How Family Relations Influence Children’s Health

Leonie-Helen Bogl (Helsinki)

- on behalf of the I.Family consortium -
Many things “run” in families
"Like mother, like daughter. Like father, like son"
Siblings
- share home environment
- share genes
- close in age

Parents & offspring
- share home environment
- share genes

Husbands & wives
- share home environment
- assortative mating
- close in age

- We studied parent-child pairs, brother/sister pairs and parental pairs and examined their resemblance
- We also quantified familial and non-familial influences on obesity-related traits
Sources of familial resemblance and differences

**Resemblance**
- Shared genes
- Shared environment

**Differences**
- Unique genes
- Unique environment

**Individual phenotype**
- Individual weight, behaviour, disease risk, etc.
- Familial vs non-familial factors?
### Online tool SACANA

#### Healthy foods
- **Cereals**
  - Low in sugar
  - Low in fat
  - High in fibre
- **Fats/oils from plant origin**
- **Low fat & unsweetened milk & milk products**
- **Fresh fruit & vegetables**

#### Unhealthy foods
- **Cereals**
  - High in sugar
  - High in fat
  - Low in fibre
- **Fats/oils from animal & processed origin**
- **Full fat & unsweetened milk & milk products**
- **Fried foods, fast food, snack foods**
KEY MESSAGES

- Family members resemble one another in terms of height, body fat measures and cardiovascular risk (e.g. total cholesterol)
- The resemblance is strongest for sibling pairs, intermediate for parent-child pairs and weakest for parental pairs
KEY MESSAGES

- Family members also resemble one another in dietary intake
- The resemblance is strongest for sibling pairs and about the same magnitude for parent-child and parental pairs
KEY MESSAGES

- Parent-child resemblance is stronger for healthy than unhealthy food intake
KEY MESSAGES

➢ Familial factors explain 60% of variability intake of healthy foods
➢ They explain only half as much intake of unhealthy foods (30%)
KEY MESSAGES

- Sibling similarity in healthy food intake is stronger than parent-child similarity
- The similarity is stronger between younger than older siblings and between parents and their younger than older children
Future work

• Which environmental factors distinguish siblings where one child is overweight or obese, and the sibling not?
Takeaway messages 1

- Family members resemble one another in terms of nutrition and obesity-related traits – there are many different reasons for this.

- Interventions aimed at reducing obesity and improving diet quality may be more effective when targeting both parents and the entire family rather than individuals.
Takeaway messages 2

- Family-based interventions could be most successful when promoting healthier diets and targeting families with younger children.

- Different patterns in healthy and unhealthy food consumption highlight the major influence of contemporary food environments in promoting less healthy options to children.
Thank you very much for your attention!