

In 1990 we established a family oriented, multidimensional out-patient concept to treat obese children, focusing on traditional counselling by 1 nutritionist.

For data collection, treatment modules, age-adapted material and evaluation sheets we are mostly standardised according to the criteria of process quality management for the last 6 years. Since 3 years the concept was modified to include the fundamentals of NLP and systemic family therapy.

Families attend the consultations for about 6 months to 1 year (in total 5-10 sessions per year). Subsequently the treatment normally stops, and sometimes restarts, when families request for further help.



- ➔ To determine, how many children showed a BMI decrease of more after one counseling interval (4-6 mo or > 9 mo) even without any strict nutritional restriction or enforcing sport activities
- ➔ To determine, how BMI changed and what are the individual factors that changed in life style by reevaluation 1 year or more after counseling.
- ➔ To evaluate the acceptance of this kind of treatment.

Introduction

Patients / Methodology

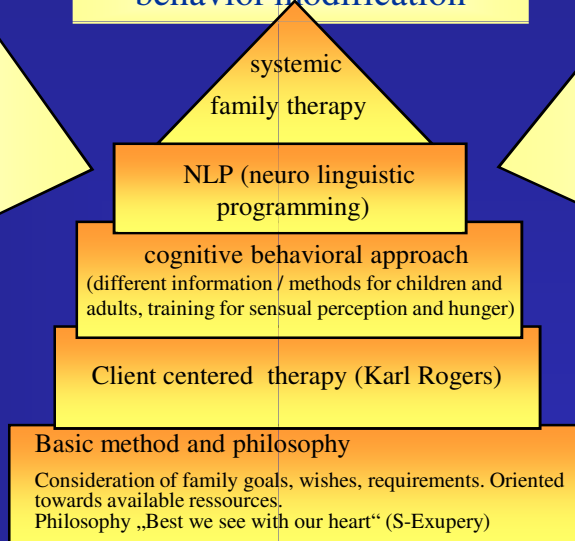
Aim

Patients (n=48, m=18 / f=30)

- 21% migrants, 31% only children, 25% with lean brother's and sister's
- mean relative BMI exceed 9,2
- 3 age groups (2-5 y (11), 6-12 y (16), >12 y (21))
- 3 settings (parents alone, with children, children alone)
- 2 lengths of treatment (4-9 mo (24) mean 5,4 mo), (>9 mo (24) mean 14,4 mo)
- retrospective analysis of counseling documents (1996-2000) and follow-up after treatment

- ➔ **Criteria for inclusion**
- ➔ BMI > p 95 (no other health problems)
- ➔ longer than 4 mo treatment
- ➔ Questionnaire at least 6 mo after treatment (mean 24 mo)
- ➔ **Criteria for exclusion**
- ➔ BMI reduction of 1 or more
- ➔ BMI maintenance in follow up
- ➔ behavioral changes
- Stat. values**
- median and quartiles (p 25, p 75)
- student's T TEST (paired, two-tailed)

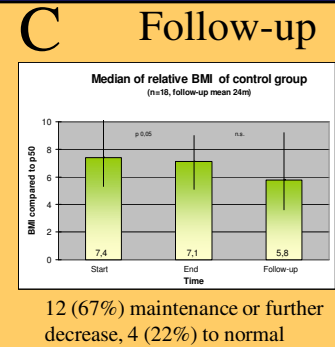
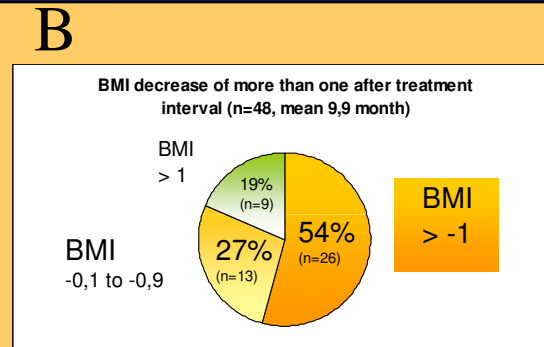
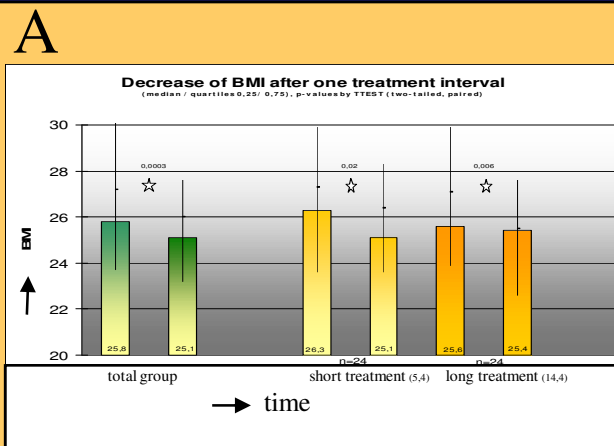
Intervention methods for behavior modification



Treatment modules and activities

- Nutrition**
- no diet sheets / recipes / calorie counting
- Focusing on general guidelines for children to influence food quality (fat content, sugars, drinks, more vegetarian food, preparation methods, preferences / dislikes, training of sensual perception)
- Quantity (hunger perception, satiety, appetite, meal frequency, emotion-induced eating between meals, binge eating, red-herring (reading, television...))
- Role modeling, rules, rituals
- Activity**
- Leisure habits of children / parents / peers (watching television, toys, games, activities at home, outside, role models, sport associations, promotion of individual interests / strengths)
- Psychosocial factors**
- Family situation (problems / residence / brothers and sisters)
- peers/other family members/school (acceptance, integration, influence)
- style of upbringing (praise / blame), communication

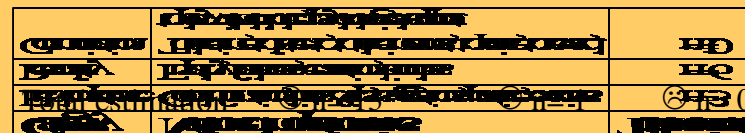
Results



D Change of life style since treatment
questionnaire n=15, mean 24 mo after treatment, BMI decrease n=9, BMI increase n=8, Ratings: much better, better, equal, worse, much worse than before)

Responsibility	Category (rating better / much better than before)	Total	Specification
Adults	Healthier food choice	n= 11 (73%)	100% of increase group
	Food preparation less fat	n= 13 (87%)	ditto
	Less amount at table	n= 11 (73%)	100% of decrease group
Children	Hasty eating	n= 9 (60%)	ditto
	Perception of hunger & satiety	n= 9 (60%)	Biggest problem in increase group
	Emotion induced eating	n= 10 (67%)	Big problem in increase group
Children	Leisure activities (much more / more active)	n= 12 (80%)	Independent from increase / decrease

E Acceptance of treatment (n = 11, 4 empty)
Open question: „This we liked best“



Conclusions

• Family-oriented treatment including nutrition, leisure habits and socio-cultural environment, even without a strict regimen and enforcing sport activities, seems to be successful and acceptable for children and families on a long term basis. During treatment 54% of children (n=48) showed a decrease in BMI of more than one. In follow-up at a mean 24 months after treatment (n=18) 67% maintained weight, 4 children reached normal weight.

• The evaluation of the questionnaire (n=15) shows that there is no link between BMI development and change of preparation methods, shopping and healthier food choice (responsibility of adults). There seems to be a tendency that problems with