Stage-Matched Interventions

- Stages of Behavior Change: Pre-Intenders, Intenders and Actors
- Stage Assessment and Intervention Designs
- Stage-Tailored Interventions: Risk Communication vs. Planning vs. Relapse Prevention

The Health Action Process Approach (HAPA) is a health behavior change framework with an open architecture.

Health Promotion

based on the stage version of the Health Action Process Approach (HAPA)

Meta Theories:

Stage Models vs. Continuum Models

From Thoughts to Action:

Stage Models

Biological Stages of Change
Stage Assessment

A simple stage algorithm (a "fast and frugal tree")

Are you physically active for at least 20 minutes at 3 times per week or more?

Do you intend to become physically active for at least 20 minutes at 3 times per week or more?

From Thoughts to Action

Do you engage in physical exercise on a regular basis?

Example of a Staging Algorithm

Risk- and Resource Communication for the Pre-Intenders

Computer-Assisted Stage Assessment

Assignment to Three Stages
**Information Appeal**

Interdental Hygiene

Risk Communication and Resource Communication for Pre-Intenders

Hypothetical Mediation

How effective is risk communication?

Under which conditions and for whom?
High fear appeals can facilitate health behavior change only when combined with specific instructions on when, where, and how to perform them.


More Interventions for Pre-Intenders

Mental contrasting of positive and negative consequences (outcome expectancies)

Imagine others’ approval (subjective norm) and watch models.

Generate self-talk: I can do it.

“Change talk” — causing clients to verbalize arguments for change

Planning Intervention for the Intenders

Risk Communication Interventions for Pre-Intenders

Personalized risk feedback on one’s cholesterol level and blood pressure plus lifestyle change recommendations


Development of Self-Efficacy

Direct Experience: Mastery

Vicarious Experience: Observing a Model

Verbal Persuasion

Action Planning

When?

Where?

How?

Planning Intervention Form

<table>
<thead>
<tr>
<th>Where</th>
<th>When</th>
<th>How</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>0+</td>
<td>+</td>
</tr>
<tr>
<td>Home</td>
<td>0+</td>
<td>+</td>
</tr>
<tr>
<td>Work</td>
<td>0+</td>
<td>+</td>
</tr>
</tbody>
</table>

Sniehotta, Scholz & Schwarzer, 2004

Action Planning Intervention Form

<table>
<thead>
<tr>
<th>Where</th>
<th>When</th>
<th>How</th>
</tr>
</thead>
<tbody>
<tr>
<td>School</td>
<td>0+</td>
<td>+</td>
</tr>
<tr>
<td>Home</td>
<td>0+</td>
<td>+</td>
</tr>
<tr>
<td>Work</td>
<td>0+</td>
<td>+</td>
</tr>
</tbody>
</table>

Sniehotta, Scholz & Schwarzer, 2004
Planning Interventions for Intenders

Coping Planning
- anticipation of barriers and obstacles
- preparation of coping strategies
- mental simulation of successful coping

Assessment of Coping Planning

<table>
<thead>
<tr>
<th>I have made a detailed plan regarding...</th>
<th>not at all</th>
<th>hardly</th>
<th>moderately</th>
<th>exactly</th>
</tr>
</thead>
<tbody>
<tr>
<td>what to do if something interferes with my plans.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>how to cope with setbacks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>how to stick to my intentions, even in difficult situations.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>which good opportunities for action to take.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>when to be especially careful in order to avoid setbacks.</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
</tr>
</tbody>
</table>

Intervention Design

(Sniehotta & Scholz, 2002)
Planning and Self-Efficacy Can Increase Fruit and Vegetable Consumption: A Theory-Based Social-Cognitive Intervention Study

Pimchanok Kreausukon, Paul Gellert, and Ralf Schwarzer

**Intervention Design**

Computer-based intervention study (RCT)

Planning intervention: action plans and coping plans.

Control group: feedback on BMI, standard health information.

**Action Plans:** What kind of physical activity would you like to perform?

<table>
<thead>
<tr>
<th>Activity 1</th>
<th>Activity 2</th>
<th>Activity 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>running</td>
<td>swimming</td>
<td>aero</td>
</tr>
</tbody>
</table>

**When?**

<table>
<thead>
<tr>
<th>Activity 1</th>
<th>Activity 2</th>
<th>Activity 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>6pm</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Where?**

<table>
<thead>
<tr>
<th>Activity 1</th>
<th>Activity 2</th>
<th>Activity 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>in the park</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**How long?**

<table>
<thead>
<tr>
<th>Activity 1</th>
<th>Activity 2</th>
<th>Activity 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>30 minutes</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Coping Plans:** Which barrier might prevent you from being active at least 3 x 30 minutes per week?

<table>
<thead>
<tr>
<th>Barrier 1</th>
<th>Barrier 2</th>
<th>Barrier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>rain</td>
<td>guests</td>
<td>being tired</td>
</tr>
</tbody>
</table>

**How could you overcome this barrier?**

<table>
<thead>
<tr>
<th>Barrier 1</th>
<th>Barrier 2</th>
<th>Barrier 3</th>
</tr>
</thead>
<tbody>
<tr>
<td>go swimming</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
**Physical Exercise in Orthopedic Rehabilitation**

Sonia Lippke & Jochen Ziegelmann

---

### Action Plans: Which kind of physical activity would you like to perform?

- **Activity 1**: Running
- **Activity 2**: Swimming
- **Activity 3**: Aerobics

### When? Where? How long?

- **Activity 1**: 6pm, running in the park, 30 minutes

### Coping Plans: Which barrier might prevent you from being active for at least 3 x 30 minutes per week?

- **Barrier 1**: Rain
- **Barrier 2**: Guests
- **Barrier 3**: Being tired

### How could you overcome this barrier?

- **Barrier 1**: Go swimming

---

### Physical Activity

**Online Survey**

---

### Changes in physical activity self-efficacy after a motivational vs. volitional intervention

- **Intender**
- **Actor**

---

### Interventions for Intenders

**Action Planning** and **Barrier-Focussed Strategic Planning** (=Coping Planning)

- Generate self-talk: I can do it.
- Mobilize social support.
- Identify opportunities for action.

---

### Amount of Planning

- Plan 1
- Plan 2
- Plan 3

---

### Amount of Planning at Different Stages

- **Action Plans**
  - Intender vs. Actor: L = 0.2*
- **Coping Plans**
  - Intender vs. Actor: L = 0.1*

---

### Working mechanism/stage

- **Intender**
- **Actor**

---

**Percentage of patients being physically active at least 30 minutes a week after the week**

- **Intender**
- **Actor**

---

**Physical Activity Changes in physical activity self-efficacy after a motivational vs. volitional intervention**

- **Intender**
- **Actor**

---

**Changes in physical activity self-efficacy after a motivational vs. volitional intervention**

- **Intender**
- **Actor**

---

**Interventions for Intenders**

**Action Planning** and **Barrier-Focussed Strategic Planning** (=Coping Planning)

- Generate self-talk: I can do it.
- Mobilize social support.
- Identify opportunities for action.
Relapse Prevention for the Actors

Every evening, please write down how many portions of fruit and vegetable you have consumed.

### Relapse Prevention Interventions for Actors

- **Action Control**: e.g., monitor own behavior and compare goals with performance
- **Control emotions, manage stress, manage time**
- **Coping planning, identify barriers**
- **Generate self-talk**: I can resume after a break

### Tailored Health Promotion for Physical Activity and Dietary Behaviour

#### Medical Examination
- Pretest
- Computer-Based Intervention
- Post-test

#### Randomized intervention and control group
- Screening for eligibility
- Invitation for participation
- Follow-up 4 weeks after baseline

### Computer-based intervention study (RCT)

- Planning intervention: action plans and coping plans
- Control group: feedback on BMI, standard health information

### From Thoughts to Action

#### Example of a simple stage algorithm (a "fast and frugal tree")

- Are you physically active for at least 20 minutes at 3 times per week or more?
  - NO = Non-Actor
  - YES = Actor

- Do you intend to become physically active for at least 20 minutes at 3 times per week or more?
  - NO = Non-Intender
  - YES = Intender

#### I do not intend to exercise five times per week for at least 30 minutes.

#### I intend to exercise five times per week for at least 30 minutes.

#### I exercise five times per week for at least 30 minutes.
Tailored Health Promotion for Physical Activity and Dietary Behaviour

Research collaboration with Freie Universität Berlin and dbgs GesundheitsService

Pre-intenders, Intenders, Actors

Pre-Intenders

Change in Motivation: Physical Activity

Change in Motivation: Nutrition

Intenders

Change in Physical Activity

Change in Nutrition

Actors

Change in Physical Activity

Change in Nutrition

Intervention Design

Match-Mismatch Research Designs

Design to Test the Matching of 2 Treatments to 2 Stages Experimentally

Treatment 1 (Risk Communication)

Treatment 2 (Strategic Planning)

Move from pre-intentional to intentional

Matched

Mismatched

Move from intentional to actional

Mismatched

Matched
Treatment example: Chewing food
By Tabea Reuter

Question:
Which constructs are included in the next 2 treatment examples?

Conclusions
- The Intention-Behavior Gap can be bridged by (a) post-intentional constructs, or (b) stages of change:
- In Pre-Intenders, risk and resource communication can improve motivation.
- In Intenders, two kinds of strategic planning can promote initiative for action.
- In Actors, relapse prevention strategies can stabilize the behavior.
The Health Action Process Approach (HAPA) is a health behavior change framework with an open architecture. www.hapa-model.de