



METHODOLOGICAL DEVELOPMENT OF A COMPETENCE ASSESSMENT INSTRUMENT

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1. Background

Competence in nursing... “is based on the ability to integrate knowledge from all disciplines in order to identify the problem, understand the theory related to the problem and respond appropriately with treatment and care of the patient, as well as then applying all this integrated knowledge in a practical event or situation in a real-life setting or simulation” (Nursing Education Stakeholders Group, 2012).

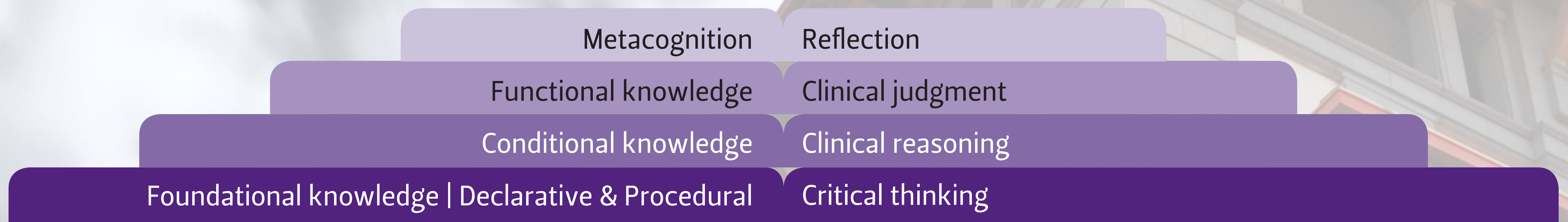


Figure 1 Knowledge domains and thinking processes (Botma, 2016)

2. Methodology

Methodological studies address the development and testing of measuring instruments (Polit & Beck, 2012).

2.1 Instrument development

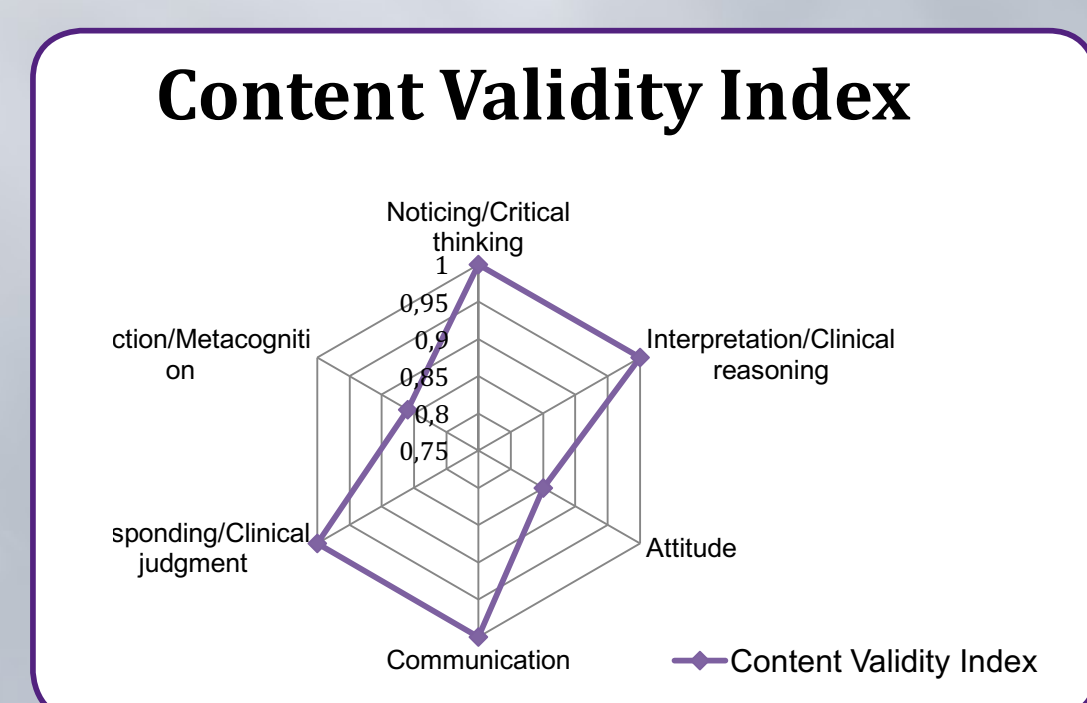
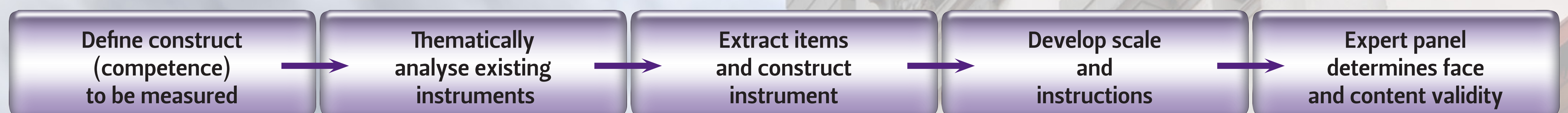


Figure 2 Content validity index per domain (n= 7)

2.2 Sample and method

Twenty purposively selected respondents each assessed 15 student nurses' competence during participation in a standardised patient simulation activity via video footage with the developed assessment instrument.

2.3 Findings from pilot

The pilot consisted of seven nurse educators that identified:

- poor sound and poor visibility of video footage; and
- insufficient training in the use of the instrument.

2.4 Data analysis

A biostatistician did the inferential analysis of the data.

3. Results

Internal consistency = Cronbach Alpha coefficient of .90

Assessment instrument measuring competence of undergraduate nursing students

Assessor name _____ Date _____

Student name and number _____

Refer to the scale below to assess the student on each statement of the assessment instrument

0 = Not done (Student does not demonstrate any aspect of expected behaviour)

1 = Incompetent (Student demonstrates some aspects of expected behaviour haphazardly)

2 = Competent (Student demonstrates most of the aspects of expected behaviour orderly)

3 = Exceptionally competent (Student demonstrates all of the aspects of expected behaviour orderly and consistently)

* Not applicable (No opportunity to demonstrate expected behaviour during simulated patient scenario)

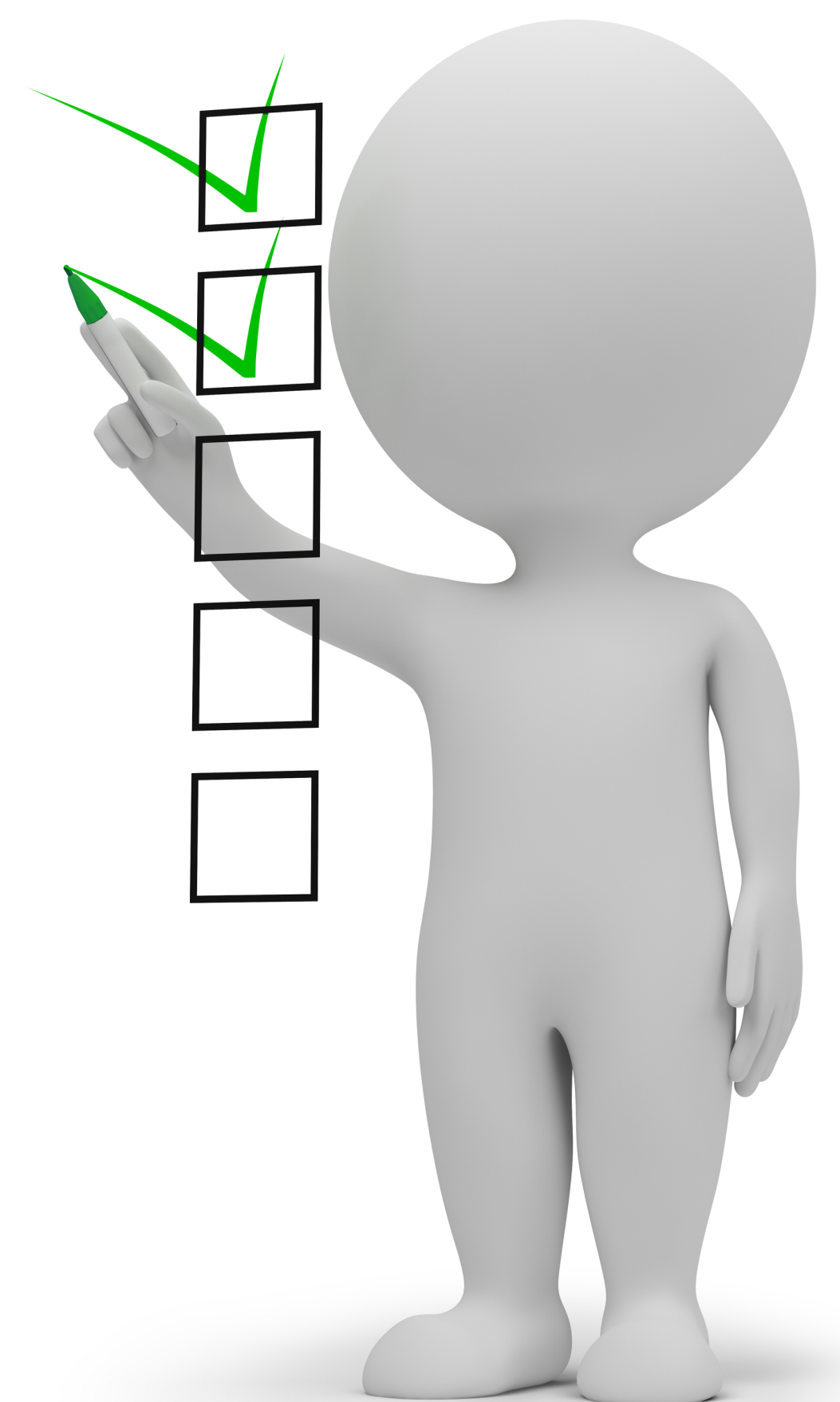
Please read each statement and indicate with a ✓ your chosen option

Domain	0	1	2	3	*N.A.
Noticing/critical thinking					
The student:					
1. collects applicable subjective data (history taking) holistically ¹					
2. collects applicable objective data (observation) correctly, with the use of various techniques (observation, inspection, palpation, percussion and auscultation, side room investigations)					
3. notices trends and/or deviations from baseline data/previous report					
4. associates all assessment data with relevant sciences					
5. the student's explanations of the findings to the patient/family/significant other/preceptor are scientifically correct					
Interpretation/critical reasoning					
The student:					
6. offers relevant differential diagnosis					
7. substantiates each differential diagnosis with evidence from the assessment data					
8. requests more information/diagnostic tests to either confirm or nullify possible diagnoses					
9. makes a correct final/working diagnosis based on the available data in the current clinical context					
Responding/critical judgment					
The student:					
10. ensures that the treatment plan addresses all healthcare needs (signs and symptoms)					
11. ensures that the treatment plan is comprehensive ² in nature with regard to all healthcare needs					
12. ensures that nursing actions/care address the root cause(s) whenever possible and does not only offer symptomatic relief (except in palliative care)					
13. plans nursing actions/care with regard to all healthcare needs based on best available evidence					
14. prioritises the correct sequence in which all nursing actions/care should be implemented					
15. executes all nursing activities that demonstrates foundational knowledge and psychomotor skill					
16. The student's time on-task is appropriately throughout					
17. seeks assistance when care is beyond his/her competence level					
18. appropriately monitors the patient's condition throughout					
TOTAL PAGE 1					

¹ Addresses all domains of living e.g. physical, emotional, psychosocial, social, cultural, spiritual, developmental etc.

² Promotes health, prevents disease, curative and rehabilitative

Inter-rater reliability = Intraclass correlation coefficient of .85



4. Recommendations

- Nurse educators and preceptors should use the assessment instrument to determine the competence of student nurses.
- Test the psychometric properties of the assessment instrument in other contexts.
- Determine the construct validity of the assessment instrument.

5. Contribution

- A competence assessment instrument with good psychometric properties.
- An assessment instrument that is appropriate for identifying learning needs of students and summative assessment.

References

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