

# Mind the gap

A guide to discuss medication use and (non)adherence at adolescents with AD(H)D

# Disclosure presenter



✓	No (potential) conflict of interests	
✗	1. Relations that could be relevant for the meeting	
✗	2. Sponsorship or research funds	
✗	3. Payment or other (financial) remuneration	
✗	4. Shareholder	
✗	5. Other relation	

# Outline presentation

- definition of adherence
- prevalence of nonadherence
- theoretical models to explain adherence related behavior
- (non) adherence at adolescents with AD(H)D
- guide to discuss medication use and (non) adherence



# Definition adherence (WHO, 2003)

The extent to which a person's behavior— taking medication, following a diet, and/or executing lifestyle changes, corresponds with **agreed recommendations** from a health care provider

**adherence**  $\neq$  **compliance**

Sabaté, E. (2003). Adherence to long term therapies, evidence for action (Geneva, Switzerland: WHO Library Cataloguing-in-Publication Data)

# Prevalence nonadherence

- Depressive- and anxiety disorders: 44 % (\*1)
- Astma/ COPD: 40 % (\*2)
- ADHD: 40 % (\*3)
- Kidney transplantation: after 6 wks 17 %, after 6 months 27 %, after 18 months 31 % (\*4)
- Antipsychotics 64 – 82 % stopped within 18 months (\*5)
- Antipsychotics 28 – 55 % stopped within 18 months (\*6)

\*1 Hugtenburg J. (2016) Nederlands Platform voor Farmaceutisch Onderzoek.

\*2 Therapietrouwmonitor (delivery details pharmacy)

\*3 Therapietrouwmonitor (delivery details pharmacy)

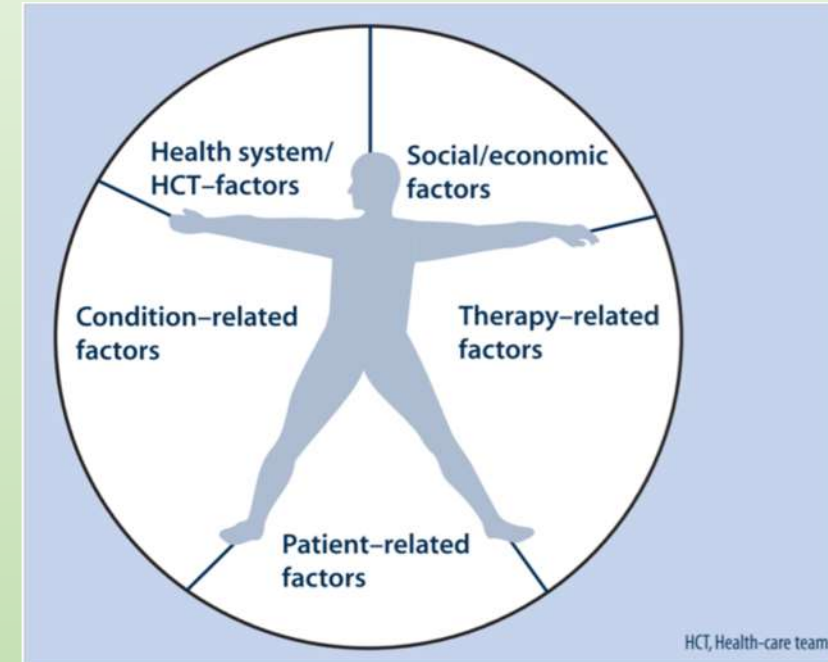
\*4 Massey et al. (2015) Discrepancies between beliefs and behavior: a prospective study into immunosuppressive medication adherence after kidney transplantation

\*5 Lieberman et al. (2005) for the Clinical Antipsychotic Trials of Intervention Effectiveness (CATIE) Investigators

\*6 Haro et al. (2006) Three year antipsychotic effectiveness in the outpatient care of schizophrenia: observational versus randomized study results

# Adherence is behavior

- Adherence isn't static
- Many influential factors (419 determinants)
- Intentional (motivation) and Unintentional (ability)
- Theoretical models to understand behaviour

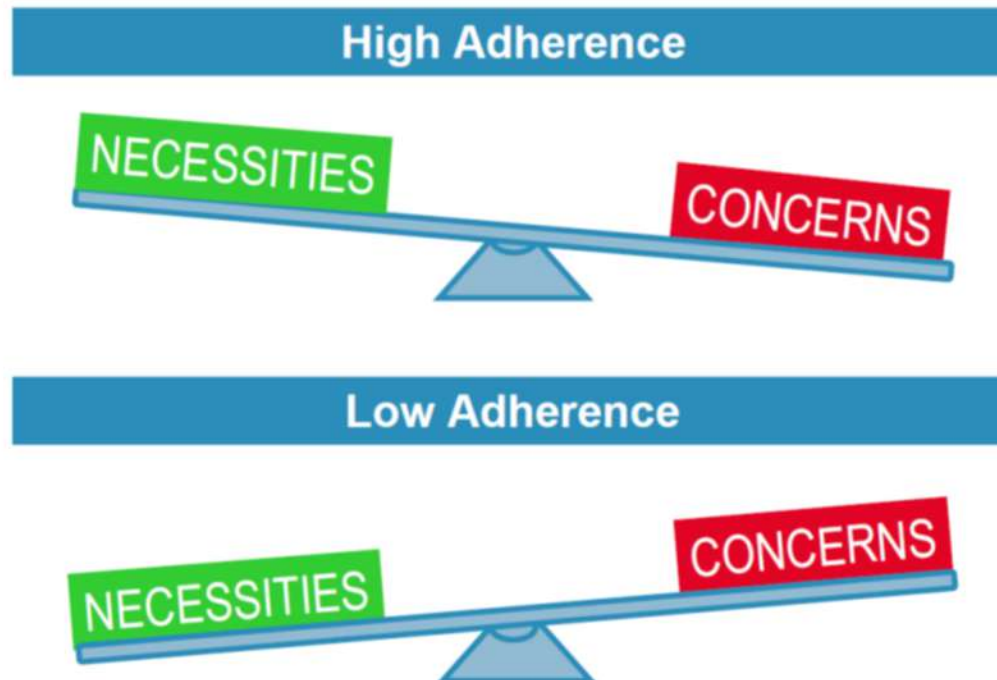


Sabaté, E. (2003). Adherence to long term therapies, evidence for action (Geneva, Switzerland: WHO Library Cataloguing-in-Publication Data)

Ascertaining Barriers for Compliance Project. (2012). Ascertaining Barriers for Compliance: policies for safe, effective and cost-effective use of medicines in Europe. (Final report of the ABC project (deliverable 7.1))

# Necessity Concerns Framework

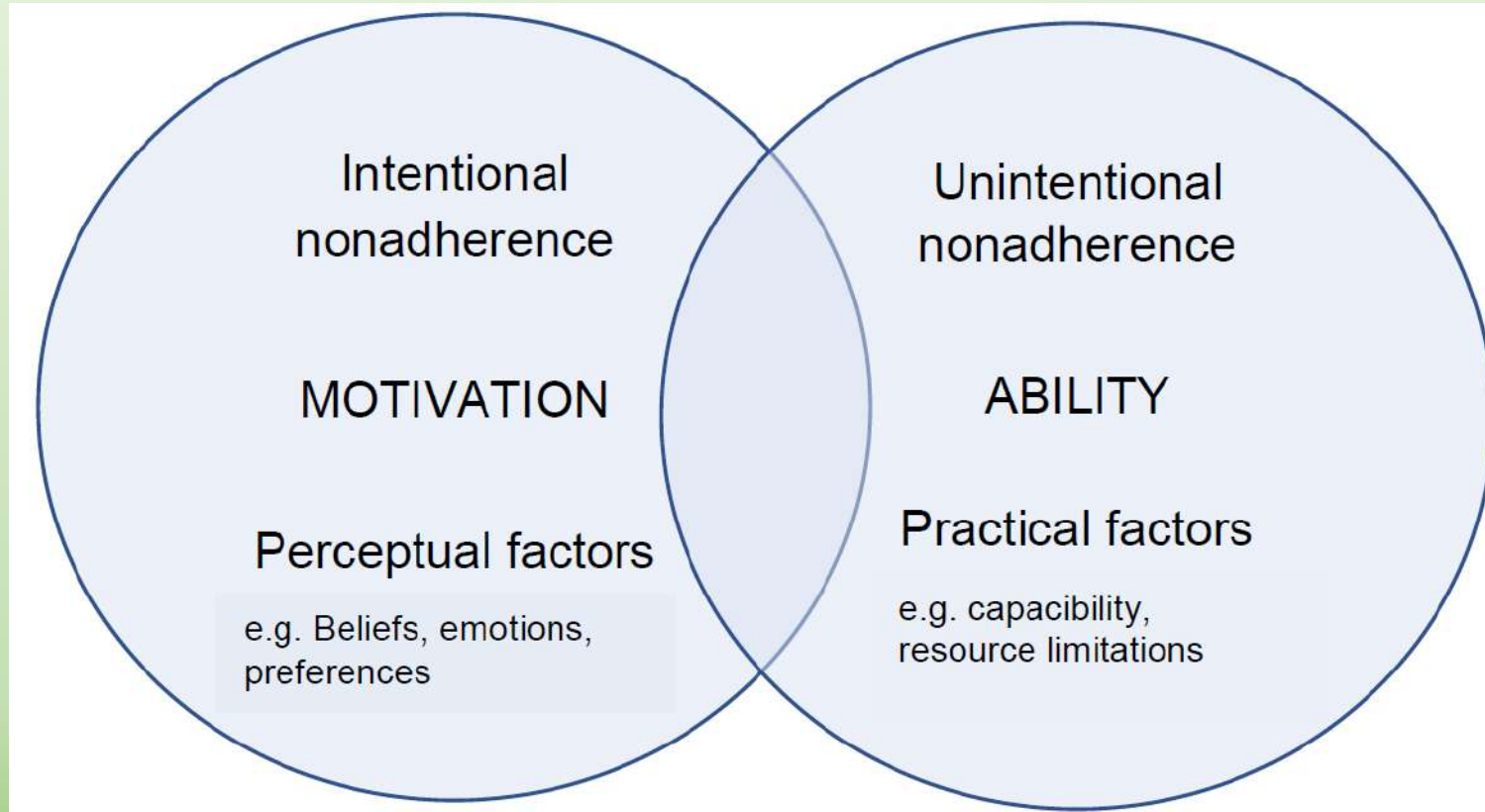
## Balancing necessities and concerns



Professor Rob Horne, Centre for Behavioural Medicine School of Pharmacy University of London ([rob.horne@pharmacy.ac.uk](mailto:rob.horne@pharmacy.ac.uk))  
[www.pharmacy.ac.uk](http://www.pharmacy.ac.uk)

Necessity Concerns Framework (Horne, Weinman & Hankins, 1999)

# Perceptions and practicalities approach

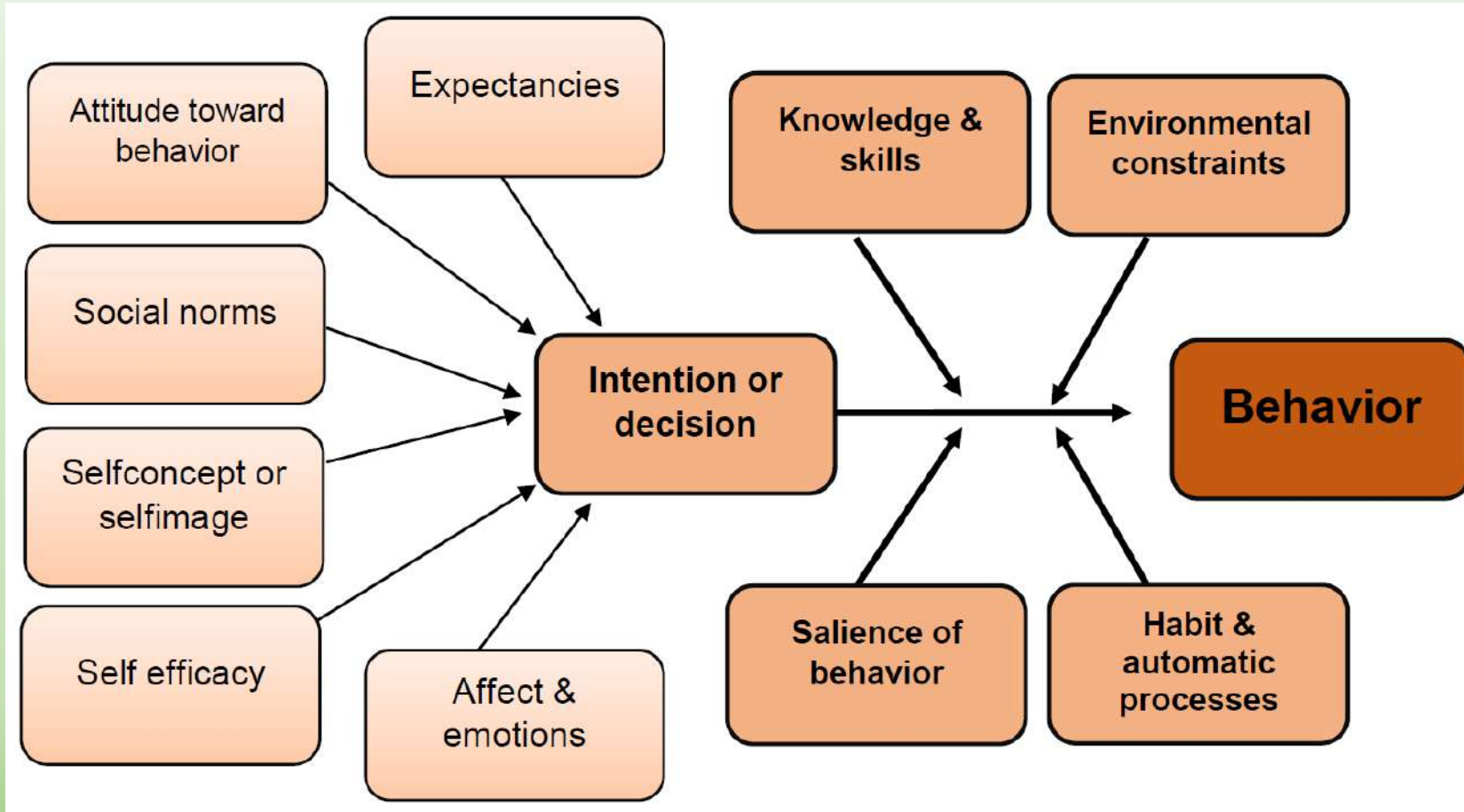


Perceptions and practicalities approach to nonadherence

Horne R, Weinman J, Barber N, Elliott RA, Morgan M. Concordance, Adherence and Compliance in Medicine Taking: A conceptual map and research priorities (2006). National Institute for Health Research Service Delivery and Organisation R&D, London.



# Unified Theory of Behavior Change

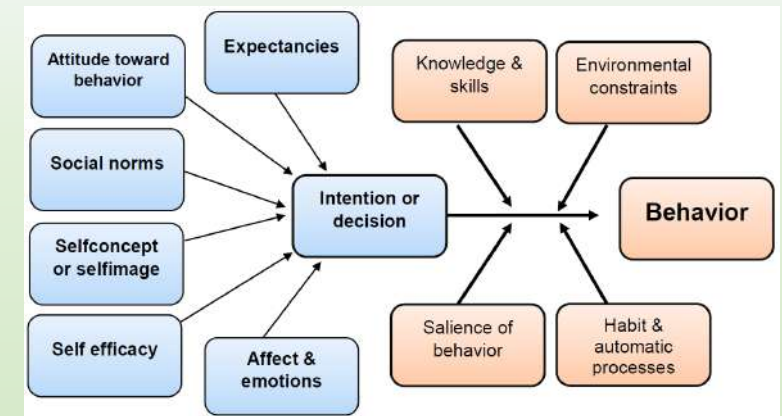


Unified Theory of Behavior Change. Parent-adolescent communication about sex and birth control: A conceptual framework. Jaccard, Dodge & Dittus, 2002, *New Directions for Child & Adolescent Development*, p. 16-18. Copyright © 2002 by Wiley Periodicals, Inc.

# UTBC: intentional factors

Motivational/ perceptual factors:

- Expectancies: about the disease and medications  
 Parents: side-effects and safety  
 Adolescents: side-effects and fear not being themselves
- Attitude: experiences and consequences  
 Parents: experienced side-effects, the degree of disfunctioning at school.  
 Adolescents: perception at their ADHD, experienced side-effects
- Social norms: acceptance target behavior by social environment  
 Parents: negative attitude family/ friends  
 Adolescents: negative attitude classmates / friends

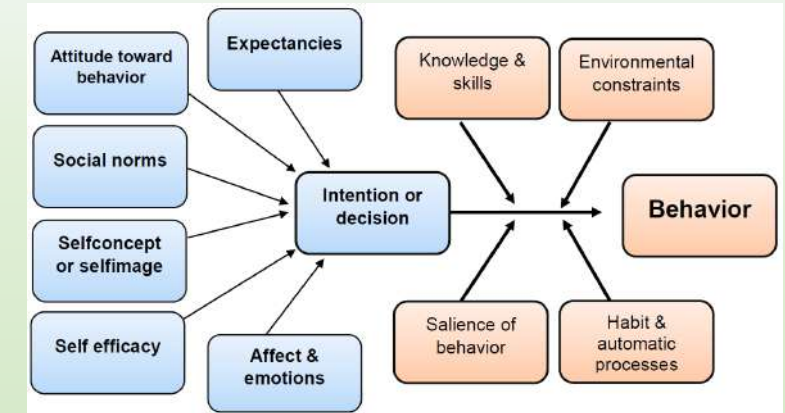


Brinkman et al. (2012). In Their Own Words: Adolescent Views on ADHD and Their Evolving Role Managing Medication. *Academic Pediatrics*, 12(1), 53-61.  
 Charach, Volpe, Boydell & Gearing (2008). A Theoretical Approach to Medication Adherence for Children and Youth with Psychiatric Disorders. *Harvard Review of Psychiatry*, 16(2), 126-135.  
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# UTBC: intentional factors

Motivational/ perceptual factors:

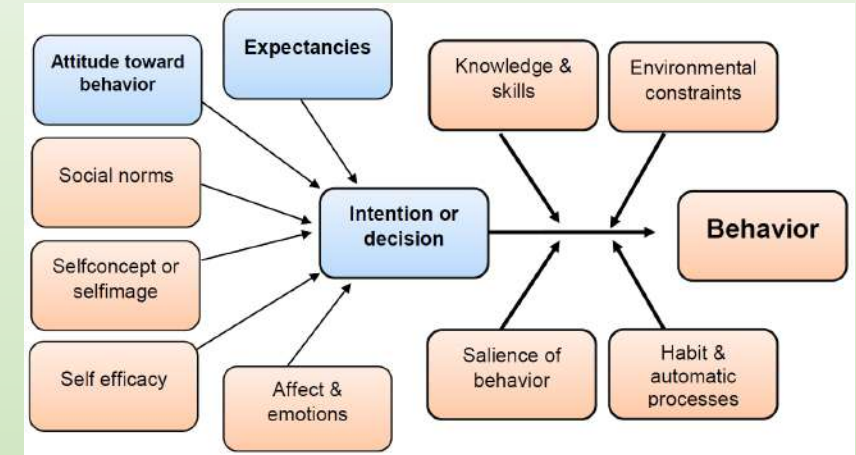
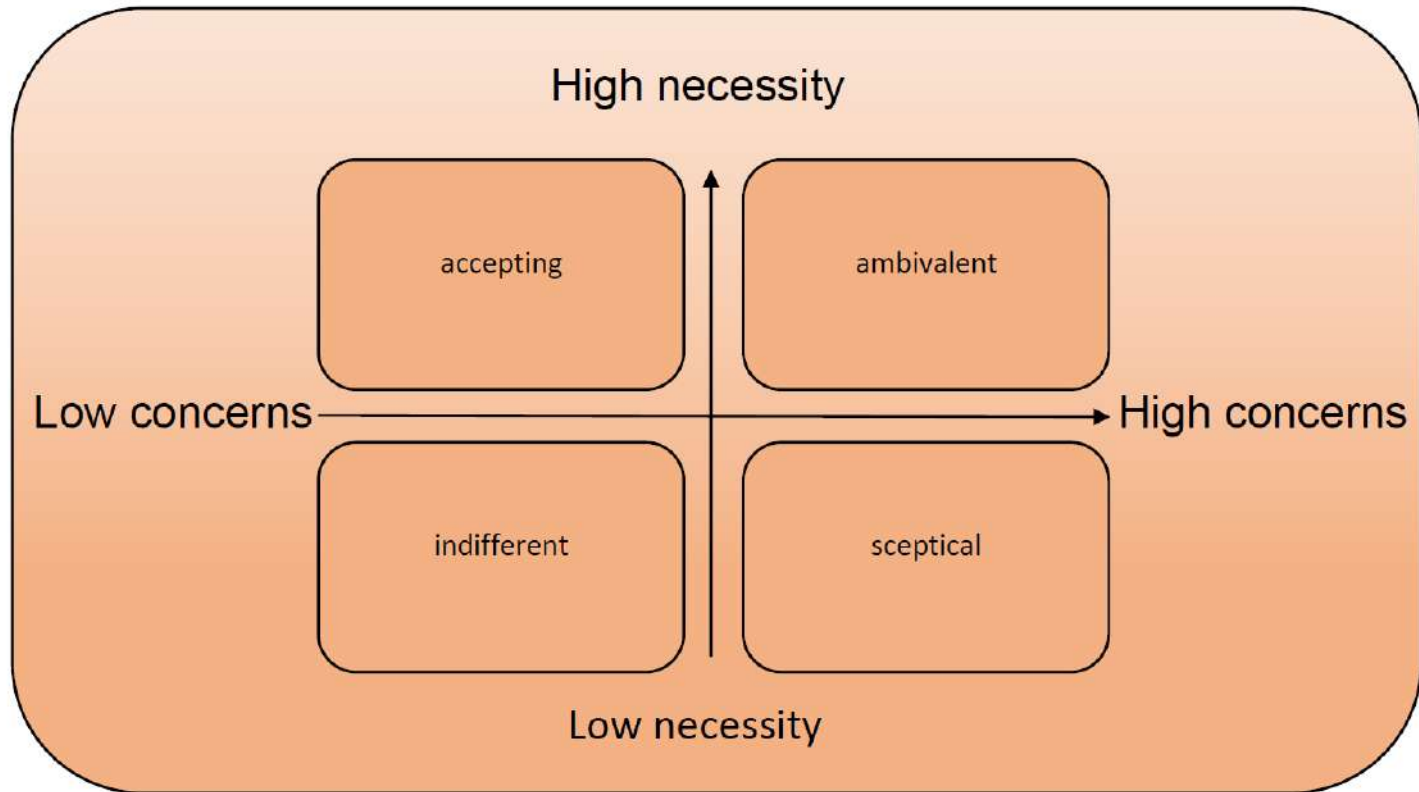
- Selfimage: does target behavior fit in one's selfimage  
 Parents: I'm a bad parent  
 Adolescents: I am a loser, I have to do it on my own



- Self efficacy: one's view and self confidence at capability to perform behavior  
 Need for long-acting medication, need to support the integration in daily life
- Affect & emotions: which emotion and strenght

Brinkman et al. (2012). In Their Own Words: Adolescent Views on ADHD and Their Evolving Role Managing Medication. *Academic Pediatrics*, 12(1), 53-61.  
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# Necessity Concerns framework



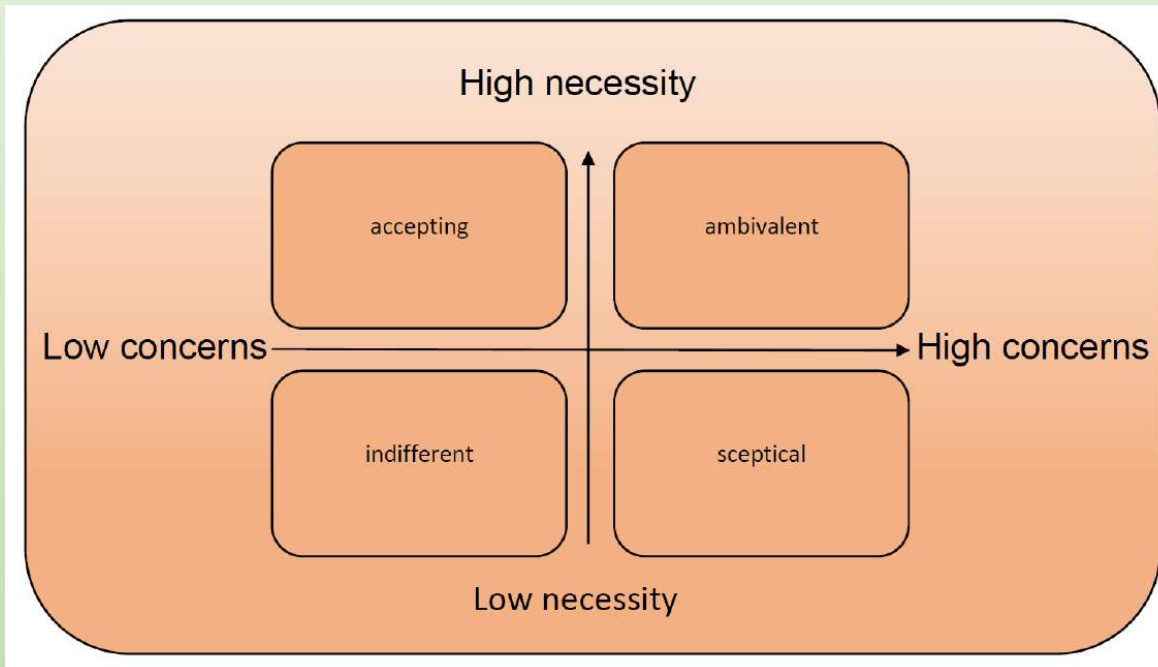
Low necessity: risk at discontinuation almost twice at big (Geers, 2012)

Low necessity: Adherence significant lower

(Aikens et al., 2005, Menckeberg et al., 2007)

Adherence to Maintenance-Phase Antidepressant Medication as a Function of Patient Beliefs About Medication by Aikens et al., 2005, *Annals of family medicine*, p. 27. Copyright © 2005 by Annals of Family Medicine, Inc.

# Necessity Concerns Framework and ADHD



Adolescents,  
average age 14,2 years (SD 1.7)  
ADHD  
N = 154

- Indifferent 80 % > adherence 38,7%
- Accepting 12.3 % > adherence 57,9%

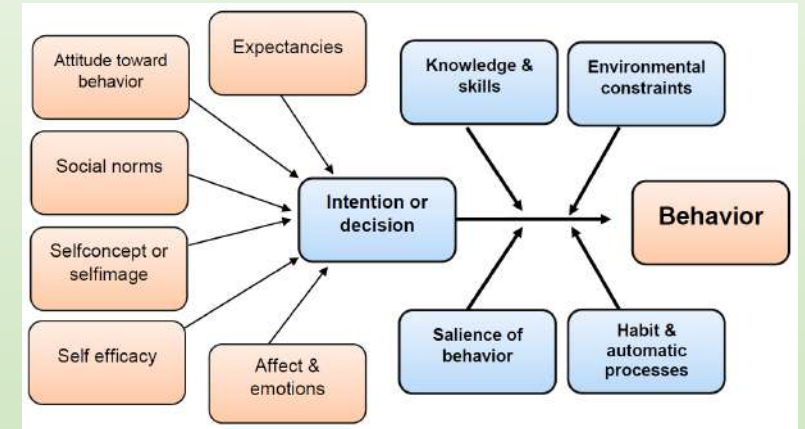
Van Puyvelde, Bouvy & Boussey (2015) ADHD medication adherence and factors associated with adherence in adolescents. University of Utrecht

# UTBC: factors with direct influence on behavior

- Intentional (motivation/ perceptual)

Unintentional (ability/ practical):

- Knowledge and skills for behavioral performance: knowledge about disease/ medication, problems with swallowing medication  
 Parents/ adolescents: unrealistic expectancies of effect medication
- Environmental constraints: related to therapy, healthprovider, social-economic  
 Communication with prescriber (don't talk about medication use/ adherence), costs medication

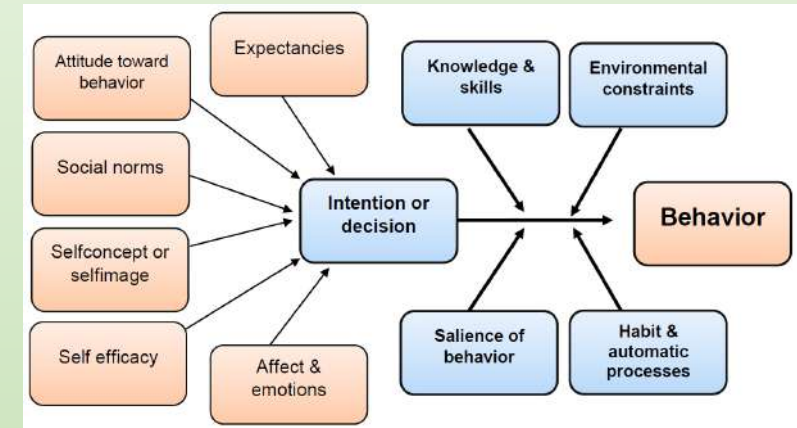


Gajria et al., 2014 Adherence, persistence, and medication discontinuation in patients with attention-deficit/hyperactivity disorder – a systematic literature review. *Neuropsychiatric Disease and Treatment*.

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# UTBC: factors with direct influence on behavior

- Habit and automatic processes:  
 ADHD: less structured days  
 ADHD: difficulties automating behavior  
 Routine interruptions



- Saliency of behavior:  
 Target behavior must be distinctive  
 What are the 'cues to action', how you notice you forgot your medication  
 Forget medication because it's not a distinctive action

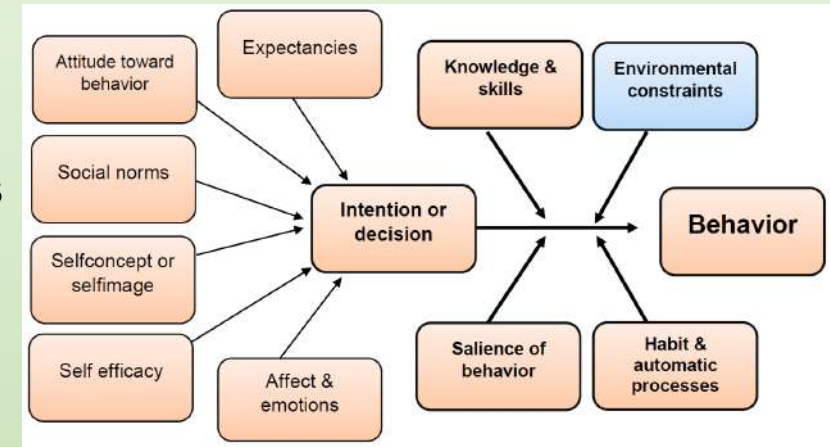
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# Who's talking with their patients about medication use?

ABC Project:  $\pm$  50 % medical doctors/ nurse practitioners/pharmacists (primary care) asks the patients about medication use (N = 3196)

NIVEL/ NPCF: videorecording general practitioners: 77% doesn't talk about medication use (N = 136)



Ascertaining Barriers for Compliance: policies for save, effective and cost-effective use of medicines in Europe. Final report of the ABC Project (deliverable 7.1, 2012)

Involving the perspective of patient and prescriber in improving communication about medicines and adherence Reporting of the joint project of NPCF and NIVEL to Stichting Fonds PGO carried out in 2007/2008



# Guide to discuss medication use

## Mind the gap

talk about medication use and (non)adherence

### 1. Explain: why you want to talk about medication use and (non)adherence

Some people find it annoying to use medication during a long period or experience trouble in daily use of medications. I want to talk with you about your medication use. Not because I want to check you but I want to find out if you need support.

### 2. Investigate if there is intentional or non-intentional (non)adherence

#### intentional

- do you choose sometimes to not take your medication
- did you ever discontinue
- do you sometimes use an lower dosage

#### non intentional

- how do you manage to take your medications daily, are there any practical barriers
- do you sometimes forget to take your medications

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### 3. Investigate possible causes of intentional and/or nonintentional nonadherence

#### Intentional (non)adherence

##### necessity

- to what extent you think you need this medication
- what's the effect of medication and what is the necessity for you

##### concerns

- do you have worries about the side-effects
- do you have concerns about the effect of medication

##### attitude

- is the effect of this medication such that it is worth using
- to what extent are the side-effects a barrier for you

##### social norms

- what's the opinion of important others (school, peers, parents) about your medication use

##### selfimage

- how is it for you to use (this) medication
- how do you feel about taking medication during school hours

##### self efficacy

- do you think you're able to use the medication the way we've agreed

#### Unintentional (non)adherence

##### knowledge & skills

- what do you know about your disease and medication
- what are your expectancies about medication effect
- do you know how/ are you able to use the medication

##### environmental constraints

- are there any practical barriers (opening hours, costs)
- how is the relationship between you and your prescriber

##### habit & automatic processes

- how do you integrate medication use in daily life
- have there been any disruptions of routines lately

##### salience of behavior

- how do you notice you forgot your medication

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# Any questions, please contact me



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