

A Different Look at Why Selection Procedures Work: The Role of Candidates' Ability to Identify Criteria

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Criterion validity

- **ACs predict job performance** (Arthur, Day, McNelly, & Edens, 2003; Gaugler, Rosenthal, Thornton, & Bentson, 1987; Meriac, Hoffman, Woehr, & Fleisher, 2008)
- **Structured interviews are good predictors for job performance** (e.g. McDaniel, Whetzel, Schmidt, & Maurer, 1994)
- **Personality inventories can predict performance across many different tasks and jobs** (Barrick, Mount, & Judge, 2001; Ones, Dilchert, Viswesvaran, & Judge, 2007)

Why do these procedures possess criterion validity?

- The rationale underlying ACs and interviews is that they are supposed to measure job-specific demands that have been identified through job analysis (SIOP, 2003)
- Personality inventories aim to measure individuals' (self-rated) standing on job-relevant personality traits.
- Construct-related validity of personnel selection procedures is based on the idea that job-related knowledge, skills, abilities, and other personal characteristics (KSAOs) are assessed.

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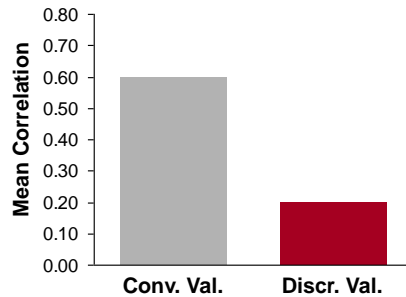
Construct validity of an AC

	Presentation	Role play	Group discussion	Case study
Analytical skills	✓	✓	✓	✓
Planning	✓	✓		✓
Leadership		✓	✓	
Cooperation		✓	✓	
Empathy	✓	✓	✓	
Strategic skills	✓			✓

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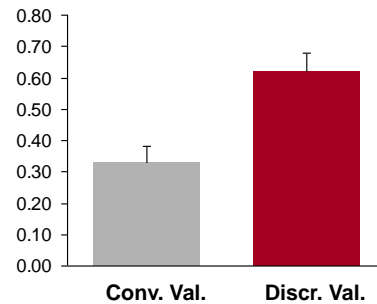
Construct validity of ACs in MTMM-analyses

Expected result:



Meta-analytical result:

(Melchers, Henggeler & Kleinmann, 2007)



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Construct validity

- AC: Low convergent validity and low discriminant validity have been confirmed (Lance, 2008; Lievens & Conway, 2001; Melchers, Henggeler, & Kleinmann, 2007; Woehr & Arthur, 2003)
- Structured interviews also suffer from problems regarding their construct-related validity (Huffcutt, Weekley, Wiesner, Groot, & Jones, 2001; Melchers, Klehe, Richter, Kleinmann et al. 2009)
- Personality inventories seems to change the factorial structure in applicant contexts (Morgeson et al., 2007), indicating that the supposed construct-related validity is altered. An extra factor which has been termed an “ideal-employee-factor”, emerges in addition to the original factors (Biderman & Nguyen, 2009; Burns & Christiansen, 2007; Klehe, Kleinmann et al. in press; Schmit & Ryan, 1993)

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Personnel selection as an interaction

- Applicants actively try to identify the criteria on which they are being evaluated (see Tullar, 1989)
- Cognitive tests disclose their purpose; other personnel selection procedures such as ACs, interviews, and personality inventories inform the applicant to a much lesser extent about the dimensions being measured.
- Such selection situations are more similar to so-called “weak” (ambiguous) situations than to “strong” situations (Mischel, 1973)

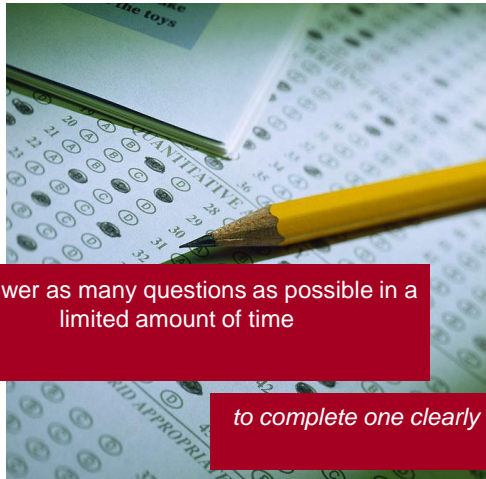
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Perception of situations

- There exist *nominal* and *psychological* situations (Block & Block, 1981)
- *Individual differences* in perceiving personnel selection situations correctly can be framed within the cognitive-affective personality system (CAPS) theory (Mischel & Shoda, 1995). This theory postulates that features of the (selection) situation trigger a series of cognitive mental representations (how should I behave).

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How should I behave in such an assessment (strong situation)?



to answer as many questions as possible in a limited amount of time

to complete one clearly defined task!

How should I behave in such an assessment (weak situation)?

The impact of adequate cognitions

showing willingness to compromise

demonstrating team spirit

asserting oneself

arguing convincingly

to complete two different tasks!

How should I behave in such an assessment (weak situation)?

The impact of adequate cognitions and subsequent behaviors

showing willingness to compromise

demonstrating team spirit

asserting oneself

arguing convincingly

to complete two different tasks!

Question 1


- Are there differences in the degree to which applicants correctly identify the criteria for evaluation in a selection procedure?

Research procedure

Application simulation / 1-2 days


Fictitious job advertisement

Assessment Centre exercises:
Group discussions
Presentations...



Interview

- Situational
- Past-oriented



Additional tests (e.g. GMA) ✍

Assumptions of candidates ✍

Further questionnaires ✍



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Research procedure

Exercise 1



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Date _____

Participant _____
(candidate number)

Advice: Your statement is necessary for our research in order to design and improve the Assessment Center exercises. Your answers do **not** affect the evaluation procedure! Therefore, no answer will be considered *right or wrong*. You have shown certain behaviours in the former exercise. Perhaps you were wondering what the observers were observing, i.e., **on which dimension they evaluated your behavior**.

Please write down in short notes the attributes (dimensions) that you think have been evaluated, e.g. *Perseverance* and your behaviour(s) related to these attributes, e.g. *continuous contributions, not giving up easily, constant participation...*

Dimension(s)	behaviors
perseverance	- continuous contributions - not giving up easily - constant participation

Research procedure

Exercise 1



Exercise 2



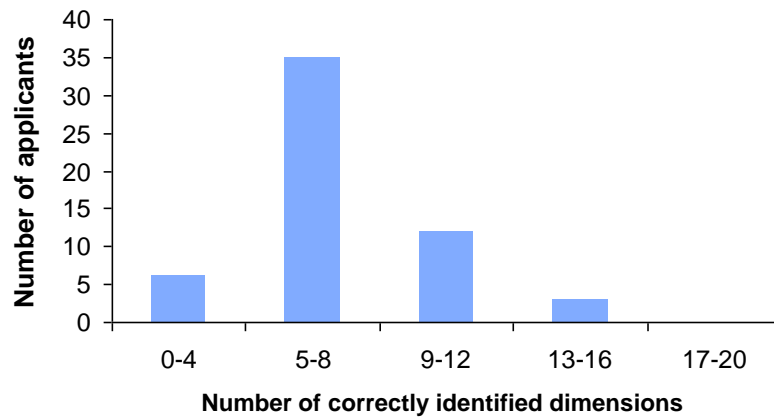
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Coding of candidates' assumptions:

- Scoring to which degree they discerned the targeted dimensions
- ATIC-score (**ATIC** = **A**bility **t**o **I**dentify **C**riteria)

Individual differences in candidates' ability to identify criteria

■ Kleinmann (1993):



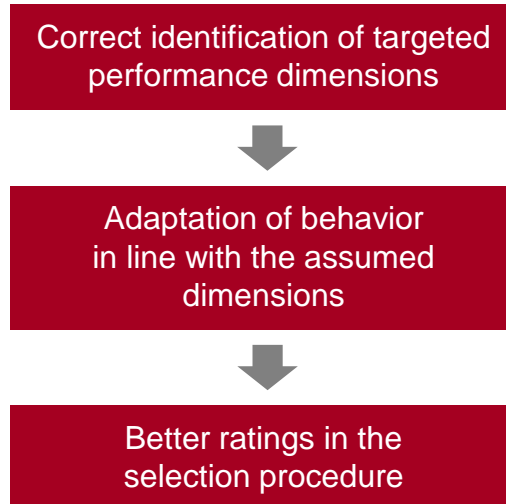
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Question 2

■ What are the effects of correctly identifying the targeted dimensions on candidates' performance?

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Our assumption



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Correlation between correct identification (ATIC) and performance

	Correlation
Assessment center:	
Kleinmann (1993)	.25* - .44**
Kleinmann (1997)	.32**
König et al. (2007)	.39**
Preckel & Schüpbach (2005)	.49**
Structured selection interviews:	
Melchers et al. (2004)	.27*
Melchers et al. (2009)	.35**
Personality test:	
König et al. (2006)	.23*

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Question 3

- Is the ability to correctly identify criteria something else than cognitive ability?

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ATIC and cognitive ability

- GMA correlates with job performance (Schmidt & Hunter, 1998) and with performance in ACs (Collins et al., 2003) or interviews (Huffcutt et al., 1996)
- Identifying the criteria for evaluation is a **cognitive** task

Relevant sub-aspects:

- What is the correlation between ATIC and cognitive ability?
- How well does ATIC predict performance in selection procedures in comparison to cognitive ability?

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Results

- Meaningful correlations between ATIC and cognitive ability across different studies:
 $r \approx .30$
- ATIC still is a significant predictor for AC/interview performance even after controlling for cognitive ability

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Question 4

- What is ATIC if it is not cognitive ability?

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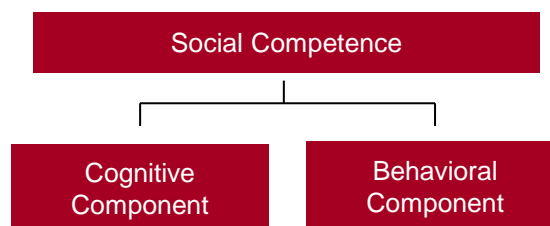
Correlates of ATIC

Source	r	N	Correlate
Cognitive Ability			
Klehe et al. (2009), König et al. (2007), Kolk, et al (2003), Preckel and Schüpbach (2005)	.17 - .30	71 - 149	General mental ability
Personality			
Ingold et al. (2011)	.02	99	Persistence
	.13	99	Assertiveness
	-.14	99	Organizing behavior
Jansen et al. (2011), Klehe et al. (2009), Preckel and Schüpbach (2005)	.04 - .17	71 - 149	Openness to experience
	-.19 - .30	71 - 149	Conscientiousness
	.02 - .12	71 - 149	Extraversion
	.08 - .26	108 - 149	Agreeableness
	.08 - .24	108 - 149	Emotional stability

A component of social competence

Social competence:

- Correct identification of what is required in a social situation (= social perceptiveness)
- Being able to adjust one's behaviour to meet the respective requirements



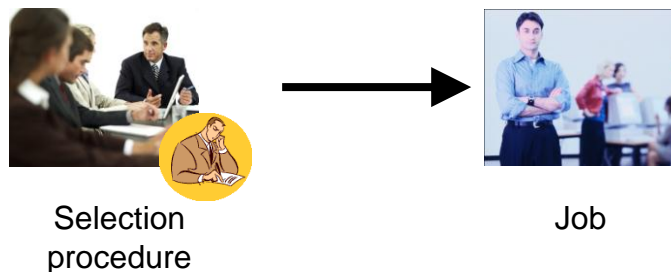
Question 5

- Is the ability to correctly identify criteria relevant for criterion-related validity?

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ATIC and job performance

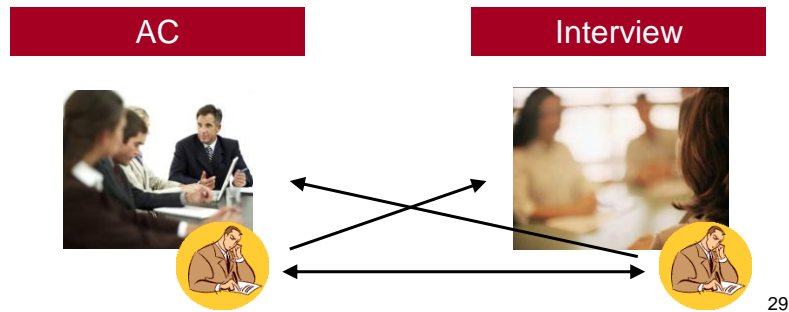
- Social competence predicts job performance (e.g., Ferris et al., 2001)
- ATIC should correlate with job performance
- At least part of the criterion-related validity of ACs or interviews might be because they measure ATIC



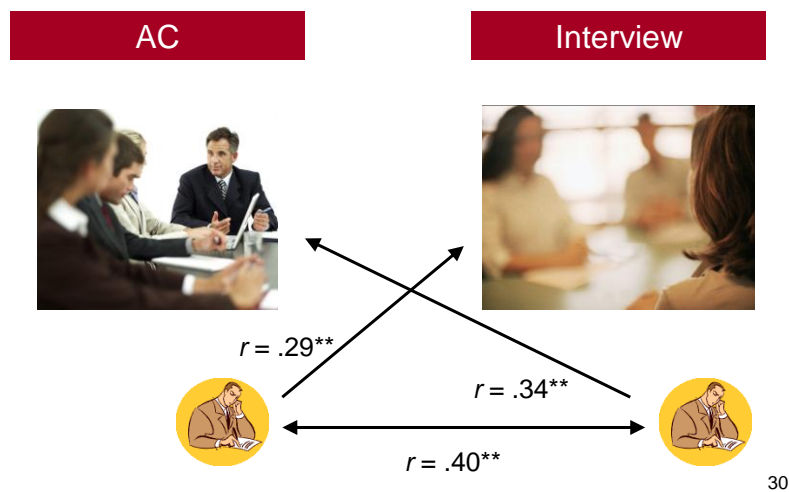
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A first indirect test

- ATIC-scores accross different situations (i.e., from different selection procedureds)...
 - should correlate significantly
 - should predict performance accross situations

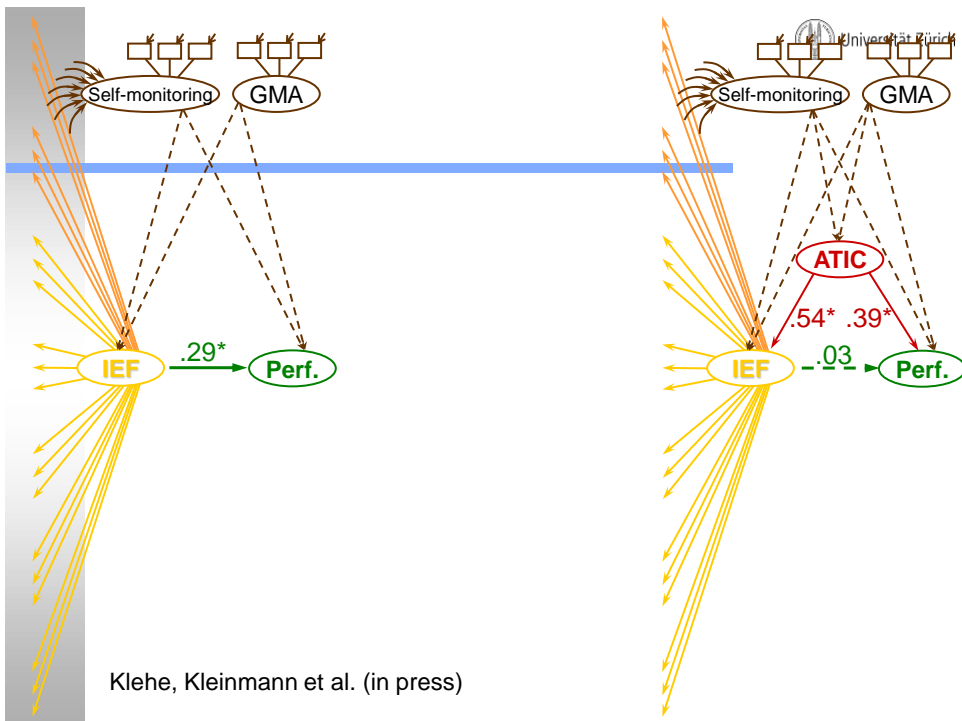
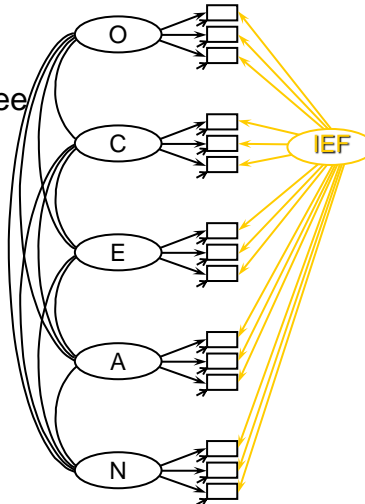


König, Melchers, Kleinmann et al. (2007):

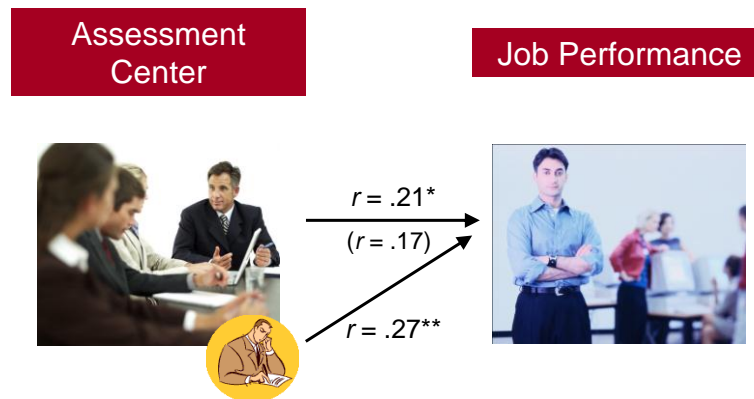


A second, more direct test

- Personality inventories are often distorted during personnel selection, resulting in a common ideal-employee factor (IEF)
- The IEF predicts performance
- ATIC should account for variance between the IEF and performance



Results from a direct test: Jansen, Melchers, Kleinmann et al. (R&R)



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Question 6

- Do candidates for whom the dimensions are made transparent perform better in a selection procedure?

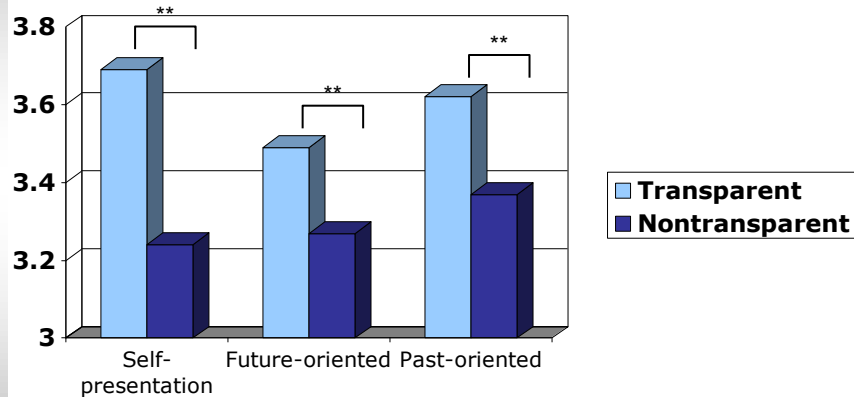
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Transparency

- The general transparency idea
 - If ATIC is important in selection procedures, its impact can be neutralized by making dimensions transparent
- Transparency can be experimentally manipulated
- One effect: Transparency makes interviews “easier”

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Results from Klehe et al.'s interview study (2008, Study 2)



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Overview of results

Better performance in the transparency condition

- Kleinmann et al. (1996): AC
- Klehe et al. (2008): structured interviews (two studies)

No performance increase

- Kolk et al. (2002), Strobel et al. (2006) and Schulze Versmar et al. (2007): all AC

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Possible moderators

- Strength of the transparency manipulation
 - Klehe et al. (2008), Study 2:
 - Transparency manipulation = dimension revealed directly before each question → strong effects
 - Klehe et al. (2008), Study 1:
 - Transparency manipulation = brief explanation of the four dimensions before the interview → weak effects
- Participants' motivation to show the relevant behavior
- Even if participants know how they should behave, are they able to show the behavior?
- Small sample sizes → power issues
 - e.g., Strobel et al. (2006): $N = 60$

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Question 7

- Is it possible to improve construct-related validity by making the dimensions transparent to applicants?

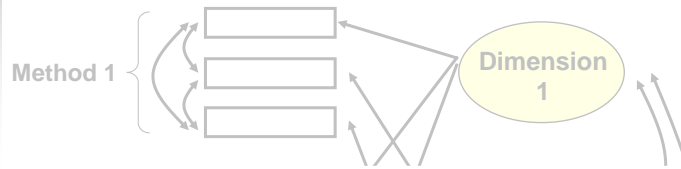
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Why should transparency matter for construct-related validity?

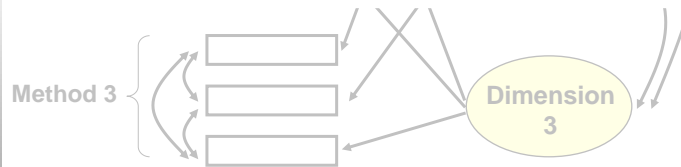
- If an interview is transparent, applicants' ability to identify evaluation criteria does not matter any more
 - Construct-related validity increases because measures are not confounded by the ability to identify evaluation criteria

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Klehe et al. (2008, Study 2): the *nontransparent* interview



→ Model fitted but not better than a more parsimonious model...

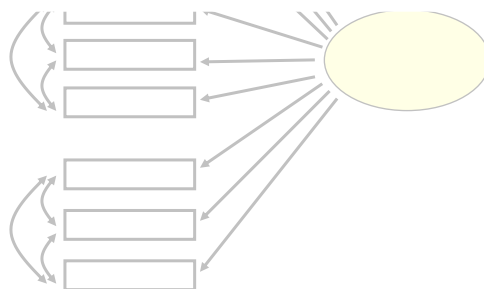


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Klehe et al (2008, Study 2): the *nontransparent* interview

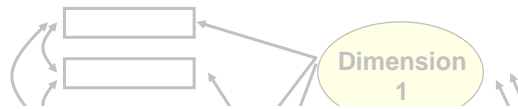


→ No construct-related validity for the
nontransparent interview



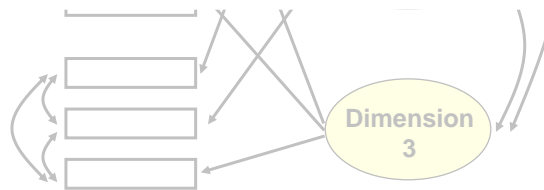
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Klehe et al. (2008, Study 2): the *transparent* interview



→ **Best fitting model**

→ **Construct-related validity for the transparent interview**



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Overview of results

Better construct-related validity in the transparency condition

- Kleinmann (1997); Kleinmann et al. (1996); Klehe et al. (2008); Kolk et al. (2003, Study 2)

No changes in construct-related validity

- Kolk et al. (2003, Study 1); Strobel et al. (2006)

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Question 8

- What are the effects of making the dimensions transparent to applicants on criterion-related validity?

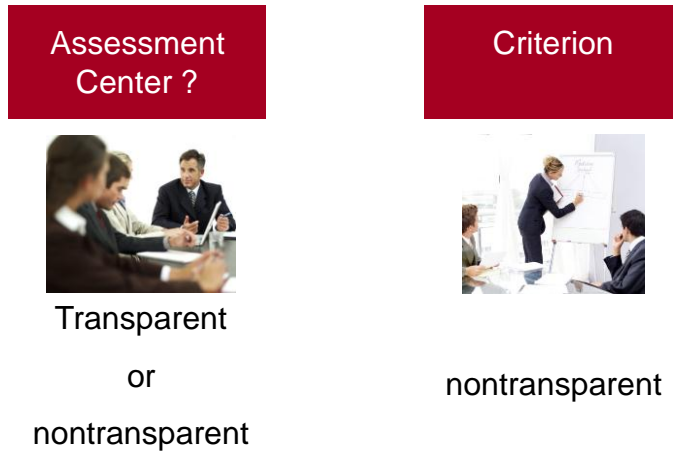
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Why should transparency matter for criterion-related validity?

- If the ability to identify criteria contributes to the criterion-related validity of a selection procedure, criterion-related validity should decrease if this important source of variance is eliminated.

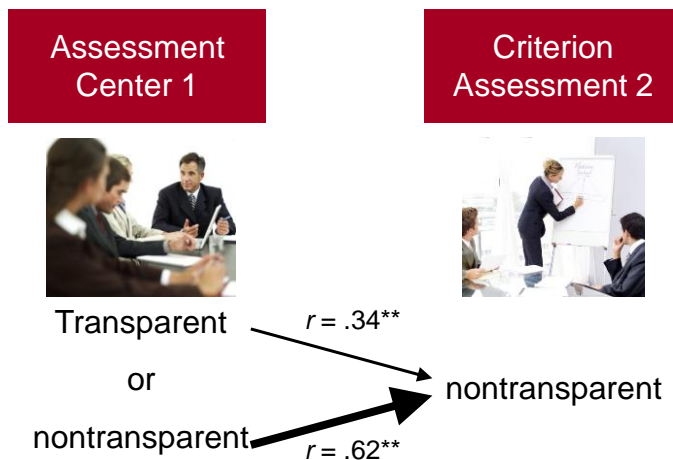
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Results of Kleinmann (1997)



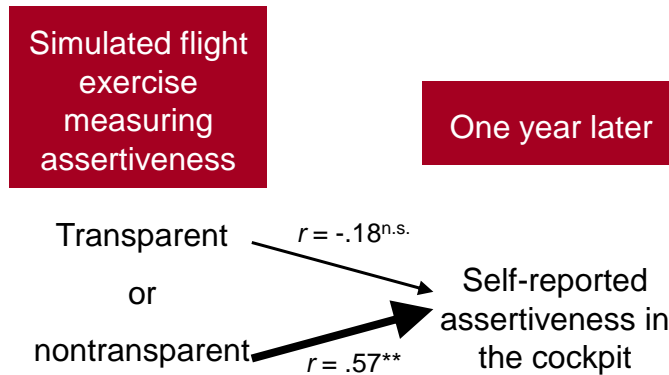
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Results of Kleinmann (1997)



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Results of Smith-Jentsch et al.



Published as Smith-Jentsch, Salas, and Brannick (2001)

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Overview of results

Better criterion-related validity in the nontransparency condition

- Kleinmann (1997); Smith-Jentsch (2001, 2007); Wiese & Smith-Jentsch (2009, SIOP presentation): Simulation exercise or AC

Small changes in criterion-related validity

- Klehe et al. (2008, Study 2): interview

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General summary

The correct identification of targeted dimensions ...

- is related to performance in the personnel selection procedure
- is different from general mental ability
- contributes to the criterion-related validity of personal selection procedures

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General summary

Transparency of targeted dimensions ...

- seems to improve candidates' performance
- seems to improve construct-related validity of selection procedures
- seems to lower the criterion-related validity of selection procedures

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Practical implications

- To ensure criterion-related validity
 - Conduct a non-transparent or only a limited transparent assessment center
 - Provide each participant with identical information
- To ensure a better measurement of the dimensions
 - Conduct a transparent assessment center for personnel development/training purposes

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Some additional ideas...

Ability To Identify Criteria

- **ATIC**: A 180° measurement approach in assessment centers?
- **ATIC**: A way to measure the cognitive *and* behavioral components of social competence?
- **ATIC**: An additional factor to push up the validity of assessment centers?
- **ATIC**: A Situational judgment test in *real* settings?

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Future research

- ATIC in field studies
- ATIC on the job
- What is the relationship between cognitive and behavioral components of social competencies?
- Is ATIC trainable?
- If ATIC is trainable, what would be more effective - to train cognitions or behavior?

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Thank you for your interest!

- Kleinmann, M., Ingold, P. V., Lievens, F., Jansen, A., Melchers, K. G. & König, C. J. (2011). A different look at why selection procedures work: The role of candidates' ability to identify criteria. *Organizational Psychology Review*, 1, 128-146.

Time for questions and remarks...

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