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Barriers and facilitators to the implementation of a community-based, multidisciplinary, family-focused childhood weight management programme in Ireland: a qualitative study

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ABSTRACT

Objective To explore the barriers and facilitators experienced by those implementing a government-funded, community-based childhood weight management programme.

Design Qualitative using semistructured interviews.

Setting Two geographical regions in the south and west of Ireland.

Participants 29 national-level and local-level stakeholders responsible for implementing the programme, including professionals from dietetics, psychology, public health nursing, physiotherapy, health promotion and administration.

Methods Framework analysis was used to identify barriers and facilitators, which were mapped onto six levels of factors influencing implementation outlined by Grol and Wensing: the innovation, the individual professional, the patient, the social context, the organisational context and the external environment.

Results Most barriers occurred at the level of the organisational context. For all stakeholders, barriers arose due to the multidisciplinary nature of the programme, including the lack of role clarity and added complexity of working in different locations. Health professionals' low-perceived self-efficacy in approaching the subject of weight with parents and parental resistance to hearing about their child's weight status were barriers to programme implementation at the individual professional and patient levels, respectively. The main facilitators of implementation, occurring at the level of the health professional, included stakeholders' recognition of the need for a weight management programme and personal interest in the area of childhood obesity. Having a local lead and supportive colleagues were further implementation drivers.

Conclusions This study highlights the complexities associated with implementing a multidisciplinary childhood weight management programme, particularly translating such a programme to a community setting. Our results suggest the assignment of clear roles and responsibilities, the provision of sufficient practical training and resources, and organisational support play pivotal roles in overcoming barriers to change. This evidence can be used to develop an implementation plan to support the translation of interventions into real-world settings.

Strengths and limitations of this study

- This is one of few qualitative studies, and the first in Ireland, that explored the factors that hampered and facilitated the implementation of a community-based, multicomponent childhood weight management programme from a wide range of stakeholder perspectives.
- While interviewing a wide range of stakeholders provided a thorough overview of the relevant issues, the themes that emerged were relatively homogeneous across disciplines, which added to the authority of the findings.
- Data were analysed using a systematic approach, and an adapted version of the implementation model by Grol and Wensing was used to classify the barriers and facilitators into levels.
- Using a preconceived framework runs the risk of prematurely excluding other ways of organising the data. However, data were analysed inductively first before mapping onto the Grol and Wensing framework.

BACKGROUND

Childhood obesity is a worldwide public health concern, and there is now widespread agreement that the complex aetiology of the issue requires a multifaceted approach to treatment.[1–3] International recommendations agree that initiatives to reduce and manage childhood obesity should be family-focused and combine healthy eating, physical activity and behavioural components.[2 4 5] In 2016,

the WHO published their report of the commission on ending childhood obesity within which they echo these recommendations but also add that they should be delivered by '*multi-professional teams with appropriate training and resources*'[5] (p11). These recommendations, however, have been largely based on small-scale studies conducted in controlled settings with specialised staff, thus limiting their applicability and generalisability to 'real-world' settings such as communities or hospitals.[2]

In public health, once interventions have undergone innovation testing and demonstrated efficacy, the next steps include replication and 'scale-up' to larger populations in 'real-world' settings.[6] There are relatively few examples of published studies reporting on the pragmatic application of effective childhood obesity treatment programmes.[7 8] While implementation issues such as engagement, local context, staffing and funding are likely to be common across many public health interventions,[8] little is documented about the experience of those implementing childhood weight management programmes and even fewer studies detail the factors influencing implementation.[9] For example, a lack of providers trained in evidence-based care for childhood obesity was listed by delegates attending a recent conference in the USA as a major barrier to treatment implementation.[3] Furthermore, with the majority of families declining referral and up to 75% of families discontinuing care, poor engagement with families has proven to be a significant challenge facing teams tasked with implementing such programmes.[10 11]

When introduced under less-controlled conditions, insight into the factors influencing implementation is crucial. Therefore, the aim of this study was to explore and categorise the barriers and facilitators experienced by those implementing a government-funded, community-based multicomponent childhood weight management pilot programme to inform their eventual scale-up.

METHODS

Intervention and context

Although trends appear to be stabilising in Ireland, prevalence of childhood obesity remains high.[12] Currently, in Ireland, almost one in four children is either overweight or obese,[13] and there is no standardised community-based weight management programme available to those children with obesity. Community programmes are usually provided on an ad-hoc basis and are rarely evaluated or sustained. In an attempt to identify a universal treatment, the Irish Health Service Executive planned to pilot the *W82GO-community* programme in two communities. This programme had previously demonstrated effectiveness in the hospital setting.[14] Its effectiveness in the community setting was to be assessed with the intention of nationwide roll-out should the programme demonstrate a positive impact on body mass index (BMI). The Template for Intervention Description and Replication checklist[15] was used to specify the details of programme delivery and is included in online supplementary file 1.

In summary, *W82GO* aims to improve nutrition, increase physical activity and facilitate behaviour change over 1 year.[14] It was designed as a hospital-based, family-focused multidisciplinary programme grounded in behavioural change theory and was modelled on best practice recommendations.[2 5 16] The primary goal was a reduction in BMI SD score and has previously been found to be effective when delivered in a hospital outpatient setting.[14]

The *W82GO* programme involves an initial individual assessment to ascertain family eligibility followed by two phases. Families were eligible for the programme if the child was between 5 and 7 years old, was obese (BMI ≥98th centile), had no limitations to engaging in physical activity, was not taking medication known to affect body weight and had at least one parent/carer who was able to attend each of the programme sessions. Siblings were also welcome to attend the sessions. Phase 1 involved an initial intensive phase consisting of six weekly group sessions for both the child and his/her parent/carer. These sessions lasted approximately 1½–2 hours and incorporated educational and practical sessions to increase physical activity, improve nutrition and increase sleep. On completion of phase 1, children returned with their parents/caregivers for three booster group sessions at 3, 6 and 9 months. These sessions aimed to encourage the family to continue with lifestyle change and to manage any barriers to change. Finally, at 12 months, the children and their parents/caregivers returned for a final individual assessment to document any changes and make plans for sustainment.

For the current study, *W82GO* was adapted and implemented in two community sites (site A and site B) from April 2015 for 12 months and subsequently renamed *W82GO-community*. Both sites were chosen as they were part of a national pilot growth measurement programme and included a mix of rural and urban towns in the west and south of Ireland. Initial assessments took place in community healthcare offices, while subsequent group sessions were delivered on weekdays in the afternoon at a local sports or community centre. The programme was offered free of charge and was delivered by existing community health professionals including dietitians, psychologists, public health nurses, physiotherapists, health promotion officers, area medical officers and administrators. These health professionals were brought together as a team and asked to deliver this programme as part of their existing roles. Table 1 outlines their specific responsibilities during programme implementation. All staff were invited to take part in a training programme prior to programme commencement. Training included a needs assessment, a 1-day educational training course and 2 days of clinical shadowing with an experienced *W82GO* programme practitioner at the National Children's University Hospital, where it was developed. Each community practitioner was supplied with a user manual,

Table 1 Health professional roles during the implementation of *W82GO-community*

Health professional	Role in implementation of *W82GO-community*
National manager (n=1)	Overseeing implementation of *W82GO-community* in both community sites
Local manager (n=2)	Overseeing implementation of *W82GO-community* at the local level; local manager in site B was involved in referring to the programme
Physiotherapists (n=4)	Involved in initial assessments and delivering programme material
Dietitians (n=5)	Involved in initial assessments and delivering programme material
Psychologists (n=3)	Involved in initial assessments and delivering programme material
Public health nurses (n=13)	Referral to the programme
Area medical officers (n=4)	Involved in initial assessments
Health promotion officers (n=4)	Delivering programme material
Administration (n=2)	Involved in contacting parents regarding programme sessions

which outlined the programme and detailed the content for both phases.

Study design and sample

A qualitative approach using semistructured interviews was used. We adopted a purposive approach to sampling, inviting stakeholders with knowledge and experience of planning, coordinating or delivering *W82GO-community*. To ensure representation from each stakeholder group and given the small number of individuals in each, we invited all stakeholders to participate (n=38, see table 1). All stakeholders were contacted by email in the first instance and followed up by telephone contact during which the researcher outlined the study aims and methodology.

Data collection

All participants were invited to take part in face-to-face interviews. However, due to time and scheduling difficulties, a mixture of telephone and face-to-face interviews were conducted between August 2015 and February 2016 (during programme implementation). To ensure consistency all interviews were conducted by a single trained qualitative researcher (EK) using a semistructured topic guide. Participants knew the interviewer as an independent programme evaluator conducting this research as part of her PhD training. The topic guide was developed based on relevant literature and focused on seven issues: (1) awareness of the issue of childhood obesity and existing healthy lifestyle programmes; (2) perceived value of and interest in community evidence-based treatment programmes; (3) communication of the *W82GO-community* pilot programme; (4) specific role in implementing *W82GO-community*; (5) barriers and enablers to implementation; (6) perceived successes and challenges experienced; and finally (7) recommendations for the future roll-out of childhood weight management programmes in Irish communities. Core topics were the same across stakeholders, and particular probes were added for specific stakeholder groups depending on their role during the programme. For example public health nurses were specifically asked to report on the barriers and facilitators to referral. Prompts and probes were used throughout the interviews to stimulate discussion. Prior to each interview, participants were informed about the purpose of the study, that participation was voluntary and that they could terminate the interview at any stage for any reason. Signed informed consent was obtained before each interview, which lasted on average 45 min. Interviews were digitally recorded and transcribed verbatim. Data collection and analysis were iterative. Data saturation was judged to have been reached between interviews 20 and 25. However during recruitment, other stakeholders had expressed an interest in sharing their experience and so were given the opportunity to participate. The data from these interviews overlapped with the existing coding framework and thus contributed to the main themes. Ethical approval was granted by the Clinical Research Ethics Committee of the Cork Teaching Hospitals.

Data analysis

Framework analysis was used to analyse the data.[17] This approach enabled the investigation of a priori objectives while also allowing new themes to emerge from the data. One researcher (EK) transcribed and coded each transcript, while another (SMH) undertook initial coding of a selection of transcripts. Similarities and differences between the coding labels and definitions were discussed, and the coding framework was refined and applied to the remaining interviews. While this process was conducted at an early stage of the analysis, the coding process was iterative; emergent codes were added to the framework and contributed to the development of themes across the interviews. Codes were synthesised and grouped according to the dominant emergent themes. Themes were also analysed across stakeholder groups to identify similarities and differences across disciplines and positions. These themes were mapped onto a framework developed by Grol and Wensing,[18] which specifies six levels of factors that facilitate or impede implementation success: the innovation, the individual professional, the patient, the social context, the organisational context, and the economic and political environment.[18] Mapping

Table 2 Barriers to and incentives for change at different levels of healthcare*

Level	Barriers/Incentives
Innovation	Advantages in practice, feasibility, credibility, attractiveness, accessibility
Individual practitioner	Awareness, knowledge, attitude, motivation to change, behavioural routines
Patient	Knowledge, skills, attitude, compliance
Social context	Opinion of colleagues, culture of the network, collaboration, leadership
Organisational context	Organisation of care processes, staff, capacities, resources, structures
Economic and political context	Financial arrangements, regulations, policies

*Grol and Wensing's multilevel model.[18]

emergent themes to the framework at this stage of the analysis ensured that we did not impose a predefined structure or terminology on participants' accounts. This well-established framework (table 2) was chosen because it describes how barriers and facilitators can be identified, categorised and used for the development of tailor-based implementation strategies to facilitate desired change,[18] in this instance implementing the *W82GO-community* programme. Discrepancies on the mapping of themes were discussed until consensus was reached. NVivo V.10 (QSR) was used to manage data analysis.

RESULTS

Participant characteristics

We contacted 38 stakeholders and recruited 29 interviewees (7 face-to-face, 22 telephone) from a range of disciplines and professions, yielding a response rate of 76% (table 3).

Barriers and facilitators

For all participants, barriers arose due to the multidisciplinary nature of the programme, including the lack of understanding of other disciplines, lack of role clarity as well as the added complexities of working in different locations. Participants' recognition of the need for a childhood obesity programme and their own personal interest in the area were the main drivers of implementation, while the presence of a local lead and supportive colleagues were further enabling factors. Views on the main barriers and facilitators to implementation were consistent across stakeholders; despite different disciplinary backgrounds, they had common experiences as implementers adding to the authority of the findings. Table 4 presents the perceived barriers and facilitators from the perspective of the stakeholders mapped onto the six implementation levels with quotations to illustrate each level.

Table 3 Stakeholders recruited from site A and site B

	Site A	Site B	National	Total
National manager	NA	NA	1	1
Local manager	1	1	x	2
Physiotherapists	2	1	1	4
Dietitians	3	x	x	3
Psychologists	1	1	x	2
Public health nurses	6	3	x	9
Area medical officers	x	2	x	2
Health promotion officers	3	1	x	4
Administration	1	x	1	2
Total	17	9	3	29

The innovation

In terms of the *W82GO-community* pilot programme (innovation), while stakeholders believed it came from a credible source having been developed by one of the national children's hospitals in Ireland, many had doubts over its accessibility and about how well it would transfer to the community setting. This uncertainty resulted in feelings of unease, and community practitioners were hesitant to get involved initially. One stakeholder explained how she worried at length about what impact the programme would have on existing services and how feasible it was to run in the community: "*The setting is different. We were taking a programme that was from an acute setting into the community - that possibly was where the breakdown happened because you didn't have the same services. You didn't have people on site. There was travel, there was all these other logistics that weren't thought about when they were moving an acute programme to the community.*" (W82GO021)

In particular, stakeholders believed they were dealing with a very different cohort of families than the hospital-based programme, as described by the following quote: "*You've a very different kind of child coming into the hospital than you do in the general community. You've a very different kind of parent. Even if you had a parent who was resistant to hearing about their child being overweight, if they are attending hospital appointments regularly they are obviously already engaged about their child's health… so I believe that's a major barrier straight away that they possibly didn't have to face in the hospital you know?*" (W82GO010)

In addition to the differences in the target group, stakeholders believed the programme was too medicalised for the community setting and some felt it did not fit with their perception of a healthy lifestyle programme. This was due to the number of health professionals involved, and in particular the involvement of medical staff.

Table 4 Perceived barriers and facilitators to the implementation of *W82GO* in the community

Levels	Quotations to illustrate the identified levels
The innovation	
Credibility	* "*I suppose because it was attached to an acute hospital and because there was a consultant paediatrician and you had a lot of disciplines and a lot of very competent professionals involved, and that it had been successful when delivered there. That was the main reason I believed in the programme I suppose.*" (W82GO003)
Attractiveness (ie, multidisciplinary nature)	* *"I do think the MDT approach was superb. I think that if you're going to do something for a child who is obese then you need it.*" (W82GO018)
Transferability (ie, different population, different resource issues)	† "*You are talking about a different cohort of families. Families who are already in the system. They are used to going in for appointments. You're talking about a group who've already had difficulties identified by their GP or whoever so by the time they are going for the group they are already sold, they are used to it and they are used to that sort of setting which is very kind of fast and quick-paced and very focused.*" (W82GO002)
Relevance (eg, too medicalised)	† *"I think the area medical officer, the medical input I think is probably optional or at least part-time. It's of less importance. It medicalised this community programme a bit too much."* (W82GO021)
The individual professional	
Awareness of the problem/recognition of need	* "*It is a problem, most definitely. I think it's a time bomb that went off over the past 10 years and that we are behind it. Way behind it and the sooner we get going and get doing something the better.*" (W82GO013)
Personal interest and motivation	* "*So that enthusiasm and that dedication made it happen, it was key to its success.*" (W82GO011)
Low self-efficacy	† "*I wouldn't be especially skilled in assessing children you know with obesity and that kind of thing… Or talking to parents about it… I was concerned about my own ability to, to get up to speed fairly quickly.*" (W82GO015)
Attitudes (ie, multidisciplinary perspectives)	† *"I suppose the other main challenge was the multidisciplinary nature of the programme. I think the challenges of it is when you put together a team obviously from all different backgrounds not with different agendas but with different experiences and knowledge and different perspectives.*" (W82GO026)
The patient	
Parental resistance (weight misperception and denial)	† "*I think there was a denial that there was anything wrong with their child, or that their child was overweight. There was a total denial about that because the population in general look like their child. Their child may be a little bit above of what the normal population looks like, but they didn't see that as an issue at all.*" (W82GO028)
The social context	
Supportive colleagues	* "*Once she came on board there was two of us, it was a lot easier to share the workload and if I couldn't be there for a day she could be there for it so I suppose that definitely took the load off and she also acted as a sounding board you know? If there was something I wasn't sure of I could say what do you think about this and vice-versa, you know what I mean?*" (W82GO016)
Leadership	* "*I mean if we didn't have her pulling all those people and bits together it wouldn't have worked. She did a great job in I think the co-ordination role cause I think running something like this with people dispersed across a whole county and city then you need a project manager on the ground.*" (W82GO017)
Collaboration between national and local teams	† "*I did feel there was a very big gap once the decision had been made nationally to roll this out, there was a very big gap between us on the ground and them, there was no consultation or collaboration with people on the ground and I think that's where the problem was.*" (W82GO003)
The organisational context	
MDT structure (logistics)	† "*I suppose one of the challenges definitely is that the health professionals are all in different places.*" (W82GO004)
Resources	† "*I guess time constraints 'cause a lot of people were pressurised for time. Like even ourselves we wouldn't have been able to go to every session and I would have liked to have gone but we just couldn't. We didn't have the time. We didn't have the staff to be able to attend so I think time and resource pressures were the main concerns.*" (W82GO013)

Continued

Table 4 Continued

Levels	Quotations to illustrate the identified levels
Training	† "*It (the training) was as if they were trying to sell us the programme when you know we were already there. We were already sold. I mean we knew why it was important… because of the obesity issue so there was no need to go over all that again. They should have just focused on how to actually implement and deliver the programme.*" (W82GO011)
External environment	
Lack of existing services	* "*There is nothing out there so that's where it was great to have something like W82GO. That if you did see a child that you knew there was something. Some sort of pathway.*"
Media	* "*There was a huge media campaign ongoing around the time we were implementing the programme which got some parents thinking and talking. I mean those things do have a big impact. Things like Operation Transformation that's aired in January have a huge impact. I think we need more media on the immediate impact of childhood obesity and not just the long-term impacts.*" (W82GO003)
	† "*I think maybe it's (obesity) hyped up a little bit in the media. I think maybe that in itself could be making things difficult for parents to come forward. We don't have any other disease related issue hyped up as much you know? If you had a child with obesity you would be feeling a small bit cringe like. You'd be wanting to find somewhere private to get some help like you know.*" (W82GO020)
Stigma	† "*Wouldn't have their child come to a programme in case they'd be labelled overweight or obese. There is a stigma and just from hearing again I wasn't in the parents room, but just from hearing other colleagues feedback it's the parents fear of feeling judged and blamed.*" (W82GO002)

*Facilitators.
†Barriers.
GP, General practitioner.
MDT, Multidisciplinary team

Furthermore, many stakeholders thought the collection of clinical markers of disease and medical history during the initial assessments was unnecessary. As one stakeholder described: "*the initial assessments were totally irrelevant. I mean when I heard that bloods were being taken I thought oh for God sake. You know we were supposed to be running a community-based education intervention where the focus should be on changing lifestyles. It's not our job to be diagnosing other problems.*" (W82GO005)

Individual professional

While stakeholders both applauded and recognised the need for a multidisciplinary approach to the treatment of childhood obesity, it created significant barriers to programme implementation. The variety of community health professionals involved in the implementation of *W82GO-community* with differing perspectives and priorities led to role uncertainty and in some cases a perception of disrespect between disciplines. One stakeholder captures this theme in the following quote: "I suppose the other main challenge was the multidisciplinary nature of the programme. I think the challenge is when you put together a team obviously from all different backgrounds not with different agendas but with different experiences and knowledge and different perspectives." (W82GO026)

Stakeholders described how: "*there was quite a lack of understanding of the various discipline roles and responsibilities and some were even unsure of what some disciplines did.*" (W82GO012)

This lack of understanding sometimes resulted in tension between disciplines and created a challenging environment to work in. Others recalled feeling concerned about where they fit into the programme and believed a structured programme plan outlining specific roles and responsibilities was lacking.

Another key barrier that emerged at the level of the individual professional was their low-perceived self-efficacy in dealing with childhood obesity and/or working with this young age group. In particular, many stakeholders reported their fear of approaching the subject with parents given the risk of upsetting them or *"rocking the boat."* One stakeholder reported that: "*It's something you want to do something about but it can be very difficult to approach the subject with parents. It's a very sensitive issue.*" (W82GO001)

Stakeholders in site A had received motivational interviewing workshops for childhood obesity prior to our study. This training equipped these stakeholders with increased skills and confidence in working with families on weight management issues. As one stakeholder described, post motivational interviewing training she was not: "*frightened of dealing with them [parents] at all, It's kind of second nature to me now… I know the buzz words, I know exactly what to say to them. And body language, the whole lot.*" (W82GO002)

Others felt it was quite *"alien"* to work with children aged 5–6 years and believed they had no appropriate training to do so.

Despite these barriers, all stakeholders were aware that childhood obesity was an issue in their respective communities and recognised the urgent need for treatment:

"*Yeah I think it's a time bomb that went off over the past ten years and that we are behind it, way behind and the sooner we get going and doing whatever we can the better.*" (W82GO012)

Furthermore, stakeholders' personal interest in tackling the issue, and their motivation and dedication to seeing the programme through, were what many believed to be the main drivers behind programme completion: *"It went ahead due to a lot of determination and not because it was easily implementable… if that's a word.*" (W82GO014)

Patient

Low programme uptake was a key issue during implementation. Many stakeholders believe that obesity has become the norm in society and as a result: "*people don't recognise overweight people as being in that actual overweight category because it's become normal to be surrounded by overweight people.*" (W82GO021)

In terms of the *W82GO-community* pilot programme, almost all stakeholders indicated that although children measured as obese on the growth charts, their parents seemed unaware of any excess weight, and once informed, many refused to accept that their child was obese. As a result of this misperception, parents did not realise or accept the need for treatment. Speaking of her experience, one stakeholder described how: *"other parents just didn't reply or didn't get in touch because they believed everything was ok and there wasn't a problem with their child. They didn't need any programme. I think that definitely was a huge problem out there in the community setting."* (W82GO012)

Because of this low recognition among parents, many stakeholders recalled the resistance they faced when trying to discuss the issue with them and their fear prior to making contact with parents. One stakeholder explained how some parents would: "*be really angry so you're taking angry phone calls in the evening. You know when you come in from a day's work so it was really difficult.*" (W82GO002)

Social context

Local-level stakeholders believed there was a certain level of *'naïvety'* at national level about the reality of rolling out the pilot programme on the ground. They felt consultation during the planning stage was lacking and that national-level stakeholders had: "*little experience of the practical aspects of childhood obesity*" as "*no one was actually working with obese children or even groups on a day to day basis.*" (W82GO004)

As a result unrealistic expectations and time frames prevailed, particularly during the recruitment phase. This led to frustration and confusion among local-level health professionals during implementation.

Communication between national-level and local-level stakeholders was considered poor. However, the presence of a local lead facilitated the exchange between staff on the ground and management at national level and was seen by almost all stakeholders as crucial for programme implementation. Furthermore, stakeholders felt that because of the multidisciplinary approach of the programme, *"you needed someone on the ground"*; if they did not have a local lead: *"pulling all those people and bits together, it wouldn't have worked because running something like this with people dispersed across a whole county and city is difficult.*" (W82GO005)

The presence of supportive colleagues and management were identified as further enabling factors.

Organisational context

The multidisciplinary structure of the programme also created barriers at the organisational level. In addition to differing individual perspectives and priorities, the added complexities of working in different locations created difficulties during programme implementation. In many cases stakeholders did not: "*work at the same site… or even the same town which was a challenge*" as it *"took up a lot of time organising between schedules and travelling to meet and go through practicalities."* (W82GO007)

In addition to these challenges, at the organisational level, stakeholders reported that implementation was hampered due to insufficient resources (ie, staff and time) and training. It was reported that two other proposed areas withdrew from the pilot programme because of the lack of staff and leadership on the ground to run the programme. Stakeholders felt that they had very different resource issues to the hospital-based teams who are: "within the confines of a hospital… so they would or should have the same vision or focus… whereas we can see now with a community based programme the professionals can be very different in their training, they can have a different ethos in the departments within their community. It's very individual. We have different line managers and different resources to deal with." (W82GO011)

Some stakeholders *"didn't want to get involved because of existing workloads"* and the lack of extra resources or allocated time to implement the pilot. Furthermore, while acknowledging the little time hospital staff had to develop community-specific training, local-level stakeholders felt they needed more *"practical and tailored"* information. Many described the training they received as *"too general"* and stated that: *"it would have been very helpful to have had more practical tips on how to actually run the programme session to session with this age group."* (W82GO012)

External environment

In the Grol and Wensing model, the 'economic and political context' refers to financial arrangements, regulations and policies—themes that did not emerge during our research. Therefore, the sixth level was renamed 'external environment' to include wider societal perspectives and determinants.

In terms of the external environment, the lack of existing services to treat and manage childhood obesity meant many stakeholders were excited to come on board and implement this new initiative. One stakeholder described: "*waiting for years for something to happen in this area.*" (W82GO005)

The media was recognised as both a barrier and a facilitator to programme implementation. While stakeholders believed TV and radio campaigns have the potential to raise awareness, they felt that the issue is *"also getting very bad press"* and being *"hyped up a little bit,"* which in itself may make it more difficult for parents to come forward. Additionally, staff felt that the stigma surrounding childhood obesity and weight management programmes created a significant barrier to programme implementation as they believed many parents were reluctant to attend or even talk about the issue of weight for fear of singling out or *"labelling"* their child.

Vision for the future

In terms of the future scale-up of *W82GO-community*, the majority of stakeholders recommend establishing dedicated childhood obesity teams within the community, *"ideally people who are located at least in the same town,"* who can offer a range of interventions for different levels of need. One stakeholder described: "*a tiered effect, for example there could be a level one which could be a generic workshop or talk that you could roll-out in lots of schools. A level two then would be a seminar for parents and level three would be a group programme. Level four then could be actual specific one on one interventions.*"

Having a tiered approach would enable the team to match the level of need with the family and allow families to choose where on the scale they would best fit.

DISCUSSION

This study identifies the barriers and facilitators to implementing a community-based weight management programme from the perspective of stakeholders tasked with delivering such a programme. While community-based weight management programmes have become an important response to the obesity epidemic, given their potential reach and accessibility for families, the majority are based on small, efficacy trials,[2] and little is known about the factors influencing their implementation in real-world settings. Our findings suggest that more consideration is needed during the planning stages, including the creation of a structured programme plan outlining specific roles and responsibilities. Local-level stakeholders believe they should be involved in this process as they have practical experience of working with families on the ground in their respective communities. In addition to their experience, the stakeholders we interviewed are keen to get involved in community-based weight management treatment provided the appropriate training and resources have been allocated. Within their 10-year framework for action, the Irish Government recognises the need for additional resources to be assigned and seeks to: *'mobilise the health services to better prevent and address overweight and obesity through effective community-based health promotion programmes'*.[19]

The government also seek to provide training and skills development. Given this renewed commitment by the Irish Department of Health to empower community teams and communities, the road ahead looks promising.

A key barrier to the implementation of *W82GO-community* was perceived parental resistance, which occurred at the patient level but is also intrinsically linked to the external environment where the increasing normalisation of overweight and obesity coexists with a stigma that surrounds the issue. Stakeholders delivering the programme described parental resistance occurring at every stage of the implementation process and suggested that parents did not appear to recognise the issue in their own children. As a result stakeholders believed that parents did not see the need for treatment or refused to accept that their child was carrying excess weight. While parental attitudes reported in this study were based on the perceptions of staff, a lack of parental awareness regarding their child's weight and resistance towards discussing weight issues has been documented in previous research.[20–24] This may be due in part to the belief that obesity has become the norm in society, a point that was suggested by stakeholders in this study, and previously outlined in the literature.[25] It is also possible that parental resistance stems from the stigma that is associated with excess weight and obesity[8 21–23] or the negative media attention obesity has received. The framing of coverage by media may affect people's views about the causes of childhood obesity and the most appropriate strategies for addressing the problem.[26] Our findings highlight the need, at a policy level, for positive awareness-raising campaigns to encourage parental recognition of healthy childhood growth and development, in addition to knowledge regarding the importance of identifying obesity early in childhood.

Low-perceived self-efficacy in approaching the subject of weight with parents was a barrier facing staff during implementation. Stakeholders in this study see the need for a childhood weight management programme in their communities and acknowledge their professional responsibility to get involved. However, they appear uncomfortable and unequipped to do this. This is consistent with previous research that found that low-perceived skills and low-perceived self-efficacy hamper the implementation of such programmes.[20 27–30] In our study motivational interviewing workshops equipped stakeholders in site A with increased skills and confidence in working with families on weight management issues. Motivational interviewing is a goal-orientated, patient-centred approach based on the use of communication skills to understand individuals' motivation for behaviour change[31] and has been found to be useful when applied in healthcare settings.[32] We therefore consider it important that healthcare professionals involved in the implementation of obesity programmes receive this training prior to programme commencement.

The multidisciplinary structure of the programme emerged as both a barrier to and facilitator of implementation and spread across many of the levels outlined by Grol and Wensing. While acknowledged that it was

required to treat such a complex health issue, it resulted in lack of role clarity, a lack of understanding of specific discipline roles and led to difficulties in scheduling. This may in part be due to the structure and governance of community health services within Ireland. While there is a vision for multidisciplinary working set out in multiple policy documents and an emphasis on integrated care,[33] the system is not set up to support the concept. Stakeholders believe a simple roundtable introduction whereby practitioners could share their professional background and outline their specific role within the project would have helped overcome this ambiguity. They suggest it is a simple but often overlooked detail. Furthermore, stakeholders felt the establishment of a local lead was critical in assisting multidisciplinary working while also facilitating discussion between national and local levels. Laws *et al*[34] also highlight the importance of having key local individuals responsible for driving and coordinating research translation.

Finally, an important finding from this research was the inherent problems in a *'one size fits all'* approach to community-based treatment. Stakeholders in our study suggest a tiered approach may be more suitable, beginning with a brief intervention that intensifies based on a child's degree of obesity, the family's motivation and the capacity of the community and/or healthcare provider. This finding is in line with a suggestion from Staniford *et al*,[35] who suggest that future interventions should tailor treatment according to participants' age, degree of obesity and their readiness or confidence to change. In addition to tailoring a programme to the individual, programmes need to be adapted for the community setting. Stakeholders in our study raised concerns that the *W82GO* programme, having been developed in a hospital setting, was too medicalised for community practice. In particular, the lengthy assessment process, which in some cases involved blood tests and the presence of medically trained doctors, was unnecessary for a community-based lifestyle programme. This finding is consistent with previous research conducted by Watson *et al*,[36] who evaluated a family-based childhood obesity treatment intervention and found they needed to modify the assessment process by replacing community paediatrician assessments with parent/carer self-completion forms for reasons of time and cost. To develop a full picture of treatment, future research should examine what aspects of the programme work, for whom, in what context and why.

While this study provides important insight into the implementation of childhood obesity programme in the community, several limitations should be acknowledged. According to de Casterlé *et al*: 'using a preconceived framework runs the risk of prematurely excluding alternative ways of organising the data'[37] (p362).

However, data were analysed inductively first before mapping emergent themes onto the Grol and Wensing framework. In subsequent phases of analysis, we adapted the framework to capture the influence of the external environment on implementation. Social desirability bias is a risk when stakeholders are known to the researcher conducting the interviews. In this case the stakeholders knew the researcher as the programme evaluator. However, we do not believe this bias had an effect as stakeholders were keen to *"tell their story."* It is also important to note that parental attitudes reported in this study were based on the perceptions of staff delivering the programme. Other studies have identified differences between parents, staff and children in terms of their attitudes towards childhood obesity treatment.[35] We are conducting further research with parents and children to understand the factors influencing their decisions to engage or disengage with obesity treatment.

CONCLUSION

In light of the dearth of knowledge available on the translation of multicomponent childhood weight management programmes to community settings, this study highlights the barriers and facilitators to implementing such programmes from a wide range of community healthcare and administration perspectives. Our results suggest the assignment of clear roles and responsibilities, the provision of sufficient practical training and resources, and organisational support play pivotal roles in overcoming barriers to change. Furthermore, our findings on the challenges of multidisciplinary working and translating hospital programmes to community settings are applicable to the implementation of interventions beyond that of childhood weight management. This evidence should be used to develop implementation plans to improve the translation of interventions into real-world settings.

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REFERENCES

1. Flynn MA, McNeil DA, Maloff B, *et al*. Reducing obesity and related chronic disease risk in children and youth: a synthesis of evidence with 'best practice' recommendations. *Obes Rev* 2006;7(Suppl 1):7–66.
2. Oude Luttikhuis H, Baur L, Jansen H, *et al*. Interventions for treating obesity in children. *Cochrane Database Syst Rev* 2009:Cd001872.
3. Wilfley DE, Staiano AE, Altman M, *et al*. Improving access and systems of care for evidence-based childhood obesity treatment: Conference key findings and next steps. *Obesity* 2017;25:16–29.
4. National Institute for Health and Clinical Excellence (NICE). *Weight management: lifestyle services for overweight or obese children and young people. Clinical Guideline*. London: NICE, 2013.
5. World Health Organisation. 2016. Report of the commission on ending childhood obesity. Geneva, Switzerland: WHO Document Production Services.
6. Nutbeam D, Bauman A. *Evaluation in a Nutshell: a practical guide to the evaluation of health promotion programs*. 2. Australia: McGraw-Hill Education, 2013.
7. Welsby D, Nguyen B, O'Hara BJ, *et al*. Process evaluation of an up-scaled community based child obesity treatment program: NSW Go4Fun®. *BMC Public Health* 2014;14:140.
8. Lucas PJ, Curtis-Tyler K, Arai L, *et al*. What works in practice: user and provider perspectives on the acceptability, affordability, implementation, and impact of a family-based intervention for child overweight and obesity delivered at scale. *BMC Public Health* 2014;14:614.
9. Stamatakis K, Vinson C, Kerner J. Dissemination and implementation research in community and public health settings. InIn: Colditz G, Brownson R, Proctor E, eds. *Dissemination and implementation research in health: translating science to practice*. New York: Oxford University Press, 2012.
10. Skelton JA, Beech BM. Attrition in paediatric weight management: a review of the literature and new directions. *Obes Rev* 2011;12:e273–e281.
11. Kelleher E, Davoren MP, Harrington JM, *et al*. Barriers and facilitators to initial and continued attendance at community-based lifestyle programmes among families of overweight and obese children: a systematic review. *Obes Rev* 2017;18:183–94.
12. Keane E, Kearney PM, Perry IJ, *et al*. Trends and prevalence of overweight and obesity in primary school aged children in the Republic of Ireland from 2002-2012: a systematic review. *BMC Public Health* 2014;14:974.
13. Layte R, McCrory C. *Growing up in Ireland. Overweight and obesity among 9-year olds*. Dublin: Department of Children and Youth Affairs, 2011.
14. O'Malley G, Brinkley A, Moroney K, *et al*. Is the temple street W82GO healthy lifestyles programme effective in reducing BMI SDS? *Obes Facts* 2012;5(Suppl 1):178–234.
15. Hoffmann TC, Glasziou PP, Boutron I, *et al*. Better reporting of interventions: template for intervention description and replication (TIDieR) checklist and guide. *BMJ* 2014;348:g1687.
16. National Institute for Health and Clinical Excellence (NICE). *Obesity. Guidance on the prevention of overweight and obesity in adults and children. Clinical Guideline*. 43. London: NICE, 2015.
17. Ritchie J, Lewis J. *Qualitative research practice: a guide for social science students & researchers*. Thousand Oaks: Sage Publications, 2003.
18. Grol R, Wensing M. What drives change? Barriers to and incentives for achieving evidence-based practice. *Med J Aust* 2004;180(6 Suppl):S57–60.
19. Department of Health. *Obesity policy and action plan: 2016–2025*. Dublin: A Healthy Weight for Ireland, 2016.
20. Gerards SM, Dagnelie PC, Jansen MW, *et al*. Barriers to successful recruitment of parents of overweight children for an obesity prevention intervention: a qualitative study among youth health care professionals. *BMC Fam Pract* 2012;13:37.
21. Grow HM, Hsu C, Liu LL, *et al*. Understanding family motivations and barriers to participation in community-based programs for overweight youth: one program model does not fit all. *J Public Health Manag Pract* 2013;19:E1–E10.
22. Visram S, Hall TD, Geddes L. Getting the balance right: qualitative evaluation of a holistic weight management intervention to address childhood obesity. *J Public Health* 2013;35:246–54.
23. Newson L, Povey R, Casson A, *et al*. The experiences and understandings of obesity: families' decisions to attend a childhood obesity intervention. *Psychol Health* 2013;28:1287–305.
24. Shiely F, Ng HY, Berkery EM, *et al*. The association between weight perception and BMI: report and measurement data from the growing up in Ireland cohort study of 9-year olds. *Int J Obes* 2017;41:46–53.
25. Binkin N, Spinelli A, Baglio G, *et al*. What is common becomes normal: the effect of obesity prevalence on maternal perception. *Nutr Metab Cardiovasc Dis* 2013;23:410–6.
26. Barry CL, Jarlenski M, Grob R, *et al*. News media framing of childhood obesity in the United States from 2000 to 2009. *Pediatrics* 2011;128:132–45.
27. Moyers P, Bugle L, Jackson E. Perceptions of school nurses regarding obesity in school-age children. *J Sch Nurs* 2005;21:86–93.
28. Steele RG, Wu YP, Jensen CD, *et al*. School nurses' perceived barriers to discussing weight with children and their families: a qualitative approach. *J Sch Health* 2011;81:128–37.
29. Story MT, Neumark-Stzainer DR, Sherwood NE, *et al*. Management of child and adolescent obesity: attitudes, barriers, skills, and training needs among health care professionals. *Pediatrics* 2002;110(1 Pt 2):210–4.
30. Turner KM, Shield JP, Salisbury C. Practitioners' views on managing childhood obesity in primary care: a qualitative study. *Br J Gen Pract* 2009;59:856–62.
31. Miller W, Rollnick S. *Motivational interviewing: preparing people for change*. New York: The Guilford Press, 2002.
32. Lozano P, McPhillips HA, Hartzler B, *et al*. Randomized trial of teaching brief motivational interviewing to pediatric trainees to promote healthy behaviors in families. *Arch Pediatr Adolesc Med* 2010;164:561–6.
33. Department of Health. *A healthy weight for Ireland 2016–2025. Obesity policy and action plan*. Dublin: Stationary Office, 2016.
34. Laws R, Hesketh KD, Ball K, *et al*. Translating an early childhood obesity prevention program for local community implementation: a case study of the Melbourne InFANT Program. *BMC Public Health* 2016;16:748.
35. Staniford LJ, Breckon JD, Copeland RJ, *et al*. Key stakeholders' perspectives towards childhood obesity treatment: a qualitative study. *J Child Health Care* 2011;15:230–44.
36. Watson PM, Dugdill L, Pickering K, *et al*. Service evaluation of the GOALS family-based childhood obesity treatment intervention during the first 3 years of implementation. *BMJ Open* 2015;5:e006519.
37. Dierckx de Casterlé B, Gastmans C, Bryon E, *et al*. QUAGOL: a guide for qualitative data analysis. *Int J Nurs Stud* 2012;49:360–71.