Social Networks and Interpersonal Relationships as Risk Factors for Obesity

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Introduction

- The current epidemic of obesity is caused largely by an environment that promotes excessive food intake and discourages physical activity.

- Increase in obesity

  - Cannot be explained just by genetics

  - All socioeconomic groups

Social and environmental explanations

- Whereas obesity has been stigmatized in the past, attitudes may be changing.

- People are embedded in social networks and influenced by the appearance and behaviors of those around them.

- It is plausible that areas of the brain that correspond to actions such as eating may be stimulated if these actions are observed in others.

Obesity and Family History

- 70% of adiposity in 10-year-olds is due to genetic factors, and approximately 20% is due to socioenvironmental contributions.

- Eating disinhibition, susceptibility to hunger, and eating in the absence of hunger all appear to be biologically heritable traits.

- Thus, a child's family health history, along with shared behaviors and familial environments, must be considered in efforts to prevent and treat obesity.
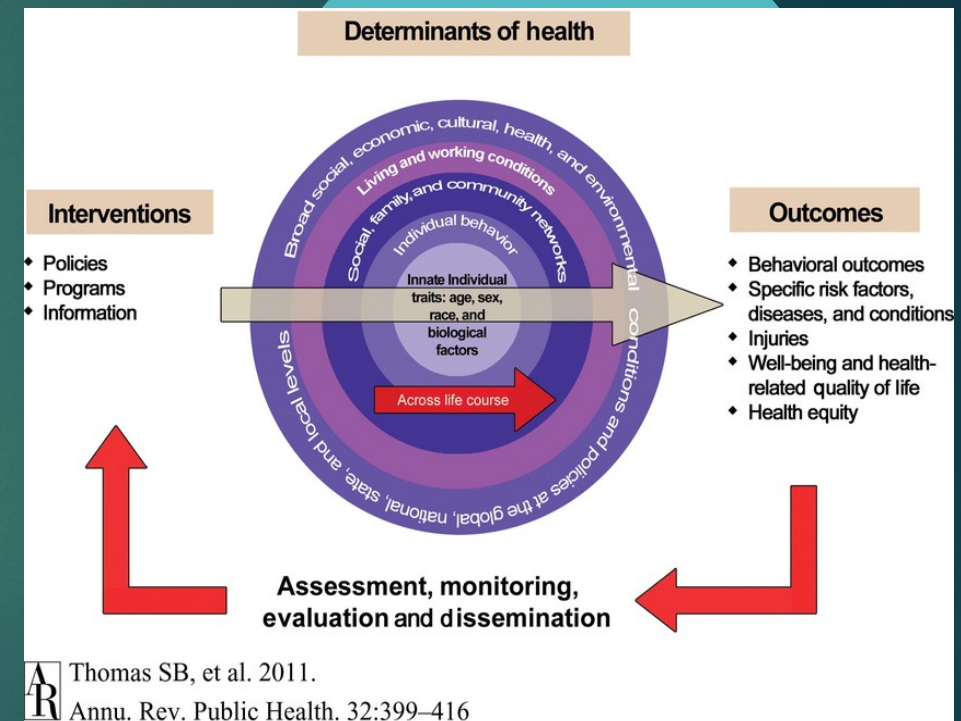
Overweight and social networks

- Social network: structure of "reciprocally oriented and dependent people"
- Many studies have explored the risk of becoming overweight or obese according to the size and density of people's social networks.
  - Characteristics of people within a particular social group.
  - Risk of overweight or obesity among network members.
  - Obesity might cluster within particular interpersonal relationships.
  - Limited understanding about the ways in which such networks might shape the development of overweight and obesity.
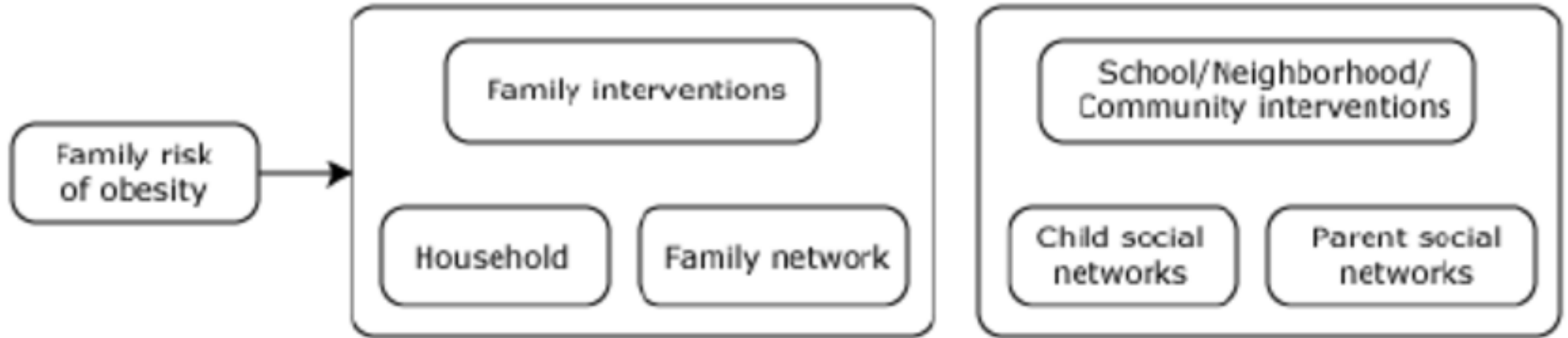
Overweight and social networks

- Public health: range of different forms of social capital that might influence health within particular networks:

    - People's sense of belonging

    - Practical and emotional support

    - Behavioural norms

    - Trust and co-operation

- Social networking sites can influence weight by exposing people in the same social network to the same information.

- Encouraging participation in health enhancing activities might also be more successful when more homogenous groups are targeted as opposed to unconnected individuals.

Determinants of health

Interventions
- Policies
- Programs
- Information

Broad social, economic, cultural, health, and environmental conditions
Living and working conditions
Social, family, and community networks
Individual behavior
Innate Individual traits: age, sex, race, and biological factors
Across life course
Conditions and policies at the global, national, state, and local levels

Outcomes
- Behavioral outcomes
- Specific risk factors, diseases, and conditions
- Injuries
- Well-being and health-related quality of life
- Health equity

Assessment, monitoring, evaluation and dissemination

Thomas SB, et al. 2011.
Annu. Rev. Public Health. 32:399–416

Communal coping

- Process in which interpersonal relationships are the conduit to behavior change among multiple members within a particular social network.

- Individuals define themselves in terms of their interconnectedness and relationships with their family, friends, neighbors, and community.

- When faced with a shared health problem, a cooperative approach may be particularly effective.

- Health interventions can target 3 interpersonal pathways:
  1. Communication about a health problem, such as shared risk factors
  2. Shared appraisals of the problem
  3. Development of cooperative strategies to reduce negative impact

Risk due to shared environment and behavior

Family risk of obesity → Family interventions / Household / Family network

School/Neighborhood/Community interventions / Child social networks / Parent social networks

Communication about risk factors → Shared appraisal of overweight/obesity risk → Cooperative strategies to adopt healthy lifestyles

Communal coping processes

Social Contagion

Aspiring to the body size of others in one's social network

- Krones et al. found that being around people that are thinner than average increased body weight dissatisfaction amongst young American women.

- Hruschka found evidence to indicate that friends' body size has an influence on an individual's body weight ideals.

- Blanchflower et al. found that perceptions about overweight among Europeans were influenced by comparisons with others and that educated individuals were more likely to rate themselves as overweight, indicating that this group aspires to a thinner ideal.

Social Capital

Sense of belonging

- Involvement in community organisations and public affairs, volunteerism, informal sociability, and social trust were protective factors.

- One of the ways in which sense of belonging might influence obesity is through a greater sense of the value in protecting one's health. Similarly, a sense of being part of one's community has been associated with greater interest in physical activity.

Social Network Approaches to Strengthen Obesity Prevention

1) Intervene with the family system, rather than with the individual

2) Design support mechanisms on the basis of social ties within the community

3) Use peer networks to encourage increased physical activity

Multinational companies and their influence in Social Networks

- *Who rules global food systems?* ➡ "Big Food"

- Multinational food and beverage companies with huge and concentrated market power.

- More than half of global soft drinks are produced by large multinational companies, mainly Coca-Cola and PepsiCo.

- The world's food system is an oligopoly. What people eat is increasingly driven by a few multinational food companies.

Multinational companies and their influence in Social Networks

- Action requires tackling vested interests, especially the powerful Big Food companies with strong ties to and influence over national governments.

- The influence of these Big Food companies can affect also Social Networks and interpersonal relationships.

- Contemporary advertising play an important role in promoting and sustaining consumer culture, and if the product advertised is an unhealthy meal, it affects directly the epidemic spread of obesity.

- Advertising functions as propaganda for consumption, especially in younger people.

Conclussion

▶ Social networks are important to our understanding of obesity, but there has been limited understanding about the ways.

▶ Three inter-related social processes appear to explain the role of social networks in the development of overweight and obesity:

1. *Social contagion* (whereby the network in which people are embedded influences their weight over time).

2. *Social capital,* (whereby sense of belonging and social support influence weight and weight influencing behaviours).

3. *Social selection* (whereby a person's network might develop according to his or her weight).

▶ Sense of belonging and Social support operate to influence behaviours within friends and family networks and regional networks.

Bibiography

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3. Obesity: preventing and managing the global epidemic. Geneva (CH): World Health Organization; 2000.

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