Stakeholder's views of adolescent weight management programmes: a qualitative study.

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Abstract

Background Child and adolescent obesity is a significant public health concern. Family-based multi-component weight management programmes are recommended, however recruitment and retention in these programmes are poor. Understanding stakeholders' views of these programmes may lead to improvements in delivery, and in turn, improve engagement and success in treating adolescents with obesity in the future. The aim of this study is to explore stakeholders' views on adolescent weight management programmes.

Methods A qualitative study of stakeholders (n = 11), recruited by purposive sampling was conducted. Semi-structured interviews were audio recorded, transcribed and analysed using qualitative content analysis. Codes were grouped into sub-categories, which were combined into higher order categories.

Results Stakeholders recognised the importance of support for adolescents from experienced professionals, as well as family and peers. There was agreement amongst stakeholders that longer-term support was needed for adolescents with obesity; suggestions included integrating follow-up support with schools and leisure services. The need for the educational side of a programme to be practical and hands on was recognised. Emotional and psychological support must be prioritised. Having a variety of delivery modes, such as group and 1-2-1, particularly in the home environment, were recommended. Stakeholders agreed that weight management programmes for adolescents need to be more proactive at incorporating technology.

Conclusions This study identified key categories, which should be considered when developing successful weight management programmes for adolescents with overweight or obesity. By taking on board the views of those that work closely with this group, attrition and dropout rates for weight management programmes may be improved.

Background

Obesity is well documented as a significant issue for public health. 28% of children between the age of 2–15 years in England are overweight or obese [1]. Not only are adolescents with obesity at greater risk of cardiovascular risk factors [2, 3], but psychosocial effects such as low self-esteem are evident [4]. Adolescents with obesity are likely to continue into adulthood with obesity [5]. Family-based multi-component weight management programmes are recommended for adolescents with obesity in England and Wales [6–9] with increased participation associated with increased weight loss [10]. However, these programmes suffer from poor uptake and high attrition rates [11–13]. Alongside adolescent views of weight management programmes, listening to those that work closely with adolescents with obesity on weight management programmes can give insight that might improve their future planning and delivery, in turn improving attrition and recruitment. However, the evidence base in terms of stakeholder views of weight management programmes for adolescents, in the UK, is limited. This study aimed to gather stakeholder views in the UK on the practical implications of findings from a qualitative systematic review

looking into the views of overweight and obese adolescents attending lifestyle obesity treatment interventions [14]. Additionally, stakeholders' own views on weight management programmes for adolescents were sought, with specific reference to Hearty Lives, a home-based weight management programme for families run by Wolverhampton City Council and part-funded by the British Heart Foundation.

Methods

Semi-structured interviews (May – August 2018) were used to collect data from stakeholders, chosen to allow a more in-depth understanding of stakeholder views. A copy of the interview guide can be seen in Additional file 1. A purposive sampling approach was used to recruit Hearty Lives service providers, commissioners and those referring adolescents into the programme. These stakeholders that were linked to the Hearty Lives programme were targeted to gain local insight, as one aim of this study was specifically to create and improve adolescent weight management programmes in the West Midlands, UK. By including stakeholders with direct involvement with delivering the Hearty Lives programme, as well as those responsible for referrals and commissioning, a variety of perspectives could be explored to fulfil a local need for evidence. This paper reports findings from our research that strengthen evidence at a national level regarding adolescent weight management programmes. Participants were approached via email and provided with information about the research prior to undertaking the interviews. Interviews took place by telephone or face-to-face in a private room at the participants place of work. All interviews were completed by one trained female researcher, undertaking a PhD, who had significant experience in weight management programmes and previous experience with qualitative methods (HMJ). Due to this prior experience, the researcher was known to some stakeholders involved in this research; this may have been advantageous in developing rapport and receiving honest views from stakeholders. Written consent was gained either electronically or in person during the face-to-face interview. The interview guide was informed partly by a qualitative systematic review looking at the views of overweight and obese adolescents attending obesity treatment interventions [14]. This created a theoretical framework for the semi-structured interview guide initially, with an open mind for new themes emerging in the interviews. Exploring stakeholder views of the systematic review findings was also used to see if findings from this review were applicable at a local level. The interview guide was checked with two authors (GJM-T, LA-K), piloted prior to data collection and sent to stakeholders before the interviews commenced. Interviews were continued until data saturation was reached.

Analysis

Audio-recorded interviews were transcribed verbatim and exported into NVivo 11 software. Data was approached using inductive qualitative content analysis [15]. Inductive content analysis is a process of creating categories systematically in order to describe a phenomenon with the aim of increasing understanding and developing new knowledge [15]. After familiarisation with the data, analysis began by organising the data through open coding. Codes that belonged together were grouped together to form sub-categories, which were then abstracted into categories. Categories were then named using words that

closely linked to the data. Memos were written alongside data collection to aid reflection, enable changes to the interview guide and allow new concepts to be explored. Analysis was audited by another author (OO) to improve reliability.

Results

11 stakeholders were recruited to this study. Stakeholders were all female and included Hearty Lives weight management programme workers (n = 2), School nurses (n = 3), dieticians (n = 2), Hearty Lives manager (n = 1), Public Health Consultant (n = 1), PE and School Sport Partner Manager (n = 1), Health advisor (n = 1). A further 10 school nurses were contacted but did not take part. Two had retired or left the trust, eight did not respond. Interviews were on average 52 minutes (36–74 min). Three interviews were completed face-to-face, the remainder over the telephone (n = 7). One stakeholder emailed text responses to the interview guide. Analysis led to the development of three main categories (professional support, tailoring and intervention content) that relate to what stakeholders consider important for future weight management programme design and delivery. Sub-categories within these categories are highlighted in bold throughout the text. All categories and sub-categories can be seen in Fig. 1. Transcribed quotations can be seen in Table 1.

Table 1
Representative quotes for sub-categories

Sub-categories	Representative quote
Professional Support	*'And I do believe that we need some, to have a good skill mix and, and multi skilled individuals.'* (S4)
Characteristics of successful professional's support	*'Yeah, I think there's so much judgement around being overweight in the health professional world, you know? 'Cause not all dieticians are non-judgemental about overweight children. And when you get a parent who is so defensive and being so full of barriers my judgement of that parent is horrendous. So I think it is a very skilled area to work in because you have got to be non-judgemental at all times, even when you're told ridiculous things.'* (S8)
Peer Support	*'People realise that they're not the only ones who are struggling. And you can build friendship groups and create almost a, a cooperative around healthy lifestyle factors.' (S4)*
Family Support	*'If the parent is open and willing to change, then the, then the teenager is. If the parent is defensive and, "You haven't, your diet hasn't worked for me," or, "The GP doesn't help," or, "We're all overweight." Then the child, the teenager is very unreceptive.' (S8)*
Tailored to age group and individual	*But, yeah. It's, it's very hard and you do have to take a lot more time and consider the individual as well. 'Cause they are young adults at the end of the day. So it's not, it's not as simple as just going and, and picking something up last minute for the store cupboard and going and thinking, "Oh, that'll be a good incentive." You've got to try and think about the person that you're working with (S2)* *'I don't think they particularly think about long term what it's gonna do to their health. I think that it's pretty much in the, it's in the here and now isn't it ...how they feel at that time?' (S9)*
Delivery mode	*'I think, I think a mixture, because I think you would, you will get some, some young people that, especially if they've got, like, they're really self-conscious, they wouldn't want to be in a group situation. But then I think you've got others that would thrive in a group situation, because, you know, they know it's not just them that's, that's, that's, you know, maybe got a weight issue, or ...I think it's a little bit of, you know, when you're with other people you can, you know, you can spur each other on, can't you? Give each other encouragement and ...I, I, I think a mixture.' (S9)*
Easing prior fears	*'You, you could have a promotional site for the program where there might be clips on there of, video clips of what participants have done before and what people have said, participants have said. So, you know, I think people always do want information. Where would they go for information? I would imagine a website.' (S1)*
Weight loss vs Health	*'I think it doesn't really matter what the primary motivation is, once you've got them there you can sell the message of how losing weight does help to improve their, their, their health. I think adolescents, as well as some adults, are concerned about their appearance, so if their appearance is driving them into your (coughs) excuse me, into their, into your arena, once you've got them there, it's selling the health message.' (S4)*
Anthropometric measurements	*'And, they would get very happy and excited to know that their BMI had gone down'* (S2)

Sub-categories	Representative quote
Emotional and psychological support	*'I think that just shows that their self-esteem is so fragile that that needs to be the number one priority in the program is to build, build the self-esteem of the teenager.' (S8)*
Goal setting	*'think it works really well if there's continued involvement with them. I think when I'm doing it, and then I'm seeing them three months later it's not ...it's not so ... actually, again, it depends on how involved and positive the other family members are. So if someone, if some of them come back and they've done brilliantly, and it's fab, and it's great and it's really positive. But some of them say, they do it for a week and then they lose motivation, so I think they need that continued involvement with somebody who's going to help motivate them.' (S10)*
Knowledge and education	*'And I think it's poor knowledge of nutrition as well, even though there's a lot out there, and I kind of, 'cause I worked, in nutrition I always think it's obvious what's healthy and what's not healthy, but I think often there was like, no comprehension of what healthy, like (?), is, even though there's quite a lot of information out there. And there's, there's a lot of confusion because you see different things in the media, and, and different family members have different ideas over what's, like, healthy eating and what's not.' (S10)*
Responsibility	*'Well, definitely at, at school, and in terms of what they eat between meals and things, I think they have sole control over it. Over, over the meals themselves the parents are the ones that buy the food. Yeah. So, so I think they, they, it's going to be shared responsibility between the ... it can't be all one, or all the other.' (S10)*
Physical activity	*'It's about being free, it's about easy access, it's about being able to get there.' (S5)*
Practical hands on activities	*'So we've taken fruit to try and we've, we've found quite a lot of games that you can play. We've, we use the Eat Well plate and the plastic food and you have to sort that. So it's things that they, they have to do and that … or they'll make themselves up a healthy plate of food. It's got to be relevant and practical.' (S6)*
Technology	*'They love apps, anything like that, social media, you'll, you'll get them, you'll grab them.' (S5)*
Longer term support	*'The groups need to go on for a long time for far more than a year to, to sustain real change I would think.' (S8)*

Support

Stakeholders commented on **the importance of qualified and experienced weight management professionals** with a mix of skills including physical activity, nutrition and psychology. Stakeholders felt that experienced staff instilled confidence in adolescents and parents.

Stakeholders felt that adolescents engaged better with 'cool' and relatable professionals, especially youth workers. Non-judgemental **characteristics** were important with adolescents and when speaking to parents/carers about their child's weight. Stakeholders recognised that adolescents' value being treated like an adult. Building rapport and trust with adolescents increased engagement in weight management programmes.

The consensus among stakeholders was that adolescents valued the **peer support** that came with attending a group programme. This made adolescents feel like they were not the only ones struggling with their weight, leading to new bonds and friendships. Stakeholders commented on how self-conscious adolescents with obesity feel in school Physical Education classes; exercising with others of a similar size made adolescents feel more comfortable.

The importance of **family support** was highlighted by all stakeholders. It was felt that without family support, behavioural changes would be limited and that educating the whole family facilitated longer sustainable lifestyle changes. Stakeholders spoke about the difficulty of engaging with some parents and found adolescents took more responsibility and were more motivated if their parents/carers were engaged. Some stakeholders felt the defensive nature of some parents was a barrier. If the parent was defensive, the adolescent was less receptive to making changes.

Tailoring

Stakeholders highlighted the importance of staff having the skills to be flexible and **individually tailor** sessions, depending on the adolescent's mood on the day, as well as tailoring to the family's needs. Adolescents need different support and resources compared with younger children. Stakeholders felt incentives were important, but that they must be **appropriate to the adolescent age group**. The consensus was that this was harder than finding appropriate incentives for younger children. Adolescents also have different needs to adults, for example, they are generally concerned with short-term outcomes and not with the risk of poor health in the long-term.

Variety in terms of **delivery mode** of weight management programmes was spoken about in depth by all stakeholders. Many praised the home setting of the Hearty Lives programme because of its ability to tailor to each family, and to reach families who might not otherwise engage. However, although the benefits of 1-2-1 programmes were recognised, particularly in a home setting, several stakeholders felt that this option was not sustainable or time-efficient in the current Public Health financial situation. Groups on the other hand offered a more cost-effective approach and were a good way to increase adolescents' self-esteem. Both dieticians interviewed felt 1-2-1 programmes in clinic settings were not effective, mainly because of infrequent appointments, and formal atmosphere. Nonetheless, most stakeholders felt that the best option was to offer both group and 1-2-1 options accommodating the differing needs of adolescents and families wanting support.

Intervention content

Stakeholders recognised that adolescents felt embarrassed and lacked confidence prior to attending weight management programmes. Suggestions to **ease these prior fears** included a taster session. This was mainly linked to the physical activity element of a weight management programme, whether this be taking part or viewing the session. Stakeholders suggested a promotional video for potential participants to watch, on a website or social media, which could include interviews with previous participants. In addition, stakeholders emphasised the importance of an induction session for adolescents prior to a programme starting.

Stakeholders spoke about the importance of **focusing on health within a** weight management programme, even if weight loss was the adolescent's motivation for initiating attendance.

Stakeholders felt that most adolescents, either didn't mind, or liked having **anthropometric measurements** taken. Some were interested in logging changes in their Body Mass Index (BMI). Adolescents seemed to like modern technology that could calculate their BMI. Stakeholders noted the importance of making sure measurements were taken in an informal, sensitive and discreet manner, with no pressure placed on the individual.

One of the most well supported sub-categories within this analysis was the importance of ensuring all weight management programmes for adolescents include support around **emotional wellbeing, confidence and self-esteem**. Stakeholders commented on how fragile adolescents were in terms of their self-esteem and confidence. With adolescence being a period of life with changing emotions and potential pressures, stakeholders suggested mental health support must be prioritised. Stakeholders felt that staff involved in weight management programmes and those who knew the adolescent well, should support their emotional well-being, rather than referring them on to external organisations. However, stakeholders were not comfortable speaking to adolescents about mental health without specific training. Stakeholders spoke about how body conscious adolescents were. They felt appearance was more important to adolescents, particularly girls, than their health.

Stakeholders spoke about the benefit of **goal setting** with adolescents. Stakeholders felt that adolescents were generally receptive to this and there was a sense of pride when a goal was achieved. It was important that these goals were SMART (Specific, Measurable, Achievable, Realistic and Time-bound) and although the priority should be on letting the adolescent decide the goal, stakeholders suggested this should be done with support from their parent/carer. An important factor in effective goal setting was that goals were reviewed regularly by a professional and progress monitored. Stakeholders acknowledged that small changes might be all that is manageable for some families.

Stakeholders spoke of the importance of nutrition and physical activity **education to improve knowledge.** This was not only essential for adolescents, but also their parents. Stakeholders felt it was important for adolescents to understand the reasoning behind promoted health messages. This may help adolescents to take more responsibility for their health and weight. Stakeholders felt that parents should also receive education on parenting skills. Cooking skills for both parents and adolescents was deemed important as well as opportunities to try new foods, again highlighting the importance of family involvement.

The consensus amongst stakeholders was that adolescents need to take **responsibility** for their health and weight, but this should be shared responsibility with parents. Some stakeholders felt that adolescents do not realise it is their responsibility so incorporating this learning into an intervention could be promising.

Stakeholders' general impression was that adolescents with obesity enjoy taking part in **physical activity** when completed as part of a weight management programme. This was felt to be a significant aspect of

any weight management programme, kick starting engagement with physical activity. Stakeholders spoke of the importance of physical activity being fun. Helping adolescents to recognise that options for physical activity can include more than just sessions in the gym. Activity must be tailored to the individual and not begin too strenuously. It should be affordable, free or subsidised. Accessibility was also noted as an important factor to encourage attendance. Stakeholders spoke about how adolescents feel in terms of poor confidence and body image, which leads to embarrassment when taking part in physical activity, particularly swimming. One criticism of the Hearty Lives programme was that it did not directly provide physical activity as part of the programme. Gender specific sessions were felt to be a good option if resources were available and several stakeholders commented on the competitive nature of some adolescents. A healthy level of competition, whether this was with family or friends, was motivating, reiterating the need for peer and family support.

Stakeholders spoke of the importance of using **practical, hands-on activities** when educating adolescents as part of a weight management programme. Visual and interactive activities, which were more creative than typical didactic teaching was favoured. Stakeholders were very positive about including interactive cooking activities within a weight management programme.

All stakeholders spoke about incorporating **technology** into a weight management programme. Email, text, WhatsApp or other apps were suggested as useful tools to support and motivate both parents/carers and adolescents throughout a weight management programme and for longer-term support. Apps were suggested as a good way to gain feedback on a programme, as adolescents would feel more comfortable completing a form online, rather than on paper, highlighting their ability to use online or digital technology with ease.

Stakeholders agreed that online support really should be part of a weight management programme, not alone, but paired with face-to-face support. Stakeholders commented on the use of social media platforms as a way of supporting and promoting weight management programmes. Websites were also recommended but stakeholders commented on the need for commitment from staff to keep these up-to-date and continue promoting them. It seems stakeholders felt the idea of using technology, in principle, was something they should do, but were not currently doing well. The negative impact of social media in terms of poor body image was noted.

Most professionals commented on the need for **longer-term support** for adolescents taking part in weight management programmes. Hearty Lives was a 6-week programme with 12 months follow-up support at 3 monthly intervals; however the initial programme and follow-up period was felt to be too short to ensure new habits were solidified. Stakeholders commented on integrating long-term support into other services. Examples included free gym or leisure centre passes for completers, or linking more with schools, including after school activity clubs.

Discussion

Effective weight management programmes to support adolescents towards a healthy weight suffer from poor engagement. Studies exploring stakeholder views of adolescent weight management programmes in the UK are limited and tend to focus on younger children [16]. In the current study, key categories were identified, which should be considered in the future when developing successful weight management programmes for adolescents with overweight or obesity. Stakeholders recognised the importance of support from experienced professionals, family and peers, when developing and delivering a tailored weight management programme for adolescents. This corresponds with findings from other qualitative studies of stakeholder's perspectives towards child obesity treatment [16]. There was agreement amongst stakeholders that longer-term support was needed for adolescents with obesity, but also recognition of the restraints on resources to enable this. Stakeholders felt that face-to-face support was still necessary, but suggestions included integrating follow-up support into schools and leisure services. This transition has also been suggested by stakeholders in Australia [17].

Additionally, the importance of easing prior worries about a programme is important to engage adolescents in the first place. Once engaged, stakeholders recognised the need for the educational side of a programme to be practical and hands-on. This active engagement has been recognised elsewhere in a qualitative study of children's views of the MEND programme [18]. Additionally, the need to offer adolescents emotional and psychological support within a weight management programme, in addition to nutrition and physical activity education was noted. This concurs with a recent systematic review investigating the views of adolescents attending obesity treatment interventions [14].

There was consensus amongst stakeholders that community-based weight management programmes worked best, as opposed to clinical settings. Having a variety of delivery modes, such as group and 1-2-1, particularly in the home environment, were recommended. Not only was the home setting of Hearty Lives praised in this study, other home-based weight management programmes have received positive feedback from adolescents [19]. The existing evidence suggests that there is no difference between individual or group-based programmes in terms of their effectiveness [7], however, a combination approach may warrant further investigation.

Stakeholders agreed that weight management programmes for adolescents need to be more proactive at incorporating an element of technology. This is encouraging, as text-messaging and web-based programmes have been positively reported previously [20–22].

Strengths and limitations

This study involved a small purposive sample of participants linked to a specific weight management programme in the West Midlands. This means the scope of their experience and knowledge may not include the full scope of what might be feasible nationwide. As the researcher was previously involved in delivering a weight management programme for adolescents, the researcher's personal views may have influenced the categories that developed in this study. To reduce this risk, an inductive approach to analysis was taken and a second author (OO) audited categories.

Conclusion

This study presents the views of stakeholders on weight management programmes for adolescents. Although quantitative reviews have sought to understand the effectiveness of these [7], qualitative research could aid their development, encouraging greater recruitment, retention and success. The stakeholders in this study shared insights that may improve future development and delivery of adolescent weight management programmes.

Declarations

Ethics approval and consent to participate

Ethics approval was obtained (REGO-2018-2149 AM01) from the University of Warwick's Biomedical and Scientific Research Ethics Sub-Committee. All participants were ensured confidentiality and provided written consent to be in the study.

Consent for publication

Not applicable

Availability of data and materials

The datasets generated and/or analysed during the current study are not publicly available due to the conditions of our informed consent but are available from the corresponding author on reasonable request within the next 10 years.

Competing interests

The authors declare they have no competing interests.

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Authors' contributions

HMJ designed the study with support from OO, LA and GJMT. HMJ completed application to ethics committee with support from LA. HMJ collected and analysed the data. Analysis was audited by OO. HMJ wrote the first draft of the manuscript. OO reviewed the manuscript and all authors read and approved the final manuscript.

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Authors' information

HMJ is a Registered Public Health Nutritionist. This paper is part of HMJs PhD research which sought to understand how best weight management programmes can support adolescents with overweight or obesity to achieve a healthy weight. HMJ has previously worked on child and adolescent weight management programmes where it was recognised that weight management support for adolescents could be improved.

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Figures

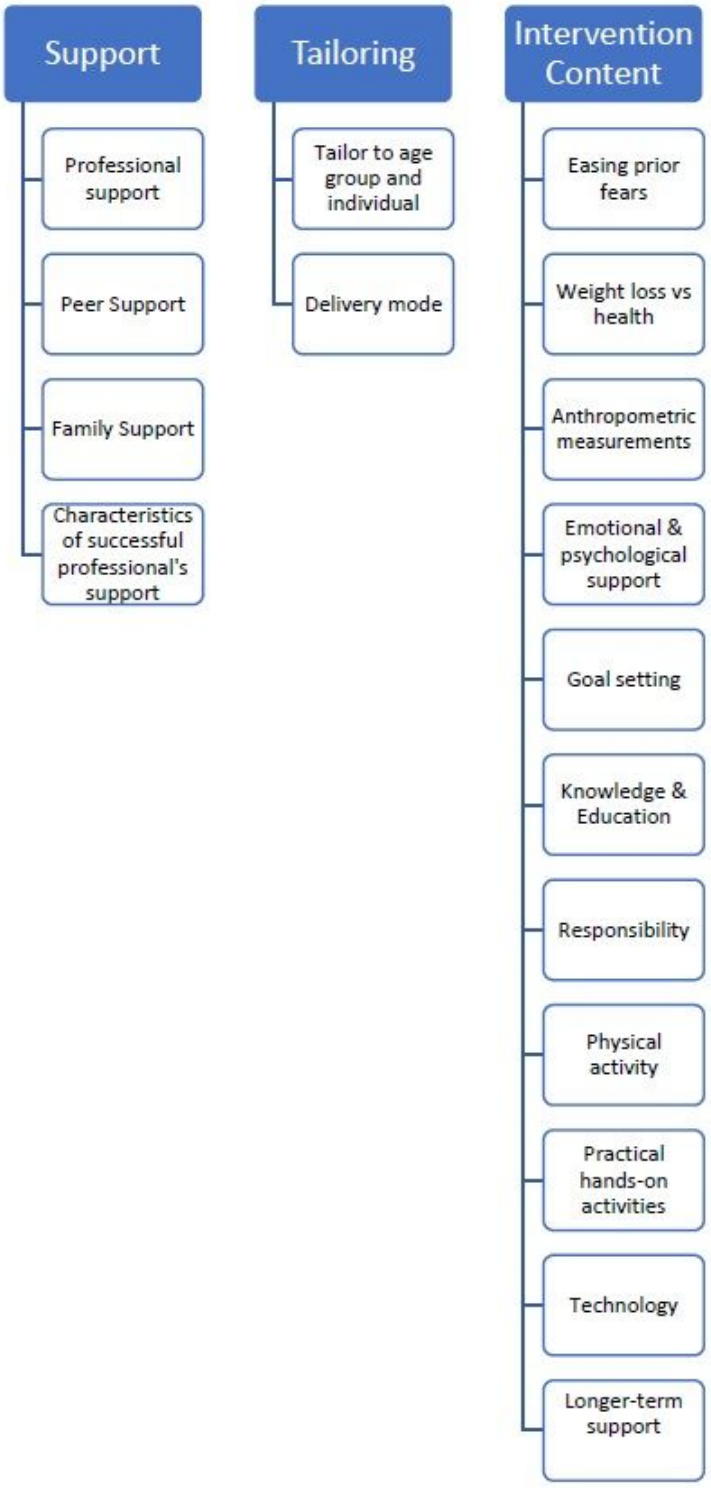

Figure 1

Categories and sub-categories

Supplementary Files

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- AdditionalFIle1.pdf