# Adolescents' perspective on integrated care and support for overweight and obesity

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## Abstract

**Background**: Child overweight and obesity present significant public health concerns, with a complex etiology and a range of adverse physical and psychosocial effects. In the Netherlands, 'the National Model integrated care for childhood overweight and obesity' was developed to address this complexity through a family-based approach that integrates the healthcare and social domains. Although included in the model, adolescents present unique challenges due to their developing needs. More insight is needed into how the Dutch National Model can meet these needs.

**Objective**: This study aims to explore adolescents' needs and perspectives within the Dutch integrated care approach to improve its effectiveness.

**Methods**: A qualitative, exploratory study under an interpretative paradigm was conducted to examine the perspectives of adolescents receiving integrated care for overweight and obesity. Eight semi-structured interviews were performed. The Self-Determination Theory informed the interview guide, while the analysis was inductive using template analysis.

**Results**: The analysis identified seven themes: 1) Motivation and confidence, highlighting the importance of mindset transformation, self-efficacy, and external encouragement; 2) Social influences, including the value of peer support and the effects of social media; 3) Parental role and involvement, emphasizing the importance of parental support; 4) Context and understanding of adolescents, stressing the importance of empathetic engagement and interest; 5) Autonomy and decision-making, underscoring the need for shared decision-making and respect for autonomy; 6) Content and application of care and support, focusing on accessibility and practical strategies; and 7) Professional support and involvement, where trust and a supportive attitude are essential.

**Conclusion**: The findings highlight adolescents' needs regarding Dutch integrated care and how these can be addressed. Professionals play a key role in enhancing confidence and motivation, addressing social influences, showing empathy and genuine interest, and supporting autonomy. Care must be accessible, emotionally supportive, and incorporate health strategies that fit adolescents' daily routines.

## Introduction

The increasing prevalence of childhood obesity presents a significant public health challenge (1,2), a concern acknowledged by the World Health Organization (WHO) as one of the most pressing issues of this century (3). In the Netherlands, 14% of children were classified as overweight in 2024, with almost 4% having obesity (4). Among young adults aged 18 to 25 years, the prevalence of overweight even reached 25% in 2022 (5). Childhood overweight is associated with a persistent risk of developing obesity in adulthood (6,7). Moreover, childhood obesity can adversely affect almost all organ systems both in the short and long term, by increasing the risk of cardiovascular disease, type 2 diabetes, and musculoskeletal disorders (8,9). It also adversely impacts the psychosocial well-being of children (8,10). The etiology of childhood obesity involves a complex interplay of individual (e.g., genetics), environmental (e.g., school policies), and socio-cultural factors (e.g., parental lifestyle) (8,9,11).

To address this complexity, the Netherlands introduced an integrated healthcare standard for managing and preventing childhood overweight and obesity (OW/OB) (12). In 2018, the Dutch "National Model integrated care for childhood overweight and obesity" was piloted in eight municipalities (13) and subsequently implemented nationwide through the "Child on a Healthier Weight" program from 2019 onwards (14). This model employs a network-based family approach that integrates healthcare and social support. Central to this approach is a structured six-step process guided by a coordinating professional (CP), who collaborates closely with families to identify factors contributing to OW/OB and develop an intervention plan. As the process progresses, the CP's involvement gradually diminishes, empowering families to sustain behavioral changes independently. Although the model targets all children (14), professionals in practice report that adolescents are considered a distinct group with specific needs linked to their developing identity and autonomy. They highlight the need for additional guidance on tailoring the model's recommendations and tools to adolescents. This underscores the importance of understanding how developmental factors interact with these recommendations and how these can be tailored accordingly.

Adolescents face unique challenges due to distinct developmental transitions (15,16). Adolescence is characterized by rapid pubertal, social, and neurodevelopmental changes (16,17). Brain regions associated with emotions and impulsivity mature more rapidly, while those responsible for cognitive control and long-term planning develop more gradually. This developmental imbalance contributes to increased risk-taking behavior and impulsivity in adolescents (18,19). Additionally, peers significantly influence adolescents' health behaviors (20,21), with motivations for weight loss often linked to social acceptance (22). Adolescence also involves greater autonomy and independence (17,18), which reduces adolescents' responsiveness to adult guidance (18,19). Moreover, children are affected by the negative impacts of weight stigma (16,23,24). For adolescents, these often lead to weight-based bullying and reduced participation in social activities, raising the risk of social isolation (23,24). Importantly, weight stigma often hinders healthy behavior changes and can reinforce unhealthy habits, with adverse effects persisting into adulthood (23,24). Without treatment, adolescents with OW/OB rarely achieve a healthier weight, making obesity highly persistent into adulthood (16).

These developmental factors add complexity to supporting adolescents with OW/B(17). Their limited capacity to assess long-term effects and their desire for peer acceptance make weight-related interventions more complex (16). Compared to younger children with OW/OB, interventions for adolescents typically involve less parental control (9). Nevertheless, there is no conclusive evidence

regarding the optimal parental involvement (25,26). Given adolescents' unique needs, research highlights the importance of a tailored approach that considers adolescents' preferences (15,27). Previous studies have examined adolescents' perspectives on weight loss interventions (15,27). However, research on adolescents' perspectives has mainly focused on time-limited, structured interventions, which differ from the Dutch integrated care approach (15,27). In the Netherlands, the "Child on a Healthier Weight" program has organized learning communities where professionals shared experiences working with adolescents (28). Additionally, semi-structured interviews further explored the perspectives of professionals working with adolescents according to the Dutch National Model. Professionals strive to establish safe communication, support adolescents' motivation and autonomy, and consider their social context and family dynamics. Additionally, the study highlights the need for adolescent-specific tools and interventions, as well as future research into adolescents' perspectives (29).

The Self-Determination Theory (SDT), widely applied in health behavior research (30,31), provides a framework for understanding adolescents' needs within the Dutch National Model (30). Its sub-theory, the Basic Psychological Needs Theory, states that sustained autonomous motivation (30,32), essential for long-term behavior change (30), can be achieved when three needs are met: competence (feeling capable), autonomy (feeling in control), and relatedness (feeling connected and supported) (32). These needs align closely with adolescent development. Adolescents need opportunities to build competence, rather than relying on parental competence (16). Their increasing desire for autonomy (9), along with decreased receptivity to adult guidance and developing decision-making skills (18,19), requires a balance between guidance and independence within family-based care. Finally, relatedness is crucial, as peers influence adolescents' health behavior (20,21), and adolescents with OW/OB value support (15). Given this alignment, the SDT offers a valuable framework.

To our knowledge, the perspectives of adolescents within the Dutch context have not been studied. Previous research exploring adolescents' perspectives on weight interventions is insufficient to tailor the Dutch integrated care and support to meet adolescents' needs (15,27). This study aims to address that gap by investigating both the needs adolescents with OW/OB identify in relation to their care and support, and how integrated care and support can be aligned with these needs to improve engagement and effectiveness with care & support. The guiding research question is: What needs do adolescents with OW/OB identify regarding care and support, and how can (the Dutch) integrated care and support for OW/OB meet these needs?

## Methods

### Study design

A qualitative exploratory research design with an interpretative approach was chosen and reported according to the Consolidated Criteria for Reporting Qualitative Research (COREQ) (Appendix A) (33). An interpretative approach, which focuses on understanding how individuals construct meaning from their experiences and actions (34), is well-suited for this study as it enables an in-depth exploration of adolescents' views on integrated care and their needs within OW/OB care. Semi-structured interviews explored perspectives from adolescents with OW/OB receiving integrated care based on the Dutch National Model. The SDT served as the conceptual framework for the interview guide (35). The research team consisted of the National Project Leader for Care for Obesity and obesity physician (BvdV), two research interns (LL and NB), and a postdoctoral researcher (RIJ). LL, who conducted all the interviews, had no prior experience with interviewing or qualitative research but was closely supervised by RIJ, who has extensive experience in both.

### The Self-Determination Theory

As mentioned in the introduction, the SDT offers guidance on adolescents' needs for support and care related to OW/OB. Moreover, the SDT has been used in qualitative studies examining adolescents' experiences of obesity care (36–38) and in guiding and improving interventions for adolescents with OW/OB (39–41). Its focus on autonomous motivation has been proven to promote positive health behavior change (30,42). The Basic Psychological Needs are particularly relevant to adolescents due to the alignment with adolescents' developmental characteristics. Accordingly, the SDT was selected as the conceptual framework for the interview guide (Appendix B), which was constructed around the Basic Psychological Needs.

### Study participants and recruitment

Participants were adolescents (16-18 years) receiving integrated care for OW/OB in the same urban area. This age group was chosen over younger adolescents due to ethical considerations, including their higher expected mental resilience given the sensitive nature of the topic. Additionally, their potentially greater capacity for reflection and cognitive maturity was expected to contribute to a deeper understanding of adolescents' perspectives. Participants were recruited through purposive sampling using BvdV's network (45). They were enrolled at an outpatient clinic in a large hospital where BvdV works as an obesity physician, and through an independent pediatric healthcare clinic within the same region. Inclusion criteria required participants to be between 16 and 24 years old and to have experience with Dutch integrated care. Exclusion criteria included any non-obesity-related medical conditions and current (or risk of) mental disorders that could significantly affect their care experiences. Their treating physician assessed participant eligibility based on these criteria, as well as emotional stability and ability to reflect on experiences. In line with qualitative research standards, a minimum of twelve participants were targeted to reach thematic saturation (43).

### Data collection

Data collection involved individual, semi-structured interviews that lasted approximately 45 minutes. The interview guide (Appendix B) was developed by LL, informed by the SDT, relevant literature, and information from the learning community meetings of "Child on a Healthier Weight" (44). Some studies

exploring adolescents' views on OW/OB support had interview guides available; these were reviewed to supplement the developed guide (36,38,41). Additionally, probe questions were created to gain deeper insights into participants' perspectives (45). The guide was tested internally and adapted with the research team and professionals involved in the "Child on a Healthier Weight" program to evaluate clarity, topics, and minimize interviewer bias (46). The goal was to explore perspectives on integrated care and support for adolescents, rather than focusing on individual experiences or sensitive narratives.

Interviews were conducted by LL, who had no prior relationship with participants or knowledge beyond their general reasons for inclusion. Two interviews took place in person with a parent present, one via Teams, and five via FaceTime. All interviews were audio-recorded, transcribed using Amberscript, and subsequently checked for accuracy by LL. Additionally, digital field notes were taken to document the interviewers' observations during the interviews (47). To enhance the credibility of the data collected, member checks were performed shortly after each interview by sending participants a summary, allowing them to verify the accuracy of their responses (48). No repeat interviews were conducted.

**Data analysis**

Given the exploratory origin of this research, an inductive thematic analysis was employed, specifically using template analysis (49). MAXQDA 2024 software supported data management and facilitated the coding process. Template analysis is a flexible qualitative research method within the broader framework of thematic analysis, emphasizing hierarchical coding and providing structure while allowing adjustments to meet the specific needs (50). After familiarization with the data, LL coded a subset of transcripts to create an initial coding template. This preliminary template was discussed and refined collaboratively with NB and RIJ, then LL applied it to analyze the remaining transcripts and adapted it as needed. Themes were derived directly from the data. Although the SDT informed the development of the interview guide, it did not guide the coding process. Participants did not review or provide feedback on the analyzed results.

**Ethical considerations**

This study was not subject to the Dutch Medical Research Involving Human Subjects Act (WMO) (51). A positive ethical review was obtained from the Ethics Review Committee of the Faculty of Science (BETCHIE), Vrije Universiteit Amsterdam. Given the involvement of adolescents and the sensitive nature of discussing perspectives on OW/OB care, particular ethical precautions were taken. This population can be considered vulnerable due to the risk of stigmatization (23,24), psychosocial burden (8,10), and health complications related to OW/OB (8,9). Participants' suitability, particularly their emotional stability, was assessed by their treating physician to minimize psychological risks. Their treating physicians provided a brief explanation of the study's aim and procedures during clinical visits. If participants expressed interest and gave consent for calling, LL contacted participants to provide additional information about the interview, answer questions, and discuss the highlights of the information letter. After the call, LL texted the information letter and informed consent form. Participants were given sufficient time to review the materials and ask questions before providing informed consent. All participants signed the consent form before the interview. They were informed that they could pause or withdraw from the interview at any time. If a participant chose to discontinue the interview partway through, participants were asked if the data collected up to that point could still be used. Interviews were conducted sensitively and respectfully at a location of the participant's

choosing. Before the interviews, LL observed outpatient clinical consultations of BvdV and CPs to become familiar with the care context and the age group and better prepare for the interview. Audio recordings were deleted after transcription. To ensure data protection, all transcripts were pseudonymized using a secure key code by LL. The secure key code is only accessible to BvdV, RIJ, and LL and is stored on a protected research drive at Vrije Universiteit Amsterdam.

## Results

Eight adolescents took part in the semi-structured interviews; an overview of their characteristics is provided below (Table 1). All were between 16 and 17 years old and from the same province. Of the 15 adolescents who initially showed interest, two ultimately decided not to participate, and five could no longer be reached despite having had multiple contacts beforehand. Significant effort was made to recruit participants, first by BvdV, who contacted several adolescents and parents, and later by LL, who called all potential participants. However, due to the characteristics of the target group and the time-consuming recruitment process, it was not possible to include more participants within the study period.

**Table 1**: Overview of patient characteristics

| ***Participant*** | ***Sex*** | ***Current Education*** | ***Clinic*** |
|---|---|---|---|
| *P1* | Female | Secondary vocational education | Independent pediatric clinic |
| *P2* | Male | Secondary vocational education | Outpatient clinic hospital |
| *P3* | Female | Secondary vocational education | Outpatient clinic hospital |
| *P4* | Male | No education | Outpatient clinic hospital |
| *P5* | Female | Secondary vocational education | Independent pediatric clinic |
| *P6* | Male | Secondary vocational education | Outpatient clinic hospital |
| *P7* | Female | Secondary vocational education | Outpatient clinic hospital |
| *P8* | Female | Secondary vocational education | Outpatient clinic hospital |

Analysis of the interviews identified seven themes, which are illustrated in the thematic map (Figure 1) and are described in detail below.

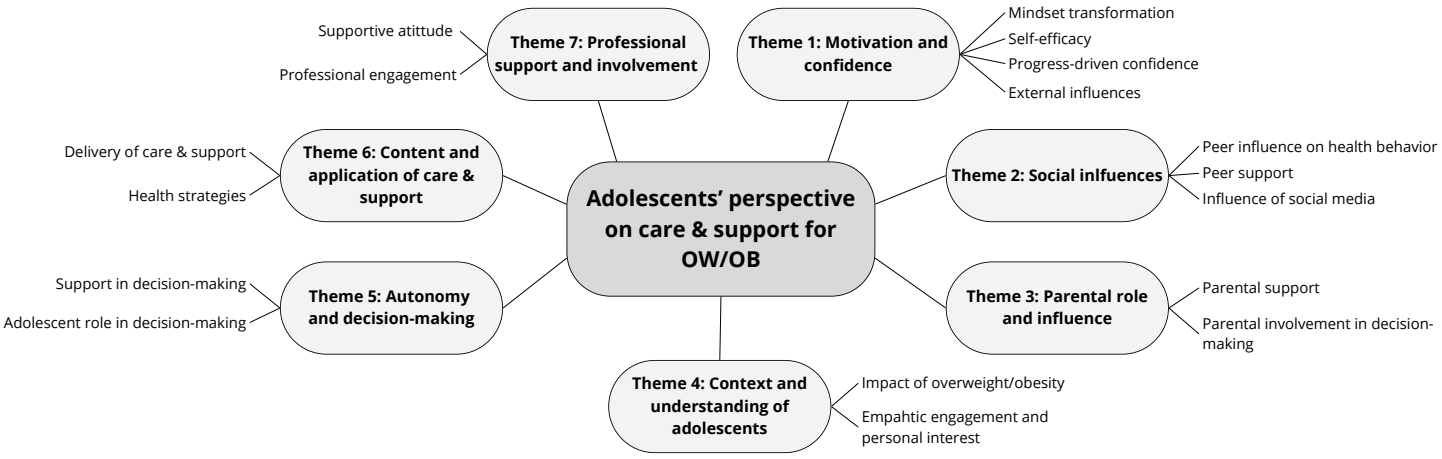


**Figure 1:** Thematic map of adolescents' perspectives on integrated care and support for overweight and obesity

**Theme 1: Motivation and confidence**

This theme, comprising four sub-themes, highlights the development of motivation and confidence needed to engage in care and adopt a healthier lifestyle. The first sub-theme, mindset transformation, emerged as a process that must be actively supported within care, since adolescents indicated that without this shift, engagement with the care process is unlikely. Within this, three aspects emerge: first, self-driven motivation is considered crucial, with adolescents wanting to live healthier for themselves rather than feeling pressured by others. Second, a change in belief that losing weight is achievable is necessary to trust the care process. As one participant stated: "*Many of us have been overweight for so long that we're kind of like: I've been overweight for so long, what's going to change now?" (P2, male, 16)* This shows how shifting beliefs is a precondition for change. Third, goal setting serves as motivation, along with the understanding that being young presents a good opportunity to adopt a healthier lifestyle. Mindset transformation was characterized not solely by aspects such as internal motivation, changing beliefs and goals, but also more broadly as a fundamental shift enabling adolescents to engage effectively with the care process.

The second sub-theme, self-efficacy, highlights the importance of believing in oneself to make lifestyle changes. Both affirming that belief is necessary and vicarious experiences, such as seeing peers or examples provided by professionals succeed in losing weight, boost confidence. As one adolescent described: "*When you see people around you saying, 'I did it this way,' then you start thinking: if they can do it, why can't I as well*?" (P7, female) This demonstrates how self-efficacy is developed internally and can be reinforced by observing relatable examples.

The third sub-theme, progress-driven confidence, shows that progress leads to greater confidence in both adolescents and the care process. Progress was mostly described as internally experienced, either as physical progress through visible weight changes or emotional progress through improvements like establishing routines. As one adolescent said: "*I only started gaining confidence when I saw a difference in my weight, in how I looked*." (P1, female) Along with self-efficacy, self-perceived progress can strengthen confidence and trust in the care process.

The fourth sub-theme, external influences, involves managing other opinions and external encouragement related to motivation and confidence. External encouragement (e.g., from parents, friends, or professionals) was seen as supportive of motivation when it was positive and non-judgmental. One adolescent said when talking about professionals: "*If you're exercising, encourage adolescents, and don't get angry if they do something wrong or not well. Just talk about it encouragingly*." (P3, female) Participants also stressed the importance of ignoring others' opinions and focusing on their own process. As one adolescent explained: "*Don't listen too much to people who don't like you. You have to be able to put that aside.*" (P1, female) This shows that negative judgments can undermine confidence, while positive encouragement enhances motivation and confidence. Overall, this theme demonstrates that motivation and confidence are influenced by adolescents' development, beliefs, and external factors. Professionals can support confidence and motivation by addressing mindset transformation, sharing relatable examples, setting achievable sub-goals, emphasizing small progress steps, and actively encouraging adolescents throughout the process.

**Theme 2: Social influences**

The theme of social influences, consisting of three sub-themes, illustrates how the social environment affects adolescents' health behavior and care process. The first sub-theme, peer influence on health behavior, shows that when friends engage in unhealthy behaviors, they are more likely to do the same. Conversely, when peers make healthier choices, it motivates adolescents to adopt similar behaviors. As one adolescent stated, "*If friends eat unhealthily, then you will too. If they exercise a lot, then you'll start exercising earlier as well.*" *(P3, female)* This demonstrates how the type of friends and social environment can affect adolescents' care process.

The second sub-theme, peer support, was highly valued and included both emotional and practical support. Emotionally, adolescents highlighted the importance of feeling understood and accepted. Supportive friends were those who listened and showed empathy during challenging experiences. Practically, peers encouraged healthy behaviors, such as exercising together, reminding each other to stay on track, and sharing activities like walking and cooking. Having someone with similar goals or challenges made it easier to stay committed and feel less alone. As one adolescent shared: "*If you have someone, you might be able to do it together with that person, especially with a friend who is also trying to lose weight. Things like that make sure you're not alone*." *(P7, female)* This shows how supportive peers and shared goals enhance the care process.

The third sub-theme, the influence of social media, was a significant factor affecting health and lifestyle. On one side, social media is seen as a helpful resource, offering practical content like cooking tips and workout routines. It also provides a platform for self-acceptance and connecting with others who share similar experiences. On the other side, adolescents often mentioned the negative effects of social media, such as body shaming, exposure to idealized body images, and negative comments. These can lower self-confidence and motivation. One adolescent shared about social media: "*Maybe when other people say things like, 'Yes, you're doing well, keep it up,' that can be motivating. Don't get me wrong, that can really help. But it only has to go wrong once, and all that motivation is gone*." (*P6, male)* This shows how social media can both boost and undermine motivation. Additionally, some adolescents mentioned guided use of social media, such as recommending applicable accounts. Taken together, the social environment can shape and support health behaviors, as well as influence adolescents' motivation and engagement with care. Professionals can encourage adolescents to engage in healthy activities with peers and explore shared hobbies. The significant influence of social media underscores the importance for professionals to address both the opportunities and risks associated with social media use.

**Theme 3: Parental role and influence**

The theme of parental role and influence, including two sub-themes, affects decision-making, the care process, and adolescents' health behavior. The first sub-theme, parental support, is consistently highlighted as important, described as more central than support from peers or professionals. Emotionally, parents who listened, showed understanding, and supported them throughout the care journey were valued. Practically, they appreciated parents assisting with specific tasks, such as choosing sports and preparing healthy meals. Shared health routines, such as exercising, grocery shopping, and cooking together, were also found to help establish and maintain a healthy lifestyle. As one adolescent explained: "*If parents are involved, then it's twice as easy. If you come home to find your mom has cooked something healthy that tastes pretty good, that's a big help. That*

*you agree with the care provider on what the parent will make for dinner, for example*." *(P4, male)*. Parental support also included the influence of everyday habits at home. When parents modeled unhealthy behaviors, it became more difficult for adolescents to make healthy choices. Conversely, healthy parental modeling promoted healthier routines. This illustrates how the presence or absence of parental support can significantly influence the difficulty of the adolescent's care process.

The second sub-theme, parental involvement in decision-making, ranged from full parental participation in all decisions to situations where decisions were made solely between the adolescent and the professional. Some adolescents appreciated when parents were involved in situations, such as difficult decisions or when they found it hard to explain or understand their own feelings. Others emphasized the importance of making their own choices, noting that overly dominant parental involvement could feel restrictive and undermine their sense of autonomy. One adolescent said about parental involvement:

"*This has less to do with doctors and hospitals, and more with your parents. My parents said, 'This is your body and your life, you decide what you want to do with it, and we will do our best to support you.' But there are many parents just tell adolescents what to do, leaving them with no other choice. I think this can be harmful, because it feels less like wanting to become healthier for yourself, and more like having to do it because your parents tell you to, rather than out of your own desire to improve*." *(P2, male)*

This highlights the challenging balance between parental involvement and adolescent autonomy, where adolescents value both guidance and independence. In conclusion, these findings demonstrate that parents play a key role in adolescents' care process, and their involvement is particularly helpful when it combines support and appropriate guidance in decision-making. For professionals, this involves discussing with adolescents the level of parental involvement they prefer, while also highlighting to parents how their support and role modeling can make a significant difference.

**Theme 4: Context and understanding of adolescents**

The theme of context and understanding of adolescents, containing two sub-themes, highlights the importance of professionals trying to understand adolescents and their context. The first sub-theme, emphatic engagement and personal interest, emphasizes the importance of professionals demonstrating genuine empathy and showing interest in adolescents' lives. Feeling listened to and understood was seen as beneficial to the care process. Additionally, adolescents appreciated when professionals acknowledged the challenges of being overweight and the care process itself. As one participant said, "*I think it's important for professionals to show understanding. I don't know if I've already mentioned this, but it's important to be able to empathize with what it's like to be overweight. Because if you do that, then you can also help someone better." (P1, female)* Adolescents also emphasized the importance of professionals getting to know their personal interests. As one adolescent suggested: *"It's just smart to have an appointment at the beginning where you really get to know that person, go deeper into what they like, where they draw their interests from, and what they would like to do." (P1, female)* This highlights that both emphatic engagement and attention to personal interests are essential, as together they make adolescents feel understood and enable care to be tailored to their lives.

The second sub-theme, impact of OW/OB, explained how being overweight or obese and going through the care process affected adolescents. Many shared mental struggles related to their weight,

as well as the emotional impact of comparing themselves to others, especially in response to negative comments. The challenges of the care process and efforts to lead a healthier lifestyle were described as tough. They also mentioned practical issues, such as shopping for clothes and deciding what to wear. As one adolescent said, "*I went to a jeans store two days ago, and I could barely find anything that fit. It really gets to you. Nothing looks good. Jeans and things like that are just difficult when you're overweight*." *(P4, male)* These examples highlight how being overweight or obese is experienced not only as a health issue but also has a significant impact on adolescents' lives. In all, this theme demonstrates that care is more meaningful when professionals are aware of how OW/OB affects adolescents' daily lives and take the time to genuinely get to know them by showing empathy and asking about personal interests, so that care can be better tailored to adolescents' needs.

**Theme 5: Autonomy and decision-making**

The theme of autonomy and decision-making, involving two sub-themes, highlights the importance of adolescents' own role and how professionals can support them. The first sub-theme, adolescents' role in decision-making, focuses on the significant involvement adolescents have in their care decisions. Most stated that they made the choices themselves, although the extent of parental input varied depending on both the parents and the adolescents. They emphasized decision ownership, and while guidance from others was helpful, they stressed it remains their body. Additionally, adolescents described reflecting on the process, which includes weighing options and learning over time. Self-knowledge and advocacy were mentioned, with some adolescents stating that they understand what works for their bodies and situations. One adolescent described: "*It really depends on age. If you're only seven, you don't really have control over what's going to happen. I think that when you're fifteen or sixteen, you have more influence. But it also depends on who you are. I'm really someone who likes to have a lot of influence on what happens*." *(P8, female)* This highlights that adolescents value having ownership of decisions, but their role in decision-making shifts over time, shaped by their growing independence, their experiences, the degree of parental involvement, and self-knowledge.

The second sub-theme, support in decision-making, discusses ways professionals can assist adolescents in making decisions and strengthen their autonomy. Respect for autonomy was seen as essential, with adolescents emphasizing that final decisions should remain with them and that attempting to pressure them was counterproductive. Additionally, shared decision-making was appreciated, where professionals invited them to participate and think together. As one adolescent said, "*Maybe just ask them a lot of questions and make it clear that they need to be able to take part in decisions. You have to let them know, it's not obligatory that they have to be involved, but they should be told that they can participate and that their opinions will be listened to." (P5, female)* Another emphasized, "*Because if they can't participate in the decision-making, then what's the point of the conversation? You immediately lose your motivation, and then you won't even get started*." *(P6, male)* Aligning adolescents' own preferences with what is realistic within care was seen as motivating. Furthermore, offering options and discussing them together was helpful, as it allowed adolescents to identify what best suited them and strengthened their sense of ownership over their decisions. Overall, this theme shows that autonomy is both a developmental need and a motivating factor for adolescents. Care is more supportive when it balances independence with guidance, enabling adolescents to feel ownership while benefiting from professional support. Professionals can assist by practicing shared decision-making, providing adolescents with options, encouraging their participation in decisions, and clearly emphasizing that the final choice is theirs.

**Thema 6: Delivery of care & support**

The theme content and application of care and support, including two sub-themes, is about both how care is delivered and the health strategies used to participate in care and pursue healthier lifestyles. The first sub-theme, delivery of care and support, showed that adolescents appreciated simple and accessible care, such as easy healthy recipes. Recognizing their preferences by considering their interests and hobbies and tailoring care accordingly was seen as helpful. As one suggested: "*Just listen to the adolescents, what they want, maybe a professional can align their approach with them. Make one step-by-step plan together*." *(P6, male)* Mental and emotional support was highly valued, with adolescents emphasizing the importance of professionals paying attention to their feelings and offering support when needed. As one adolescent explained: "*For example, once a week sitting together for 10 minutes and having a conversation about how the week went? That way they can let out their emotions, throw out their anger, sadness, and happiness, and really express themselves." (P5, female)* Costs and affordability were identified as barriers, with some helpful supports, like personal trainers, being considered too expensive. Finally, guidance and structure were appreciated, particularly in areas such as meal planning and sports. This sub-theme suggests that care is most supportive when it is both practically accessible and attentive to adolescents' emotional needs.

The second sub-theme, health strategies, outlined strategies adolescents used to promote healthier living. Adolescents often mentioned physical activities, such as exercising or walking, particularly in a social context. They also emphasized the value of a realistic lifestyle focused on moderation and balance. Minor adjustments similar to their current routines were favored over drastic changes. Gradual habit formation was seen as motivating. As one adolescent expressed: "*Just keep doing the things you always did, maybe with a few changes. You don't have to stop everything just because you want to lose weight. You can keep doing your own things, just maybe eat a bit less, go outside more. Ten thousand steps a day, you'll reach that anyway, you work, go to school, go outside." (P7, female)* Some adolescents also used medication alongside lifestyle changes and considered this combination very effective for weight loss**.** This highlights that healthier living feels more achievable when strategies align with adolescents' existing routines. Taken together, this theme suggests that sustainable change occurs when care and health strategies are aligned. Professionals can support this by focusing on accessible care, providing mental support, promoting moderation over extreme changes, and helping adolescents develop routines that fit into their daily lives.

**Theme 7: Professional support and involvement**

The theme of professional support and involvement, encompassing two sub-themes, highlights the importance of professionals' roles in care. The first sub-theme, professional engagement, emphasizes that seeking and accepting help is crucial. Adolescents mentioned that asking for help early is better, as problems become harder to manage later. Building trust with professionals encourages open sharing, with adolescents emphasizing the importance of a genuine connection. As one adolescent said: "*If the connection with the professional is strong and you get to know the person better, it might help more, because you trust that person, not just a doctor, but someone you know*." *(P2, male)* Engaging with professional support is seen as essential, but its value depends on adolescents' willingness to seek help and the trust established with professionals.

The second sub-theme, supportive attitude, explains the attitudes of professionals that adolescents appreciated and how they perceived them. Some adolescents experienced professionals as judgmental

and patronizing, making incorrect assumptions, such as linking all health issues to weight, and expecting unrealistic progress, such as rapid weight loss. As one adolescent noted, "*And then they really give you that nasty feeling. And you should not have that with adolescents, because then it will not work*." *(P3, female)* These experiences could damage trust, discourage engagement, and influence adolescents' attitudes towards professionals in the future. In contrast, many others highlighted positive experiences with empathetic professionals. Professionals who showed understanding and motivated adolescents even when there was little progress were appreciated, with one adolescent stating, "*It is not really a big problem, in my experience, most of the people in this field are extremely kind and understanding." (P2, male)* A supportive attitude helps adolescents feel more comfortable with the care process. In conclusion, this theme demonstrates that professional support is most effective when based on trust and a supportive attitude. Professionals can support this by being non-judgmental, setting realistic expectations, motivating even when progress is slow, and understanding that trust takes time to develop.

## Discussion

This research examined adolescents' perspectives on Dutch integrated care and support for OW/OB. Analysis of eight interviews identified seven themes that reflect the developmental needs of adolescents. Thematic saturation was achieved on all seven themes, as no new themes or subcodes were identified in the final two interviews (43). Adolescents emphasized the importance of motivation and confidence, supported by mindset transformation, self-efficacy, progress, and external encouragement. Their social environment plays a significant role, with peer support and shared health routines having a positive impact, while social media exerts both supportive and harmful influences. Parents are considered crucial, both through their supportive role and appropriate involvement in decision-making. Adolescents value professionals who demonstrate empathy, take an interest in their lives, and understand the broader impact of OW/OB. Autonomy and decision-making are highlighted as essential, with adolescents seeking ownership of decisions and respect for autonomy, while appreciating guidance in the form of shared decision-making and the provision of options. Furthermore, the delivery of care is most effective when it is accessible, structured, and attentive to mental well-being, with health strategies that promote moderation and routines aligned with adolescents' lives. Finally, professional support was most appreciated when it was based on trust and characterized by a supportive, non-judgmental attitude. Overall, these findings provide insight into adolescents' developmental needs in care and indicate how the Dutch integrated care & support can meet these needs.

Most previous studies on adolescents' perspectives on OW/OB care focus on time-limited, structured interventions (15,27), which differ from the Dutch integrated care approach. Therefore, limited guidance exists on how the Dutch approach can better meet adolescents' needs. Although there are contextual differences, this study's findings relate to and are supported by earlier research and align with the three basic psychological needs in SDT (32), despite the use of inductive coding. Additionally, the results can be placed in the context of the semi-structured interviews conducted with Dutch professionals who provide integrated care to adolescents (29). For motivation and confidence, adolescents in this study emphasized the importance of self-efficacy, progress, and the belief that change is possible. This reflects the SDT concept of competence, highlighting the importance of feeling capable for autonomous motivation (30,32). Findings showed that encouragement from parents and professionals strengthened this motivation. Previous research has also shown that motivational interviewing (MI) within care for adolescents with OW/OB had positive effects (17). Similarly, Dutch professionals reported MI and setting small, achievable goals as applicable (29). At the same time, professionals observed that adolescents often struggled with insecurities and guilt about their lack of success (29). These findings also emerged in this study, underscoring the importance of self-efficacy and realistic expectations in maintaining engagement in care.

Peers were described in this study as motivating and as helping to reduce feelings of loneliness or insecurity, consistent with research highlighting the importance of peer support (15,25) and social networks in promoting physical activity (36). Parental support was also seen as highly supportive, with adolescents emphasizing that their involvement makes the care process easier. This reflects earlier findings that parental support is central (25,26) and research indicating that greater parental involvement in treatment is associated with higher adolescent participation (26). Taken together, this study shows that parental and peer support helped strengthen motivation, aligning with the SDT concept of relatedness (32) and evidence linking parental and peer support to adolescents' physical

activity (52) and healthier behavior (53). Adolescents in this study also identified social media as a significant factor influencing their care process, both positively and negatively, underscoring the need to address social media explicitly in OW/OB care. The study with Dutch professionals similarly underlined the importance for professionals to be aware of adolescents' online behavior, noting that Dutch professionals often systematically focus on the physical social environment but tend to pay less consistent attention to the digital social environment (29). That study also suggested the development of a mobile Health (mHealth) application (29). Some adolescents in this study also highlighted the value of more guided use of social media and supportive digital platforms, which supports the idea that mHealth tools can be helpful when combined with professional guidance.

The importance of respecting autonomy was emphasized in this study, where adolescents highlighted that the feeling of autonomy strengthened their motivation. This finding is consistent with the SDT, where autonomy is considered essential for sustaining autonomous motivation (30). Adolescents in this study valued guidance from professionals through shared decision-making and offering options, with varying degrees of independence. Similarly, parental involvement was described as diverse, with adolescents emphasizing the importance of balancing autonomy and guidance. These findings align with research on differences among adolescents and highlight the importance of respecting and exploring adolescents' preferences (54).

Another key finding from this study was the importance of professionals who strive to understand adolescents' lives and contexts, and tailor care to their preferences and routines. This finding is supported by research emphasizing the importance of individually tailored interventions and personalized care (15,55), and is also highlighted by professionals working with adolescents (56). Adolescents in this study value care that fits into their daily lives and health strategies that align with their routines and context, consistent with the emphasis on patient-centered care within the Dutch care for OW/OB (57). Dutch professionals identified various strategies for addressing psychosocial factors, beginning with gaining a thorough understanding of adolescents' experiences (29). Our results confirm this priority, showing that adolescents themselves place a high value on empathy and interest. Finally, adolescents in this study consistently emphasized the importance of a supportive attitude, emphasizing how this fosters trust. In contrast, judgmental and previous negative experiences make it harder to engage with care. These findings align with previous research where professionals emphasize the importance of unbiased, respectful communication and trust-building in adolescent obesity care (56).

**Strengths and limitations**

A key strength of this study is its focus on adolescents' own perspectives within the Dutch integrated care context. To our knowledge, this is the first study to specifically explore their needs, as few adolescents have been included in earlier Dutch research (58). Most participants had several years of care experience, enabling them to reflect on their current needs and how these have changed over time. Credibility was strengthened through member checks (48), with seven of eight participants confirming their responses. The study also has significant limitations. The small, homogeneous sample (from one region and consisting of older adolescents) limits generalizability and prevents analysis of potential sex differences, as highlighted in previous research (25,27). Recruitment through purposive sampling may have introduced selection bias, as adolescents who were more motivated or satisfied with their care could have been more likely to participate. This might mean they expressed reflecting active engagement with care, whereas less engaged adolescents, who have different needs, may have

been underrepresented. Although thematic saturation was achieved in all themes, this could partly be due to the relative homogeneity of the sample (same age group and region), the recruitment method, and the focus of the interview guide. Saturation should therefore be interpreted within this context. Finally, some sensitive topics may have been more challenging to discuss, which could have limited the depth of emotional reflection.

**Recommendations for practice and future research**

The findings of this study highlight several directions for addressing adolescents' needs and how Dutch integrated care can better meet these needs. Previous research has already demonstrated that motivation is a facilitator of engagement with integrated care (59). Within the SDT, the three basic psychological needs, competence, relatedness, and autonomy, align closely with adolescents' developmental characteristics, and autonomous motivation has been linked to positive behavior change (30,42). Care should strengthen competence by setting small, realistic goals, recognizing progress, and focusing on self-efficacy. Autonomy can be supported by offering options and involving adolescents in shared decision-making. Relatedness should be promoted through encouraging shared health routines with peers and parents, along with emotional support.

Professionals play a central role in shaping adolescents' experiences of integrated care. Adolescents in this study and professionals in earlier research both emphasized the importance of an empathetic, non-judgmental attitude as a foundation for trust and engagement (29,56). Within the Dutch National Model, a broad anamnesis is conducted (14), where attention could also be given to adolescents' personal interests and digital environments. This enables care to be better aligned with adolescents' lives and recognizes the influence of both offline and online contexts on health behavior. Additionally, professionals should actively discuss the preferred level of parental involvement, understanding that some adolescents benefit from support while others prefer less. Finally, being aware of negative past experiences with care is important, as these can shape adolescents' initial trust and willingness to engage.

The previous study with Dutch professionals already suggested the development of a mHealth application (29), supported by our findings, as adolescents emphasized the potential positive impact of social media and the guided use of the digital environment. However, research shows that engagement with mHealth tools among adolescents is often challenging, underscoring the need to involve adolescents in the development process and personalization (60,61). Research on adolescents' preferences further highlights the value of customization, age-appropriate tools, reward systems, peer support, and gamified activities (60). Within the context of integrated care, such an application should also facilitate contact among and with involved professionals, while allowing for appropriate parental involvement. In this way, mHealth can both strengthen self-efficacy by making progress visible and enabling adolescents to see others succeed and improve alignment between adolescents, parents, and professionals. Therefore, a recommendation is the development of an adolescent-specific mHealth application, co-created with adolescents.

Future research should include larger and more diverse groups of participants, allowing for comparisons between genders and across different regions within the Netherlands. In addition, participatory studies are necessary to co-design age-appropriate digital applications. Lastly, the previous study on professionals working with adolescents with OW/OB highlighted the importance of investigating professionals' awareness and understanding of adolescents' digital environments (29).

This is reinforced by our findings, which underscore the significant role of social media in shaping adolescents' care processes and health behaviors.

**Conclusion**

This study examined the needs that adolescents with OW/OB identify regarding care and support and how integrated care can address these needs. Adolescents emphasized the importance of motivation and confidence, support from peers and parents, autonomy, as well as guidance in decision-making, and caring professionals who demonstrate empathy and genuine interest in their lives. Care was seen as most helpful when it was accessible, emotionally supportive, and aligned with adolescents' daily routines. Professionals are essential in offering positive encouragement, understanding adolescents' lives and social environments, supporting autonomy, and building trust with a supportive attitude.

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## Appendix A: COREQ

| No. Item | Guide questions/description | Reported on page # |
|---|---|---|
| **Domain 1: Research team and reflexivity** | | |
| ***Personal characteristics*** | | |
| 1. Interview | Which author(s) conducted the interviews? | P. 5 |
| 2. Credentials | What were the researchers' credentials? | MSc. Student, P. 5 |
| 3. Occupation | What was their occupation at the time of the study? | P. 5 |
| 4. Gender | Was the researcher male or female? | Female |
| 5. Experience and training | What experience or training did the researcher have? | P. 5 |
| ***Relationship with Participants*** | | |
| 6. Relationship established | Was a relationship established prior to study commencement? | P. 6 |
| 7. Participant knowledge of the interviewer | What did the participant know about the researcher? | P. 6 |
| 8. Interviewer characteristics | What characteristics were reported about the interviewer? | P. 5/P. 6 |
| **Domain 2: Study design** | | |
| ***Theoretical Framework*** | | |
| 9. Methodological orientation | What methodological orientation was stated to underpin the study? | P. 5 |
| ***Participant Selection*** | | |
| 10. Sampling | How were participants selected? | P. 5 |
| 11. Method of approach | How were participants approached? | P. 6 |
| 12. Sample size | How many participants were in the study? | P. 8 |
| 13. Non-participation | How many people refused to participate or dropped out? Reasons? | P. 8 |
| ***Setting*** | | |
| 14. Setting of data collection | Where was the data collected? | P. 6 |
| 15. Presence of non-participants | Was anyone else present besides the participants and researchers? | P. 6 |
| 16. Description of sample | What are important characteristics of the sample? | P. 8 |
| ***Data collection*** | | |
| 17. Interview guide | Were questions, prompts, guides, provided by the authors? Was it pilot tested? | P.5/6 |
| 18. Repeat interviews | Were repeat interviews carried out? | P. 6 |
| 19. Audio/visual recording | Did the researcher use audio or visual recording to collect the data? | P. 6 |
| 20. Field notes | Were field notes made during and/or after the interviews/ | P. 6 |
| 21. Duration | What was the duration of the interviews? | P. 5 |
| 22. Data saturation | Was data saturation discussed? | P. 15 |
| 23. Transcripts returned | Were transcripts returned to participants for comment or correction? | P. 6 |
| **Domain 3: Analysis and Findings** | | |
| ***Data Analysis*** | | |
| 24. Number of data coders | How many coders coded the data? | P. 6 |

| | | |
|---|---|---|
| 25. Description of the coding tree | Did authors provide a description of the coding tree? | P. 8 |
| 26. Derivation of themes | Were themes identified in advance or derived from the data? | P. 6 |
| 27. Software | What software, if applicable, was used to manage the data? | P. 6 |
| 28. Participant checking | Did participants provide feedback on the findings? | P. 6/17 |
| ***Reporting*** | | |
| 29. Quotations presented | Were participant quotations presented to illustrate the themes/findings? Was each quotation identified? | Results |
| 30. Data and findings consistent | Was there consistency between the data presented and the findings? | Discussion |
| 31. Clarity of major themes | Were major themes clearly presented in the findings? | Discussion |
| 32. Clarity of minor themes | Is there a description of diverse cases or discussion of minor themes? | Discussion |

## Appendix B: Interview guide

| | MAIN SUBTOPICS | EXAMPLE QUESTIONS |
|---|---|---|
| INTRODUCTION | Goal, content, course of the interview<br>Getting to know the adolescent | - How old are you?<br>- What would you normally be doing today? |
| COMPETENCE | Feeling capable<br>Learning and progress | - What helps you and other adolescents to live healthier?<br>- What knowledge or skills do adolescents need to be able to benefit from the support? |
| AUTONOMY | Making your own choices<br>Role of yourself and others | - What do adolescents need to make their own choices during guidance?<br>- What do you think about the role of parents in the guidance process? |
| RELATEDNESS | Support from others<br>Social influence | - How would adolescents like to be supported during a guidance process?<br>- How do you experience What role does social play in how adolescents experience guidance? |
| CLOSING | Wrap-up<br>Final thoughts | - What else would you like to tell me? |