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Original article

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Abstract

More than fifteen percent of children in Europe are overweight; another five percent are obese. The high prevalence of obesity emphasizes the necessity of developing evidence based treatment programs that are useful in a clinical setting. Management of childhood obesity is commonly based on lifestyle interventions where nutrition, physical activity, and behavior modification are the main targets. To incorporate lifestyle interventions, many childhood obesity treatment models use different psychological models, such as behavior modification or cognitive behavior therapy. This paper presents the key lessons from a research program on an empirically supported family therapy-based treatment, Standardized Obesity Family Therapy (SOFT). SOFT is based on systemic and solution-focused theories and has shown positive effects on the child with respect to degree of obesity, physical fitness, self-esteem, and family functioning in several studies. The distinguishing features of SOFT are the focus on family interactions as an important source for implementing and maintaining lifestyle changes, the multidisciplinary team approach, and a limited number of sessions (three to four per year). The main aim of this paper is to provide tools for clinicians in the field of obesity who work with families, alone or in a multidisciplinary team.

KEY WORDS: body mass index, children, family therapy, obesity, overweight

Introduction

More than twenty percent of children in Europe are overweight. One in five of these children is obese. The high prevalence of obesity emphasizes the necessity of developing evidence-based treatment programs that are useful in a clinical setting (Flodmark, Lissau, Moreno, Pietrobelli, & Widhalm, 2004; Lobstein, Baur, & Uauy, 2004). In this article, we present the key lessons from a research program on an empirically supported family-based treatment, Standardized Obesity Family Therapy (SOFT®[1]). We briefly outline the rationale for working with the family when addressing childhood and adolescent obesity and summarize key findings from twenty years of research. The main aim is to provide tools for clinicians in the field of obesity who work with families, alone or in a multidisciplinary team.

Background

SOFT compared to other treatment models

Although treatment approaches effective in the treatment of childhood and adolescent obesity share many similarities, the models are quite different in their underlying treatment philosophies and implementation strategies (Flodmark, 2005). Management of childhood obesity is commonly based on lifestyle interventions where nutrition, physical activity, and behavior modification are the main targets (Dietz & Robinson, 2005). To incorporate lifestyle interventions, pediatric obesity treatment models use different psychological models, such as behavior modification (Edwards, et al., 2006; Epstein, Valoski, Wing, & McCurley, 1994) and cognitive behavior therapy (Braet, 1999). The most distinguishing feature of SOFT is the focus on family interactions as an important source for implementing and maintaining lifestyle changes (Flodmark, 1997; Flodmark & Ohlsson, 2008). Inclusion of families in

[1] SOFT® is a trademark owned by Childhood Obesity Unit, University Hospital, Malmö, Sweden.

treatment of childhood obesity is widely used (Kitzmann & Beech, 2006; Nowicka & Flodmark, 2008; Young, Northern, Lister, Drummond, & O'Brien, 2007). However, SOFT is the only treatment model for obesity that relies on coherent integration of family systems theory and therapy, developed and evaluated in a medical setting. SOFT integrates systemic (Selvini, Boscolo, Cecchin, & Prata, 1980) and solution-focused theory and principles (de Shazer, et al., 1986) and is an empirically validated family therapy model for children and adolescents with obesity. SOFT differs from a standard family therapy practice in many clinics working with a range of different problems, as this model has been developed and applied for one illness – obesity – and is performed in a medical setting. The goal of SOFT is to provide an appropriate level of medical and psychosocial support to families of children with obesity.

Brief summary of research on SOFT

Several studies have tested the efficacy of SOFT in child and adolescent groups. In the first study, family therapy was found to be effective in the treatment school children with obesity (Flodmark, Ohlsson, Ryden, & Sveger, 1993). The families were randomized to three groups after screening a general population of school children in the city of Malmö aged 10-11 (n=1 774). The first group received conventional treatment (i.e. regular visits to a physician and a dietician). The second group underwent six sessions of family therapy. In both groups the duration of treatment was 14-18 months. The third group received no treatment. At follow-up one year after the end of treatment, body mass index was significantly lower in the family therapy group than in the untreated control group. Furthermore, physical fitness was significantly higher in the family therapy group than in the conventionally treated group, and the fat mass (measured by skinfold thickness) was significantly lower.

In a second study 54 highly obese children and adolescents (mean BMI z-score 3.7) were offered family therapy by a multidisciplinary treatment team consisting of a pediatrician, a dietician/sports trainer, a pediatric nurse, and a family therapist. This intervention resulted in a significant decrease in the degree of obesity of the child (BMI z-score -0.12), as well as improvement of self-esteem and family functioning (Nowicka, Pietrobelli, & Flodmark, 2007). These results were obtained with 3.8 sessions. Eighty-one percent of the families participated in the follow-up. The treatment offered in this study is part of routine clinical practice in the Childhood Obesity Unit and will be described under "SOFT in practice".

A third study focused on adolescents and treatment of groups of families (Nowicka, Hoglund, Pietrobelli, Lissau, & Flodmark, 2008). A Family Weight School treatment model was developed, based on the same theoretical framework as single-family treatment, into a one-year program consisting of four group meetings. Up to twelve families participated at each four-hour meeting. A total of 65 out of 72 adolescents completed the program. The participation in the Family Weight School resulted in a significant decrease in degree of obesity in adolescents (BMI z-score -0.09) with BMI z-scores below 3.5 (adult equivalent approximately BMI 40 (Daley, Copeland, Wright, Roalfe, & Wales, 2006)), but not in adolescents with BMI z-scores above 3.5 compared with a waiting list control group. Thus, the Family Weight School has been shown to be effective in treating adolescents with severe obesity, but not for those with morbid obesity.

SOFT in practice

Our research on family therapy in the treatment of pediatric obesity has led to the establishment of a regional Childhood Obesity Unit, serving children and adolescents in

southern Sweden. The unit is located in Malmö, Sweden's third largest city, a multiethnic city in which 30 percent of the children were immigrants when the scientific evaluation was carried out. Now, more than 50 percent of the children in Malmö are second-generation immigrants (mostly from Easter Europe (i.e. former Yugoslavia) and Asia (i.e. Libanon, Iraq) which means that the method and the program can be used in a multiethnic society. The Childhood Obesity Unit consists of two multidisciplinary treatment teams which treat approximately 250 families a year. To date more than 1200 families have participated in the family-based programs offered by the unit. The Family Weight School program has been described in a book containing a manual that enables the program to be set up in other settings (Nowicka & Flodmark, 2006). The Family Weight School is currently being tested in several sites in Sweden and one in Denmark. Since the Family Weight School has been described elsewhere, from now on we will focus on single-family treatment.

Structure of the model - First visit and follow up

The children are referred to the Childhood Obesity Unit in southern Sweden by family doctors, pediatricians, school nurses, and dieticians for treatment of obesity. Self-referral is also possible, as we encourage patients to take the initiative to seek treatment. All children accepted for treatment have obesity as defined by the international definition of childhood obesity (Cole, Bellizzi, Flegal, & Dietz, 2000). The first and subsequent visits follow a standardized structure; see Flow Chart, Figure 1.

Please insert Figure 1 here. (Figure 1 is on a separate sheet).

Strategy of interventions – a contextual frame for analysis

SOFT is based on an integrative approach that combines normative interaction and collaborative family support, Figure 1.

Normative interaction assumes that it is possible to change people by directing them. This perspective is based on the first-order cybernetics[2] in which the observer (a team member) remains outside that which is observed and is able to find the precise decision of the problem and specify the change (Hoffman, 1985). In SOFT, the team members act as experts in the context of the medical assessment of the child and medical recommendations for the family. Throughout the treatment, the health, growth, and development of the child are monitored by team members (physician and nurse) according to medical guidelines. The medical aspects are presented by the team during the first visit when the child is assessed and the family receives feedback on the health of the child, as well as on nutrition and physical activity reported by the family during the initial diagnostic interview.

However, when it comes to *how* the family should act to change its lifestyle, the team members do not propose precise instructions, but instead influence the context of change through collaborative family support. This process is consistent with second-order cybernetics, which states that the observer (a team member) is included in the total arc (Cecchin, 1987) and cannot be objective to find the "truth" or precise decision of the problem. Instead, reality is defined as a consistent frame of reference for at least two observers (team members and family members) (Hoffman, 1985). The impact of the influence in SOFT is derived through three key elements of the program:

1. Approach

Tools: - family member involvement

[2] Cybernetics is a field of study relating to how information and regulation function in systems.

- neutrality
- adoption of a normalizing, nonblaming position,
- assumption of motivation

2. Language

Tools: - intervention with questions
- use of scaling questions
- use of contextual markers
- reframing

3. Process

Tools: - highlighting exceptions to the problem
- focus on small changes
- identification of family resources

Brief case example (based on authentic patient data): ***John 12 years of age***

John's visit to the Childhood Obesity Unit starts with a referral letter sent by a primary care physician: "Severe overweight. Boy in fifth grade. From the age of five years onwards the patient has gradually gained weight and he is now above the third standard deviation. The patient suffers a lot from his overweight. He has quit several activities because of his obesity. The patient comes to the welfare centre for new metabolism tests. I am enclosing the test results taken 15/4-07 which are normal." John represents a common patient in our unit. Below follows an overview of tools that will be used in the treatment of John.

Tools as intervention in SOFT

Each of SOFT key elements and the tools used to achieve them, are presented below. Practical examples and underlying theory are given.

Approach

The term *approach* refers to the tools the SOFT team members use when in contact with children and their families throughout the treatment period and is intended to build and foster a positive relationship. Four factors in treatment relationships have been identified as important for patients to change. These are accurate empathy, non-possesive warmth, congruence, and unconditional positive regard (Rogers, 1957). Indeed, recent research has found that therapeutic alliance is a stronger predictor of outcome in psychotherapy than the method employed (Norcross & Lambert, 2006).

In family therapy, the therapeutic alliance is extended to include not only the patient, but all the members of the family. Further, interaction among team members is also part of the approach. Thus, family therapy can be defined as "the use of the encounter with a family to improve the members' health by observing and analyzing interactions between family members, as well as with the therapists, and improving the family's ability to use their own resources."

The important goal of the first visit is that the family comes back to the second visit. The dropout rate in eighteen randomized controlled trials of lifestyle interventions for treating obesity in children in a systematic Cochrane review ranges from 7% to 41% with an average of 21.2 % (Summerbell, et al., 2004). The lowest dropout rate is reported in the Flodmark study previously described in this paper, which suggests that patients consider the treatment to be of value (Flodmark, et al., 1993), which is consistent with the recent SOFT findings. Our experience is that the low dropout rate is due to a positive approach, which can be obtained by applying certain premises that will be outlined below.

Involve family members

Given the potential value of parental involvement, the SOFT model works actively to engage the family in treatment. After referral to our unit, John's family receives a letter outlining the family-based framework of SOFT and emphasizing participation of all family members. However, we believe it is possible to conduct family therapy without participation of all family members in treatment. However, it is important to include and refer to the support system of the child during treatment. According to systems theory, change in one part of a system can lead to changes in the system as a whole. Therefore, the number of people constructing the problem and the solution does not necessarily matter (de Shazer, et al., 1986). In John's case it was his mother who was present at the first and subsequent visits. We managed to engage family members in treatment by asking: "What would your husband say if he had joined us today?" or "What will you tell John's grandmother (a significant other identified early by a family) about what we discussed during this session?"

The necessity of parental involvement and systemic application in SOFT is based on practical and theoretical premises. Even when treatment is not identified as family-based, children and adolescents typically cannot participate without parental support, consent, reimbursement, and transportation. However, the presence of parents in the treatment room is insufficient if the clinician is unsure about how to engage families in dialogue on behavioral change regarding lifestyle patterns. Family therapists focus on the fact that relationships are central to health and treatment (Silverstein, Bass, Tuttle, Knudson-Martin, & Huenergardt, 2006), which distinguishes an interactive approach to family therapy from an approach where the whole family is present but uninvolved. Unfortunately, in Medline the term *family therapy* is used for all meetings with families, regardless of whether or not an interactive approach is used.

Parents determine the child's environment. Although they cannot control all aspects of a child's day, they can control foods purchased and availability, as well as meal planning, preparation, and portion sizes (Ritchie, Welk, Styne, Gerstein, & Crawford, 2005). Parents have a general sense of the important role they play in providing access to foods, but may not fully understand the gatekeeper influence they have over their child's level of physical activity. In a comprehensive review of physical activity correlates, one of the strongest and most consistent correlates of physical activity in children was the time spent outdoors, a factor largely determined by parents (Sallis, Prochaska, & Taylor, 2000). Parental encouragement, involvement in, and modeling of physical activity have been shown to positively predict activity in children. Parents can also increase children's daily activity levels by controlling television viewing and computer use (Nowicka & Flodmark, 2007).

As obesity is a hereditary disease it is common that parents are also obese. In SOFT we choose to focus on the child's weight and do not require parents to loose weight as well. The reasons for that principle are several. Firstly, treatment of children seems to be more effective than treatment of adults (Epstein, Valoski, Kalarchian, & McCurley, 1995), with documented effects ten years after the intervention (Epstein, et al., 1994). Treatment of adult obesity has limited long-term success (Rossner, Hammarstrand, Hemmingsson, Neovius, & Johansson, 2008; Tsigos, et al., 2008). Secondly, as many of the parents have been obese as children as well and probably tried to loose weight without success, we believe that it is better for them to focus on their children instead. If they incidentally manage to loose weight during the SOFT treatment, we see it as beneficial side effect but not a requirement.

Be neutral

The way in which the SOFT team members approach the family is based on a principle of systemic framework called Neutrality (Selvini, et al., 1980). Neutrality can be explained as a

state of curiosity (Cecchin, 1987). If the team member actively avoids the acceptance of any one position as more correct than another, alternative views and moves can be more easily explored and created. In this way team members are able to develop multiple perspectives and voices and build a more systemic view of the behaviors. This can be achieved by giving all family members the opportunity to present descriptions and to accept the family's definition of the problem. As described earlier, if team members follow second-order cybernetics, they are not interested in discovering the best description or the best definition of the current problem. Rather, team members are looking for a pattern of how these descriptions fit together. By adopting a position of neutrality, team members also develop equal alliances with all family members. In practice, team members do not make a moral judgment or declare any judgment, whether approval or disapproval, which can ally them with or distance them from any of the family members (Cecchin, 1987).

Especially in the beginning it is important to establish good relationships with each family member from the moment they enter the room. Each team member greets each family member. Then family members may be seated anywhere they like and team members sit in the left-over chairs. By allowing the family to sit where they like in the session room we help to create a relaxed atmosphere. At the same time, how family members choose where they sit provides important information on relational patterns in the family, which team members carefully observe without intervention.

Adopt a normalizing and nonblaming position

Obesity in children has been regarded as a sensitive and difficult disease both for children and parents. It has been shown that obese children in a clinical sample have a lower health related quality of life than children diagnosed with cancer and undergoing chemotherapy (Schwimmer, Burwinkle, & Varni, 2003). Indeed, preference tests have demonstrated that 10-

to 11-year old boys and girls prefer as friends children with a wide variety of disabilities to children who are overweight (Latner & Stunkard, 2003). Overweight children were ranked lowest among those with whom they would like to become friends. Furthermore, we have found that adolescents with obesity, especially girls, have low self-esteem (Nowicka, et al., 2009). Many parents of obese children perceive that they are criticized and blamed for the child's overweight by healthcare professionals (Edmunds, 2005). Therefore, we find normalization to be important. A family with an obese child is like any other family. In addition, it is also helpful to point out the difficulties that families with obese children have in common. By adopting a normalizing and nonblaming position it is much easier to initiate treatment and provide help to the families.

> "Obesity is like being allergic to calories. If you are allergic to fur, you need to stay away from cats and dogs. Similarly, if you are 'allergic' to calories, you need to be more careful than your friends about what you eat and your activity level. It is not your fault and it may seem unfair," a nurse explains to John, during the first visit.

Indeed, many studies show that obese people eat less, and usually this is explained by the assumption that obese people underreport their eating. However, metabolic adjustments occur to return body fat to its baseline level, if energy intake is constrained in order to hold fat stores constantly above or below the baseline level (Leibel, Rosenbaum, & Hirsch, 1995). If a child has inherited the disease obesity, it is not enough to live as normal-weight people do in regard to exercise and diet— the child needs to have a more-than-perfect lifestyle. This may explain why an obese individual who eats small amounts of food still remains obese. Without genetic

susceptibility to obesity, it is much easier to lose weight. In children with certain genes predisposing them to obesity, special attention needs to be paid to lifestyle (Flodmark, 2005).

Assume motivation

The basic premise in SOFT is that the families that come to our unit want change. Many families find our ideas about change compatible with their thinking, while others have different ideas. We agree with de Shazer et al, that rather than viewing this behavior as resistance, it should be viewed more as the families' way of letting us know how to help them (de Shazer, et al., 1986). To promote cooperation we must first connect the present to the future and then point out to the families what we think they are already doing that is useful and/or good for them. Once they realize that we are on their side, we can suggest something new that might benefit them. Our experience is that families seek help because they want to change their situation and have tried many changes that have not worked. They may have made their own situation worse, and even developed unfortunate habit patterns, such as skipping meals or avoiding special food groups. The assumption that they will resist change is misguided. Instead, prejudice on the part of the therapist could generate a self-fulfilling prophecy of an unsuccessful outcome (de Shazer, et al., 1986).

> "What has John been trying to do in the past that has been helpful to him?"
>
> "How did you notice that?" "Who else in the family has noticed that?"

These questions, which can be asked during the first visit, show that team members assume that the family members have been trying to solve the problem and are motivated to continue doing so.

Language

Language is an important key element of the SOFT treatment. Here the term *language* refers to how communication is established in the therapeutic conversation in order to achieve treatment goals. The role of language in therapy has been widely recognized in family therapy, especially in systemic (Selvini, et al., 1980; Tomm, 1987a, 1987b, 1988), language systems (Anderson & Goolishian, 1988) and solution-focused therapies (de Shazer, et al., 1986; de Shazer & Molnar, 1984). In SOFT we pay particular attention to language by considering 1) how questions are constructed, 2) how negative descriptions can be reframed toward more constructive modes and 3) how we use scales in dialogues about behavioral changes. In addition we use contextual markers. These tools will be described below.

Intervene with questions (observe-analyze-intervene)

The first visit starts with a standardized diagnostic interview. The primary goal is to acquire medical and lifestyle data in order to solicit information of importance for treatment. Our secondary goal of this interview is to observe how the family reacts and cooperates when answering questions. It reveals important information about family function for our analysis on how to best help the family. Our third purpose is to initiate the process of change among family members. Every question is constructed to address the goals of the interview.

> "If you compare yourself with your mother, do you eat less, as much, or more?" a dietician asks the child when addressing the topic of appropriate portion size. The form of this question is guided by an assumption that a child should not consume more than an average sedentary working middle age female. The

> question is formulated in a circular way that requires comparison with other family members and automatically involves other parts of the family (Selvini, et al., 1980). John answers with pride: “I eat more than my father”. This information reveals that the child eats too much. A mother adds: “But I eat very little. I'm the kind of person who really needs to think about portion size, otherwise I gain too much weight”. Such information also indicates a strong genetic component.

The topics in the initial diagnostic interview include questions about the child’s family and school situation, medical history, food and physical activity patterns, genetic background for obesity and obesity-related disease. Usually a pediatric nurse asks all the questions except for those relating to food patterns, which are asked by a dietician. However, it is possible for team members other than those mentioned (i.e. a pediatrician) to ask all of the questions, since they are formulated in a general way. The other team members observe how the family members respond to the questions. All questions are formulated so that even a child understands and can answer them. Only questions relating to genetic background are directed to the parents. If a question provokes a longer discussion on another unrelated issue or leads to another question from the family, the interviewing team member limits the ongoing discussion and tells the family that all issues will be addressed later during the visit.

Use scaling questions

Scaling questions, one of the characteristic features of solution-focused brief therapy, provide a valuable tool for the SOFT team when communicating with family members about their subjective experience and the process of moving toward a goal (de Shazer & Berg, 1997).

> “John, I would like to know how important it is for you to work toward a healthy weight. On a scale of 1 to 10, where 10 is most important and 1 is not at all important, where would you say you are today with respect to how important it is for you to work toward a healthy weight?’ John answers five. “OK. On the same scale, where were you half a year ago?” The boy answers three. “Hmn... How interesting. How come you moved from three to five on this scale?”

When working with a family, we usually ask each participant for a rating. Differences between ratings are explored because they often highlight important clues to maintaining and developing progress (Lethem, 2002).

> “I would like to ask you another scale question, if it's okay with you? On a scale of 1 to 10, where 10 represents the highest possible level of satisfaction and 1 as the lowest, where would you say you are today with respect to how satisfied you are with your progress toward a healthy weight?’ John answers six. “OK. And how about you, Mom?" The mother of the boy answers seven. “That’s interesting. So – (turns back to John) –what do you think about the fact that your mother chooses a higher number than you do?”

Use contextual markers

The SOFT program starts with the medical assessment of the child; families are also given advice on medical issues. In this context, team members clearly exercise their role as experts. For example, this happens when the family gets feedback on the child’s blood pressure or blood lipids. This can also happen when a family member introduces a medical issue in the middle of a conversation. In all these situations we use a technique called “contextual marker”

to separate the medical phase of the session (first-order cybernetics) from the therapeutical part of the session (second-order cybernetics) and still maintain a good therapeutic alliance with the family (Petitt & Olson, 1992).

> "Some studies show that by decreasing television viewing time, children are able to increase physical activity and decrease weight. That is why we encourage children to limit television and computer time to a maximum of 2 hours a day. What is your opinion about this?"
>
> "Many families say that it is easier to keep hunger under control during the day, if children eat breakfast, but what do you, as parents, think about this?"

When team members take note of the context, they remain neutral and curious, making it easier for them to derive benefit from the meaning of the recommendations presented to the parents. In addition, when recommendations are put in context, it is easier for parents to discuss them and find their own solutions to the problem. We prefer to use contextual markers instead of another way to make recommendations is by using a direct, normative approach, i.e.: "We recommend that children need to eat breakfast and decrease screen time to maximum two hours a day in order to achieve a healthy weight". This is a quick and simple way to act as an expert (first-order cybernetics). If it works, the family will be pleased with this method of communication. However, there is a risk that the family might become dependent on the expertise of the treatment team and will not develop their own capacity to change. If the recommendations do not work, the family will need to disqualify the expert in order to feel good about them. This might affect the therapeutic alliance. By using a contextual marker, that is putting the recommendations or the norms in a context and

discussing them with family, the team members establish a collaborative support and involve the family in the treatment. Family members become experts on their own lives and gain insight into their resources to accomplish change.

Create a positive climate by reframing

Reframing, known by different names in different therapies (e.g., positive connotation, relabeling, ascribing noble intentions, seeing the good), has been shown to be an important for tool in creating a constructive climate in treatment. A study compared therapists' use of reframing (nonblaming reattributions), reflection, and organizational (structuring) statements with respect to client attitude during the initial therapy session with families of adolescents referred for delinquent behavior (Robbins & Alexander, 1996). The researchers directly examined the impact of these interventions on each participating family member (e.g., mother, father, adolescent). Their findings support the belief that when adolescents represent the referral problem, they enter family therapy expressing more negativity toward therapy than other family members do. Secondly, therapist statements regarding the therapeutic process (i.e., organizational statements) appear to elicit the most positive responses from mothers, but not from adolescents, perhaps because the adolescents conformed to general expectations about treatment. It should also be noted that although fathers' responses were not significantly different than adolescents' responses to therapist organizational statements, fathers' responses were as anticipated. Thus, therapist organizational statements appeared to operate similarly for both parents. Adolescents’ average scores also improved following reframes. In summary, these findings encourage the use of reframes to interrupt negative client behaviors; reframing produces the expected positive effects (Robbins & Alexander, 1996). In SOFT we reframe often, for example by changing the word “nag” to “remind”.

> "I don't know how to help John. I nag all the time. Sometimes I sound like a tape recorder from morning to night," the mother complains during the first session. "So you have been wondering if reminding your son is helpful," the therapist asks.

Process

The term *process* refers to the tools that team members use to support families in reaching their treatment goals. The overall goal can be described in terms of well-functioning self-treatment − the result of the child's lifestyle modification and enhanced family support system. It is commonly recognized that any changes in dietary intake and exercise patterns which decrease caloric intake below energy expenditure will result in weight loss. However, the important question is whether the changes recommended also promote better physiological and psychological well-being for the growing child. It has been shown that improving the child's nutritional habits can best be accomplished by reducing intake of foods high in fat, simple sugars, and sweetened beverages, with an emphasis on eating more low-calorie, high-fiber foods such as fruits, vegetables, and whole grains (Spear, et al., 2007). A more active lifestyle can be promoted by reducing sedentary behavior, encouraging spontaneous play, promoting everyday activities and sports, emphasizing the importance of physical education class, increasing the variety of activities, and encouraging hobbies (Spear, et al., 2007). For all that, the most useful source in creating successful interventions is the family system – the family's experiences with previous attempts to solve the problem, small changes already working, sometimes unnoticed by the environment, and the unique resources that every family possesses.

Highlight exceptions to the problem

Many families have extensive experience with trying various methods to prevent weight gain, since obesity in children often debuts when the child is 5 to 10 years old. It is essential to explore and highlight previous attempts to solve the problem, which we find inspirational for future intervention. Sometimes families discontinued a solution because a therapist failed to pay attention to this process, or diminished the potential of a specific solution. This is often due to the fact that some solutions require time to be effective and therapists (and sometimes families) may be too anxious to see results, which can be especially difficult during certain developmental stages in a child's life, such as puberty, during which normal growth and increasing body weight may camouflage the effects of a change in lifestyle.

In solution-focused family changing is defined as a therapeutic process of initiating (and promoting) observed new and different behaviors (frames) within the context of the presenting problem (and the patterns that surround it) or the solution of that problem (de Shazer & Molnar, 1984). "If it works, do more of it. If it doesn't work, don't do it again. Do something else.", is the basic premise. Thus, in our clinical practice we highlight all changes and exceptions (that is, situations or times when the problem doesn't exist) and use them as a source to solve the problem, as in the following example investigating the role of breakfast.

> Instead of a common question: "Do you eat breakfast?" the team member can ask: "How many days a week do you eat breakfast?" John answers: "Five" The therapist has a possibility to explore the difference between the days when breakfast occurs and different circumstances when breakfast is not eaten. The therapist follows: "So what's different about the days when you eat breakfast?" In this way the therapist highlights the positive exception to the problem (not eating breakfast).

By focusing on situations when the problem doesn't exist, we can also increase hope and optimism in the treatment. We just build on the fact that a solution exists and it is already occurring. Furthermore, we don't need to act as experts, since the solutions are found in the patient's life.

Focus on small changes

Our experience is that only small changes are necessary. The one major difference between brief therapy and other models lies in the idea held by the brief therapist that regardless of how difficult and how complex the situation is, small changes in one person's behavior can lead to profound and far-reaching differences in the behavior of all persons involved (de Shazer, et al., 1986). Inversely, it seems that the bigger the goal or the desired change, the harder it will be to establish a cooperative relationship, and the more likely the team and child will fail.

> "John, what would be the smallest change that you could make before our next meeting that you feel would be easy to carry out?" "How can your mother help you accomplish this change?" "What can your father do to help?"

Many families have started with a number of changes after referral and prior to the start of treatment. We have found it useful to explore pre-treatment changes. If these are numerous and not yet part of the daily routine, we do not recommend introducing additional changes prior to the next visit because it could be difficult to implement so many different ideas and solutions in daily life.

Identify the resources of the family

One of the novel features of SOFT is the limited number of sessions. The positive results of the low-intensity contact suggest that the families carry out interventions by themselves. It is therefore likely that our approach guides families on how to deal with problems on their own. It may imply that they will be able to continue to succeed without frequent contact with the treatment team. This is possible because the team members build upon the already existing resources in the family. The strengths of the family are identified and reinforced by involving the family members in constructive mutual cooperation and support. Many treatment programs are based on the assumption that patients and clinicians should meet frequently, i.e. once a week, to fuel motivation and examine recent progress. Our experience is that by engaging family members, the child will experience help in motivation and control of healthy routines not once a week, but every hour of the child's daily life. Already during the early stages of treatment it is important to identify significant persons in the child's life and invite them to participate or, where this is impossible, to explore their role in the discussion with those family members who are present. As a result, it is not unusual for a grandmother, neighbor, PE teacher, or best friend to participates in sessions. This is also why our treatment is useful when working with children with obesity and a variety of disabilities, because the child already has a support network. In this case the initial treatment goal is to identify the resources in the system (school, hospital care, etc.) and orient them in the same direction. This is commonly obtained by organizing a network meeting to which all people who work with the child are invited.

SOFT – Setting

In addition to the specific tools that are influential in creating successful interventions in SOFT, the *setting* (practical arrangements) is also important. Special consideration should be given to teamwork organization and adequate treatment intensity.

Teamwork

The process of treatment can be enhanced by involving more than one therapist in the session. In SOFT the entire multidisciplinary team is present at the family's first visit. During subsequent visits only part of the team (at least two team members) meets the family.

One advantage of teamwork in treatment of childhood obesity is the possibility of including and actively involving different professionals of importance to successful treatment outcome (experts in pediatrics, nursing, psychology, physical activity, and nutrition). In this way the family can address several issues with any of the team members, because everyone is present at the first meeting in the same room. Another advantage of teamwork is the opportunity for team members with different perspectives to use the difference as a basis to initiate change (de Shazer & Molnar, 1984). The differing perspective of each team member contributes to the development of a team perspective. This can be understood using the concept of polyocularity as a basis for describing how the system knows. The polyocular process in therapy works in much the same way that the human eyes function to create depth perception from the slightly different perspective of each eye. Creation of a team perspective may result in the "bonus" of a clinical view that is more creative and more useful in producing therapeutic changes than the view of an individual practicing alone (de Shazer & Molnar, 1984).

Intensity of treatment

At the Childhood Obesity Unit we work without a predefined number of sessions but, when asked, we say “as few as possible”. At the first study conducted by a pediatrician and a family therapist in the mid 1980s, families attended six sessions. This frequency was the result of pragmatic development of the treatment model. Initially, researchers planned to offer sessions every third week, but since time constraints precluded meeting this goal, the interval was increased without any negative reaction from the families. The method was further used in a traditional pediatric practice. Due to limited resources some families were offered only one session and had to call back when they needed the next session. Usually patients called within a couple of months, but in one case a family did not call for a new appointment until three years later. Upon meeting the family, the mother explained: “The first visit was very useful and we have tried different approaches, but now we need a booster session to get going again.”

In our single family treatment the average number of sessions per family was at first evaluation 3.8. There was no association between number of sessions and treatment success.

The effectiveness of brief treatment is supported in research. The controlled outcome evaluation of brief psychotherapy with children and adolescents published since 1990 has demonstrated significant beneficial effects from the program (Bloom, 2002). This evaluation included different time-limited treatments targeting a variety of common individual and family psychological problems within various diagnostic groups, such as sexual abuse, separation anxiety, attention deficit hyperactivity disorder (ADHD), posttraumatic stress disorder, excessively aggressive behavior, and conduct disorders. Thus, it may be as important to avoid overtreatment as it is to avoid undertreatment (Bloom, 2002).

What happened to John? Case example continues:

The diagnostic interview uncovered a number of positive behaviors that the treatment team repeatedly highlighted during the session by reinforcing their importance, namely: soccer play 3 times a week, active transport to school and when meeting friends and fairly limited time in front of the TV and computer. In addition, food habits were mostly satisfactory, as the mother revealed that the boy was eating regularly and tried to avoid unhealthy food. However the portions sizes were too big and the intake of soft drink was also substantial. During this first visit the team members also discovered that the boy's BMI (weight adjusted for height) has indeed decreased during the last year. The paediatrician showed John and his mother on the BMI chart where John's BMI lies today. BMI had gone down from 3 standard deviations (SD) down to about 2.5 SD in one year. This was a very positive change, especially as the team pointed out that John is going through puberty right now. Because of changes in hormone levels, puberty is a difficult period during which to maintain a healthy weight, especially when one has an "allergy to calories" which the boy has inherited from his mother. Reasons for the improvement in BMI were explored (beginning to play soccer again and a good collaboration between John and his mother). The boy was asked what would be the easiest change for him to make before the next visit and he answered that he would like to try eating less. Six months later John and his mother saw the team again and a further improvement in BMI was observed. To the question of what behaviours have been better since the last time, John answered that he has reduced his portions from 2 to 1, both for lunch and dinner. He also added another change: he swapped his soft drinks for water and only drinks diet soft drinks on Saturdays. His mother has experienced John to be more conscious about his diet, which others have also noticed (school canteen staff). John felt that it has been easier for him to be physically active now. His mother expressed her pride over John's efforts. The

team gave John and his mother a lot of credit for the work they've done together and for focussing on effective solutions. The team also pointed out that it takes time to establish new habits, so until the next visit they don't want John to make any more changes, but to keep doing what he has been doing; be observant of portion sizes and soft drink consumption. The subsequent visit six months later showed further positive improvement and the treatment was ended.

Summary and future research

This paper has described the research on SOFT and the key elements of the program (approach, language, and process) that are helpful in treating children and adolescents with obesity in a clinical setting. Dissemination of empirically supported treatments is one of the greatest challenges facing family treatment researchers (Diamond & Josephson, 2005). The process of exporting empirically validated treatments to real-world clinical settings has proven far more complicated than anticipated. In case of childhood obesity treatment, the main criticism of the outcome in research has been the lack of generalizability to everyday practice. Sampling problems in many studies may underlie the difficulties in making generalizations – the best research in the field has been conducted in populations who are most likely to respond to interventions, such as motivated white educated middle-class families (Summerbell, et al., 2004). It has yet to be investigated how the SOFT model can be adapted to the conditions of other treatment settings such as primary or school health care (i.e., Family Weight School). The importance of factors such as the level of specialization of the team members and the possibility of a multidisciplinary approach (within a team of experts in pediatrics, nursing, nutrition, physical activity, and family therapy) needs to be further explored. Many clinicians in the field of pediatric obesity treatment work alone.

Nevertheless, we believe that a school nurse or a family doctor can benefit from using the tools presented in this paper independent of setting.

In addition to answering questions on dissemination we need more research regarding impact on outcome variables such as body mass index, self-esteem, and family function. Longitudinal prospective studies are the most needed type of study. We encourage all those involved in treatment of childhood obesity to discover and strengthen resources in families with obese children and adolescents.

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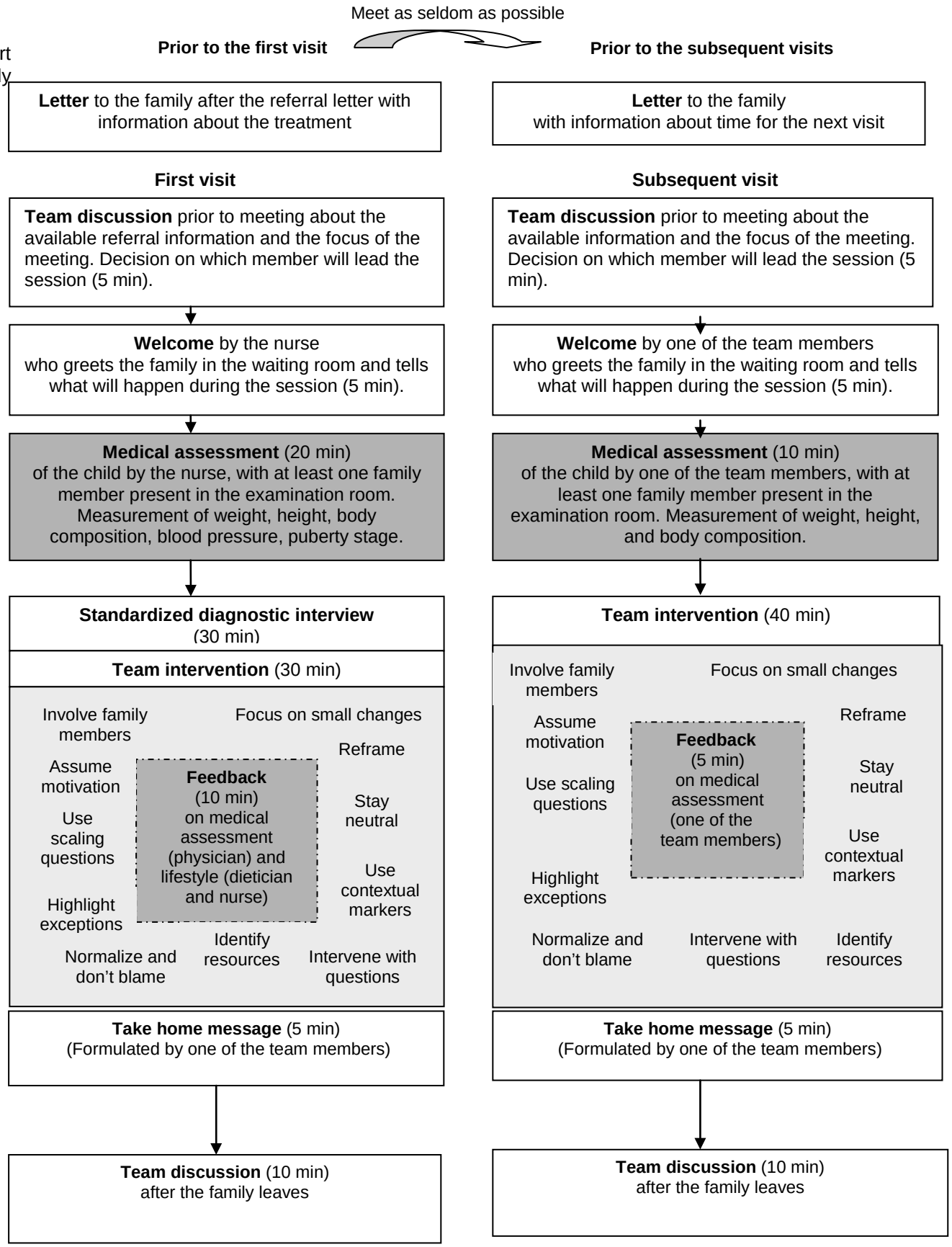
Figure 1
The Flow chart of single family treatment in SOFT



Explanation to the figure:

Integrated approach

Treatment support according to second-order cybernetics

Experts' opinion according to first-order cybernetics