# Psychometric properties and norms of the German ABC-Community and PAS-ADD Checklist

Elisabeth L. Zeilinger [a,*], Germain Weber [a], Meindert J. Haveman [b]

[a] University of Vienna, Faculty of Psychology, Liebiggasse 5, 1010 Vienna, Austria
[b] University of Dortmund, Faculty of Rehabilitation Sciences, Emil-Figge-Straße 50, 44227 Dortmund, Germany

## ARTICLE INFO

## ABSTRACT

*Aim:* The aim of the present study was to standardize and generate psychometric evidence of the German language versions of two well-established English language mental health instruments: the *Aberrant Behavior Checklist-Community* (ABC-C) and the *Psychiatric Assessment Schedule for Adults with Developmental Disabilities* (PAS-ADD) Checklist. New methods in this field were introduced: a simulation method for testing the factor structure and an exploration of long-term stability over two years.

*Methods:* The checklists were both administered to a representative sample of 270 individuals with intellectual disability (ID) and, two years later in a second data collection, to 128 participants of the original sample. Principal component analysis and parallel analysis were performed. Reliability measures, long-term stability, subscale intercorrelations, as well as standardized norms were generated. Prevalence of mental health problems was examined.

*Results:* Psychometric properties were mostly excellent, with long-term stability showing moderate to strong effects. The original factor structure of the ABC-C was replicated. PAS-ADD Checklist produced a similar, but still different structure compared with findings from the English language area. The overall prevalence rate of mental health problems in the sample was about 20%.

*Conclusion:* Considering the good results on the measured psychometric properties, the two checklists are recommended for the early detection of mental health problems in persons with ID.

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## 1. Introduction

Persons with an intellectual disability (ID) are more likely to suffer from mental health problems than individuals in the general population (e.g., Cooper, Smiley, Finlayson, et al., 2007; Cooper, Smiley, Morrison, Williamson, & Allan, 2007; Deb, Thomas, & Bright, 2001; Einfeld et al., 2006). Special emphasis should therefore be given to early detection and prevention of mental health problems. The availability of sound mental health screening tools in different languages helps to implement the same quality of health services in the field of early detection of mental health problems for all people without discrimination on the basis of disability, as claimed by the UN Convention on the Rights of Persons with Disabilities, Article 25 (United Nations, 2006), or distinction of language, as claimed by the UN Declaration of Human Rights, Article 2 (United Nations, 1948). Even though in the Anglo-American area a variety of screening tools for early detection of mental health

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problems exist, only some of those standardized tools have been translated and, to the best of our knowledge, psychometric properties of these translations have not yet been investigated in the German-speaking area.

In this study we tested the *Aberrant Behavior Checklist-Community* (ABC-C) by Aman and Singh (1994), and the *Psychiatric Assessment Schedule for Adults with a Developmental Disability Checklist* (PAS-ADD Checklist) by Moss (2002), on their potential to contribute to reliable screening for mental health problems in German-speaking persons with ID. Therefore, we examined the psychometric properties of the translated ABC-C and PAS-ADD Checklist, created norms, and gave an insight into prevalence of mental health problems in persons with ID as assessed in a representative German-speaking sample of adults. For the first time, the number of factors in the principal component analysis of the two instruments was tested with Horn's (1965) parallel analysis to assess the number of factors and to avoid the overextraction of factors empirically using a simulation method. Long-term stability, which has never been examined before for the ABC-C and PAS-ADD Checklist in other languages, was explored over a period of two years.

Valid and reliable assessment requires norms and psychometric data gathered and tested on a sample of individuals with the same specific cultural background and language as the person in question. Psychiatric disorders can present differently in persons with different cultural backgrounds, and some behavior may be socially accepted in one, but despised in another cultural area (Berry, Poortinga, Segall, & Dasen, 2002). Acknowledging the effects of cultural aspects in the presentation and assessment of mental disorders gets more common in the general population. Most research in the field of ID, however, is conducted on white and English-speaking persons. Therefore, cross-cultural research is not only lacking, but urgently needed (Hatton, 2004). To address any cross-cultural issues, the instruments used for assessment are required to be functionally equivalent, which is "the extent to which an instrument does what it is supposed to do equally well in two or more cultures" (Herdman, Fox-Rushby, & Badia, 1998, p. 331). This includes semantic, conceptual and item equivalence. Semantic equivalence can be assured by a thorough translation process. For conceptual equivalence, the underlying domains of an instrument have to have equal meaning and be equally applicable in different cultures. For the ABC-C, a factor analysis will give indications of possible violations in conceptual equivalence. The PAS-ADD Checklist is based on the ICD-10 system, which is agreed upon and used in European countries. Therefore, conceptual equivalence can be assumed. Item equivalence assures that items address exactly the same issues and are equally relevant in different cultures. In the ABC-C, the respective behaviors are accurately described and therefore interpretation is facilitated. In the PAS-ADD Checklist, a large number of items are accompanied by examples. This helps in the interpretation of each item and enhances item equivalence. Additionally, factor analysis and internal consistency will serve as indicators for item equivalence in both checklists.

In order to assess mental health problems, it is important to consider both possible psychiatric disorders as well as challenging behavior in persons with ID. The distinction between these two psychopathologies is still not clear. Specific challenging or problem behavior can be (Myrbakk & von Tetzchner, 2008), but does not necessarily have to be a behavioral equivalent of psychiatric disorders (Allen & Davies, 2007; Sturmey, Laud, Cooper, Matson, & Fodstad, 2010). As a consequence, it was decided to assess both types of psychopathologies separately.

The instruments used in this study should be adequate for early detection of mental health problems and should be completed by non-experts like family members and front-line staff. These proxies hold a crucial position when it comes to the detection of any kind of health problems of the person they care for, including mental health problems. Screening instruments help to decide whether or not to refer the person with ID to a mental health professional, thus ensuring adequate treatment if necessary. Furthermore, the instruments should be usable for all levels of ID and cover a broad range of dimensions. For assessing challenging behavior, the ABC-C was used, since it fulfills the mentioned criteria and includes a wider variety of behaviors than instruments like the *Behavior Problem Inventory* (BPI-01; Rojahn, Matson, Lott, Esbensen, & Smalls, 2001) or the *Disability Assessment Schedule for Problem Behaviors* (DAS-B; Holmes, Shah, & Wing, 1982). Additionally, the ABC-C is designed to assess behavior, not behavioral equivalents of psychiatric disorders, like the *Reiss Screen for Maladaptive Behavior* (Reiss, 1988). To screen for psychiatric disorders, the PAS-ADD Checklist was chosen, since it is based on the ICD-10 system, which is used in European countries to diagnose disorders. This assures conceptual equivalence in different areas. Other instruments, like the *Assessment for Dual Diagnosis* (ADD; Matson & Bamburg, 1998), the *Diagnostic Assessment for the Severely Handicapped-II* (DASH-II; Matson, 1995), or the *Psychopathology Inventory for Mentally Retarded Adults* (PIMRA; Matson, 1988) are based on the DSM system, which is widely used in America, but less common in Europe. Furthermore, the PAS-ADD Checklist is applicable for all levels of ID.

The ABC-C and the PAS-ADD Checklist are both well-established in the Anglo-American area, but distinctly different in nature. In contrast to the factor-analytically derived scales of the ABC-C, the PAS-ADD Checklist was designed as a criterion-based instrument. The latter is related to the consideration of the clinical relevance and significance (as defined in the ICD-10 System) of a symptom or behavior for the diagnosis of a specific psychiatric disorder, whereas a factor analysis offers a statistically derived content structure for a pool of symptoms or behaviors which need no clinical theoretical consideration for their relatedness.

This paper evaluated the ABC-C and the PAS-ADD Checklist and created norms, aiming at a sound application of these important screening tools in German. Internal consistencies, subscale intercorrelations, factor structure (including a parallel analysis for factor retention) and norms, as well as prevalence of mental health problems as assessed by the two screening instruments were examined in an Austrian and German sample. In a second data collection, the Austrian sample was retested two years later. Interrater reliability, retest reliability, and long-term stability were explored and prevalence of mental health problems was examined.