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Brief report

Overweight children and adolescents – is there a subjective need for treatment?

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Abstract

Objectives: We report on the first months of recruitment for a study to evaluate outpatient training for moderately overweight youths.
Methods: Various recruitment strategies were employed, including media exposure, paediatricians, school events, and the distribution of flyers. Roughly 6 160 overweight and 4 720 obese children and adolescents of the target age range were estimated to live in the study area.
Results: Altogether, 172 families enrolled for participation. Only 38 enrolled children (22.1 %), however, were overweight and thereby eligible for participation, 132 children (76.7 %) were obese and two were normal weight. Most eligible participants were recruited via media or paediatricians.
Conclusions: Reaching overweight, but not obese, children and adolescents for intervention is difficult, where a low recognition of the condition in its less extreme form might be a particular problem.

Keywords: Recruitment – Children – Adolescents – Overweight – Prevention – Clinical trial.

Introduction

Difficulty with recruitment is a common issue in clinical trials[1] and the success rates of different strategies in various contexts are rarely studied systematically.[2] Particular problems can occur in relation to preventive interventions[1] because prospective health risks are uncertain and potential participants may not perceive a need for action. This may be particularly true of weight management in children and adolescents. Recent intervention trials for weight reduction reported difficulties with recruitment of overweight or obese children;[3,4] however, recruitment was not reported in detail, and no distinction was made between moderate versus more extreme forms of excess weight (i. e., overweight vs. obesity).
We report on the first six months (January 2007–July 2007) of recruitment for a randomised controlled trial with one wait-list control group to evaluate outpatient training for moderately overweight youths. The report is intended to call attention to an apparently lack of awareness of treatment requirements in overweight, as opposed to obese, children and adolescents.

Methods

The six-month outpatient training programme 'Obeldicks LIGHT' was established at two clinics in the district of Recklinghausen, north-west Germany (study sites: Datteln and Marl). The intervention addresses overweight children aged 8 to 16 years and their parents. This programme is based on the intervention 'Obeldicks' for obese children and adolescents[5] and includes nutrition, behavioural therapy, and physical activity. The programme aims at reducing relative overweight and enhancing quality of life. It requires a weekly time expenditure of about 3 hours for the first three months and 1.5 hours for the latter three months. Maximum distance to travel to training facilities was 30 km.

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Based on recent population statistics, including the local number of children of different age-groups in 2006[6] and the current national percentage of overweight in similar age-groups,[7] it was estimated that 63 670 8- to 16-year-olds, including roughly 6 160 overweight and 4 720 obese children and adolescents, live in the study area.

Participants and procedures

All overweight children 8 to 16 years old without weight-related morbidities were eligible for the intervention. Overweight was defined by body mass index (BMI: weight in kg divided by squared height in metres) >90th and ≤97th age- and gender-specific percentiles for German children.[8] Children above the 97th BMI percentile were classified as obese (i.e., extremely overweight) according to this reference and were not eligible for the intervention. All enrolled children and adolescents were weighed and measured while wearing only underwear and examined at the study sites to determine eligibility.

Expenses of the intervention were fully paid by all compulsory health insurance funds. Written informed consent was obtained from parents as well as from children aged 12 years or above. The study was approved by the Ethics Committee of the University of Bremen.

Recruitment approaches

Media: Recruitment began in January 2007 with an initial press conference at the main study site to introduce the training to the public. There were reports about the programme in five local newspapers and the local radio and TV programmes. It was explained that overweight, but not obese, children and adolescents were eligible for the intervention. An internet address for calculating degree of overweight (www.mybmi.de) was provided in each media presentation.

Paediatricians: Media coverage was paralleled by letters to all registered paediatricians and general practitioners in the study region (n = 225). Physicians were informed about the intervention, study design, and eligibility criteria (including BMI percentiles) and were invited to refer eligible families to the treatment facilities. The information included in the letter was a short information sheet, a telephone number for queries, and some coloured information brochures for parents comprising information about paediatric overweight, the intervention, BMI percentile charts, and telephone contact information. Physicians were also informed about the study in education sessions held at the main study site in Datteln. Training included information about the health risks of paediatric overweight and diagnostics based on BMI percentile charts. Ten education sessions took place during the described six-month period, with 40 to 100 physicians attending each.

Furthermore, coloured brochures were sent to adult education centres and pharmacies, school administrations were informed about the project, and recruitment was conducted via health insurance offices. The training was also advertised on the homepage of the clinic in Datteln and was announced by staff to all eligible families attending the endocrinological outpatient clinic at this site.

School screenings: Because only a small number of participants were recruited during the first few months, further recruitment strategies were implemented. A school lesson on healthy nutrition was combined with a BMI screening. This 45-minute lesson was offered to 14 regional schools from May to July. Appointments were made with two elementary schools. All parents of participating classes were asked to give their written consent to assess the weight and height of their children and receive information about the observed weight status. Ten classes from third and fourth German school year (8–10-year-old children) took part in the lesson (n = 203 pupils). Written consent was given by the parents of 140 children (68.97 %; 77 girls).

During the lessons, pupils were weighed and measured individually in a separate room. Parents of participating children were informed about the weight status of their children by a personalised letter including a BMI percentile chart with the BMI value of their own child indicated. The interpretation of the chart was explained and the intervention was offered to families with overweight children.

To assess effectiveness of different recruitment strategies, all enrolled families were asked how they had gained knowledge of Obeldicks LIGHT during their first interview. Parents of eligible participants also completed a short questionnaire that asked for the recruitment source.

Results

Families of 172 children and adolescents of the target age range enrolled for participation from January to July 2007. Only 22.1 % of these children and adolescents, however, met the inclusion criteria, which resulted in 38 recruited participants (63.2 % girls; mean age = 7.68, SD = 1.87; mean BMI = 22.92, SD = 1.65). Most enrolled children (n = 132, 76.7 %) were obese and, therefore, not eligible for the intervention (participation in the Obeldicks training for obese children instead of Obeldicks LIGHT was offered to these families). Two children (1.2 %) were normal weight. Fig. 1 shows the results of the different recruitment approaches.

Most families became aware of the intervention via the media. However, 85.6 % of children enrolled through this channel were obese and, therefore, ineligible. Eight participants

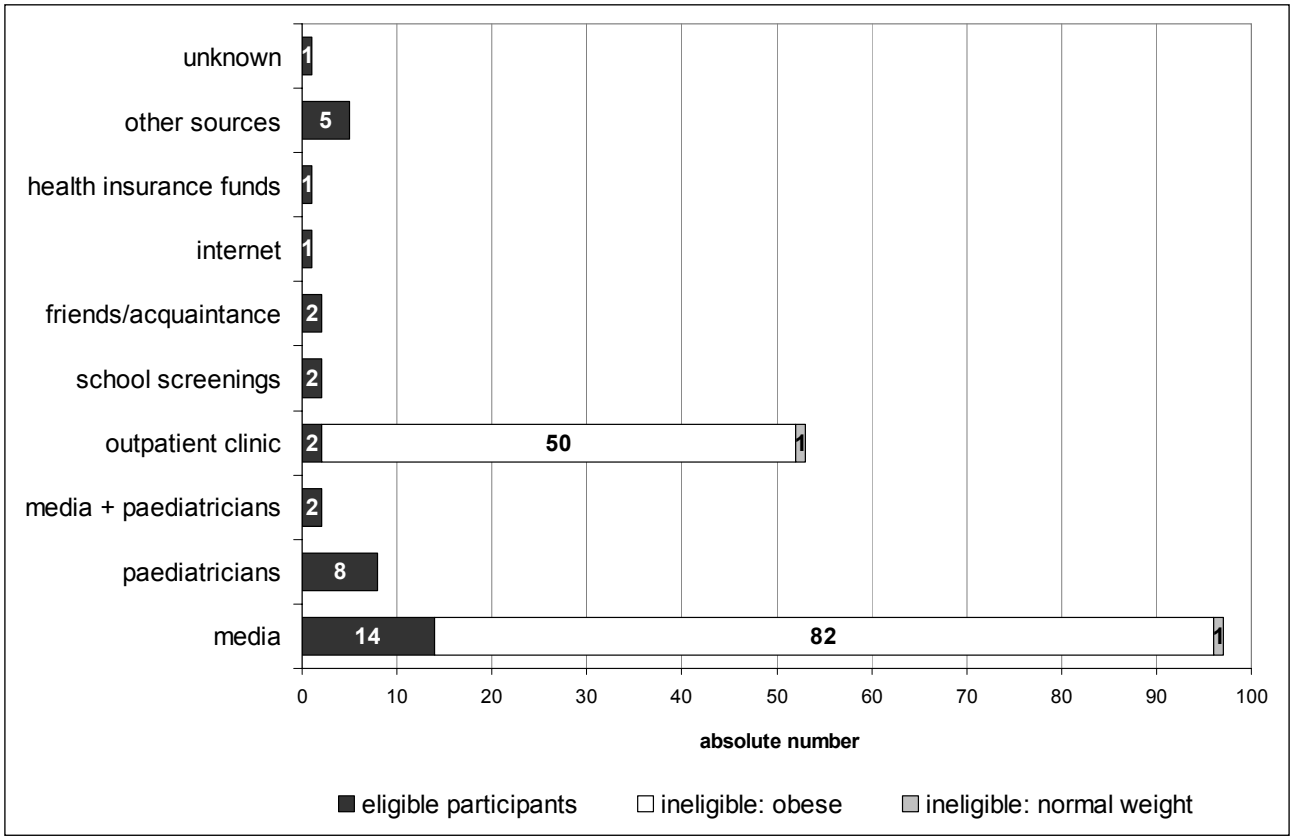

Figure 1. Number of enrolled and eligible children by recruitment source.

were recruited via paediatricians, all of whom met eligibility criteria. In addition, two double entries indicated both media and paediatrician as sources of information.

Among the 309 children and adolescents who visited the obesity-specialised outpatient clinic in Datteln during the described six months, 58 (18.8 %) met inclusion criteria for the study in terms of age and weight. Only two, however, could be recruited for the intervention, although parents were informed about the weight status of their child and the training offered. Rather than these overweight children, many obese patients (96.2 % of children enrolled via outpatient clinic) desired to participate. It is indeterminate how many of them visited the clinic because they had heard of Obeldicks LIGHT, since the number of patients was higher than in other months without press releases.

Among the 140 children measured at school, 19.3 % (n = 27) were overweight and 5.7 % (n = 8) were obese. Of the 27 families informed about their child being overweight through this means, only two (7.4 %) enrolled for participation.

One participant was recruited via health insurance fund and one via the internet but none were reached through pharmacies, adult education centres, or school administrations. Other sources were the hospital in Marl, where training courses are offered (n = 2), other health care providers (n = 2), and prior knowledge of the Obeldicks programme for obese children (n = 1).

Discussion

Recruitment for a clinical trial to evaluate a preventive treatment for overweight children was investigated. Roughly 6 160 overweight and 4 720 obese children and adolescents of the target age range were estimated to reside in the study area. Thus, over six months, with 38 overweight and 132 obese children enrolled, only 0.6 % of eligible overweight but 2.8 % of assumed obese children were reached. Kalavainen and colleagues,[3] in contrast, stated a rate of 10 % of obese children; however, the recruitment period was longer.

Overall, response to recruitment was good in that the treatment offer was comprehended by the public and many families were interested in participation, with the highest response rate for media exposure. However, recruitment resulted primarily in the enrolment of obese children, indicating that in

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the search for overweight children, predominantly obese children felt addressed. Since the school screenings showed an even higher percentage of overweight children than a national representative sample,[7] it is unlikely that the absence of overweight youths in the study region accounts for this result. We, therefore, conclude that paediatric overweight is primarily perceived as a problem in its extreme form (i. e., obesity).

In fact, a growing body of literature shows that parents, in general, tend to underestimate their children's weight status, with rates of underestimation in overweight children of 56–75 %.[9–13] Kurth and Ellert[14] recently found that many obese German adolescents underestimate their weight status, but weight perceptions of overweight adolescents were not reported.

Recruitment via paediatricians was also low, although all enrolled children were eligible. Informal feedback from some physicians indicated that they also encounter difficulties with the identification of moderate overweight in children. Further acknowledged were concerns about calling parents' attention to their offspring's excess weight. Some practitioners expressed concern about annoying their patients.

Barriers to addressing weight problems in children for professionals in other investigations included time constraints, lack of counselling skills, treatment motivation or parental compliance, low reimbursement, and perceived treatment futility. In line with feedback from physicians in our study, these professionals also often avoid confronting parents with the subject of excess weight.[15,16] Difficulties with the identification of moderate paediatric overweight are likewise underpinned by international research.[17–19] These problems are apparently attributable to a low utilisation of BMI percentile charts in common practice.[15,17,18,20,21]

Poor detection of overweight, however, was not the only barrier to participation in our study, since many more families were informed about their child being overweight than were enrolled for training. Reasons for the low interest of these families may be a lower treatment motivation in families with overweight children (who do not particularly suffer from weight-related complaints), denial of relevance of the condition, or sense of parental guilt, if non-physiological reasons for excess weight are acknowledged.

Limitations: No written enquiry of ineligible families was conducted and the information about recruitment sources of ineligible enrolees may, therefore, be less reliable (especially the distinction between media and outpatient clinic). The number of families that were informed about their child being overweight by their paediatrician but chose not to enrol in the study cannot be determined. For administrative reasons, the use of direct mailing was not possible, though this was shown to be an effective recruitment approach in other studies.[1,22] Finally, the exact number of overweight children in the study area is undocumented and could only be estimated.

In summary, the subjective need for treatment is low in most families with overweight children. This poses a serious barrier to the accomplishment of an evidence base for treatments as well as for prevention. A low recognition of the condition by physicians as well as by the affected families contributes to this result. This conclusion is supported by the cited literature, which shows the widespread shortcomings of parents and physicians in the identification of excess weight.

When implementing intervention programmes for overweight children, it should be kept in mind that the majority of families with overweight children do not feel addressed, and most families presenting for intervention will have obese, but not overweight, children.

Further research on barriers and facilitators for paediatricians to diagnose and communicate the weight status of their patients and for participation in families who know their child's overweight status will be essential for the development of targeted recruitment strategies.

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Zusammenfassung

Hintergrund: Wir beschreiben die ersten Monate der Rekrutierungsphase für eine Evaluationsstudie zur Bewertung eines ambulanten Trainings für mäßig übergewichtige Kinder.

Methoden: Eine Vielzahl an Rekrutierungsstrategien wurde genutzt, darunter Medien und Kinderärzte, Schulveranstaltungen sowie die Verteilung von Flyern. Etwa 6160 übergewichtige und 4720 adipöse 8- bis 16-Jährige leben in der Studienregion.

Ergebnisse: Insgesamt 172 Familien meldeten sich für das Schulungsprogramm an. Allerdings waren nur 38 (22.1 %) der Kinder übergewichtig und damit teilnahmeberechtigt. 132 Kinder (76.7 %) waren adipös, und zwei waren normalgewichtig. Die meisten Teilnehmer/innen wurden über die Medien oder Kinderärzte gewonnen.

Schlussfolgerungen: Übergewichtige – nicht adipöse – Kinder und Jugendliche scheinen schwer zugänglich für Interventionen. Ein besonderes Problem scheint die mangelhafte Identifizierung des Übergewichts in seiner weniger extremen Form zu sein.

Schlüsselwörter: Rekrutierung – Kinder – Jugendliche – Übergewicht – Prävention – Klinische Studie.

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