ECOLOGICAL HEALTH PROMOTION INTERVENTIONS

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INTRODUCTION

- **Ecology** is a term derived from **biological sciences** and refers to the **interrelations** between organisms and their environments;

- Ecological Models (EMs) are rooted in the 19th century when HP was mainly focusing on socio-environmental determinants of health;

- Re-emerged in the mid-1980s (WHO’s European Regional Office; Epp, 1986; Kickbush, 1994, 2003; Ottawa Charter, 1986);

- EMs have gained in popularity in the recent years;
WHAT IS ECOLOGICAL MODEL?

Definition (1)

- EMs in HP emphasize the *environmental* and *policy* contexts of behaviors, while incorporating *social* and *psychosocial* influences;

- EMs lead to the explicit consideration of *multiple levels of influence*, thereby guiding the development of more *comprehensive interventions*.

(Sallis, Owen, & Fisher, 2008)
WHAT IS ECOLOGICAL MODEL?
Definition (2)

- **Purposes of EMs:**
  - Explain behaviors;
  - Intervention planning (e.g. Green & Kreuter, 2005; Bartholomew *et al*., 2006);
  - Applied to many health behaviors or be tailor-made for specific categories.

- **Recent EMs** incorporate concepts of ‘community capacity for health improvement’, ‘partnerships’ and ‘life-course processes’ (e.g. Stokols *et al*., 2003; Best *et al*., 2003)

(Sallis, Owen, & Fisher, 2008; Richard & Gauvin, 2012)
WHAT IS ECOLOGICAL MODEL?

Core Concepts (1)

- Behavior has multiple levels of influence:
  1. Intrapersonal (biological and psychological);
  2. Interpersonal (social, cultural);
  3. Organizational
  4. Community
  5. Physical Environment
  6. Policy

(Sallis, Owen, & Fisher, 2008)
WHAT IS ECOLOGICAL MODEL?

Core Concepts (2)

- The complexity and wide-scale system of influences have led to a stratification of the environments:

  - Bronfenbrenner (1979) – micro, meso, exo and macrosystems;
    (Sallis, Owen, & Fisher, 2008; Richard & Gauvin, 2012)
WHAT IS ECOLOGICAL MODEL?

Core Principles

1. Multiple levels of factors influences health behaviors;

1. Influences interact across levels;

1. Multi-level interventions should be more effective in changing behaviors;

1. Ecological models are most powerful when they are behavior-specific.

(Sallis, Owen, & Fisher, 2008)
APPLICATIONS OF ECOLOGICAL MODEL TO HP (1)

Ecological Model of Four Domains of Active Living
Ecological Model of Four Domains of Active Living (Sallis et al., 2006)
APPLICATIONS OF ECOLOGICAL MODEL TO HP (2)

AGE-FRIENDLY CITIES IN QUÉBEC: ACTIVE AGING FRAMEWORK BASED ON AN ECOLOGICAL MODEL
AFC-QUÉBEC: ACTIVE AGING FRAMEWORK

Adapt public policies and government programs
Job retention and gradual retirement
Community factors
Adapt services and infrastructure
Education and skills development
Dealing with poverty
Social support
Available information
Factors related to individuals
Change behaviours
Knowledge
Skills
Attitudes
Beliefs
Active aging
Varied and adapted activities provided
Urban planning
Public transit
Family policies
Transportation
Cultural policies
Active aging
Adapted work environment
Dealing with abuse and maltreatment
Taxation and income
Training and education opportunities
Respectful and non-violent environment
Specially adapted housing
Safe premises
Dealing with ageism and discrimination
Living accommodations
Land-use planning and urbanization
SAFETY
HEALTH
PARTICIPATION

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Interactions across multiple levels need more empirical evidences;
- Little variations in social environment and policy variables across units of study.

EMs broaden perspectives without identifying specifics variables or providing guidance about how to use ecological models to improve research or interventions;

(Sallis, Owen, & Fisher, 2008)
**CHALLENGES & CRITIQUES (2)**

- **Methodological** challenges: complex interactions of variables difficult to manipulate experimentally (multi-level statistical models, clustered randomized trials, quasi-experimentation, case studies);

- **Logistical** challenges: the difficulty of implementing and evaluating multi-levels interventions should not be underestimated:
  - Time, material and financial resources;
  - Environmental variables and policies are not controlled by the health professionals;
  - Change requires a political process.
  
  (Sallis, Owen, & Fisher, 2008; Richard & Gauvin 2012)
Role of *community participation* in the development and implementation of programs (multi-level community outcomes VS proximal preoccupations);

Apparent *unwillingness* of practitioners to *advocate* for *legislative* and *policy changes*;

- ‘they find themselves in the awkward position of trying to influence the very people who employ them (...) [or] interfering with the daily business of very powerful corporations’ (p. 75)

(Richard & Gauvin 2012)
IMPLICATIONS FOR GERONTOLOGY

- Aging is a complex process that commands a framework incorporating complexity;

- Multi-dimentional issues such as Aging-in-Place are better understood with EMs;

- Interventions/Programs requiring inter-sectoral interventions (breaking the silos) may benefit from EMs.
REFERENCES


Age-Friendly Cities in Québec: www.vadaquebec.ca