

## **Targeting and Tailoring an Intervention for Adolescents with Overweight: Some Ethical Concerns**

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# Targeting and Tailoring an Intervention for Adolescents with Overweight: Some Ethical Concerns

## Abstract

There are important ethical issues to be examined before launching any public health intervention, particularly when targeting vulnerable groups. The aim of this article is to identify and discuss ethical concerns that may arise when intervening for health behavior change among adolescents identified as overweight. These concerns originate from an intervention designed to capacitate adolescents to increase self-determined physical activity. Utilizing an ethical framework for prevention of overweight and obesity, we identified three ethical aspects as particularly significant: the attribution of responsibility for health behavior, liberty to choose, and the effect on the participants' psychosocial well-being. It is discussed whether and how measures can be taken to deal with these aspects. It seems evident that the ethical aspects are mainly concerned with the vulnerability of adolescents identified as overweight. However, we claim that when individual feedback and counseling is provided, tailored interventions have a unique potential to empower adolescents to make ethically anchored decisions about their own health behavior.

## Keywords

Adolescents, ethical dilemmas, overweight, physical activity, public health ethics, tailored interventions

## Introduction

The proportion of overweight and obesity among children and adolescents has increased worldwide over the last decades.<sup>1</sup> In Norway, the prevalence of overweight among children and adolescents has been estimated at 14%-17%.<sup>2-4</sup> The numbers are similar to those reported in other western countries, however lower than estimates from the United States, United Kingdom and countries in southern Europe.<sup>5,6</sup> Due to the close associations between excess weight in childhood and later life, and the potential health risks of obesity, the arguments for developing and implementing strategies to sustain healthy weight-related behavior and lessen unhealthy behavior are compelling.<sup>7,8</sup> The World Health Organization states that preventive strategies with highly probable effect should be implemented as early as possible to combat the spreading obesity epidemic.<sup>9</sup> There is, however, a lack of knowledge about the best approaches to achieve long term results.<sup>10,11</sup> Thus, researchers are urged to carry out more studies to identify effective public health strategies at all levels of

prevention. However, scientific evidence alone cannot guide and determine health policy and decisions for intervention.<sup>12</sup> Public health interventions also bring about normative debates about how pursuing better health outcomes for the whole population influences individual persons' lives. While public health interventions primarily focus on health-related outcomes like weight reduction, increased physical activity and more balanced diets,; there is a strong need to address the many ethical issues involved. This implies keeping an eye on aspects such as empowerment, responsibility, autonomy, dignity, integrity<sup>13</sup>, and well-being or health-related quality of life <sup>14</sup>. If it is not clear how an intervention relates to such individual outcomes, it is likely that, instead of supporting and strengthening them, the intervention could end up restricting them. This is not only morally irresponsible, but could also threaten to reduce social acceptance of the intervention and lower its effectiveness.<sup>15</sup> Thus, there are important ethical issues to be identified and examined before launching any public health intervention, particularly when targeting vulnerable groups like overweight adolescents.

### ***The aim of the article***

The aim of this article is to identify and discuss ethical concerns that may arise when intervening for health-behavior change among adolescents identified as overweight. These concerns originate from an ongoing individually-tailored Internet intervention designed to capacitate adolescents to increase daily physical activity and thereby obtain enhanced fitness and health-related quality of life.<sup>16</sup> During development and implementation, several ethical issues became apparent. In the following we first give a condensed description of the intervention. We then frame our ethical analysis by emphasizing the tension between public health concerns and individual ones. Using an ethical framework for the prevention of overweight and obesity developed by ten Have et al.<sup>17</sup>, we identify ethical dilemmas arising from the intervention study. Relying on ethics theory, we then discuss whether and how measures can be taken to deal with these dilemmas. In particular, our discussion emphasizes the value of communicative rationality in empowering adolescents to make autonomous choices about physical activity, health and life in general.

### ***The “Young & Active” Internet intervention***

In an attempt to meet the call for evidence-based interventions to support health behavior among overweight adolescents,<sup>9,18</sup> we developed an Internet program dubbed “Young & Active”. It was included in a 12-week intervention with the aim of increasing overweight adolescents' physical activity and thereby their fitness and ultimately their health-related quality of life. The intervention is

thoroughly described elsewhere, but in short it included establishing personal goals and plans for physical activity, registration of physical activity, a physical activity diary, continuous graphical feedback on progress, social support in a forum, frequently updated information on physical activity and, most importantly, weekly individualized feedback from a health counselor.<sup>16</sup> Except for one first face-to-face meeting, each participant's contact with the counselor took place online. Based on the knowledge of physical activity as a significant contributor to health regardless of body mass index (BMI),<sup>19</sup> this intervention did not emphasize weight reduction. Rather, it drew attention to the physical activity of participating adolescents, how active they aimed to be, and how they could make self-determined choices to increase activity throughout the day. Initially, however, *inclusion* was based on body weight. Following screening of height and weight in eighth grade<sup>20</sup> adolescents with age- and gender-adjusted BMI above 25 were invited to take part in the intervention. The school nurse was involved in the recruitment process, responsible for issuing information and obtaining informed consent from the adolescents and their parents.<sup>21</sup> A non-randomized control group design was chosen for the study. The control group was provided with standard follow-up by the school nurse. This article focuses on participation in the intervention group. However, we acknowledge that there are specific ethical considerations regarding participation in a control group. The study was approved by the Norwegian National Research Ethics Committee.

Despite widespread public concern about the obesity epidemic and explicit national guidelines for action,<sup>22</sup> some controversy attended the introduction of our initiative. . Several nurses argued against approaching overweight adolescents directly and then declined requests to assist in recruitment. Studies from other countries investigating nurses' experiences of raising issues about overweight among children and adolescents have identified several possible barriers to communication.<sup>23, 24</sup> Even if reported barriers like uncertainty and fear of reactions are not explicitly discussed as ethical issues, this may reflect that nurses are concerned about reinforcing stigmatization when broaching the topic of weight with children and their parents. The school nurses, who agreed to contribute to recruitment, experienced some negative reactions from parents and adolescents when they addressed the topic of overweight in general and when they issued invitations to participate in the intervention. However, several nurses also reported positive responses.

### ***Public health and individual concerns***

In contrast to clinical medicine which seeks to cure or treat individual patients mostly on the patient's initiative, public health initiatives are imposed by governments and employ non-medical means to prevent disease and promote the health and well-being of populations.<sup>25</sup> However, since

public health interventions by nature require some degree of interference in the lives of individuals, the prioritizing of such interventions can and will at some point conflict with the rights and freedom of the individual.<sup>26</sup> The question is whether this is ethically defensible. If one relies solely on traditional medical ethics and holds the interests of each individual as the only rightful criteria, the majority of public health initiatives may actually be ruled out. However public health actions can also be seen as vitally important activities with legitimate ends which can only be acquired through population-level programs, as pointed out by Dawson.<sup>27</sup> This requires taking into account the unique ethical needs and features of public health practice by drawing upon moral and political philosophies.<sup>26</sup> Most typically utilitarianism and liberalism are applied to reflect and react to public health interventions.<sup>28</sup> Public health interventions are utilitarian efforts in that they are performed to impartially maximize the health and well-being of populations. In contrast to utilitarianism, liberalism emphasizes the primacy of individual rights and freedoms.<sup>29</sup> Thorough ethical reasoning is essential to reconcile this clash of interests between individual freedom and community well-being. This can be done on a more fundamental level, leaning on philosophical methods. However, it can be argued that, since public health commonly is both highly practice-oriented and context-sensitive, ethical deliberations should be kept “closer to the ground”, relying also on empirical research and knowledge about the social world.<sup>26</sup>

### **A framework used to identify ethical dilemmas**

While philosophical theories are applied on higher levels of abstraction to provide justification for public health actions, ethical frameworks are instruments aimed at assisting in deliberations about ethical aspects of programs and policy.<sup>30</sup> In recent years there has been a rapid development of frameworks for public health that attempt to clarify ethical boundaries for public health interventions and to help public health professionals consider ethical implications and determine whether promoting public health warrants consideration of moral values.<sup>25, 31, 32</sup> However, the applicability of these frameworks to the whole range of public health areas and all kinds of ethical challenges is questionable.<sup>29, 33</sup> An overview of current frameworks and their usefulness for evaluating overweight and obesity prevention programs concluded that the frameworks may be supportive, but that they lack practical guidance for ethical conflicts in this particular area.<sup>34</sup> Based on an inventory of ethical issues that may occur in programs to prevent overweight or obesity, ten Have et al. recently developed an ethical framework for the prevention of overweight and obesity.<sup>15</sup> This is a tool for “making transparent what the potentially ethically problematic aspects of a program

are and for evaluating to what extent a program to prevent overweight and obesity is acceptable from an ethical point of view".<sup>17</sup> A questionnaire of eight ethical pitfalls forms the center of the framework (Box 1).

**Box 1** Questionnaire regarding ethical pitfalls

- How does the program affect physical health?
- How does the program affect psychosocial well-being?
- How does the program affect equality?
- How does the program affect informed choice?
- How does the program affect social and cultural values?
- How does the program affect privacy?
- How does the program affect the attribution of responsibilities?
- How does the program affect liberty?

ten Have et al. p 300<sup>17</sup>

All of these moral features seemed relevant to the present intervention. By analyzing ethical aspects of our intervention against the framework, as described in the supplement to the questionnaire in ten Have et al.<sup>17</sup>, three issues were revealed as particularly significant; attribution of *responsibility* for health behavior, *liberty* to choose and how the intervention affects the participants' *psychosocial well-being*.

## Discussion of identified ethical dilemmas

Leaning on the inventory and the framework<sup>15, 17</sup> supplemented with ethics theory,<sup>29, 35, 36</sup> we discuss the issues identified and elaborate on how the present intervention emphasizes responsibility for health and action, how the adolescents' choices are impinged upon and how their well-being is attended to.

### ***Responsibility***

The question of personal versus social responsibility for health has been widely discussed.<sup>37</sup> It seems unreasonable to claim that health behavior is completely a matter of autonomous and conscious choice. There are multiple factors contributing to overweight and obesity, ranging from genetic disposition to the culture in which we live, to personal and voluntary choices; and the mechanisms explaining why some people gain weight more than others, are still not fully understood.<sup>38</sup> However, studies report that young people with overweight say they are blamed for their size, and that they also blame themselves.<sup>39</sup> A program sending the message that you are yourself responsible for being overweight might divert attention from all the important large-scale environmental factors that

contribute to excess weight. This is a significant dilemma in the individual targeting of interventions which focus on health behaviors.<sup>29</sup> Also, by aiming to impact individual health behavior, interventions indirectly communicate that the present behavior is unsatisfactory. There are good reasons for being especially sensitive when targeting children and adolescents. Not only is their comprehension of causal factors and consequences likely to be poorer than that of adults, they are also under the influence of their parents and home environment and thus less able to control their own behavior. Parents have ethical and legal obligations to promote what they believe to be the best interests of their child.<sup>40, 41</sup> Interventions targeted to adolescents might reduce parents' involvement and their natural responsibility.

One can argue that any program focusing on behavior modification is in danger of attributing the cause of excess weight and responsibility for it to the individual. However, according to Holland,<sup>29</sup> behavior modification in individually-targeted interventions can be warranted as long as it is recognized that individual choices are influenced by environmental factors. In our intervention, the adolescents were recruited based on their BMI, but, resting on both empirical and ethical considerations, the focus during the study was not weight. Instead, we emphasized motivation for necessary actions to increase and maintain physical activity. However, *not* focusing on weight also means not focusing on its complex origins. This may have left the adolescents with a biased view of responsibility, and a skewed belief about exercise as the only and easy way to solve a self-induced "problem".

Thus, by intentionally not focusing on weight our intervention may have unintentionally caused an unbalanced attribution of responsibility. It is, however, important to distinguish between attributing responsibility for the situation and attributing responsibility for resolving it.<sup>15</sup> At ages 13 and 14, adolescents are increasingly independent of their parents. The majority of daily activity is under strong influence by the adolescent herself: active transportation, efforts made in physical education class, leisure time activities and so on. The intervention aimed to support such self-determined activity. However, ten Have et al. stress that programs should not force upon individuals the responsibility for tackling overweight.<sup>17</sup> Rather participants should be enlightened about the complexity of the causes of excess weight, while also helping them to attribute to themselves some responsibility for tackling it.<sup>42</sup> Participation in our intervention was voluntary. Even so, we could not fully control whether parents or school nurses persuaded the adolescent to participate. If the adolescent for some reason chose not to enroll, or dropped out, she or he may have experienced a feeling of guilt: "If I don't participate, I don't care about my health."

## ***Liberty***

Autonomy and freedom of choice are important ethical values in modern liberal societies.<sup>15</sup> From a liberal point of view, choices of eating- and activity are personal and should not be compromised. One way of answering the dilemma between utilitarian public initiatives and the individual's autonomy, is to distinguish between different forms of paternalism.<sup>40</sup> Hard paternalism involves direct coercion and denial of self-determination while soft or weak paternalism is self-regarded and allows an expression of choice.<sup>31, 40</sup> Interventions aimed at empowering individuals to make healthy choices can be labeled "libertarian paternalistic".<sup>43</sup> Such interventions are easier to ethically justify, at least as long as strategies or interventions are based on solid evidence that the healthy choice is the healthiest.<sup>40</sup> However, significant ethical issues still arise in the clinical context. At this point we are no longer dealing with policies which are based on arguments for action on epidemiological evidence, but interacting with vulnerable teenagers.

An intervention such as the present one, is weak paternalistic in the sense that it imposes on the participant's personal preferences by directing actions for his or her own good. Despite a strong focus on self-determination of goals and activities, the intervention included several ethical pitfalls concerning the autonomy of the participants. First, the intervention was directed at asymptomatic individuals based on arguments of known population risks.<sup>44</sup> Applying statistical risks as arguments for an individual to change is highly problematic. Knowing that overweight adolescents are significantly less active than their peers of normal weight,<sup>45</sup> does not mean that every adolescent participating in the intervention was less active than his or her classmates. Second, in a measurement of an entire population of adolescents, some were identified as overweight or obese based on a preset cutoff.<sup>20, 46</sup> The majority of these adolescents were presumably aware they were overweight, but some might have been less conscious about it. Another problematic issue was that the adolescents were not the ones taking the initiative to get help, but on the contrary were directly approached by the health service. This might have created anxiety and have been experienced as offensive, unpleasant or limiting to one's autonomy.

Not all people hold health as the most valuable thing in life and what people consider healthy varies.<sup>15</sup> Our intervention regards health as a goal and presupposes the link between physical activity and health, which might have conflicted with the participant's wishes and preferences. However, adolescents' views can easily be overridden by the arguments of health experts. Being talked into adopting behavior whether it is regular exercise or dropping preferred activities such as playing video games may impinge upon the integrity of the individual. Trying to persuade someone to be more



physically active is not only morally problematic. From a psychological point of view it is likely to be unsuccessful, at least in the long run.<sup>47</sup>

The intention of building the intervention around the theoretical framework of Self-determination theory was to specifically empower adolescents to plan and execute daily activity and exercise of their own choice and preferences. This was dependent of course on whether they became involved in the intervention or not. Adolescents who declined to participate, or dropped out before the intervention was completed, were potentially left with a feeling of discomfort, disturbed by an initiative they never asked for.

### ***Psychosocial well-being***

Psychosocial well-being refers to psychological and social aspects of subjective well-being or quality of life. These aspects are multidimensional constructs that include both affective and cognitive components, and further encompass the experience of both positive and negative emotions.<sup>48, 49</sup> Approaching a vulnerable group based on their body weight also involves several ethical issues relating to psychosocial well-being. First, there are potential problems of stigmatization. Reviews report that the consequences of being overweight are extremely negative for young peoples' social status and emotional health.<sup>39, 50, 51</sup> Persons with overweight are often presented and perceived as unattractive, and adolescents tend to be their own worst critics. Young people of all sizes view overweight people as lazy and lacking in self-discipline.<sup>39</sup> With an underlying message that fat should be avoided, interventions directed at overweight individuals may add to the already existing stigma of being overweight or obese.<sup>40</sup> Another ethical issue occurs when being overweight is equated with being unhealthy. It is highly unfortunate if interventions end up treating overweight, yet fairly healthy adolescents as patients with a potential medical condition that needs to be "cured" by weight reduction or health behavior change. This is particularly troublesome in view of the lack of knowledge about when excess body fat becomes an actual health threat. Adolescents seem to be more concerned with the social, rather than the health consequences of overweight.<sup>39</sup> Even so, interventions with an explicit focus on health-risks may create uncertainty and worries for the future.<sup>17, 40</sup> Oversimplified messages may lead slightly overweight adolescents to believe that health risks of long term and severe obesity also apply to them.<sup>15</sup>

Our intervention was designed to increase well-being, conceptualized here as health-related quality of life. Thus it seems to be a paradox that questions regarding participants' well-being, particularly concerning stigmatization, cropped up repeatedly. In a period of life in which appearances and bodily

leanness are emphasized, our participants were singled out from a group normal weight peers. We are aware that being selected and approached this way, even though done with discretion, might reinforce the feelings of stigmatization.<sup>44</sup> However, one can argue that this might happen, to some degree, within any preventive intervention offered to individuals solely on the basis of their BMI.

Gaining positive physical activity experiences and establishing physical activity habits may increase both physical health and psychosocial well-being.<sup>52</sup> We argue that tailoring our intervention to each participant and providing individualized counseling, created a good chance of enhancing the existing level of physical activity. Tailored health promotion interventions use information or change strategies intended to reach one specific person based on individual factors derived from an individual assessment and related to the outcome of interest.<sup>53</sup> Our intervention provided tailored automated feedback and individualized written counseling based on theoretical inputs from Self-determination theory and principles from Motivational Interviewing (MI).<sup>16</sup> Hence, tailoring with extensive use of theory hopefully enhanced the possibility that the adolescents would experience support in a way that both motivated them to increase and maintain physical activity while ensuring their well-being during and following the intervention.

At first glance, it seems that our intervention is suited to attend to the participants well-being as it emphasizes self-determined physical activity and not weight reduction while contributing to empowerment.<sup>17</sup> Several of the participating adolescents expressed satisfaction with finally being offered assistance to become more physically active. However, we have to take into consideration that for some adolescents, participating or being offered participation, might have been an unpleasant experience that threatened to undermine the primary objective of the study.

## **Final comments**

In this article we have identified and discussed ethical issues that may occur in an ongoing preventive intervention for overweight adolescents. Rather than conducting an empirical analysis documenting the frequency or severity of the issues, we aimed to focus attention on our experiences and reflections related to ethical pitfalls. The issues were concerned with how to avoid blaming the adolescent while simultaneously pointing out the individual's responsibility for engaging in activities which promote health.. Furthermore, it is possible that the intervention, instead of empowering the adolescents to make self-determined choices, made them pursue health choices predetermined by the intervention. Also, since overweight and obese individuals are pervasively stigmatized in society,

there will always be a risk of exposing the individuals to some degree of discomfort through participation in such an intervention. The question is whether the intervention would prove legitimate despite the risks and threats involved. Buchanan states that three common arguments are often made for paternalistic interventions, despite potential ethical constraints: first, by enabling people to provide voluntary, informed consent; second, by assuming weak paternalism to inform individuals about health risks and how they can prevent self-harming activities; and third, by relying on the utilitarian argument that the best choice is the course of action that produces the greatest good for the greatest number.<sup>54</sup> An intervention like ours could very well be approved resting solely on these arguments, but as demonstrated by the discussion above, there are obvious reasons that more thorough analysis is needed to really consider the justification of the program. However, making use of ethics theory or leaning on ethical frameworks does not necessarily produce a clear answer to the question of justification either. Instead, by highlighting the most pressing concerns, we are in a better position to add, change or withdraw elements of the intervention to reduce ethically sensitive issues. Detection of disagreement and pitfalls when applying a framework or principles from theory is an important result, as these are also likely to appear in society.<sup>17</sup>

Empowering the adolescents to make self-determined choices about physical activity is the core intention of this intervention. Building on Habermas' theory of communicative action,<sup>55</sup> Buchanan argues that instead of more or less successfully persuading people to be involved in public health activities, we should focus on helping individuals to make critical value judgments about their priorities: "...the quality of a health educator's work would be evaluated not by its effectiveness in changing people's behavior, but by whether audiences find the dialogue valuable in helping them think about how they want to live their lives".<sup>13</sup> According to Habermas, ethically sound decisions originate from respectful explorative dialogue.<sup>55</sup> Communicative rationality is consent-oriented, based on gaining understanding and agreement about the moral rightness of behavior. Thus the participants themselves are the only ones competent to decide whether the intervention can be justified, "for it is the consequences to their needs and interests that constitute the relevant reasons in terms of which the issue of normative validity must be decided".<sup>13</sup> The counseling borrowed from MI. This approach seeks to empower the adolescents' own reasons for change by expressing empathy, to make the adolescent more aware of discrepancies between goals and actions, to encourage personal reasons for change, and to support self-efficacy.<sup>56</sup> It has been argued that even though MI is more focused on exploring behavior change than on behavior in general, it clearly overlaps with Habermas' model.<sup>57</sup> We thus claim that our intervention has a unique potential to help the adolescents make ethically anchored decisions about change through increased insight into the field of possible action.

Assuming that we can justify the intervention per se, there are still important ethical dilemmas relating to how the adolescents were recruited. Put in a nutshell: The strength of the intervention lies in the tailoring, the challenge in the targeting. For the future, it seems necessary to evaluate if and how measures can be taken to minimize stigma and avoid blaming in the process of engaging participants. However, there is only so much one intervention can provide. Stigmatization does not take place in isolation from an intervention, but must be conceived as a complex social process.<sup>58</sup> It is also the case that adolescents are identified as overweight or obese regardless of our intervention.<sup>20</sup> It is not in the scope of this article to discuss the ethical implications of weight screening, but if screening programs are introduced, it can certainly be argued that it is unethical not to offer some kind of follow-up program for those detected as being “at risk”. This does not mean that just any program should be implemented as long as it promises weight reduction or health behavior change. However, we argue the need for a thorough ethical analysis of the entire range of measures initiated by governments to prevent development of overweight and obesity in the children and adolescents.

In this intervention study we conduct a process and outcome evaluation by combining qualitative and quantitative approaches.<sup>59</sup> Along with assessment of intervention effects on fitness and health-related quality of life, we examine how participants experienced the intervention by means of qualitative interviews. We also measure to what degree the participants experience the counseling to be supportive of autonomy. The results of the tests and interviews are yet to be analyzed and interpreted. The combination of different perspectives provided by quantitative and qualitative methods and the consciousness of ethical dilemmas acquired through the process of ethical reasoning is essential when determining if the intervention ought to undergo further large scale evaluation and subsequent implementation in the school health service.

## **Limitations**

In this article we have identified and analyzed ethical dilemmas embedded in our intervention approach using an ethical framework for prevention of overweight and obesity.<sup>17</sup> Without performing a full evaluation following the detailed steps and procedural recommendations for application, we have chosen to focus our attention on the most prominent issues. Indeed, as a consequence, other important ethical strengths and pitfalls may have been overlooked. Furthermore, it has not been within the scope of this article to discuss ethical issues involving research on adolescents in general and the additional burdens of being the subjects of a study. Neither have we examined ethical issues in online interventions specifically.

## Declaration of conflicting interests

These authors declare that there is no conflict of interest.

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