] all again and you punish yourself, to come back out the other side of it, to just go back through it again'. (Participant 6)
	How intuitive eating is different to dieting	'[It's] more about a lifestyle choice, than a diet'. (Participant 7) 'I always felt like food was an enemy, it [intuitive eating] has normalised my view of food, which I have found really helpful. I don't obsess over eating bad foods as much, which I think was my biggest problem'. (Participant 6) 'The voice in my head constantly commentating on what I was putting in my mouth, I don't know why, how or when it happened, but I don't have that, I still have it sometimes but nothing like what it used to be'. (Participant 10)
	Valued outcomes of eating intuitively	'At least six months, I haven't put on any weight, and I've lost weight. Although it's not a weight-loss programme, it's working'. (Participant 11) 'I have technically put on weight over the programme and yet I also feel more vital'. (Participant 3)
Nature and nurture	Intuitive eating is an innate behaviour	'It's like children have that inner voice. They don't overeat naturally. They eat what they need, when they should eat it'. (Participant 7)
	Retraining to recover the ability to eat intuitively	'It's kind of recovering something you've lost rather than learning something that's new'. (Participant 3) 'Understanding the taste [and] the texture created a whole new perspective on eating a meal'. (Participant 8) 'I think I'm still working with it [intuitive eating], it's been 45 years of training one way [dieting]'. (Participant 3)
Nutrition and intuition		'If you've ever been on a diet, you know lots about it [food] but you've got to come back to, how about listening to my own body'. (Participant 7)
The emotional connections with food		'I think I'm just swallowing emotions. It's nothing to do with the food'. (Participant 3)
Keeping the focus on intuitive eating	Realigning with values	'I feel like I'm living my values a lot more [since <i>'Mind, Body, Food'</i>]'. (Participant 2)
	Coping strategies to refocus on intuitive eating	'You've got to understand you've made that mistake, hold on a second, well this is what I've done and I can't do it again otherwise I'm slipping back into old ways and you've got to reel yourself back in, refocus and get back on the right path and guide yourself back in to where you should be'. (Participant 8)
	Resources to continue eating intuitively	'I'd like a personalised tool to help me reflect on the course and refresh my memory'. (Participant 11)
Societal influences	The pressure of social occasions and social norms	'It is quite hard, like I've got friends that I meet for coffee and we normally have something sweet and that's just the way it goes and a few times, I've just had a coffee ... it was quite a big thing because I think when you're in a group of people and they're all doing the same thing it was that social obligation'. (Participant 10)
	Family pressures	'It's hard for a lot of women because you tend to see to everybody else's needs before you see to your own, there's no energy left over to be organised and do the right thing. I don't do it on purpose, but it's just what happens'. (Participant 10)
	Role modelling	'Tuning in a little bit more with how I'm feeling is a really good thing for him [son] because any small change that I can make has got big changes for him'. (Participant 3) 'I think I influence my family quite a bit. Whenever I change how I'm eating, it has a flow on effect to everyone else'. (Participant 6)
	Support and relationships	'Support (to eat intuitively) was HUGE ... which is a massive thing if you've got very low self-esteem on how you feel about yourself'. (Participant 4)

If I have a good breakfast and lunch, I could have something naughty for tea and not have to hate myself for it. I've learned not to feel guilty when I do have something that I know is naughty because I've given myself permission to enjoy it. (Participant 4)

Motivation to join *'Mind, Body, Food'* varied from the prevention of weight-related 'health complications', to having 'more energy' or a 'better relationship with food'. Although participant 3 gained weight during *'Mind, Body, Food'*, she felt 'more vital'. Despite recognising that IE

was not focused on weight loss, some women continued to evaluate their success by their weight e.g. ‘Why am I still the same weight? At least I’m not bigger’.

Theme 2: ‘nature and nurture’

Many women viewed IE as a natural behaviour that needed nurturing to prevent it being ‘lost’ in childhood. Participant 11 believed schools should teach IE. These women felt that as parents, they ‘are the ones that kill that natural instinct [to eat intuitively]’. However, participant 5 considered that some eating is beyond individual control because there are ‘really hard wired’ genetic traits leading us to overeat in the modern environment.

Women’s innate ability to eat intuitively, once lost, required retraining and this took time, effort and skills:

That’s the biggest difficulty I’ve had—it [IE] requires a lot of learning and tuning into where you are. Once you’ve really got that, you can do it in an instant, but until you’ve got that, it’s not always as easy to do it so quickly before a meal. (Participant 3)

Regardless of whether women described the process of relearning IE as ‘brain retraining’, ‘relearning’, or learning ‘something new’, they recognised that it required development of skills. Commonly mentioned skills included questioning of ‘how is this food actually going to make me feel?’ and enjoying food with full awareness.

Theme 3: ‘nutrition and intuition’

Women described IE as requiring integration of their nutrition knowledge regarding healthy/unhealthy foods and their intuition (i.e. listening to their body). However, this was perceived as challenging and women varied in the degree to which they were able to do this.

Some women listened to their bodies but continued to apply their nutrition knowledge of less healthy foods in a manner more consistent with dieting (i.e. referring to ‘bad’ and ‘naughty’ foods). Participant 6 attempted to blend her nutrition knowledge with satisfying her body by making her meals as ‘healthy’ as she could with ‘enough [food] to actually make [her] feel full’. Participant 9 realised that ‘if you’re listening to your body, what your body wants is something that meets that physical need’. In other words, she trusted that her body would guide her to food choices that were healthy for her, without always having to consciously apply nutrition knowledge.

Theme 4: ‘emotional connections with food’

Women experienced emotions and stressful situations as a barrier to eating intuitively, and some believed their emotional connections with food developed during childhood:

We had those nightmare mealtimes where you had to eat everything on your plate and you were punished with thrashings or the belt if you didn’t. The only thing my mother and I connected on was that I ate her meals, and so I’ve got quite a strong reward/punishment around food. (Participant 3)

In adulthood, confronting these emotional connections with food was described as ‘really difficult’ and participant 5 ‘didn’t want to go there [address her emotions]’. Some reported that when in ‘survival mode’ during which ‘life just consumes everything’, IE could be forgotten. However, they also noted that ‘*Mind, Body, Food*’ enabled the development of skills such that emotional situations no longer necessarily triggered eating:

It’s [IE] meant my life events don’t dictate my eating events and, that’s quite, revolutionary. It’s diffused the emotional aspect of eating for me. (Participant 9)

Theme 5: ‘keeping the focus on intuitive eating’

Women found it easier to remain focused on eating intuitively when they saw how IE was connected to their values. Learning to eat more intuitively using ‘*Mind, Body, Food*’ led to a re-examination and realignment with deeply held views about self. At the cessation of ‘*Mind, Body, Food*’, participant 2 felt she was ‘living her values a lot more’ and had drawn on her ‘Christian roots’ to find ‘that me again’ that she thought she had ‘lost’. Some women also felt IE helped prevent them from ‘end[ing] up like my mother’ who had ‘coped by just eating biscuits’. Others kept their focus on IE by viewing it as an opportunity to ‘practice what they preach’ in their social roles.

In order to maintain their focus on IE, many women felt that some support or additional resources would be valuable at the end of ‘*Mind, Body, Food*’. Some expressed the desire for a tangible resource to ‘reflect’ on and ‘refresh’ their memory, while participant 7 found that the contact with other participants during the group interview ‘reinforced’ her to ‘carry on’. Others wanted to participate in ‘*Mind, Body, Food*’ again, recognising that they had already built skills and would ‘pick up more the second time’.

Women described that sustaining IE practices was hard and periods of reverting to previous eating habits was commonplace. They identified several strategies that helped them to get back on track with eating more intuitively: mindfulness, not engaging in unhelpful thoughts, self-nurturing in ways that do not involve food and having healthier food ‘alternatives’ readily accessible to them. Women learned to ‘press pause’ or put a ‘mental fire break’ in place to prevent automatic eating behaviours and consequently perceived ‘a sense of control’ because they were ‘not just reacting and giving in’. A common perception was that ‘you have to be organised, it’s the only way you can make [IE] go smoothly’ (Participant 1); however, nearly all of the participants agreed, ‘it’s [organisation] easier said than done’.

Theme 6: societal influences

Women described food as a ‘part of the social fabric, not explicitly stated, just underlying’ and believed it ‘underpinned everyday social interactions’. They saw food as a sign of ‘hospitality and love’ offered ‘with a good heart’. Consequently, women felt a ‘social obligation’ to eat at social events and believed ‘break[ing] out’ of those ‘regular habits’ and eating intuitively may be perceived as ‘rude’, ‘insulting’, or ‘really weird’. *‘Mind, Body, Food’* taught women how to take ‘a tiny bit [of cake] that satisfied [their hunger] at social gatherings’ rather than taking a normal sized piece of cake or depriving themselves.

Some women described that before engaging in the programme, they ‘always [had] this fear that you’re going to run out of food’, which led to over-catering for social events (Participant 11). Participant 10 felt that since *‘Mind, Body, Food’* she didn’t over-cater as much, while Participant 6 described that no longer providing plentiful food would challenge her family’s identity. However, another perspective (Participant 1) was one of independence of others’ opinions: ‘I’m strong. I don’t care what others think’.

Most women reported that fitting in with their family’s daily schedule made it difficult to eat intuitively, and some frequently ate with their family despite not being hungry. Prior to engaging in the programme, most women prioritised the food needs of others. Participant 9 described herself as ‘the family dietitian’ who was only a ‘good mother’ if she met her children’s nutritional requirements. Despite not liking meat themselves, some women cooked it because it was a ‘balanced food’ and their family enjoyed it. Since *‘Mind, Body, Food’*, some women felt more ‘entitled’ to ‘prioritise’ themselves but still found their orientation to family preferences and routines was an ‘obstacle’ to eating intuitively. Nevertheless, women felt more in control of their own eating if they were ‘the family cook’. Others found it difficult to find time to prepare foods that would benefit their bodies:

I know it seems absolutely insane before you have children. How could somebody not get time to make a salad in a day? But, sometimes you actually don’t. (Participant 3)

Participant 11 realised she was at a ‘different stage’ than others in the group interview and this was not a problem for her as her children had left home.

Nearly all women did not want their family or friends to experience the same mental and physical distress they had experienced with food and weight. These women were ‘motivate[ed] to role model the right kind of attitude [eating intuitively] to food’. Participant 10 expressed ‘huge worry’ for her daughter’s ‘vulnerability’ to eating disorders:

I’m interested in finding a way for her to be happy at a weight that’s healthy, that isn’t feeding into a bunch of ideas about what young women should be ... I don’t want her to have that

monologue in her head. I’ve had it, my weight’s gone up and down my whole life and I can remember being very, very unhappy in my 20s and I REALLY don’t want that for her. (Participant 10)

Some women appreciated the ‘genuine support’ that they received from their spouses to eat intuitively. However, others perceived that their spouse may not have understood how to support their eating intuitively: ‘I think he [husband] feeds me for my emotions’, using food to help her feel better rather than helping in other ways. Only Participant 3, a single mother who was ‘already isolated at home’ wished for an ‘online community’ (as part of *‘Mind, Body, Food’*) to provide ongoing support.

Discussion

This study provides a unique qualitative investigation of women’s experiences of learning IE in a programme designed to teach these specific skills. Of 26 participants in a pilot study of *‘Mind, Body, Food’*, insights into the experience of 11 women revealed the challenges encountered as they attempted to make the shift to IE. Our findings highlight the particular challenge in embracing the ‘unconditional permission to eat’ aspect and shifting focus away from body weight and have practical implications for the design of future IE interventions. Some qualitative research has examined individual’s experiences of learning mindful eating (Kidd et al., 2013). Although mindful eating shares some similarities with IE, it does not specify ‘unconditional permission to eat when and what food is desired’, and thus, direct comparison with our findings is inappropriate.

Some women adopted aspects of IE (e.g. eating in response to body signals or giving themselves permission to enjoy a wide range of foods) while holding onto elements of ‘diet thinking’ or behaviour such as a focus on body weight and/or labelling some foods as ‘bad/naughty’. This may reflect that ‘unconditional permission to eat when hungry and what food is desired’ may be a more challenging and fear-inducing aspect of IE (i.e. ‘If I do this, won’t I gain weight?’), and thus less readily adopted than practicing eating when hungry and stopping when full. Eating according to internal cues may simply be applied as yet another attempt at weight control. Alternatively, these women may be in the process of transitioning to a more intuitive way of eating. An exploration of the determinants of dieting and non-dieting among 15 overweight/obese mid-age women (Leske et al., 2012) documented a transition from a focus on weight to a broader focus on wellbeing as they embraced a non-dieting approach. Our findings suggest that some women may require more time to fully understand, integrate, and practice the ‘unconditional permission to eat’ aspect of IE and that future interventions may benefit from assessing women’s readiness to ‘let go’ of diet thinking and behaviours and/or a focus on body weight

during the course of the intervention. This may enable more tailored or additional support where needed to integrate and apply the more challenging aspects of IE.

Interestingly, several of the barriers to IE reported by women in this study are similar to barriers women face when attempting to diet. For example, emotions and social and family influences presented challenges to eating intuitively and have also been shown in qualitative studies to be barriers to dieting (Hammartstrom et al., 2014). In future IE interventions, participants may be encouraged to enlist the support of friends and family, perhaps providing skills on how to talk with friends/family about why they are learning to trust their body's hunger and satiety signals rather than dieting.

Integration of ACT skills in '*Mind, Body, Food*' may have enabled hunger and satiety cues to play a stronger role in regulating eating behaviour. Women in this study reported becoming less reactive to inner (e.g. emotions) and outer (e.g. environmental) experiences, and some reported applying ACT skills to aspects of life other than eating. This is consistent with ACT developing a different relationship with feelings, thoughts or cravings that could otherwise trigger eating; that is, allowing these experiences to be present without acting on them.

Several strategies were employed to enhance the data's rigour (Braun and Clarke, 2006). The primary researcher was responsible for conducting all interviews and data analysis, ensuring consistency. Other authors crosschecked the analysis at multiple time points to provide alternative points of view and assist with complexities in the data. The entire dataset was then revisited and discussed by three of the authors until consensus was reached, and two forms of respondent validation were used (Malterud, 2001). The primary researcher also participated in '*Mind, Body, Food*' herself, which contributed to a deeper understanding of the intervention experience.

Our study presents the experiences of those 11 of the 25 pilot study participants still living in the study city at the time of this research. Since these 11 women had completed seven or more of the 12 '*Mind, Body, Food*' modules, they had all been exposed to the topics of the first seven modules: unconditional permission to eat, eating with awareness and in response to hunger/fullness, coping with emotions/cravings and body non-judgement/appreciation. However, since the median number of modules completed was 7.5 (interquartile range 2–12) modules (Boucher et al., 2016), a limitation is that the sample did not represent the experiences of those women who had a lower than average programme completion rate. Our study participants may have been more motivated or open to learning IE than women who completed fewer modules, and whose experience may have been different. Furthermore, women who did not attend the 3-month post-intervention assessment were not included in the study, and these women may also have contributed different views.

Web-based interventions typically have low completion rates. A systematic review of web-based health promotion trials reported that on average 50 per cent (min 1%; max 93%) of study participants completed all intervention modules (with interventions typically 10 modules long; Kelders et al., 2012). However, 76 per cent of the reviewed interventions included interaction with a counsellor, a factor that predicted greater adherence but was not a feature of '*Mind, Body, Food*'. A recent web-based weight gain prevention intervention more comparable to ours reported a lower completion rate than in our pilot study (Van Genugten et al., 2012). Our pilot study identified a number of online delivery and design issues that would be likely to improve participant engagement (Boucher et al., 2016). Nevertheless, this study is of value in describing the experience of women who had completed at least 7 of the 12 modules, and future qualitative research exploring the experiences of women with lower levels of engagement in IE programmes would be worthwhile.

Conclusion

Our study complements the growing body of quantitative research on IE. Overall, women perceived and valued the benefits of shifting to IE and were able to adopt a more intuitive way of eating. Eating in response to hunger and satiety signals appeared easier to adopt than letting go 'good'/'bad' labels on food and a focus on body weight and giving oneself unconditional permission to eat desired foods. Key barriers to IE were emotionally triggered eating, women's accommodation of family food preferences and habits and social occasions that revolved around food. Further research could explore how to more effectively assist women in giving themselves unconditional permission to eat desired foods and letting go 'good'/'bad' labels on foods, as well as avoiding interpretation of IE as another form of dieting. This may enhance our efforts to teach a more intuitive style of eating.

Declaration of conflicting interests

The author(s) declared no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

Funding

The author(s) received no financial support for the research, authorship and/or publication of this article.

References

- Barry CA, Britten N, Barber N, et al. (1999) Using reflexivity to optimize teamwork in qualitative research. *Qualitative Health Research* 9(1): 26–44.
- Barte JC, ter Bogt NC, Bogers RP, et al. (2010) Maintenance of weight loss after lifestyle interventions for overweight and obesity, a systematic review. *Obesity Reviews* 11(12): 899–906.

- Berg BL (2004) *Qualitative Research Methods for the Social Sciences*. Upper Saddle River, NJ: Pearson Education.
- Boucher SE, Edwards O, Gray A, et al. (2016) Teaching intuitive eating and acceptance and commitment therapy skills via a web-based intervention: A pilot single-arm intervention study. *Journal of Medical Internet Research: Research Protocols* 5(4): e180.
- Braun V and Clarke V (2006) Using thematic analysis in psychology. *Qualitative Research in Psychology* 3: 77–101.
- Braun V and Clarke V (2013) *Successful Qualitative Research: A Practical Guide for Beginners*. London: SAGE.
- Field AE, Manson JE, Taylor CB, et al. (2004) Association of weight change, weight control practices, and weight cycling among women in the Nurses' Health Study II. *International Journal of Obesity and Related Metabolic Disorders* 28(9): 1134–1142.
- Hammartstrom A, Wiklund AF, Lindahl B, et al. (2014) Experiences of barriers and facilitators to weight-loss in a diet intervention – A qualitative study of women in Northern Sweden. *BMC Women's Health* 14: 59–69.
- Hayes SC, Luoma JB, Bond FW, et al. (2006) Acceptance and commitment therapy: Model, processes and outcomes. *Behaviour Research and Therapy* 44(1): 1–25.
- Kelders SM, Kok RN, Ossebaard HC, et al. (2012) Persuasive system design does matter: A systematic review of adherence to web-based interventions. *Journal of Medical Internet Research* 14: e152.
- Kidd LI, Graor CH and Murrock CJ (2013) A mindful eating group intervention for obese women: A mixed methods feasibility study. *Archives of Psychiatric Nursing* 27(5): 211–218.
- Krueger RA and Casey MA (2000) *Focus Groups: A Practical Guide for Applied Research* (3rd edn). Thousand Oaks, CA: SAGE.
- Leong SL, Gray A, Haszard J, et al. (2016) Weight-control methods, 3-year weight change, and eating behaviors: A prospective nationwide study of middle-aged New Zealand women. *Journal of the Academy of Nutrition and Dietetics* 116: 1276–1284.
- Leske S, Strodl E and Hou X-Y (2012) A qualitative study of the determinants of dieting and non-dieting approaches in overweight/obese Australian adults. *BMC Public Health* 12: 1086.
- Madden CE, Leong SL, Gray AR, et al. (2012) Eating in response to hunger and satiety signals is related to BMI in a nationwide sample of 1601 mid-age New Zealand women. *Public Health Nutrition* 15(12): 2272–2279.
- Malterud K (2001) Qualitative research: Standards, challenges, and guidelines. *The Lancet* 358: 483–488.
- Milne B, Byun U and Lee A (2013) *New Zealand Socio-Economic Index 2006*. Wellington, New Zealand: Statistics New Zealand.
- Neumark-Sztainer D, Wall M, Guo J, et al. (2006) Obesity, disordered eating, and eating disorders in a longitudinal study of adolescents: How do dieters fare 5 years later? *Journal of the American Dietetic Association* 106(4): 559–568.
- Polivy J and Herman CP (1985) Dieting and bingeing: A causal analysis. *American Psychologist* 40(2): 193–201.
- Polkinghorne DE (2005) Language and meaning: Data collection in qualitative research. *Journal of Counseling Psychology* 52: 137–145.
- Sairanen E, Tolvanen A, Karhunen L, et al. (2015) Psychological flexibility and mindfulness explain intuitive eating in overweight adults. *Behavior Modification* 39(4): 557–579.
- Sandelowski M (1995) Sample size in qualitative research. *Research in Nursing and Health* 18(2): 179–183.
- Schaefer JT and Magnuson AB (2014) A review of interventions that promote eating by internal cues. *Journal of the Academy of Nutrition and Dietetics* 114(5): 734–760.
- Stice E, Burger K and Yokum S (2013) Caloric deprivation increases responsivity of attention and reward brain regions to intake, anticipated intake, and images of palatable foods. *Neuroimage* 67: 322–330.
- Sullivan-Bolyai S, Bova C and Harper D (2005) Developing and refining interventions in persons with health disparities: The use of qualitative description. *Nursing Outlook* 53: 127–133.
- Tribole E and Resch E (2012) *Intuitive Eating: A Revolutionary Program That Works*. New York: St. Martin's Griffin.
- Tylka TL and van Diest AMK (2013) The intuitive eating scale-2: Item refinement and psychometric evaluation with college women and men. *Journal of Counseling Psychology* 60(1): 137–153.
- Tylka TL and Wilcox JA (2006) Are intuitive eating and eating disorder symptomatology opposite poles of the same construct? *Journal of Counseling Psychology* 53(4): 474–485.
- Tylka TL, Annunziato RA, Burgard D, et al. (2014) The weight-inclusive versus weight-normative approach to health: Evaluating the evidence for prioritizing well-being over weight loss. *Journal of Obesity* 2014: 983495.
- Van Dyke N and Drinkwater EJ (2014) Relationships between intuitive eating and health indicators: Literature review. *Public Health Nutrition* 17(8): 1757–1766.
- Van Genugten L, van Empelen P, Boon B, et al. (2012) Results from an online computer-tailored weight management intervention for overweight adults: Randomized controlled trial. *Journal of Medical Internet Research* 14(2): e44.
- Ward A and Mann T (2000) Don't mind if I do: Disinhibited eating under cognitive load. *Journal of Personality and Social Psychology* 78(4): 753–763.
- Williams L, Germov J and Young A (2007) Preventing weight gain: A population cohort study of the nature and effectiveness of mid-age women's weight control practices. *International Journal of Obesity* 31(6): 978–986.