Health care practitioners' views and experiences of barriers and facilitators to weight management interventions for adults with intellectual disabilities

INTRODUCTION

Obesity is common in individuals who have intellectual disabilities. Obesity affects 37% of patients with intellectual disabilities (aged 18 years and over) who are registered with National Health Service (NHS) primary health care services in England and who have had a recent BMI check, compared to 30% of patients without intellectual disabilities (aged 18 years and over) (NHS Digital, 2017). Several factors may contribute to this, including age, gender, type and level of intellectual disability, residential circumstances, poverty, genetics, prescribed medication, poor diet, and high levels of physical inactivity (Emerson, 2003; Frey et al., 2005; Rimmer and Yamaki, 2006; McGuire et al., 2007; Rimmer et al., 2010; Singh et al., 2010; Matthews et al., 2011). People with intellectual disabilities may also be more exposed to a wider range of environmental, demographic and socio-economic adversities than their non-disabled peers (Emerson and Hatton, 2014), as well as the present-day obesogenic environment which may hinder individuals' weight management efforts (Kumanyika et al., 2002; Bleich et al., 2008; Cutler et al., 2003; Kitchen, Kim and Schultz, 2008; Harris et al., 2009; Butland et al., 2007; Swinburn, Sacks, and Ravussin, 2009). Some individuals may also have physical as well as intellectual disabilities and may be unable to access interventions to meet their needs (Messent and Cooke, 1998; Frey et al., 2005). Some may be unknown to services and some may be unable to access healthcare services such as health promotion, screening services, and primary prevention interventions (Taggart et al., 2014; Brown et al., 2017), particularly as facilities may not be reasonably adjusted to meet

the needs of this population (Frey et al., 2015; Messent, Cooke and Long, 2009; Hatton, Roberts and Baines, 2011; Cartwright et al., 2017).

UK obesity and weight management guidelines

UK obesity and weight management guidance for adults recommend multi-component weight management interventions comprising energy deficit diets (containing 600kcal less per day than the person needs to stay the same weight), physical activities that fit easily into people's lives, and behaviour change components (Scottish Intercollegiate Guidelines Network [SIGN], 2010; National Institute for Health and Care Excellence [NICE], 2014a). However, the UK guidelines acknowledge that there is minimal evidence available on weight management interventions for adults with intellectual disabilities, and that this may contribute to health inequalities and inequities in access to services as experienced by this population (NICE, 2014a; NICE 2014b).

Literature review: weight management support for individuals with intellectual disabilities

General Practitioners (GPs) may believe there is a lack of service availability and or inadequate specialist weight management services for individuals who have intellectual disabilities (Smallman, Engel and Nelson, 2011). There is also evidence of variations in health care practitioners' (HCPs) confidence in helping individuals with intellectual disabilities to gain and maintain a healthy weight (Stein 2000; West Midlands Trust, 2011), and a need for accessible resources to aid weight management communication between health care practitioners and people with intellectual disabilities (Spanos et al., 2013b; Sundblom et al., 2015). Previous studies have identified a range of ineffective communication practices displayed by

HCPs in their interactions with this population, which include not using age-appropriate language, speaking only to the carer, failing to acknowledge or address the patient's worries, and an insufficient knowledge of how to communicate with individuals who have a disability (Ziviani et al., 2004; Murphy, 2006; Chinn, 2017). Factors such as time constraints and a lack of continuity in health service provision may exacerbate such communication challenges (Law et al., 2005; Mastebroek et al., 2014). Furthermore, a systematic review of mainstream HCPs' attitudes towards people with intellectual disabilities found stigmatising attitudes (Pelleboer-Gunnink et al., 2017). The provision of health care for people with intellectual disabilities has largely depended on doctors who appear to receive little training in disability, and or on disability support staff who appear to receive little training in health (Tracy and McDonald, 2015).

Previous studies have found that support from carers can have a positive impact on weight management for adults with intellectual disabilities (Hamilton et al., 2007; Spanos et al., 2013a), probably via influencing their diet and food choices (Rodgers, 1998). However, some carers themselves may lack knowledge about healthy eating and the benefits of physical exercise (Melville et al., 2009; Cartwright et al., 2017), and some may promote unhealthier food choices and activities in this population (Smyth and Bell, 2006). Carers and people with intellectual disabilities may have opposing views about weight management which may affect motivation for weight loss (Jones et al., 2015). A systematic review of carer-led interventions to monitor, promote and improve health in this population group found a paucity of research in this field and a need for further carer-led or carer-involved intervention studies (Hithersay et al., 2014).

Previous reviews of weight management interventions for adults with intellectual disabilities

Reviews have been conducted to explore weight management interventions for adults with intellectual disabilities (Hamilton et al., 2007; Jinks et al., 2011; Spanos et al., 2013b; Doherty, Jones, Chauhan & Gibson, 2018a; Harris et al., 2018a). These reviews all found a lack of evidence-based weight management interventions tailored to meet the needs of adults with intellectual disabilities. Furthermore, the review conducted by Doherty et al., (2018a) found that the identified studies did not fully explore the views of participants with intellectual disabilities, and only one identified qualitative study explored the views and experiences of HCPs involved in the delivery of weight management interventions for this population (Sundblom et al., 2015).

Study Aim

GPs and other HCPs have important contributions to make in weight management provision for people with intellectual disabilities. This study aimed to explore GPs and other HCPs' views and experiences of barriers and facilitators to providing evidence-based weight management interventions for adults with intellectual disabilities. A separate co-produced research study has been conducted and published by the authors to explore barriers and facilitators to eating well, living well and weight management from the perspectives of people with intellectual disabilities (Doherty et al., 2018b).

Ethical approval

Favourable ethical opinion was obtained for the study from the host academic institution (STEMH 393 dated 20.10.15) and from the National Health Service (NHS) (NHS R&D 197599 dated 03.03.15).

METHODS AND MATERIALS

Semi-structured, face-to-face interviews were held with GPs and other HCPs involved in obesity identification and or the provision of evidence-based weight management interventions for all adults (including adults with, and without, intellectual disabilities) in Lancashire, North-West England. The research team comprised a lead researcher and two other researchers with knowledge and experience of conducting qualitative research.

Sample selection

Inclusion criteria

The sample selected included GPs or General Practice Nurses (GPNs) working in primary health care and other HCPs (such as health facilitators, physiotherapists and dietitians), involved in obesity identification and or the provision of weight management interventions for obese adult patients (either with, or without, intellectual disabilities) in Lancashire. A combination of purposive and snowball sampling (Saumure & Given, 2012) was selected as the most practical approach due to resource constraints. The researchers intended to recruit up to 20 participants (either GPs, GPNs or other HCPs involved in the delivery of weight management interventions). However, recruitment challenges were incurred and 6 of the 20 potential participants who were approached and provided with information declined

to take part citing their busy schedules and patient priorities as reasons for not agreeing to take part.

Process

Purposive sampling

Clinical Commissioning Groups (CCGs) who are responsible for the planning and commissioning of health care services for their local area, were approached by the lead researcher and asked to send information about the research study to GPs' Practices. The lead researcher attended GP locality meetings to introduce the study to potential participants. GPs who were interested contacted the lead researcher and a mutually convenient date, time and venue was arranged to answer any queries, and to seek potential participants' consent for involvement in the research.

Snowball sampling

The lead researcher also contacted local authorities in Lancashire by email requesting information about their commissioned weight management services. The lead researcher was introduced to HCPs involved in the provision of their weight management services by the local authorities. The lead researcher then sent information about the research by email to these potential participants and they were asked to contact the lead researcher if they wished to take part in the research.

Sample

Face-to-face semi-structured interviews were held with 14 practitioners (7 GPs, one GP nurse and 6 other HCPs) who agreed to take part in the study and who provided their written informed consent. Participants were all interviewed by the lead researcher. Interviews were held in GPs' Practices and other venues used in the

delivery of weight management services and interventions (e.g. leisure centres). The interviews took place between April 2016 and November 2016.

Data collection

A study topic guide for the semi-structured interviews was developed by the lead researcher with the support of the other researchers. The guide contained 16 questions designed to explore how HCPs recognise obesity in adults with intellectual disabilities, and how they manage weight management interventions for such individuals. The study topic guide's questions included, for example, whether HCPs incurred anything that helped or hindered them from discussing obesity and weight management with people who have intellectual disabilities, from offering and or delivering weight management interventions to this population, and if they had accessed or needed any training, guidelines or other resources for weight management interventions involving this population. Digital audio-recordings made of the semi-structured interviews lasted an average of 28 minutes per interview (range 13 - 52 minutes). Participants volunteered to take part in the research and they were not paid for their participation.

Data analysis

Digital audio-recordings of the interviews were transcribed by an independent researcher from within the lead researcher's institutional faculty. The transcriptions were checked for accuracy by the lead researcher. Mays & Pope's (2000) application of reflexivity was applied by the research team. Reflexivity involves being sensitive to the ways in which the subjectivities of researchers affect the data collection and analysis. The application of reflexivity in this study involved the lead researcher undertaking the primary analysis followed by a second member of the

research team independently analysing a sample of the transcripts. The transcriptions were analysed using thematic analysis (Ritchie and Lewis, 2003). Thematic analysis summarises data into themes that are described and explained and a `story' of the data is presented, rather than necessarily developing any new theory (Ryan and Bernard, 2000). Reading, re-reading, and open coding of each individual transcript was firstly undertaken to explore the data, and then themes within and between all the individual transcriptions were compared using constant comparison techniques. Potential themes and sub-themes were identified by hand and then by using NVivo (v11) software by the lead researcher. A second independent researcher similarly analysed a sample of the transcripts. A thematic coding framework was produced by the lead researcher to aid the analysis. Key themes identified by the lead researcher in the analysis were verified with the second independent researcher. A third researcher from the team reviewed and critiqued the emerging themes attributed by the first two researchers. Any discrepancies were discussed and reviewed by the research team to reach a consensus agreement.

FINDINGS

Six main themes were identified from the analysis of the interviewees' transcripts. The themes included: communication, knowledge, support, resources, external factors, and motivation. These themes – including barriers and facilitators identified - are described narratively below, with selected quotations from the transcripts in the text. Table 1 provides a summary of these main themes.

Table 1: Weight management interventions for adults with intellectual disabilities: summary of main themes

THEMES

Theme 1: Communication

1.1 Barriers

Participants revealed that some GPs may experience challenges raising the subject of obesity with patients who have intellectual disabilities due to communication issues. For example, a GP might need to have a three-way conversation with a carer (or support worker) as well as the patient:

> "*You're trying to motivate a carer to motivate the patient. So, it's second hand motivation*" (GP4)

This can be even more challenging if accompanying carers or support workers are also obese or overweight:

> *"If somebody's got you know, special needs where their IQ is affected so they can't take in what you're saying then you're just dealing with the carers. And most carers seem to be overweight….But you're trying to get somebody to do something with somebody that they themselves may not be doing in the first place."* (GP4)

Participants indicated that individuals with intellectual disabilities may not always have the support of the same carer or support worker, and this lack of care continuity for some may lead to further communication difficulties for GPs and HCPs:

> *"Different carers come along, like they'd come along on a weekly basis and they'd have different carers coming with them to the sessions and there's no support then."* (HCP4)

> *"…each time you see somebody you have different carers, different knowledge, maybe different views themselves on weight loss. … So, that's definitely a challenge."* (GP6)

A lack of available accessible (easy-read) information and other resources acts as a further barrier to communication. For example:

> *"I'm aware that there's a lot of easy-to-read information out there but we don't really have that [in general practice]."* (GP1)

> *"Some people have mild learning disability and so if we have more information like leaflets or pictures or pamphlets… written information*

sometimes they can take home and read if they can, or pictures or things or more information to offer to patients." (GP2)

Furthermore, some patients with intellectual disabilities do not communicate accurate information to GPs and other HCPs about their lifestyles and their weight management:

"What our staff have experienced is again, depending on the level of learning disabilities, they are always quite eager to please." (HCP6)

Participants experienced further difficulties communicating obesity and weight management issues due to time constraints and a need to prioritise presenting medical problems:

"Overweight can be a problem, a third or a fourth problem in the normal consultation. So, by the time they've finished their first or second medical consultation you see that you've kind of run out of time then if they do raise the subject of wanting to lose weight…" (GP3)

Cultural issues also form a barrier to communicating weight management issues, particularly with people with intellectual disabilities and their carers from Black and Minority Ethnic (BME) groups:

"*A lot of them feel they are quite healthy, especially in our culture [South Asian ethnic groups], they don't like anyone who is slimly built, especially with kids; so that kind of, that kind of mentality kind of goes with them into to adulthood."* (GP3)

There may be other types of generally held cultural attitudes and assumptions about people with intellectual disabilities which can make it difficult to communicate and deliver weight management interventions for this population:

"*They [carers] just feed him junk food cos that's what he eats and he won't eat anything else. And they're not gonna have a conflict with him…I can see an attitude of well, this person's not got much in their life and if they like eating burgers well let them eat burgers, cos what else have they got."* (GP4)

"A girl on my team she's got a son with learning disabilities…she said he's put loads of weight on…but then in school, the dinner ladies are giving him extra portions she said,…., they say oh well he's hungry, she said so that's what you're up against" (HCP2)

1.2 Facilitators

Participants suggested the provision of resources in primary care such as clear, simplified information to improve communication and facilitate discussions about obesity and weight management with people who have intellectual disabilities. Participants also indicated that GPs should offer more time and attention for people who have intellectual disabilities, but acknowledged that GPs' time constraints may restrict this:

> *"So, we should be more hands on in a way with patients with learning disability…so that we can give these patients more time and effort."* (GP1)

> *"I think we could perhaps improve things if we offered more than an annual check, perhaps if we offered six monthly checks…More frequent offering of appointments would be better but everybody's very busy you know."* (GP5)

Theme 2: Knowledge

2.1 Barriers

Participants highlighted that GPs' lack of knowledge and awareness of available weight management interventions and services can act as a barrier:

> *"Weight management services? I don't think we've got any weight management services I am afraid."* (GP7)

2.2 Facilitators

Participants suggested the need to raise GPs' knowledge and awareness of locally available evidence-based weight management interventions and services. Increased knowledge and awareness was perceived to be needed to improve the number of referrals of people with intellectual disabilities to existing weight management services.

Theme 3: Support

3.1 Barriers

Participants commented that a lack of continuity of support, unmotivated carers or support workers, and unmet training needs (for carers and support workers) act as barriers to weight management for people with intellectual disabilities:

> "*We try to encourage the parents or the support workers and carers to actually be part of the groups …. I mean we still see it at times in some of the groups we work with, the carers are in McDonald's and things, Costa [coffee] with big creamed drinks*." (HCP2)

> *"They [carers or support workers or families] get blamed for things and they are probably not supported as much as they need to be…there is probably very little support in terms of dealing with supporting adults with some of their weight…A lot of carers have had little training in weight management."* (HCP6)

3.2 Facilitators

Participants suggested the need to involve carers and support workers in weight management interventions for people with intellectual disabilities (as and when appropriate).

Theme 4: Resources

4.1 Barriers

Targeted, specialist, tailored weight management services for people with intellectual disabilities may be needed i.e. not solely providing reasonable adjustments to universal services designed for the general population:

> *"You've got to improve their access to a lot of services available, specialised interventions for their needs."* (GP3)

> *"I think there's need to have your more specialist intervention where it isn't integrated… I think it's hard….just integrating everybody all into one thing."* (HCP3)

However, participants suggested specialist services can be time and labour intensive, and thus may not be prioritised by service commissioners:

> "*They're probably one of the hardest groups [people with intellectual disabilities] to work with … and it's really time intense…when really our funders want us to see the masses*." (HCP2)

Different HCPs (from a range of specialities), carers and service users appear to lack opportunities to collaborate and to develop and share weight management resources with and for people with intellectual disabilities:

> "*The people at the council who've had twenty years' experience working in learning disability probably have zero experience in health, and it's probably linking those together that's going to be key."* (HCP3)

Participants indicated that there are training needs for GPs in weight management interventions generally, and in communicating with people who have intellectual disabilities:

> "*I've got a thirteen percent chance of having a heart attack, does that mean I am going to have a heart attack?... I think we are not always good at explaining that as GPs – I think particularly with people who have learning disabilities."* (GP3)

> *"I haven't had any training in terms of dealing with patients with intellectual disability and weight."* (GP1)

Existing UK guidelines for obesity and weight management may need reviewing so that they are more relevant for this population, and for practitioners when working with people who have intellectual disabilities:

> *"Off the top of my head, all the government guidelines I've read, there's never anything really that's targeted towards that group [people with intellectual disabilities]."* (HCP2)

4.2 Facilitators

Facilitators suggested by participants included specialist weight management provision for people with intellectual disabilities; opportunities for interdisciplinary collaborations to develop and share weight management resources; training for GPs in weight management and in communicating with people who have intellectual disabilities; and more practical UK obesity and weight management guidelines and support for practitioners in supporting people with intellectual disabilities.

Theme 5: External factors

5.1 Barriers

Participants described external barriers including demographic, socio-economic and environmental factors which may impact on the delivery of weight management interventions for adults with intellectual disabilities:

> *"I think because of the area we are working in you know, the demographics of the people with the BME populations, it's quite a tough area to deliver… You can't just tell them to go out for a thirty minute walk every day to get your physical activity in cos they're never gonna do it. And we've got rubbish weather…"* (HCP2)

> *"I think its environmental more than anything…they're just getting dragged off to McDonald's and things…"* (HCP3)

5.2 Facilitators

Weight management interventions that are cognisant of the wider supporting networks and conditions surrounding individuals with intellectual disabilities.

Theme 6: Motivation

6.1 Barriers

Motivation to lose weight can be a challenge for some people with intellectual disabilities - and their carers and or support workers may, or may not, help:

> *"I've got a guy who has got Down's Syndrome…he knows he's overweight, he is actively engaged with us…, I think he's lost about two stone…*
> *I had another guy who did have learning difficulties…he was twenty-five stone, and I said why do you want to lose weight?...[he said] me family, they are on my back, they want me to lose weight. I said well…what do you want? He said I'm fine, I like what I do, I like my life, it's fine. So, he didn't have the motivation to change."* (HCP7)

According to participants, there seems to be too much emphasis on numerical weight loss outcomes as the main motivation for weight loss and weight management in the UK obesity guidance. Participants indicated that other motivators such as image and appearance might be more appropriate for individuals with intellectual disabilities:

> *"We had another guy who had a learning disability and he was working really, really hard…If you set a goal with him, he would achieve that goal. Now his goal, was to be able to reduce his size enough so he could buy a jacket…a particular brand of jacket he wanted to be able to buy."* (HCP4)

Participants also highlighted that GPs and other HCPs need to be motivated and incentivised to undertake training, yet training in this field may not be a high priority:

> *"You've got to be really motivated…if some course comes up about obesity, that's the last thing I'm gonna go to. Whereas if there's a course on new treatments in hypertension or new treatments in epilepsy or… that's what I'm gonna go to."* (GP4)

> *"It's never gonna be high enough on the priority list that anyone will sort of think that this is the training we need."* (HCP2)

6.2 Facilitators

A focus on image and appearance in weight management interventions (rather than on numerical weight loss goals) may facilitate improved motivation for weight management in people with intellectual disabilities. Having a motivated carer or support worker may help individuals with intellectual disabilities with their weight management. Participants also suggested that there may be a need to explore incentives for GPs to provide brief weight management interventions, as GPs appear to be incentivised only to record obesity prevalence, but not to intervene:

> *"They're [GPs]getting QOF [financial incentive] points aren't they for sort of putting people on diabetes medication and things like that and I don't think they get the money for people losing weight do they?* (HCP2)

Existing service provision and facilitators

This study found that evidence-based weight management interventions were provided across the county for adults with intellectual disabilities, but referrals to these services were dependent on GPs' awareness of such services; and the study's findings suggest that not all GPs were aware of what weight management services were available locally. Existing weight management services were delivered by a range of HCPs including health facilitators, dietitians, physiotherapists, and psychologists. Existing facilitators identified included making reasonable adjustments for people with intellectual disabilities. Reasonable adjustments were made to the existing `universal' weight management services (which were designed for the general population). The reasonable adjustments made for people with intellectual disabilities included: the provision of clear, simplified information; smaller group or one-to-one sessions; the involvement of carers (if appropriate) in weekly weight management sessions; confidence-building activities; and rapport building (i.e. matching the personalities or interests of staff with patients who have intellectual disabilities). However, participants specified a need for specialist weight management services for people with intellectual disabilities, but perceived that such services were not provided because of funding constraints and a drive by service commissioners to provide *universal* services for all obese patients as opposed to *targeted* specialised services for different population groups such as adults with intellectual disabilities:

> *"I mean we've lost staff this year, we don't know that we'll lose any next year but I'd be surprised if we didn't... you'll see as many people as possible at a very kind of like low level and it's all about getting people into physical activities, but targeting individuals with specific conditions or whatever has been pulled back."* (HCP3)

DISCUSSION

This research aimed to explore GPs and other HCPs' views and experiences of barriers and facilitators to obesity identification and or providing evidence-based weight management interventions for adults with intellectual disabilities. Findings suggest there are several barriers to weight management for adults with intellectual disabilities according to the GPs and HCPs involved in the provision of weight management interventions for this population. Figure 1 summarises the barriers and existing facilitators identified by this study. Figure 1 also provides further suggested facilitators for overcoming identified barriers. The barriers and facilitators are narratively discussed below.

Theme 1 Communication

GPs experience challenges in communicating the subject of weight management with individuals with intellectual disabilities, and that these challenges are compounded if the carers or support workers are overweight or obese themselves and or if individuals with intellectual disabilities do not always have the support of the same carer or support worker. These findings are supported by other studies' findings which similarly suggest GPs experience communication barriers to obesity identification and weight management for adults with intellectual disabilities (Stein 2000; West Midlands Trust, 2011). Communication aids are needed in primary care to facilitate GPs' discussions of obesity and weight management issues with people who have intellectual disabilities, and their carers or support workers.

There may be cultural issues involved in weight management for obese adults with intellectual disabilities from BME communities. Future research might usefully explore weight management issues for individuals with intellectual disability from

different BME communities. However, culture goes further. HCPs may have stigmatising attitudes towards people with intellectual disabilities (Pelleboer-Gunnink et al., 2017). This study's findings imply that cultural attitudes and behaviours towards people with intellectual disabilities both in the general population, and in cultural relationships between GPs, other HCPs and people with intellectual disabilities, may be worth further scrutiny and attention.

Figure 1 Summary of identified barriers and existing facilitators to weight management interventions for adults with intellectual disabilities and further suggested facilitators for overcoming identified barriers

Theme 2 Knowledge

This study identified a need to raise GPs' knowledge and awareness of locally available weight management interventions for adults with intellectual disabilities and, thereby, improve referrals to such services. Existing UK obesity and weight management guidance may also need reviewing so that it contains clearer and more practical guidance to inform GPs' and HCPs' routine practice – including guidance on supporting different population groups (Jones et al., 2015; Dewhurst et al., 2017).

Theme 3 Support

GPs and other HCPs value continuity of caring support for people with intellectual disabilities who have weight management needs, including carers' involvement in weight management interventions for this population (Hamilton et al., 2007; Spanos et al., 2013b). However, some individuals with intellectual disabilities may lack such continuity of carers' support.

Theme 4 Resources

Resources - including training for HCPs - are required to facilitate weight management discussions between HCPs and people with intellectual disabilities (Spanos et al., 2013b; Sundblom et al., 2015). However, this study's findings suggest that some GPs may not to be sufficiently motivated or incentivised to participate in weight management training for this population group.

This study also found a need for greater interdisciplinary working between HCPs and other health care professionals. Other studies have similarly identified the need for greater collaboration with other health and social care disciplines (such as staff from Learning Disabilities Services) (Tracy and McDonald, 2015).

Theme 5 External barriers

This study's findings add to other studies' arguments for weight management interventions for people with intellectual disabilities that are tailored to address the wider environment, demographic and socio-economic issues surrounding this population (Emerson and Hatton, 2014). For example, tailored weight management interventions that take account of adverse weather conditions.

Theme 6 Motivation

Motivation for weight management may be a challenge for some individuals with intellectual disabilities and it is acknowledged that there may be conflicts between carers and people with intellectual disabilities which may affect motivation for weight loss (Jones et al., 2015). People with intellectual disabilities require support from motivated carers, support staff, GPs and HCPs for their weight management. There is also a need for motivational support from wider community-based networks e.g. staff responsible for providing meals for people with intellectual disabilities in educational establishments. Future studies may usefully explore the impact of incentives for the involvement of carers and wider support networks in weight management interventions for this population.

Implications for research, policy and practice

This study's findings have implications for research, policy and practice. Suggestions for research, policy and practice consideration are summarised within Table 2.

STUDY'S STRENGTHS AND LIMITATIONS

This is one of the few studies to have explored the views and experiences of GPs and other HCPs involved in obesity identification and provision of evidence-based weight management interventions for adults with intellectual disabilities. However, this study was limited. The study included a small sample of participants from one English county and those that volunteered may have had a special interest in the subject, and so their views may not accurately reflect the views of all GPs and HCPs. The study would have benefited from a larger sample of GPs and other HCPs from across the United Kingdom. Findings are therefore not generalisable, but they do provide a local context, and they are supported by findings from a previous study conducted in another English county which similarly found that despite a high prevalence of obesity in this population, obesity services were not well organised to meet their needs (Smallman, Engel and Nelson, 2011).

CONCLUSIONS

This study provides an important insight into the barriers and facilitators to obesity and weight management provision from the perspectives of GPs and other HCPs involved in local services. The study provides suggestions for future research, policy and practice consideration.

References

Bleich, S., Cutler, D., Murray, C., and Adams, A., (2008) Why is the developed world obese? *Annual Review of Public Health.* **29**:273-295

Brown, M., Taggart, L., Karatzias, T., Truesdale, M., Walley, R., Northway, R., Macrae, S., Carey, M., and Davies, M., (2017) Improving diabetes care for people with intellectual disabilities: a qualitative study exploring the perceptions and experiences of professionals in diabetes and intellectual disability services. *Journal of intellectual Disability Research*. **61**(5):435-449.

Butland, B., Jebb, S., Kopelman, P., et al., (2007) *Tackling Obesities: Future Choices – Project Report (2nd Ed).* London: Foresight Programme of the Government Office for Science. www.gov.uk/government/uploads/system/uploads/attachment_data/file/287937/07-1184x-tackling-obesities-future-choices-report.pdf [accessed 07/10/15]

Cartwright L., Reid, M., Hammersley, R., and Walley, R.M., (2017) Barriers to increasing the physical activity of people with intellectual disabilities. *British Journal of Learning Disabilities*. **45**(1):56-63.

Chinn, D., (2017) Review of interventions to enhance the health communication of people with intellectual disabilities: a communicative health literacy perspective. *Journal of Applied Research in Intellectual Disabilities.* **30**(2):345-359.

Cutler, D. M., Glaeser, E. L., and Shapiro, J. M., (2003) Why have Americans become more obese? *Journal of Economic Perspectives.* **17**(3):93-118.

Doherty A.J., Jones S.P, Chauhan U., Gibson J.M.E. (2018a) An integrative review of multi-component weight management interventions for adults with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities.* Jan. **31** (S1):39-51.

Doherty, A., Jones, S., Chauhan, U., & Gibson, J. (2018b). Eating well, living well and weight management: A co-produced semi-qualitative study of barriers and facilitators experienced by adults with intellectual disabilities. *Journal of Intellectual Disabilities*. https://doi.org/10.1177/1744629518773938

Emerson, E., (2003) Mothers of children and adolescents with intellectual disability: social and economic situation, mental health status, and the self-assessed social and psychological impact of the child's difficulties. *Journal of Intellectual Disability Research.* **47**(4-5):385–399.

Emerson, E., and Hatton, C., (2014) *Health Inequalities and People with Intellectual Disabilities*. Cambridge Medicine. Cambridge University Press.

Frey, G.C., Buchanan, A.M., and Rosser Sandt, D.D., (2005) "I'd Rather Watch TV": An examination of physical activity in adults with mental retardation. *Mental Retardation*. **43**(4):241-254.

Hamilton, S., Hankey, C.R., Miller, S., Boyle, S., and Melville, C.A., (2007) A review of weight loss interventions for adults with intellectual disabilities. *Obesity Reviews.* **8**(4): 339-345.

Harris, J. L., Pomeranz, J. L., Lobstein, T., and Brownell, K. D., (2009) A crisis in the marketplace: how food marketing contributes to childhood obesity and what can be done. *Annual Review of Public Health.* **30**(1):211-225.

Harris, L., Melville, C.A., Murray, H., Hankey, C., (2018) The effects of multi-component weight management interventions on weight loss in adults with intellectual disabilities and obesity: A systematic review and meta-analysis of randomised controlled trials. *Research in Developmental Disabilities.* **72**(2018):42-55.

Hatton, C., Roberts, H., and Baines, S., (2011) *Reasonable Adjustments for People with Learning Disabilities in England: A National Survey of NHS Trust.* Improving Health & Lives: Learning Disabilities Observatory, Durham.

Hithersay, R., Strydom, A., Moulster, G., and Buszewicz, M., (2014) Carer-led health interventions to monitor, promote and improve the health of adults with intellectual disabilities in the community: A systematic review. *Research in Developmental Disabilities.* **35**(4):887–907.

Jinks, A., Cotton, A., and Rylance, R., (2011) Obesity interventions for people with a learning disability: An integrative literature review. *Journal of Advanced Nursing,* **67**(3):460-471.

Jones, N., Melville C.A., Harris, L., Bleazard, L., and Hankey, C., (2015) A qualitative study exploring why adults with intellectual disabilities and obesity want to lose weight and views of their carers. *BMC Obesity.* 2:49. DOI 10.1186/s40608-015-0080-2.

Kitchen, P. J., Kim, I., and Schultz, D. E., (2008) Integrated Marketing Communications: Practice Leads Theory. *Journal of Advertising Research.* **48**(4):531-546.

Kumanyika, S., Jeffery, R. W., Morabia, A., Ritenbaugh, C., and Antipatis, V. J., (2002) Obesity prevention: the case for action. *International Journal of Obesity & Related Metabolic Disorders.* **26**(3):425-436.

Law J., Bunning K., Byng S., Farrelly S. and Heyman B., (2005) Making sense in primary care: levelling the playing field for people with communication difficulties. *Disability & Society*. **20**(2):169–184.

Mastebroek, M., Naaldenberg, J., Lagro-Janssen, A. L., and van Schrojenstein Lantman de Valk, H., (2014) Health information exchange in general practice care for people with intellectual disabilities – a qualitative review of the literature. *Research in Developmental Disabilities.* **35**(9):1978–1987.

Matthews, L., Penpraze, V., Boyle, S., Hankey, C.R., Macmillan, S., Miller, S., Murray, H., Pert, C., Spanos, D., Robinson, N., and Melville, C.A., (2011)

Agreement of accelerometer and a physical activity questionnaire in adults with intellectual disabilities. *Preventative Medicine.* **52**(5):361-264.

Mays, N., and Pope, C., (2000) Assessing quality in qualitative research. *British Medical Journal.* 320(7226):50-52.

McGuire, B.E., Daly, P., and Smyth, F., (2007) Lifestyle and health behaviours of adults with an intellectual disability. *Journal of Intellectual Disability Research.* **51**(7):497-510.

Melville, C.A., Cooper, S.A., Morrison, J., Allan, L., Smiley, E., Williamson, A., (2008) The prevalence and determinants of obesity in adults with intellectual disabilities. *Journal of Applied Research Intellectual Disabilities.* **21**(5):425-37.

Melville, C. A., Hamilton, S., Miller, S., Boyle, S., Robinson N., Pert C., and Hankey, C.R, (2009) Carer knowledge and perceptions of healthy lifestyles for adults with intellectual disabilities. *Journal of Applied Research in Intellectual Disabilities.* **22**(3):298–306.

Messent, P.R., Cooke, C.B., and Long, J., (2009) Physical activity, exercise and health of adults with mild and moderate learning disabilities. *British Journal of Learning Disabilities*. **26**(1):17-22.

Murphy, J., (2006) Perceptions of communication between people with communication disability and general practice staff. *Health Expectations.* **9**(1):49–59.

NICE, (National Institute for Health and Care Excellence) Clinical Guidance PH53 (2014a) *Managing Overweight and Obesity in Adults – Lifestyle Weight Management Services.* Issued May 2014. http://www.nice.org.uk/guidance/ph53 [accessed 07/10/15].

NICE, (National Institute for Health and Care Excellence) Clinical Guideline 189 (2014b) *Obesity: Identification, Assessment and Management of Overweight and Obesity in Children, Young People and Adults*. Issued November 2014. http://www.nice.org.uk/guidance/cg189 [accessed 07/10/15].

NHS Digital, (2017) *Health and Care of People with Learning Disabilities*. http://content.digital.nhs.uk/article/7543/Health-and-Care-of-People-with-Learning-Disabilities [accessed 07/03/17].

Pelleboer-Gunnink, H.A., Van Oorsouw, W.M.W.J., Van Weeghel, J., and Embregts, P.J.C.M., (2017) Mainstream health professionals' stigmatising attitudes towards people with intellectual disabilities: a systematic review. *Journal of Intellectual Disability Research.* **61**(5):411-434.

Rimmer, J.H., and Yamaki, K., (2006) Obesity and intellectual disability. *Mental Retardation and Developmental Disabilities Research Reviews.* **12**(1):22-27.

Rimmer, J.H., Yamaki, K., Davis Lowry, B.M., Wang, E., Vogel, L.C., (2010) Obesity and obesity-related secondary conditions in adolescents with intellectual /

developmental disabilities. *Journal of Intellectual Disability Research.* **54**(9):787-794.

Ritchie, J. and Lewis. J. (eds.) (2003) *Qualitative Research Practice: A Guide for Social Science Students and Researchers*. Sage Publications, London.

Rodgers, J., (1998) 'Whatever's on her plate': food in the lives of people with learning disabilities. *British Journal of Learning Disabilities.* **26**(1):13–16.

Ryan, G.W., and Bernard, H.R., (2000) Data management and analysis methods. In N. Denzin and Y. Lincoln (Eds.) *Handbook of Qualitative Research*. California. Sage. pp: 769-802.

Saumure, K. and Given, L.M., 2008. Nonprobability sampling. *The SAGE Encyclopedia of Qualitative Research Methods*, *1*, p.562.

Scottish Intercollegiate Guidelines Network (SIGN) (2010) *Management of Obesity*. www.sign.ac.uk [accessed 29.03.16].

Singh, A.N., Matson, J.L., Hill, B.D., Pella, R.D., Cooper, C.L., and Adkins, A.D., (2010) The use of clozapine among individuals with intellectual disability: a review. *Research in Developmental Disabilities.* **31**:1135-1141.

Smallman, S., Engel, B., and Nelson, J., (2011) Obesity services for adults with learning disabilities. *Journal of Human Nutrition and Dietetics.* **24**(3):277-310.

Smyth, C. M., and Bell, D., (2006) From biscuits to boyfriends: the ramifications of choice for people with learning disabilities. *British Journal of Learning Disabilities.* **34**(4):227–36.

Spanos, D., Hankey, C., R., Boyle, S., Koshy, P., Macmillan, S., Matthews, L., Miller, S., Penpraze, V., Pert, C., Robinson, N., Melville, C.A., (2013a) Carers' perspectives of a weight loss intervention for adults with intellectual disabilities and obesity: A qualitative study. *Journal of Intellectual Disability Research.* **57**(1):90-102.

Spanos, D., Melville, C.A., and Hankey, C.R., (2013b) Weight management interventions in adults with intellectual disabilities and obesity: A systematic review of the evidence. *Nutritional Journal.* **12**:132

Stein, K., (2000) Caring for people with learning disabilities: a survey of general practitioners' attitudes in Southampton and south-west Hampshire. *British Journal of Learning Disabilities.* **28**:9-15.

Sundblom, E., Bergstrom, H., and Elinder, L.S., (2015) Understanding the implementation process of a multi-component health promotion intervention for adults with intellectual disabilities in Sweden. *Journal of Applied Research in Intellectual Disabilities.* **28**(4):296-306.

Swinburn, B., Sacks, G., and Ravussin, E., (2009) Increased food energy supply is more than sufficient to explain the US epidemic of obesity. *American Journal of Clinical Nutrition.* **90**(6): 1453-1456.

Taggart, L., Brown, M., and Karatzias, T., (2014) Diabetes (Chapter 6). In: *Health Promotion for People with Intellectual and Developmental Disabilities* (eds L. Taggart and W. Cousins). Open University Press/McGraw-Hill Publishers, Maidenhead, England.

Tracy, J., and McDonald, R., (2015) Health and disability: partnerships in health care. *Journal of Applied Research in Intellectual Disabilities*. **28**(1):22-32.

West Midlands NHS Trust (2011) *Obesity and Learning Disabilities: Audit of Training Needs.* https://webarchive.nationalarchives.gov.uk/20150116164024/http://www.obesitywm.org.uk/resources/WM_Obesity_and_Learning_Disabilities_Training_Audit_Report_October_2011.pdf [accessed 06.12.2018].

Ziviani J., Lennox N., Allison H., Lyons M. and Del Mar C., (2004) Meeting in the middle: improving communication in primary health care consultations with people with an intellectual disability. *Journal of Intellectual & Developmental Disability.* **29**(3):211–225.

Table 1: Weight management interventions for adults with intellectual disabilities who are obese: summary of main themes

Main themes
Communication
Knowledge
Support
Resource
External factors
Motivation

Table 2: Suggestions for further research, policy and practice consideration

Research
1. Conduct studies to explore cultural perceptions and attitudes towards people with intellectual disabilities (including studies involving sub-groups such as BME communities).
Policy
1. Review obesity and weight management guidance for adults to include more practical support and guidance for General Practitioners and Health Care Practitioners on the provision and delivery of tailored evidence-based weight management interventions for people with intellectual disabilities.
Practice
1. Provide resources in primary care on how to better communicate obesity and weight management issues with patients who have intellectual disabilities.
2. Provide incentives for carers and support workers to be involved in evidence-based weight management interventions for people with intellectual disabilities (as and when appropriate).
3. Raise General Practitioners' awareness and knowledge of locally available evidence-based weight management interventions and services for people with intellectual disabilities.
4. Provide tailored evidence-based weight management interventions for adults with intellectual disabilities which take account of their wider surrounding networks and conditions.