Understanding and Addressing Key Barriers in Behaviour Change:
Can a Leopard Change His Spots?

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Behaviour is a key determinant of health

- Personal
- Social
- Environmental
But there are barriers...

- Personal
- Social
- Environmental
Theories and models of behaviour change

- Behaviour Change
- Behaviour Theory
- Behaviour Model
Benefits of Theories and Models

• Present a roadmap for understanding health behaviors
• Highlight variables (e.g. knowledge, skills) to target in an intervention
• Supply rationale for designing nutrition interventions that will influence knowledge, attitudes and behavior
• Guide process for eliciting behavior change
• Provide tools and strategies to facilitate behavior change
• Provide outcome measures to assess the effectiveness of interventions
Theories and models of behavior change: Application

Individual/One-On-One
- Health Belief Model
- Motivational Interviewing
- Cognitive Behavioral Therapy

Community/Organization-Level
- Social Cognitive Theory
- Social Ecological Model

Intrapersonal/Self: Technology
- The next domain for exploration
- Wearable devices & technology
Individual/One-on-One
Individual/One-on-One: Theories in Practice

- Cognitive Behavioral Therapy: Thoughts, feelings, actions
Individual/One-on-One: Theories in Practice

• Motivational Interviewing: Directive, client-centered method
  – Strategy to enhance intrinsic motivation by exploring/resolving ambivalence and barriers to change, with specific intentions of:
    – Express empathy through reflective listening
    – Develop discrepancy b/w individual’s goals and current behavior
    – Avoid argumentation
    – Roll with resistance
    – Support self-efficacy
Individual/One-on-One: Theories in Practice

- Health Belief Model: Focus on health motivation
Community/Organization
Community/Organization-Level: Theories in Practice

- Social Cognitive Theory

Learning occurs in social context with dynamic interactions among several levels of intervention:

- Individual/Personal Factors
- Environmental Factors
- Behavioral Factors
Community/Organization-Level: Theories in Practice

• Social Cognitive Theory: In Action

  Centers for Disease Control & Prevention (CDC) & Association for Supervision and Curriculum Development (ASCD): Whole School, Whole Community, Whole Child
Community/Organization-Level: Theories in Practice

• Social Ecological Model: Considers the complex interplay between individual, relationship, community, and societal factors
  – Synopsis: Behavior is impacted by factors all at varying levels of influence that impact one another
Community/Organization-Level: Theories in Practice

- Social Ecological Model: In Action
- Drink Up!
Community/Organization-Level: Theories in Practice

• Social Ecological Model: In Action

• Drink Up!

  – Implementation: Intervention addressed multiple levels consistent with SCT
    – Community: Partnered with several cities (Philadelphia, Chicago, Houston)
    – Interpersonal:
      – Social media presence on Twitter @URH2O and #drinkH2O hashtag
      – Talking water fountain installation in NYC
      – Sponsorship of surf competition
    – Individual: Via PSAs; digital + out-of-home ads
Community/Organization-Level: Theories in Practice

- Social Ecological Model: In Action
- Drink Up!

- Results:
  - Nielsen research showed 4% lift in incremental retail sales of bottled water/filter products
  - Natural Marketing Institute reported 2.7% increase in tap water consumption
Interpersonal/Technology
Intrapersonal/Self: Theories in Practice

• Applying behavioral science to wearable technology and health apps/websites
  – Wristbands, smartwatches, bio-monitors; health and fitness smartphone applications/websites
  – Goal: Adoption and sustained, long-term engagement
  – Researchers argue that baseline criteria must be met for adoption and short-term utilization, but behavioral science must be considered to yield sustained engagement
  – Evidence is limited
Intrapersonal/Self: Theories in Practice

• Case Study: Weight Loss App

  • In US since 2008, in UK since Q3 2015
  • Results:
    • n= 518,401
    • 29% male
    • Average Days Active in Lose It!: 167
    • Starting BMI: 30.51
    • Current BMI: 28.8
    • Pounds lost per week: .68

• Not only the personal motivation but also the community
Intrapersonal/Self: Theories in Practice

To drive long-term engagement:

- Address the habit loop (cue, behaviour, reward)
  - FitBit Flex: push notifications
- Provide social motivation
  - Strava: connect with other runners
- Provide goal reinforcement
  - Nike Fuel Band
“Look, I can't promise I'll change, but I can promise I'll pretend to change.”
Thank You!