

## Intercultural psychometric diagnostics

### Relevance

- often poorer access to appropriate treatment for refugees due to:
  - inadequate language skills
  - reservations about psychodiagnostics and psychosocial treatment approaches, lack of bicultural therapists/interpreters/language and cultural mediators
  - lack of information about the health care system
  - culturally influenced concepts of disease, feelings of shame (Kleinemeier et al., 2004; Razum & Twardella, 2004; Walter et al., 2007)
- culturally sensitive test diagnostics are important to solve communication problems, comprehension as well as interpretation difficulties (Siefen et al., 2018)
- increased risk of misdiagnosis among refugees and of under- or overestimation of cultural influences (Glaesmer et al., 2012)
- goal: achieving culturally fair treatment of refugees (Siefen et al., 2018)

### Methodological challenges

- ensuring measurement invariance (configural, metric, and scalar) in the cross-cultural context to gain comparability
- functional equivalence: assessment of the same construct in all groups

### Equivalence and bias

Goal: if possible complete equivalence of language versions to allow comparisons between groups and ensure that the same thing is measured

<b>Language equivalence</b>	<ul style="list-style-type: none"> <li>• correct translation considering linguistic and cultural aspects</li> <li>• systematic errors:</li> </ul> <p><b>Construct bias</b></p> <ul style="list-style-type: none"> <li>○ the construct being measured is not identical across cultures (e.g., conceptualization or in typical behaviors or statements about the construct)</li> </ul> <p>➤ cultural equivalence not fulfilled</p> <p><b>Method bias</b></p> <ul style="list-style-type: none"> <li>○ influence of cultural factors on the validity of an instrument (e.g., social desirability, tabooing of certain topics)</li> <li>○ biases in the design of test materials (e.g., familiarity with response format), acquisition of samples, test administration, due to cultural characteristics of individual groups</li> <li>○ possible solution: intensive examiner training, detailed implementation instructions and test instructions, observation protocols for test processing (Siefen et al., 2018)</li> </ul> <p><b>Item bias</b></p> <ul style="list-style-type: none"> <li>○ lack of translation, linguistic/cultural differences in meaning and evaluation of item wording</li> <li>○ possible solution: linguistic and psychological adjustment in expert groups necessary (van de Vijver &amp; Hambleton, 1996)</li> </ul> <p>(Calliess et al., 2011)</p>
<b>Cultural equivalence</b>	<ul style="list-style-type: none"> <li>○ interpretation of the relevance of questionnaire items within different linguistic and cultural groups</li> </ul>
<b>Metric equivalence</b>	<ul style="list-style-type: none"> <li>○ comparability of item difficulties (Peña, 2007)</li> </ul> <p><u>Method:</u> <i>Confirmatory factor analysis (CFA)</i> (Chen, 2008)</p> <div style="background-color: #f4b084; padding: 10px; margin-top: 10px;"> <p><u>Configural invariance</u></p> <ul style="list-style-type: none"> <li>• same factors exist in different groups → same items must be associated with same factors in each group</li> <li>• factor loads may vary within the groups</li> </ul> <p>➤ if configural invariance is not met, the same construct is not captured between groups</p> <p><u>Metric invariance</u></p> <ul style="list-style-type: none"> <li>• factor loadings of different items are comparable</li> </ul> <p>➤ equality is necessary to be able to implement comparisons between groups</p> <p><u>Scalar Invariance</u></p> <ul style="list-style-type: none"> <li>• indicates whether item has the same starting point between different groups</li> </ul> <p>➤ requirement to compare group mean values</p> </div>

- not every aspect of equivalence can be implemented at the same time, the preference of certain aspects of equivalence should depend on the research objective or the field of application

(Nesterko & Glaesmer, 2018)

Recommendations for the development and application of culture-sensitive test procedures	
<ul style="list-style-type: none"> <li>consensus-checked translation and back-translation, alternately repeated until confirmed by expert panel as equivalent/meaningful to the original → examine impact on factor structure and quality criteria empirically (van de Vijver &amp; Tanzer, 2004)</li> <li>identification of construct-related biases: cultural mediators and bilingual test designs, transcultural comparisons of convergent/divergent validity studies; trial runs with participants who, e.g., verbalize the process of task completion (van de Vijver &amp; Tanzer, 2004)</li> </ul>	
Implementation difficulties	
<ul style="list-style-type: none"> <li>lack of psychometric instruments in different languages</li> <li>lack of cultural equivalence of various languages</li> <li>addressing reading and spelling difficulties, low educational level</li> </ul>	
Cultural-Formulation-Interview (CFI)	
<ul style="list-style-type: none"> <li>specific concepts/value systems of the patient are considered in diagnostic process (e.g., customs, culturally bound attitudes)</li> <li>cultural identity of a person: ethnic/cultural reference group, culture of country of origin, language skills/preference, religiousness, legal status, etc.</li> <li>culturally bound concept of suffering: description of the symptom (perception/understanding), narrative of suffering, own explanatory model/causes for the condition - severity of the disease should be based on it</li> <li>psychosocial stressors and cultural characteristics of vulnerability and resilience</li> <li>cultural characteristics of the relationship between patients and caregivers: discrepancies regarding the cause/progression of the disease or treatment expectations, etc.</li> <li>16 questions in total (Falkai et al., 2015)</li> </ul>	

## Used and further literature

- Calliess, I. T., Behrens, K., Machleidt, W. & Heinz, A. (2011). Kultursensible Diagnostik und migrationsspezifische Anamnese. *Praxis der interkulturellen Psychiatrie und Psychotherapie–Migration und psychische Gesundheit*. Elsevier, München, 191–197.
- Chen, F. F. (2008). What happens if we compare chopsticks with forks? The impact of making inappropriate comparisons in cross-cultural research. *Journal of personality and social psychology*, 95(5), 1005.
- Falkai, P., Wittchen, H. U. & Döpfner, M. (2015). Diagnostische Kriterien DSM-5: Deutsche Ausgabe. *American Psychiatric Association/Hogrefe, Verlag Göttingen*.
- Glaesmer, H., Brähler, E. & Lersner, U. von (2012). Kultursensible Diagnostik in Forschung und Praxis. *Psychotherapeut*, 57(1), 22–28.
- Kleinemeier, E., Yagdiran, O., Censi, B. & Haasen, C. (2004). Psychische Störungen bei türkischen Migranten - Inanspruchnahme einer Spezialambulanz. *psychoneuro*, 30(11), 628–632.
- Maercker, A. & Schützwohl, M. (1998). Erfassung von psychischen Belastungsfolgen: Die Impact of Event Skala-revidierte Version (IES-R). *Diagnostica*.
- Mollica, R. F., Caspi-Yavin, Y., Bollini, P., Truong, T., Tor, S. & Lavelle, J. (1992). The Harvard Trauma Questionnaire: validating a cross-cultural instrument for measuring torture, trauma, and posttraumatic stress disorder in Indochinese refugees. *Journal of nervous and mental disease*.
- Nesterko, Y. & Glaesmer, H. (2018). Kultursensible klinische Psychodiagnostik bei Erwachsenen. *DB Maehler, A. Hajek, & HU Brinkmann, Handbuch Diagnostische Verfahren für die Migrationsbevölkerung in Deutschland*. Göttingen: Hogrefe.
- Peña, E. D. (2007). Lost in translation: Methodological considerations in cross-cultural research. *Child development*, 78(4), 1255–1264.
- Razum, O. & Twardella, D. (2004). Niedrige Sterblichkeit unter Migranten–wirklich ein Paradox? Ein Gedankenexperiment. *Gesundheit von Migranten–Internationale Bestandsaufnahme und Perspektiven*, Weinheim: Juventa, 61–74.
- Siefen, R. G., Glaesmer, H. & Brähler, E. (2018). Interkulturelle psychologische Testdiagnostik bei Menschen mit Migrationshintergrund. In A. Heinz, M. G. Sieberer, U. Kluge & W. Machleidt (Hg.), *German Medical Collection: Bd. 101. Praxis der interkulturellen Psychiatrie und Psychotherapie: Migration und psychische Gesundheit* (2. Aufl., S. 219–227). Elsevier.
- van de Vijver, F. & Hambleton, R. K. (1996). Translating tests. *European psychologist*, 1(2), 89–99.
- van de Vijver, F. & Tanzer, N. K. (2004). Bias and equivalence in cross-cultural assessment: An overview. *Revue Européenne de Psychologie Appliquée/European Review of Applied Psychology*, 54(2), 119–135.
- Walter, U., Krauth, C., Kurtz, V., Salman, R. & Machleidt, W. (2007). Gesundheit und gesundheitliche Versorgung von Migranten unter besonderer Berücksichtigung von Sucht [Health and health care of migrants with particular regard to addiction]. *Der Nervenarzt*, 78(9), 1058–1061.