The role of Health Promotion in HIV Transmission: An Intervention Mapping Approach

Brothers in Arms, PRIOR, 10-11-2009

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Maastricht University, RESHAPE
Health Promotion: Theory- and Evidence-Based

• Applying theory and research
• Research skills
• Knowledge of Theory
  – especially knowledge of the process and conditions
• Example: Fear Appeals
The Grim Reaper - Australia

[Image of a Grim Reaper and a sign reading AIDS]
Theory and Research

High Personal Relevance
Difficult Behavior Change
Fear

Defensive reaction

Allen & Witte, 2000; Ruiter et al., 2001; Albarracín et al., 2005; de Hoog et al, 2007
Theory and Research

High Personal Relevance
Difficult Behavior Change
Skills

Constructive reaction
Intervention Mapping:

Planning Theory- and Evidence-Based Health Promotion Programs
Perspectives

- Participation perspective: **Empower**
- Ecological perspective: **Environment**
- Systems perspective: **Larger system**
- Eclectic approach of theories: **Multi-theory**
Intervention Mapping

- Needs Assessment
- Defining Program Objectives
- Selecting Methods and Applications
- Designing the Program
- Planning for Program Implementation
- Planning for Program Evaluation

Bartholomew et al, 1998, 2001, 2006; Kok et al., 2004; Schaalma & Kok, 2009
Needs Assessment
PRECEDE/PROCEED*

- Personal determinants
- Life Style
- Environment
- Health: HIV
- Quality of Life

Green & Kreuter, 2005
Environment

- Individual
- Interpersonal
- Organization
- Community
- Society
HIV

Health goal
Primary Prevention
Early testing & treatment
Therapy adherence

Behavioral outcome
*Safe sex; Condoms
HIV testing & Counseling
Adherence counseling

Environmental outcome
Availability
Access; Stigma reduction
Access; Stigma reduction
Environment

Personal and External Determinants

Life Style

Environmental Condition

Behavior Environmental Agent

Health And Quality of Life

Personal and External Determinants

UM
Environmental Decision Makers

- Parents
- Health professionals
- School management
- Chiefs
- Traditional healers
- Politicians
Intervention Mapping

- Needs Assessment
- **Defining Program Objectives**
- Selecting Methods and Applications
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- Planning for Program Evaluation
Program Objectives

• *What must be learned by the program participants and what must be changed in the environment*
Program Objectives

• **What must be learned by the program participants and what must be changed in the environment**
• Differentiating the target population: Who?
• Stating performance objectives: What?
• Selecting determinants: Why?
• Defining program objectives
Stating Performance Objectives

- What do we want the target to do?
- Subbehaviors: condom use, testing, adherence
- Preparatory behaviors
Preparatory behaviors

• Condom use in adolescents:
  – Decide
  – Acquire
  – Bring
  – Communicate/negotiate*
  – Use correctly
  – Maintain use
Stating Performance Objectives

- What do we want the target to do?
- Subbehaviors
- Preparatory behaviors
- Necessary
- Different determinants: decide – bring – negotiate - use
Self-Regulatory Behavior

- Monitoring
- Evaluation, comparison
- Finding solutions, setting goals
- Implementing behavior
- Monitoring $\Omega$

- *Helping, not telling what to do*
Safe Sex among HIV+ men

- **Self-observe** sexual behavior and **compare** sexual behavior to standard of safer sex
- **Identify** when a problem exists
- **Action Plan**
- **Implement** selected coping strategies
- **Evaluate** actions & return to **monitoring**

Van Kesteren et al., 2006
Safe Sex among HIV+ men

- **Self-observe** sexual behavior and **compare** sexual behavior to standard of safer sex
- **Identify** when a **problem** exists
- **Action Plan:**
  - Decide to use non-penetrative sexual techniques, or
  - Decide to use condoms
- **Implement** selected coping strategies
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Safe Sex among HIV+ men

• **Self-observe** sexual behavior and **compare** sexual behavior to standard of safer sex
• **Identify** when a **problem** exists

**Action Plan:**
- Decide to use non-penetrative sexual techniques, or
- Decide to use condoms:
  - Purchase condoms
  - Carry condoms or have condoms easy available
  - Negotiate condoms
  - Use condoms correctly and consistently
  - Maintain use over time

• **Implement** selected coping strategies
• **Evaluate** actions & return to monitoring
Safe Sex among HIV+ men

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    - Negotiate condoms:
      - xxx
    - Use condoms correctly and consistently
    - Maintain use over time
  - **Implement** selected coping strategies
  - **Evaluate** actions & return to **monitoring**
Determinants of Behavior

- Differentiating the target population: Who?
- Stating performance objectives: What?
- Selecting determinants: Why?
- Defining program objectives
Determinants of Behavior

• **Personal determinants;** under the individual’s control, i.e.:
  – Attitudes
  – Self-efficacy
  – Habit
  – Risk perception
  – Perceived norms

• **Environmental conditions;** outside the individual’s control, i.e.:
  – Availability
  – Costs
  – Stigma
  – Barriers
  – Social norms
Integrated Behavioral Model (CDC)

- Strong positive intention
- No environmental constraints
- Necessary skills
- Advantages outweigh disadvantages
- Social pressure/support
- Consistent with self-image
- Positive emotional reaction
- Perceived capability/self-efficacy
Finding Determinants

- Participation of the target population
- Literature
- Theories
- New research
  - Qualitative methods
  - Quantitative methods
Cultural Sensitivity

• Theories are almost always generalisable to other cultures
• The content of the application is different for all kinds of populations, also for different cultural groups: beliefs, networks, reinforcements, emotions, roles
• TPB successfully applied to numerous cultures
Program Objectives

- Differentiating the target population: Who?
- Stating performance objectives: What?
- Selecting determinants: Why?
- Defining program objectives
## Program Objectives

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<thead>
<tr>
<th>Performance objectives: Adolescents</th>
<th>Determinants</th>
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<tbody>
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<td>Make a commitment to always use condoms</td>
<td>Attitude</td>
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<td>Purchase quality condoms</td>
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<td>Attitude: Anticipate disadvantages of condom use</td>
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<tr>
<td>Purchase quality condoms</td>
<td></td>
</tr>
<tr>
<td>Use condoms correctly and consistently</td>
<td>Attitude: Recognize advantages of safe sex</td>
</tr>
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Intervention Mapping

- Needs Assessment
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Methods for Life Style and Environment

- Method
  - Personal and External Determinants
  - Behavior Environmental Agent
  - Environmental Condition
  - Life Style
    - Health And Quality of Life
Methods and Applications

- Theoretical methods
  - general technique for influencing change

- Practical applications
  - Specific technique for the application of the method
Methods and Applications

• Theoretical methods
  – general technique for influencing change
  – Modeling (SCT)

• Practical applications
  – Specific technique for the application of the method
  – Photo novella
Photo Novella HIV Prevention

Real men don't have to have sex to be a man

It's the only way, all my friends are doing it
Selecting Methods

• Order the program objectives by **determinant**
• Select **methods** per determinant
• Consider the **parameters** of the method*

• More methods at higher **environmental** levels
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<td>Purchase quality condoms</td>
<td><strong>Express confidence to buy condoms</strong></td>
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<td>Use condoms correctly and consistently</td>
<td><em>Recognize advantages of safe sex</em></td>
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Selecting Methods

- Consider the parameters of the method
- **Modeling:**
  - Identification
  - Skills
  - Reinforcement
  - Coping versus mastery model
## Methods for Skills and Self-Efficacy

<table>
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<tr>
<th>Methods and Theory</th>
<th>Considerations for use</th>
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<tr>
<td><strong>Modeling</strong></td>
<td>Requires identification, skills, reinforcement, coping versus mastery models</td>
</tr>
<tr>
<td><em>Social Cognitive Theory</em></td>
<td></td>
</tr>
<tr>
<td><strong>Goal setting</strong></td>
<td>Requires commitment to the goal and a goal that is difficult but available within the individual's skill level</td>
</tr>
<tr>
<td><em>Goal setting theory</em></td>
<td></td>
</tr>
<tr>
<td><strong>Xxx</strong></td>
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Bartholomew et al., 2006; see Abraham & Michie, 2008
## Methods to Create Health-Promoting Communities

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<tr>
<td>Reflection-action-reflection</td>
<td>Requires being with the people in the community; Safe environment for participation</td>
</tr>
<tr>
<td><em>Conscientization theory</em></td>
<td></td>
</tr>
<tr>
<td>xx</td>
<td></td>
</tr>
<tr>
<td><strong>Use of lay health workers</strong></td>
<td>Existence of natural helpers in a social network; lay health workers have opinion leader status in the community and volunteer for training</td>
</tr>
<tr>
<td><em>Community organization theory</em></td>
<td></td>
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</table>
A project outreach lay health worker in the field explains stages of HIV and AIDS to his peers, using a peer education tool kit (Pakistan)
## Methods and Applications Table

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<th>Determinant</th>
<th>Method</th>
<th>Parameter</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude</td>
<td>Arguments</td>
<td>New arguments</td>
<td>Statement game</td>
</tr>
<tr>
<td>Social norm</td>
<td>Modeling</td>
<td>Identification, skills, reinforcement, coping</td>
<td>Photo novella with many role model stories</td>
</tr>
<tr>
<td>Skills</td>
<td>Facilitation</td>
<td>Requires changes in the environment</td>
<td>Easy access to VCT facilities</td>
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Program Design

- Overall structure
- Themes
- Channels and vehicles
- Culture
- Design and materials
- Working with other professionals
- Pilot testing
Self-Regulation for Adherence

If adherence to HAART is suboptimal:
• Monitor adherence; feedback
• Decide to act: define causes for failure
• Formulate solutions in action plan
• Implement action plan
• Next visit: evaluate adherence, adapt plans
• Set goals for maintenance

→ Training of Nurses

De Bruin et al., 2009
Stigma

- Overt behavioral manifestations
  - Dehumanization
  - Threat
  - Avoidance
  - Social rejection
- Subtle manifestations
  - Non-verbal expressions of discomfort
  - Ambivalence in social interaction
Health consequences

Limited number of social support providers

Non-disclosure of serostatus (to partners)

Delays in HIV-testing
Fear of stigmatization as barrier of HIV VCT

Main reason to go for VCT:
- Knowing your status

Main barrier for VCT:
- Fear of stigmatization
- Fear of knowing your seropositive status
Determinants of stigmatization

• Contagiousness of disease
• Seriousness of disease
• Personal responsibility
• Attitude towards homosexuals*
What can we learn from theory?

• Changing stereotypes
• Personal contact with members of stigmatized groups
• Interaction strategies
AIDS stigma in developing countries

- Create greater recognition about stigma
- Provide in-depth knowledge about all aspects of HIV/AIDS
- Provide safe spaces to discuss stigma related values and beliefs
- Use language of the target population
- Involve PLWA!
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Implementation of HIV Prevention Programs

- Aware: 70%
- Adopt: 50%
- Implement: 30%
- Sustain: 10%
Planning for Implementation

Linkage Group

Program Developers

Program Users

Orlandi et al, 1990
Intervention Mapping

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Planning for Evaluation

• Using the Intervention Map as the evaluation model
  – Quality of life and health
  – Life style: Performance objectives
  – Environment: Agents’ performance objectives
  – Determinants: Personal and environmental
  – Process: Parameters, implementation
Conclusions

• Health Promotion = Planning

• Applying research and theories

• Intervention Mapping