# A retrospective evaluation of an adapted group weight management intervention for adults with intellectual disabilities: Waist Winners Too

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### Article points

1. Following observation that the content and pace of a mainstream weight management service were inaccessible to people with ID, the authors adapted the programme for this patient group.
2. People with ID and their carers attended eight weekly sessions adapted from the original programme and simplified. Sessions were goal-led, with less than half of each 1-hour session spent on new content.
3. The resultant weight loss was statistically, but not clinically, significant. However, longer follow-up may have revealed clinically significant weight loss.

### Key words

- Intellectual disabilities
- Weight management services

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**Adults with intellectual disabilities (ID) not only experience a higher prevalence of obesity than the general population but also face barriers to accessing healthcare. Waist Winners Too (WWToo) is a weight management intervention for adults with ID, adapted from a current community weight management intervention, which was piloted in order to reduce inequalities in service access. In total, 29 adults with ID and BMI ranging from 28.6 to 54.3 kg/m$^2$ attended the intervention with carers. Recruitment was feasible and feedback positive. Attendance was good over 8 weeks but follow-up proved difficult. Statistical analysis showed statistically significant weight loss, but the intervention period was too short to achieve clinically significant weight loss of 5%. WWToo may be an effective intervention if held over a longer time period.**

Adults with intellectual disabilities (ID) have a higher prevalence of obesity and its associated comorbidities compared with the general population (Hsieh et al, 2014), with NICE (2014) stating that rates of obesity in adults with ID are around 50%. As well as reducing life expectancy, being obese can exacerbate disabling conditions and negatively affect quality of life (Cooper et al, 2004). It has been shown that a 5% weight loss results in improved health and reduced risk factors for poor health in people with obesity (SIGN, 2010; NICE, 2014).

Low levels of physical activity and poor adherence to healthy diets have been suggested as reasons why obesity is more prevalent in adults with ID (Hamilton et al, 2007). In a recent qualitative study, Cartwright et al (2015) identified a number of possible contributory factors, including carer beliefs regarding the individual's autonomy when making food choices, the influence of others' choices around the individual and inconsistent attitudes among care staff.

Adults with ID face barriers to accessing evidence-based health services (Spanos et al, 2013a). Although there are guidelines on the management of obesity in the general population (SIGN, 2010; NICE, 2014), there is a lack of evidence to allow clinicians to make decisions about which weight management interventions to offer adults with ID. In a systematic review of 22 published interventions designed to reduce obesity in people with ID, all the interventions differed from the recommended best practice of a multicomponent energy-deficit diet to support long-term weight loss of 5% (Spanos et al, 2013b). Despite a lack of evidence to support group therapy, most of the interventions examined in the review took place in a group setting. Likewise, many community interventions are run in groups because of cost, resource and time limitations.

Waist Winners Too (WWToo) is one such community group intervention. It was designed and piloted in an attempt to mirror a mainstream weight management group – Waist Winners – to reduce inequalities in service access. The original Waist Winners programme was developed within North East Glasgow as a free, community-based programme providing information and support

on how to achieve weight loss and a healthier lifestyle. It was initially developed as part of an anticipatory care package for GPs and practice nurses to refer patients to, and has been running for 6 years in community venues in the most deprived communities. Although it was developed by NHS dietitians, it is run by dietetic assistants. A number of adults with ID had attended this intervention but found the resources too complex, and the pace too fast, for them to benefit fully from the group sessions.

Although interventions such as WWToo are frequently used in the community health setting, few are evaluated formally in terms of outcome. It is hoped that, by sharing the results and process evaluation of WWToo, lessons learned can be shared with those who may run similar community interventions for adults with ID in the future.

## Aims

1. To adapt a current mainstream community weight management intervention to make it accessible for adults with ID.
2. To mirror as much as possible the mainstream intervention so that the adapted resources could easily be integrated into the mainstream intervention, if need be, in the future.
3. To pilot the intervention and evaluate it in terms of weight, BMI and waist circumference change, lifestyle changes made, knowledge improvement and acceptability among the adults with ID attending.

## Method

### Sample

Participants with ID were recruited under the following inclusion criteria:

- Presence of a mild to moderate ID, as perceived by the individual's caregiver.
- Age ≥18 years when starting the intervention.
- A desire to lose weight.
- Availability of a nominated individual (carer, family member, friend or significant other) who could commit to supporting the person and attend a carer's information session.
- Ability to participate in a group environment.
- Ability to be involved in eating, cooking and shopping decisions (with or without support).
- Not seeing a dietitian for any other reason.

Those with severe or profound ID were excluded, as were those with Prader–Willi syndrome, as it was felt that such individuals would benefit from other more specialist, individualised advice.

### Organisation

A partnership group was set up between NHS Greater Glasgow and Clyde Community Dietitians, Learning Disability Nursing, Health Improvement Scotland and Glasgow Life (the main Glasgow city cultural and physical activity provider) to develop and pilot the intervention. Funding was accessed through Health Improvement Scotland funds and money from other previously supported weight management groups. Quality standards for running groups were drawn up and included an induction procedure for group facilitators to undergo prior to running the intervention.

### Location and timing

All groups were run at an accessible time and location for the client group. The groups were held in a local health promotion centre, accessible by local transport routes. They were held midweek to avoid disruption from public holidays and ran from 10.30 AM to allow for sufficient transport time from the day centres where some participants attended.

### Intervention

The WWToo intervention is a multicomponent, group intervention consisting of eight weekly, hour-long group sessions conducted over 7 weeks, led by a dietitian and a lifestyle assistant, with a follow-up session held 6 weeks after the intervention has ended. Whenever possible, participants attended with a supporting person, who also attended a carer's information session to explain their role in the intervention and the importance of their support, and to provide background dietary information, prior to the group starting.

Session content mirrored the mainstream Waist Winners intervention from which it was adapted (*Table 1*). Each session was goal-led, setting new goals and reviewing goals from previous weeks, with less than half the time being spent on new educational content. Clients monitored their dietary intake and physical activity between sessions in food diaries (with coloured dots for food and smiley faces for any physical activity undertaken), and these

### Page points

1. Waist Winners Too was adapted from a mainstream weight management service to suit the needs of people with intellectual disabilities (ID).
2. Eight weekly, hour-long group sessions were held in a local health centre, accessible by public transport, in the morning. Participants attended with their carers wherever possible.
3. Session content mirrored the original programme's, with less than half of any session dedicated to covering new content and the rest dedicated to discussion, reviewing previous goals and setting new goals.
4. Participants monitored their physical activity and consumption of food and drink in a diary using stickers. Foods were labelled as "green" (healthy), "orange" (healthy in moderation), or "red" (unhealthy).

**Table 1. Comparison of session content of between the mainstream Waist Winners and the adapted Waist Winners Too interventions.**

| Session | Waist Winners | Waist Winners Too |
|---|---|---|
| Carers' introduction | n/a | • One-hour group session for carers |
| Week 1 | **Introduction to health and weight:**<br>• Food diary<br>• Introduction to SMART goals<br>• Evaluation of current diets: fruit and vegetables, takeaways, sugary snacks, oily fish and understanding of food labels | **Different types of food:**<br>• Food diary and traffic light coding<br>• Starting to set goals<br>• Knowledge game for baseline evaluation<br>• Energy balance |
| Week 2 | **Food groups and portion sizes:**<br>• Meal planning and food groups<br>• Healthy snacks and drinks<br>• Portion sizes<br>• Changing eating habits<br>• Cycle of change, setbacks and lapses<br>• Food lists and recipes | **How much to eat and when to eat:**<br>• Meal planning<br>• Healthy versus unhealthy meals/snacks<br>• Portion sizes<br>• Being active every day |
| Week 3 | **Food labelling and fats:**<br>• Labelling definitions<br>• High, medium and low levels of fat, sugar, saturates and salt<br>• Fat amounts in food<br>• Traffic light label coding | **How to eat less fat:**<br>• Food labelling and low-fat choices |
| Week 4 | **Food labelling, sugar and salt:**<br>• Types of sugar<br>• "A lot versus a little" sugar<br>• Alternatives to salt<br>• Sweeteners<br>• Food lists with sugar calorie and fat content<br>• Example way to reduce salt in a day's intake | **How to have less salt and sugar:**<br>• Food labelling and low-sugar choices<br>• Recognising supermarket healthy ranges<br>• Alternatives to salt |
| Week 5 | **Shopping, budgeting, snacks, eating out and takeaways:**<br>• What to choose when eating out | **Choosing foods at home, in the supermarket and at restaurants:**<br>• Menu choices<br>• Home-made food versus bought food |
| Week 6 (run by an alcohol counsellor) | **Alcohol (drinks):**<br>• Tips for sensible drinking<br>• Calories in alcoholic drinks, mixers and non-alcoholic drinks<br>• Food versus drinks in calories | **Alcohol and other drinks:**<br>• Types of drinks and body weight<br>• Alcohol and soft drinks<br>• The importance of hydration |
| Week 7 (run by an exercise counsellor) | **Physical activity:**<br>• Calories burned in exercise<br>• Benefits and barriers to exercise<br>• Staying motivated | **Exercise:**<br>• Different types of exercise<br>• Importance of exercise<br>• Planning exercise into our lives |
| Week 8 | **What have we learned? What now?**<br>• Evaluation of current diets: fruit and vegetables, takeaways, sugary snacks, oily fish and understanding of food labels<br>• Feedback from attendees<br>• Certificates | **What have we learned?**<br>• Evaluate knowledge improvement using traffic light game<br>• Summaries, questions and answers<br>• Feedback from attendees<br>• Certificates |
| Goal setting (all sessions) | • SMART goals | • Goals set and reviewed each week<br>• A "we did it board" to list goals achieved over the weeks |
| Self-monitoring (all sessions) | • Food diaries encouraged weekly<br>• Weight monitored weekly at the start of each group | • Food diaries using coloured dots to symbolise food as being healthy and unlimited (green), unhealthy and to avoid as much as possible (red) and healthy in moderation (orange)<br>• Weight monitored weekly at the start of each group |

SMART=Specific, Measurable, Achievable, Results-focused, Time-bound.

were discussed as a group at each session. Food and drink were categorised using green, red and orange dots, depending on how "healthy" they were to be perceived as being. "Green" food and drink were healthy items that could be had in unlimited amounts, "red" items were unhealthy foods/drinks which should be avoided or minimised and "orange" items were foods that were healthy if eaten in portion-controlled amounts (*Online supplement 1*; available at: www.britishjournalofobesity.co.uk). The intervention remained interactive throughout and consisted of games and discussion around a theme each week. Each session was flexible and could be adapted by the facilitator according to group level, interest and time.

Resources were developed where there was a need, in line with accepted readability guidelines for adults with ID (National Equality Partnership, 2005; Department of Health, 2010). This included using appropriate font size and type, layout, colour and wording. Copyright permission was sought for all occasions where photographs, images or pictures were used in resources. Other images required and not already available were taken specifically for the project.

## Measurements

Measurements were taken by the dietitian running the group (NJ). Weight was measured in kg using Seca 877 scales (Seca, Birmingham) at each session. Height was measured at the first session using the Seca Leicester stadiometer to calculate BMI. Waist circumference was measured at the first and eighth session to the nearest 0.5 cm at the midpoint between the iliac crest and the lowest rib while the person was standing.

Knowledge change was measured via a "traffic light game", in which participants had to place "red", "green" and "orange" foods on coloured card. This was played at the first session before any information had been given, the eighth session and the follow-up session at 13 weeks.

Opinions on the programme were gathered via a focus group at the end of the programme, by another professional who was not involved in the delivery of the programme (JT), as well as via informal verbal feedback throughout the sessions. Comments were recorded at the time by hand.

Other outcomes included the frequency of consumption of healthy and unhealthy food and drink, as seen in food diaries as red, green and orange dots.

**Table 2. Baseline characteristics of the 29 Waist Winners Too participants.**

| | Mean | Standard deviation | Range |
|---|---|---|---|
| Age (years) | 40.0 | 13.0 | 19–66 |
| Height (m) | 1.59 | 0.12 | 1.36–1.83 |
| Weight (kg) | 97.7 | 22.4 | 65.3–147.9 |
| BMI (kg/m$^2$) | 38.5 | 6.8 | 28.6–54.3 |
| Waist circumference (cm)* | 116.4 | 15.5 | 89.0–140.0 |

*Waist circumference was not measured in two individuals.

## Analysis

After the five group sessions had been completed, it was decided to examine the effectiveness of WWToo in terms of weight, BMI, waist circumference, lifestyle changes made and knowledge gained, using the raw data collected during the programme. SPSS (IBM, Portsmouth) was used to carry out a paired *t*-test to determine whether there was a significant difference in weight, BMI and waist circumference at 7 and 13 weeks from baseline. A process evaluation was also undertaken noting challenges, successes and acceptability. A weight change of less than ±3% was defined as weight maintenance, as per a previous meta-analysis of weight maintenance definitions (Stevens et al, 2006).

# Results

Between 2012 and 2014, five groups were run, with between five and seven adults with ID in each group. In total, 29 adults (19 female) with ID and a BMI of 25.0–29.9 kg/m$^2$ ($n$=4; 14%), 30.0–34.9 kg/m$^2$ ($n$=5; 17%), 35.0–39.9 kg/m$^2$ ($n$=10; 35%), 40.0–44.9 kg/m$^2$ ($n$=6; 21%) and ≥45.0 kg/m$^2$ ($n$=4; 14%) attended WWToo with their nominated supporters (*Table 2*). All adults attending were of white Scottish ethnicity and either attended day centres or received carer support at home. Attendance was 89% over the eight sessions and 48% at the 13-week follow-up session.

### Page points

1. Between 2012 and 2014, 29 people with ID were enrolled in the programme. The attendance rate was 89% over the eight sessions and 48% at the follow-up 6 weeks after the programme ended.
2. Participants lost a mean of 1.7% of body weight over the 7 weeks of the programme, which increased to 2.6% at the final follow-up.
3. At 7 weeks, eight participants (28%) had lost 3–5% of their body weight, and two (7%) had lost 5%. At 13 weeks, six participants had lost 3–5% of body weight, of whom five had lost 5%.

**Table 3. Change in BMI, weight and waist circumference over the Waist Winners Too programme.**

| | T1: baseline (*n*=29) Mean (SD) | T2: 7 weeks (*n*=29) Mean (SD) | T3: 13 weeks (*n*=14) Mean (SD) | T1 – T2 (mean difference; 95% CI) | T1 – T3 (mean difference; 95% CI) |
|---|---|---|---|---|---|
| Weight (kg) | 97.74 (22.43) | 96.07 (22.06) | 89.99 (16.56)† | 1.67 (0.69–2.65; *P*=0.002‡) | 2.48† (0.25–4.70; *P*=0.032‡) |
| BMI (kg/m$^2$) | 38.45 (6.79) | 37.80 (6.72) | 37.48 (5.80)§ | 0.65 (0.27–1.03; *P*=0.002‡) | 0.97§ (0.13–1.87; *P*=0.027‡) |
| Waist circumference (cm)* | 116.40 (15.5) | 112.32 (16.42) | n/a | 4.08 (1.97–6.21; *P*=0.001‡) | n/a |

*Waist circumference was measured in 27 participants at baseline, 23 at 7 weeks and none at 13 weeks. †Mean baseline weight in the 14 participants available at the 13-week follow-up was 92.47 kg. §Mean baseline BMI in the 14 participants available at follow-up was 38.45 kg/m$^2$. ‡*P*-values obtained from paired *t*-tests.
CI=confidence interval; SD=standard deviation.

### Weight and waist circumference change

Changes in weight, BMI and waist circumference over the WWToo programme can be seen in *Table 3*. There was a mean percentage weight loss of 1.7% (standard deviation [SD], 2.2%) over 7 weeks, and this increased to 2.6% (SD, 3.8%) at 13 weeks. At 7 weeks, two of 29 participants (7%) had lost 5% of their body weight and eight (28%) had lost 3–5%. At 13 weeks, five of 14 participants (36%) had lost 5% of their body weight and six (43%) had lost 3%, showing that some people carried on losing weight after the programme ended.

There was a significant reduction in BMI and weight over 7 weeks (*P*=0.002 for both) and 13 weeks (*P*=0.027 and *P*=0.032, respectively), although the weight reduction did not reach the clinically significant level of 5% to improve health. Waist circumference reduction at 7 weeks was also significant (*P*=0.001).

### Changes in frequency of consumption of healthy and unhealthy foods

Over time there was an increase in recording of food and drink. Individuals were asked to use the appropriate coloured dot for each food and drink they had consumed between sessions. "Green" food and drink consumption increased and "red" and "orange" consumption decreased over the 7 weeks. At the 13-week follow-up, clients had continued to record their intake on photocopied diaries and this was also popular with other clients from the day centre who had not attended the programme.

### Knowledge change over 7 weeks and 13 weeks

A photo was taken after clients had put a set number of food models and packets on green, orange and red cards to show how healthy or unhealthy each food or drink was.

In the first, third, fourth and fifth groups, most items were placed incorrectly at session one, but by the eighth session most were placed correctly. In the second group, the knowledge of clients was already very good, as they had benefitted from knowing those who attended the first group. This mirrored the improvement in knowledge that was apparent during the sessions (as determined by individuals speaking correctly about healthy and less healthy foods) and was reported by carers. At the 13-week follow-up, this improvement in knowledge had been retained.

## Process evaluation

### Challenges

Making a mainstream healthy lifestyle group accessible to adults with ID presented some challenges in terms of recruitment, carer involvement, motivation, group dynamics, medication and facilities.

#### Recruitment

Although recruiting from day centres was straightforward, recruiting those being cared for at home was more difficult. Day centres were able to identify groups of people who were keen to attend what was in effect another "activity" during day centre hours. Individuals cared for at home, however,

had varied existing social commitments and staffing schedules. More administrative time was necessary to contact carers of individuals as opposed to the one call necessary to a day centre.

### Care staff

Day centres allowed for consistent reinforcement of the information learned, in between sessions. This aided communication between carers and also between carers and the individuals with ID. In cases where different carers attended for the same client at home, however, the communication of information between carers was not always apparent. This was clear at some sessions when "new" carers were not aware of the programme content or their role in supporting the individual. A low attendance at the 13-week follow-up was due to difficulties with travel arrangements and a lack of carer communication with the individuals.

### Individual motivation

In one case, an individual did not have any interest in changing their lifestyle. Their carer had instigated their attendance.

### Group dynamics

In groups where individuals did not know each other, time was taken to "settle in" in terms of behaviour, feeling comfortable and making progress. Weight loss started to be seen later in the programme, around week 5, rather than from the start, as was the case in groups who already knew each other. Conversely, existing relationships between attendees sometimes caused friction and affected concentration and attendance. During recruitment, one person refused to come on the programme as another person whom they disliked was attending.

### Medication/other health conditions

One person was on a medication contributing to weight gain, making it difficult to lose weight despite following the programme. There was a lack of facilities to weigh two individuals who were wheelchair users. These people were weighed elsewhere.

## Successes

WWToo was found to be acceptable and enjoyable by the adults attending the groups, and verbal feedback was positive. Feedback during the focus groups held at the end of the intervention demonstrated that participants enjoyed coming to the groups, using the food diaries, losing weight and meeting new people, with some expressing a desire to keep coming to the groups. They showed an understanding of the information covered and the changes they had made to lose weight. The following two comments demonstrate that they were able to ask for healthier foods and, therefore, influence their caregivers' decisions:

*"I said 'no thank you' when my carer gave me sweets and I asked them to buy me porridge."*

*"I went to respite and I told them I don't want pies or crisps. Just fruit and vegetables and Snack a Jacks."*

They also reported the difficulties in trying to eat more healthily, which is often the reality of making healthy choices. One participant summed this up when they said:

*"It was hard to eat less red foods. They were talking to me and saying 'eat it, eat it.'"*

Suggestions to improve the programme included being able to bring a friend or a family member along to some of the sessions and to do more exercise and walking as part of the group programme.

## Feedback from carers

Feedback from attending carers built further on the comments of the adults with ID participating in the programme. The comment, "They are already asking us which foods are healthy and asking us to buy healthy foods," showed that healthy eating communication was continuing between the group sessions. The carers noticed that the participants were stopping to think of what choices they were making and which was the healthier option. They commented on the traffic light colour system to recognise healthy and less healthy foods, saying:

*"I was really surprised how much they understood. It was a lot more than I would have expected because of the colours game."*

The food diaries were popular and described as "a great visual tool and a reminder to take home and use," but the success of individuals depended on how supportive families were at home, with "some being

### Page points

1. This pilot study revealed that day centres have a useful part to play, as they allow reinforcement of the programme content in between sessions.
2. Participants who attended group sessions with strangers took several more weeks to begin losing weight compared with groups in which the participants already knew each other.
3. The sessions were popular with the participants, who showed evidence of improved knowledge. The carers were also surprised by the level of understanding achieved.

**Page points**

1. The results of this study show that adapting a community weight management service for people with ID is feasible; however, a lack of data from the follow-up session means it is difficult to conclude whether the programme is effective in the long term.
2. This poor follow-up was primarily a result of transport difficulties and lack of communication between care staff, suggesting that ongoing support is required.
3. A randomised controlled trial of a similar adapted service, with a longer programme duration and a 6-month follow-up, is underway, and its results will hopefully build on these findings.

more supportive than others."

Care staff from the day centres reported an ongoing effect of the groups outside the sessions. Other members of the day centre were excited about the idea of being healthy and making healthy changes themselves ("The learning is rubbing off on others"). Staff reported that "there are quite a few more people at the day centre who want to come on the programme," and that they would be happy to mix into mainstream groups with the adapted resources. They wanted more groups in order to include other adults with ID from the day centre.

## Discussion

### Statement of principle findings

Recruitment to the WWToo community weight management intervention for adults with ID was feasible. It was more difficult to recruit those who did not attend day centres, and this may have implications in terms of recruitment as more and more day centres close. Attendance was good over the eight weekly sessions and feedback was positive from both participants and their carers. However, follow-up at 13 weeks proved difficult. Statistical analysis showed significant weight loss over the 7-week intervention period, but the intervention was too short for people to achieve a clinically significant weight loss of 5% (assuming weight loss of 0.5 kg per week). A lack of data at 13 weeks means that we do not know whether WWToo is effective at supporting a significant proportion of people to lose a clinically effective amount of weight, but the data we do have show that some people continued to lose weight after the eight sessions and that this weight loss was statistically significant. Therefore, there is some suggestion that WWToo may be an effective intervention if held over a longer period of time.

WWToo was devised in response to an expressed desire of adults with ID to attend an existing weight management programme that had not previously been accessible to them. It was a multicomponent intervention, containing education on a healthy diet and physical activity but was not specific in terms of calorie information or duration of physical activity. Behaviour change strategies included goal setting and self-monitoring of dietary intake, physical activity and weight. Owing to the short duration of the programme, there was no weight maintenance element.

Change in weight and waist circumference from the five runs of the WWToo programme were similar to those achieved in the mainstream Waist Winners group (data not published). WWToo, therefore, helped reduce an identified inequality in health service accessibility which has been noted elsewhere (Spanos et al, 2013a), by tailoring an existing intervention to the cognitive, communication and literacy abilities of adults with ID. The social benefit to the adults attending the groups was also evident from feedback.

Poor attendance at the 13-week follow-up session was due to transport difficulties and lack of communication between care staff. Ongoing support has been found to be important in long-term weight maintenance (Svetkey et al, 2008), and drop-out from weight management interventions is common (Hadžiabdic et al, 2015). As compliance with weight management interventions for adults with ID is affected by factors outside the individual's control, communication with and between carers is essential to optimise attendance and engagement.

### Comparison with other studies

A similar study of an adapted mainstream weight management programme for 60 adults with ID (Shape Up-LD) is being carried out but with a randomised design, comparing the intervention with usual care (Beeken et al, 2013). Similarities include the use of healthy eating advice, physical activity and behaviour change techniques, as well as carer involvement. However, Shape Up-LD differs from WWToo in terms of programme duration (12 weekly sessions with a 6-month follow-up, rather than eight weekly sessions with a 6-week follow-up) and session duration (90 minutes rather than 60 minutes), and it is based at day centres rather than a general community location. Results from the Shape Up-LD randomised controlled trial could hopefully build on the findings of WWToo.

Spanos et al (2013a) identified the importance of carers in tackling obesity in adults with ID and the substantial barriers of an unsupportive internal and external environment and poor communication between carers. This was confirmed in feedback from carers in WWToo, who commented on the influence of an individual's family and other people caring for them. WWToo had a strong element of carer involvement throughout the programme in

terms of attendance, support between sessions and providing feedback and opinion.

It is questionable whether simply providing health information is sufficient to help people with ID to make sustainable changes (Codling and Macdonald, 2011). In WWToo, the participants showed improved knowledge over 7 weeks in how to classify a food as being healthy or unhealthy, and this was maintained at the 13-week follow-up session. This increase in knowledge coincided with an increase in self-monitoring and frequency of consumption of healthy (green) foods and a decrease in unhealthy (red) foods. However, attendance at the 13-week follow-up was low and it is therefore impossible to know if those who did not attend had retained the information or maintained their new behaviours. The difference between simply gaining knowledge and making sustainable lifestyle changes should also be considered, especially in adults with ID, who often do not have control over their lifestyle choices and may be used to others making decisions for them.

Codling and Macdonald (2011) found that health education delivered over 6 weeks on health subjects such as nutrition (good versus bad foods, food group activities based on the Eatwell Plate, weight monitoring and food diaries) enhanced the knowledge of people with ID but that this was not sustained and did not result in health improvements. Participants were unable to transfer this new information into their daily lives, and the knowledge gained did not result in demonstrable improvements in health. The authors recommended that healthcare professionals working with people with ID understand the significant influence of carers and that such support systems are included when facilitating health education for this patient group.

Unlike WWToo, in which the adults with ID and their carers reported changes that they had made, in the study by Codling and Macdonald (2011), virtually all participants found it difficult to identify changes that they had made to their lives following education sessions. The sample size was small ($n$=38), although similar to WWToo ($n$=29). The findings from that and the current study suggest that the health of adults with ID should be the responsibility of the individuals and their surrounding support network. Health education should involve enabling people to make informed, supported choices.

## Strength and weaknesses

WWToo is a real-life, ongoing community programme, and this brings with it both strengths and weaknesses. Its greatest strength is that it demonstrates that a community lifestyle programme can be adapted and run for adults with ID, thus reducing inequalities in accessing healthcare. Feedback was positive and it has provided us with an opportunity to see in practice how weight management interventions can be run for adults with ID.

However, it had a small sample size of 29 people in five groups, and it has missing data, mainly for the 13-week follow-up session, where the did-not-attend rate was over 50%. It is also possible that those who did not attend follow-up were more likely to have been unsuccessful in their weight loss. There is no maintenance part to the programme, which goes against guidelines for weight management; however, this is also the case with the mainstream Waist Winners programme. Because of this, there is no way of knowing whether changes would be maintained over time.

As this is a programme evaluation that was written up as a paper retrospectively, there was no randomisation, sample size justification or control of variables in the analysis of weight change. It is also possible that the lack of blinding may have introduced measurement bias. The reported improvements in knowledge and food choices were not quantified; therefore, it is impossible to know if there was a significant improvement or whether this was just the perception of the group leader and carers.

## Meaning and implications

Many weight management interventions are run by the NHS and health promotion departments, and it is debatable whether these are effective in terms of weight loss and long-term weight maintenance. The results from WWToo show that such interventions can be run for adults with ID and result in some statistically significant weight loss. However, conclusions cannot be drawn as to their effectiveness in achieving clinically significant weight loss for health, due to their short duration. Addressing inequalities in health and access to healthcare are necessary, however, and WWToo shows how an existing weight management intervention can be adapted and accepted by adults with ID.

### Page points

1. A previous study has shown that delivery of health education to people with ID without carer support leads to improved knowledge in the short but not long term.
2. The involvement of carers is an essential component in weight management services for people with ID.
2. Future research into the Waist Winners Too programme requires a more robust design with longer follow-up and, possibly, a longer course duration.

**Box 1. Recommendations for future weight loss interventions for people with intellectual disabilities.**

- Aim for small group sizes of between six and eight people, together with a supporting person for each individual.
- Give notice to allow carer time to be arranged.
- Communicate regularly throughout and use reminder letters to encourage attendance.
- Recruit from already formed groups who know each other.
- Hold groups in accessible locations.
- Groups should be led by an experienced dietitian, with group and administration support.
- Allow flexibility for other influential family members or friends to attend with the person.
- Encourage people to attend follow-up. This could include staying in contact with individuals and/or their supporting person in the weeks leading up to the follow-up session. Some dedicated support time is necessary for this.

## Future research

Given the limitations of this study, reflecting its nature as a retrospective programme evaluation, there is a need for more robust methods in future studies. This could include a controlled design and the researchers measuring outcomes whilst blinded to the allocation of participants. Collecting and analysing food diaries in terms of amounts of "red," "green" and "orange" foods consumed would enable more definite conclusions to be drawn regarding changes in eating habits.

These encouraging findings suggest that it would be useful to determine whether WWToo was effective at helping a significant proportion of people lose a clinically significant amount of weight if the programme was run over a longer period of time. By making the eight sessions run fortnightly, individuals would be attending the programme over 14 rather than 7 weeks and, with a follow-up session 6 weeks after the end of the programme, we would be able to establish the degree of weight loss over 20 weeks. It would also be interesting to determine whether lost weight is maintained by including a weight maintenance component to the programme and offering longer-term follow-up. Recommendations based on our findings are listed in *Box 1*.

## Conclusion

WWToo was a well-received community weight management intervention for adults with ID, adapted as closely as possible from the existing mainstream Waist Winners programme, which helped to reduce inequalities in access to healthcare. However, although it was popular with adults with ID and their carers and resulted in statistically significant weight loss, clinically significant weight loss was not achieved over the 13 weeks. ■

### Other useful resources

- The British Institute of Learning Disabilities provides links to easy-to-read information: www.bild.org.uk/easy-read/easy-read-information
- Easy Read Online specialises in making information accessible for people with intellectual disabilities: www.easy-read-online.co.uk
- Nutrition and Diet Resources UK (NDR-UK) provide specific diet information for people with intellectual disabilities: www.ndr-uk.org/vmchk/People-with-learning-disabilities/View-all-products.html
- Books Beyond Words provides resources for people who find it easier to understand pictures than words: www.booksbeyondwords.co.uk

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