



1) Predicting individual changes in behaviors such as quitting smoking, improving physical activity, dental hygiene, seat belt use, dietary behaviors.  
 2) Design of interventions.

- **Constructs**
- **Theory**
- **Interventions**



- **Constructs for Health Behaviors**
  - Health Action Process Approach
  - Stage-Based Interventions

- **Intention**
- **Risk Perception**
- **Outcome Expectancies**
- **Self-Efficacy**
- **Planning**

- **Intention**
- **Risk Perception**
- **Outcome Expectancies**
- **Self-Efficacy**
- **Planning**

**Intention**

*I intend to start biking today for 20 minutes on a regular basis.*

**Intention**

By the end of this week,  
I intend to eat five portions of  
fruit or vegetable every day.

## Intention

I intend to perform the following activities for at least 5 days per week for 30 minutes..."

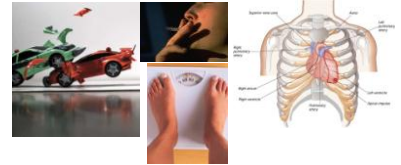
- (1) ...strenuous (heart beats rapidly, sweating) physical activity.
- (2) ...moderate (not exhausting, light perspiration) physical activity.



Intercorrelation of the two items  $r=.21$ .

- Intention
- Risk Perception
- Outcome Expectancies
- Self-Efficacy
- Planning

## How do people perceive their own risk?



How likely is it that you will have a heart attack one day?

- very unlikely                      moderately likely                      very likely
- 1   2   3   4   5   6   7

My risk of becoming involved in a car crash at some time of my life is...

*extremely low --- low --- moderate --- high --- very high*



- Intention
- Risk Perception
- Outcome Expectancies
- Self-Efficacy
- Planning



If I drive too fast, I might lose my licence.



**Positive Outcome Expectancy**

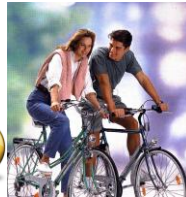
If I conduct more exercise, **then** my blood pressure will be lowered.

=*anticipated reward*



**Negative Outcome Expectancy**

If I conduct more exercise, **then** I have to invest more time and money.



If I eat the dessert now, I will regret it later.

=*anticipated regret*



Smoking helps me to relax

**Decisional Balance**




- Intention
- Risk Perception
- Outcome Expectancies
- **Self-Efficacy**
- Planning



**Perceived Self-Efficacy:**  
The Can Do-Cognition

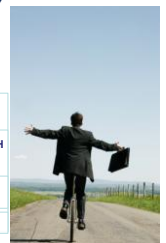
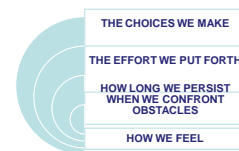
“Self-efficacy is the *belief* in one’s capabilities to *organize and execute* the sources of action required to manage *prospective* situations.”



Bandura, 1986

**SELF-EFFICACY**

WHAT DOES IT DO?





### Dietary Self-Efficacy



I am certain that I can stick to a healthy diet, even if my partner continues to consume junk food.



I am certain that I can use a helmet on a regular basis, even if others don't.



### Smoking Cessation Self-Efficacy

If someone offers me a cigarette, I can decline it without hesitating.

**The construct of Perceived Self-Efficacy**

- competence-based
- prospective
- operative (behavioral)

- Intention
- Risk Perception
- Outcome Expectancies
- Self-Efficacy
- **Planning**

## Planning



### Action Planning

Translating intentions into action:

- when** will I act?
- where** will I act?
- how** will I act?



### Planning

I have already planned [*where; how, when, and how often*]  
I will be physically active.

3 items, Cronbach's  $\alpha = .90$



### Coping Planning

- anticipation** of barriers and obstacles
- preparation** of coping strategies
- mental simulation** of successful coping that may include vivid imagery

## Coping Planning

I have made a detailed plan regarding...

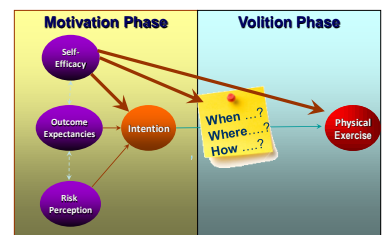
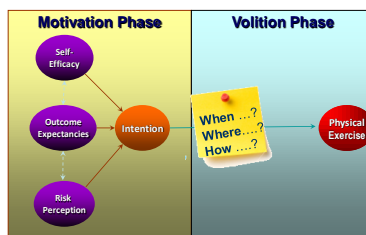
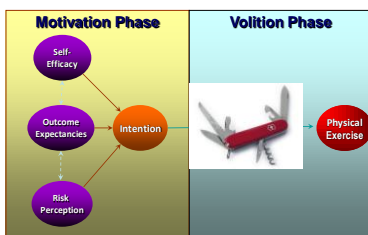
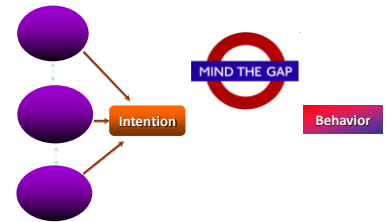
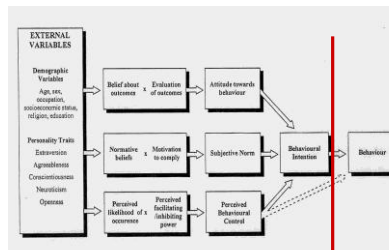
- (a) ...what to do in high-risk situations in order to stick to my good intentions.
- (b) ...how to deal with a relapse into unwanted behaviors.



- Constructs for Health Behaviors
- **Health Action Process Approach**
- Stage-Based Interventions



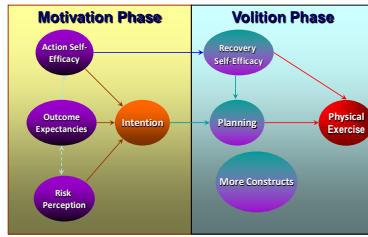
Theory of Planned Behavior Ajzen 1991



## Perceived self-efficacy

facilitates

- goal-setting,
- effort investment,
- persistence in face of barriers
- recovery from setbacks.

## Action Self-Efficacy

How confident are you that you can engage in more physical activity?

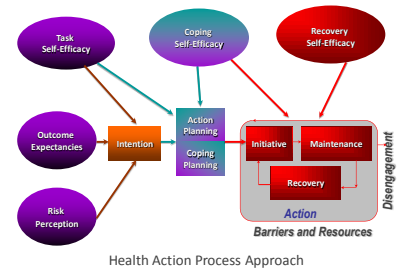
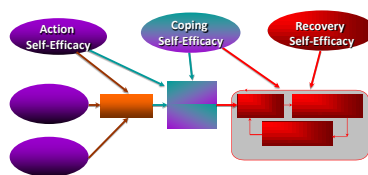
I am confident that I can start engaging in physical activities <i>immediately</i> , ...	not at all true	hardly true	moderately true	exactly true
... even if I have to pull myself together.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
... even when I have to force myself to start doing this right now.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## Recovery Self-Efficacy

In spite of good intentions minor or major setbacks might occur. Imagine you have not been exercising for a while. How certain are you that you will be able to **resume** your physical activity after such a break?

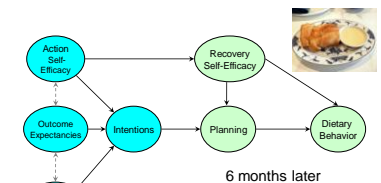
I am confident that I can restart engaging in physical activity again, ...	not at all true	hardly true	moderately true	exactly true
... even when I haven't engaged in physical activity for several times.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
...even when I wasn't able to pull myself together on one occasion.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Perceived self-efficacy is influential for **motivation** as well as for **volition**

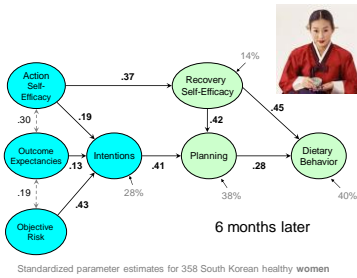


## Predicting Dietary Behaviors in South Korea: A Longitudinal Study Exploring Moderators

Brita Ranner, Sunhyo Kwon & Ralf Schweizer



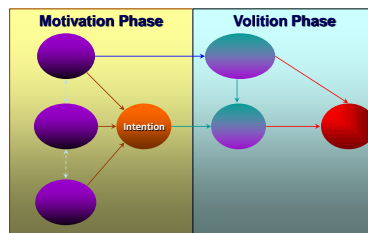
Objective risk feedback: blood pressure, cholesterol, BMI



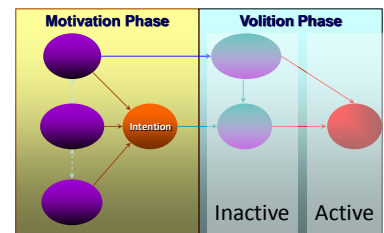
HAPA is a Set of 5 Principles



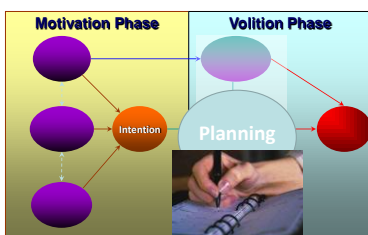
HAPA Principle 1: Behavior change can be divided into 2 phases



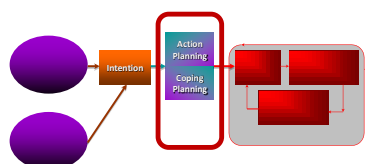
HAPA Principle 2: Volition phase can be subdivided, resulting in 3 stage groups: Non-Intenders, Intenders, and Actors



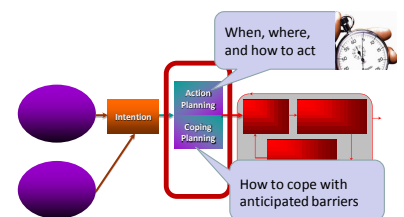
HAPA Principle 3: In the volitional pre-actional stage, planning operates as a mediator

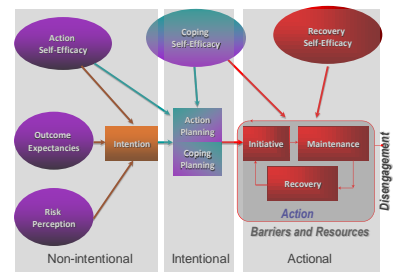
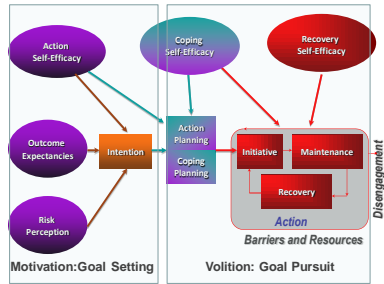
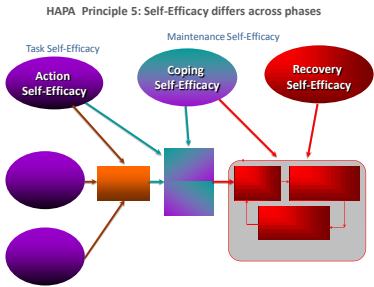


HAPA Principle 4: Planning can be divided into action planning and coping planning



HAPA Principle 4: Planning can be divided into action planning and coping planning





- Constructs for Health Behaviors
- Health Action Process Approach
- **Stage-Based Interventions**



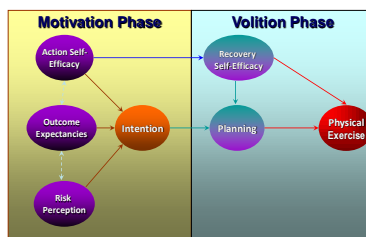
## Health Promotion

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

### Meta Theories:

Stage Models vs. Continuum Models

## Continuum Models

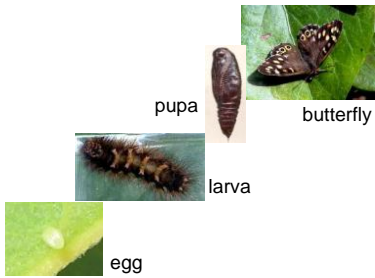


Continuum-Layer of the Health Action Process Approach

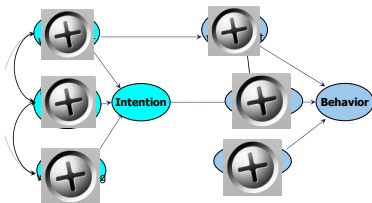
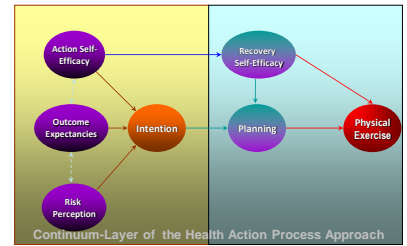
From Thoughts to Action:



## Stage Models



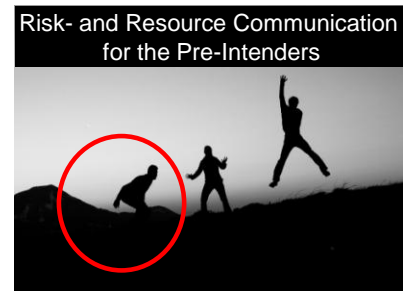
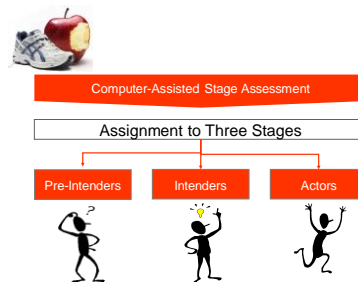
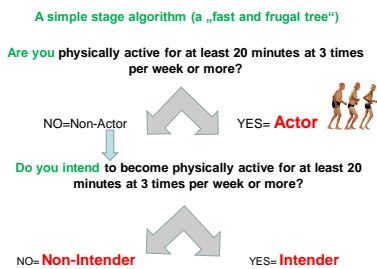
How do we intervene on the basis of a continuum model?

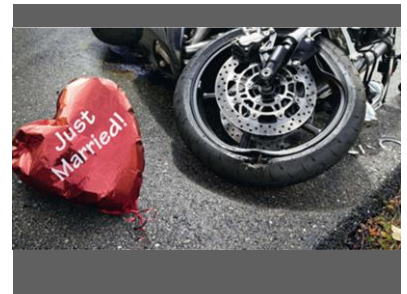


Turn all the screws for an undifferentiated audience:  
Increase intentions of those who already intend,  
increase behavior of those who are not yet ready.

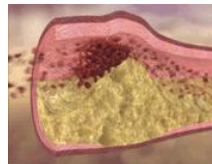


## Stage Assessment





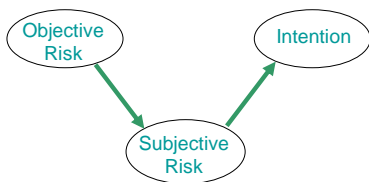
*Information Appeal*



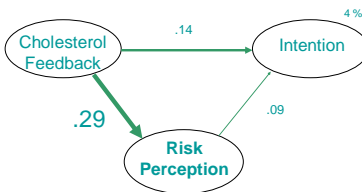
**Information Appeal**



Hypothetical Mediation



N = 200, no stages  
 (Bomer & Schwarz)



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.



Leventhal, H., Singer, R., & Jones, S. (1965). Effects of fear and specificity of recommendation upon attitudes and behavior. *Journal of Personality and Social Psychology*, 2, 20-29.

Leventhal, H., Watts, J. C., & Pagano, F. (1967). Effects of fear and instructions on how to cope with danger. *Journal of Personality and Social Psychology*, 6, 313-321.

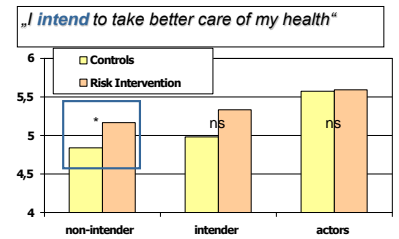
### Risk Communication Interventions for Pre-Intenders

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



Britta Renner, Sonia Lipkin, & Rolf Schwarzer  
Health Risk Assessment and Health Promotion Group  
http://www.zi.z.uni.edu/2009/08/09/

Britta Renner, Sonia Lipkin, & Rolf Schwarzer



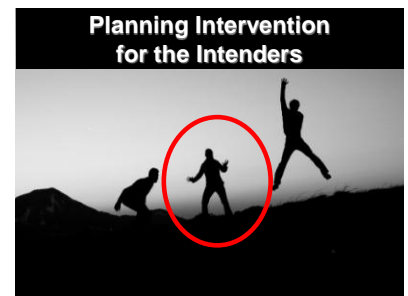
### More Interventions for Pre-Intenders

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



### Action Planning

- ☑ **When ?**
- ☑ **Where ?**
- ☑ **How ?**



When? Always.

Cue to action for intenders.



### Coping Planning

- ☑ **anticipation** of barriers and obstacles
- ☑ **preparation** of coping strategies
- ☑ **mental simulation** of successful coping that may include vivid imagery

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

Activity 1	running	Activity 1	running
Activity 2	swimming	When?	often
Activity 3	aerobics	Where?	in the park
		How long?	20 minutes

**Coping Plans:** Which barrier might prevent you from being active at least 2 x 20 minutes per week?

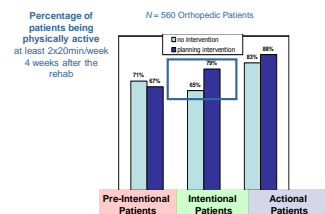
Barrier 1	rain	How could you overcome this barrier?	
Barrier 2	guests	Barrier 1	rain
Barrier 3	being tired	Strategy 1	go swimming

100

## Physical Exercise in Orthopedic Rehabilitation



Sonia Lippke & Jochen Ziegelmann



Lippke, S., Ziegelmann, J. P., & Gollwitzer, P. M. (2010). Intention-behavior gaps in health behavior change: A self-regulatory perspective. *Health Psychology, 29*, 1-10.

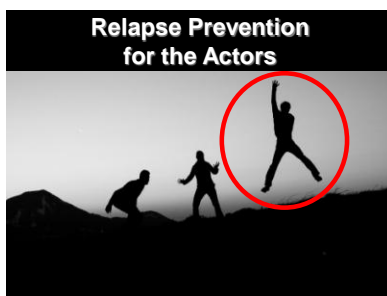
## Interventions for Intenders

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

Generate self-talk: *I can do it.*

Mobilize social support.

Identify opportunities for action.



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*  
 Generate self-talk: *I can resume after a break*

Control emotions, manage stress, manage time, Coping planning, identify barriers, rehearse vivid imagery, emotional cue exposure, mastery and reward experience,

