



# Idiographic assessment: Conceptual and psychometric foundations of individualized behavioral assessment

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## ABSTRACT

Idiographic assessment is the measurement of variables and functional relations that have been individually selected, or derived from assessment stimuli or contexts that have been individually tailored, to maximize their relevance for the particular individual. This article first reviews various definitions and clinical applications of idiographic assessment. Several properties of behavior problems and causal relations provide the conceptual basis for idiographic assessment: (a) differences across persons in the attributes, response systems, and dimensions of a behavior problem, and (b) differences across persons in the causal relations relevant to a particular behavior problem. Because of these individual differences, nomothetic measures often reflect variance that is irrelevant to the targeted construct for the individual. We present a psychometric framework for idiographic assessment by first summarizing why the psychometric principles used to develop standardized measures of nomothetic constructs can create incongruity between the nomothetic measure and the characteristics of the targeted construct for an individual. We then develop a psychometric framework for idiographic assessment that combines components of multilevel modeling (random effects) and confirmatory factor analyses applied to repeated measurements of each individual. We also provide a step-by-step guide for the development and evaluation of an idiographic assessment instrument.

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## Contents

1. What is an idiographic assessment instrument? . . . . .	180
2. Methods and applications of idiographic assessment . . . . .	180
3. Conceptual foundations of idiographic assessment I: attributes of behavior problems and their causes . . . . .	181
3.1. Individual differences in the attributes of behavior problems . . . . .	181
3.2. Individual differences in causal relations . . . . .	183
4. Conceptual foundations of idiographic assessment II: psychometric issues in idiographic assessment . . . . .	184
4.1. Aggregate-level optimization and invariant weights of factor and scale scores . . . . .	184
4.2. A psychometric framework for idiographic measurement using standardized items . . . . .	184
4.2.1. A multilevel random effects factor model: addressing the assessment congruence problem . . . . .	184
4.2.2. Evaluating intra-individual relationships . . . . .	184
4.2.3. The intra-individual variance/covariance matrix and item-level construct validity . . . . .	185
4.2.4. A multivariate, multilevel, random effects, confirmatory factor model for idiographic measurement: overview . . . . .	186
5. Principles and procedures for developing idiographic self-report questionnaires and behavior rating scales . . . . .	188
5.1. Developing the initial array of items for the idiographic assessment template . . . . .	189
5.2. Procedures for the selection of items for a particular person from the idiographic assessment template . . . . .	189
5.3. Developing the assessment instrument and assessment strategy for a particular person . . . . .	189
5.4. Initial evaluation of idiographic assessment template, instrument, and strategy . . . . .	190
5.5. Additional evaluation of psychometric properties of idiographic measures . . . . .	190
6. Summary . . . . .	190
References . . . . .	190

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Idiographic assessment involves psychological assessment instruments, methods, and strategies designed for an individual respondent. Psychological assessment can be individualized in several ways: (a) the assessment strategy (e.g., the assessment instruments selected for use and their method of application) can be individualized, (b) assessment data can be used to construct an idiographic case formulation, (c) elements from a nomothetically based assessment instrument can be selected to use with a particular respondent, (e.g., selecting a subset of items from a standardized questionnaire) and (d) elements within a standardized assessment template can be individualized (e.g., individually selected goals in Goal Attainment Scaling, Kiresuk, Smith, & Cardillo, 1994, or individually selected discussion topics in an analogue behavioral observation protocol). In this article we focus on “c” and “d” above, and discuss the concepts and psychometric principles that guide the use and development of individualized assessment instruments.

Idiographic assessment is relevant to a number of psychological assessment paradigms but is especially congruent with the behavioral and cognitive-behavioral assessment and treatment paradigm (e.g., Beck & Emery, 1985; Clark, Beck, & Alford, 1999; Haynes & O'Brien, 2000). Within the latter paradigms, for example, numerous manuals have been developed to guide the clinician in using idiographic assessment and developing cognitive-behavioral case formulations (e.g., Beck, 1995; Needleman, 1999; Persons & Tompkins, 2007). Despite interest in idiographic assessment, the concepts and psychometric principles underlying idiographic assessment have infrequently been articulated. Not surprisingly, then, idiographic assessment instruments have infrequently been subjected to rigorous psychometric evaluation. Although we address this paper primarily to the behavioral assessment paradigm, the concepts, psychometric principles, and methods of development are applicable across assessment paradigms. See, for example, Barton, Morley, Bloxham, Kitson, and Platts (2005) for idiographic applications of a sentence completion scale.

The goals of this paper are to: (a) review the definitions, goals, and applications of idiographic assessment in clinical and research contexts, (b) provide a precise, parsimonious, useful, and generalizable definition of idiographic assessment, (c) discuss how the attributes of behavior problems and causal relations are consistent with an idiographic approach to assessment, (d) illustrate how a nomothetic assessment instrument introduces error into measures of the targeted construct for an individual, (e) describe a psychometric framework for conceptualizing and validating idiographic assessment measures, and (f) recommend procedures for the development and validation of an idiographic assessment instrument. Ultimately, we hope that a more conceptually and empirically based approach to idiographic assessment will promote idiographic science – an increased focus of psychology on the scientific study of the person (see also commentaries on the benefits of an idiographic science of psychology in Howard and Meyers, 1990, and Molenaar, 2004, 2005).<sup>1</sup>

## 1. What is an idiographic assessment instrument?

Idiographic assessment has been defined in various ways: (a) The use of measures that elicit idiographic information, or content unique to the individual case, that can be used to generate case formulations (Barton et al., 2005); (b) An individualized method of data collection and data processing focused on relations between individually-defined situations and behaviors, designed to give individually-tailored cues for therapy (Claes, Van Mechelen, & Vertommen, 2004); (c) Methods, instruments, measures, and contexts designed specifically for an individual (Haynes & O'Brien, 2000); (d) Assessments designed for the diagnosis and treatment of individual cases, in

which the goal is to make predictions and guide practical decision-making in specific situations (McFall, 2005), (e) The measurement of constructs or specific behaviorally defined targets and pertinent situational variables that are relevant for a particular individual, and can serve as indicators of casual relations and/or change over time within an individual (Mumma, 2001); and (f) A focus on intraindividual organization of behavior in terms of specific patterns of variability in situation-behavior relations over time within an individual (Shoda, Mischel, & Wright, 1994).

The definitions of idiographic assessment have several aspects in common: (a) at least some elements of the assessment instrument or strategy are designed to increase their relevance for an individual respondent, (b) the assessment instrument or strategy is at least *partially unstandardized*, in that some elements can differ across respondents, and (c) some elements of the assessment instrument or strategy (i.e., the *template* of an idiographic assessment instrument) can be standardized.

Some analogue behavioral observation methods exemplify individualized assessment within a standardized template (Heyman & Slep, 2004; Snyder, Heyman, & Haynes, 2008; Kern, 1991). For example, analogue behavioral observation methods used to measure the verbal interactions of distressed couples and families often include standardized elements, such as instructions to participants, the physical structure of the assessment setting, and time-sampling strategies. However, the discussion topics are often based on each couple's or family's ratings of the most problematic areas in their relationship to increase their relevance for that couple or family, (cf. Sheeber, Davis, Leve, Hops, & Tildesley, 2007, for an example with parent-adolescent discussions). For example, Johnson and O'Leary (1996) used the 109 item *Daily Checklist of Marital Activities* (DCMA) as a template for idiographic assessment of behaviors associated with marital satisfaction and distress. Each participant selected 20 items from the DCMA and monitored their occurrence daily for seven days.

Our definition of idiographic assessment emphasizes individualized methods of assessment and is congruent with a range of assessment foci, methods, and applications:

“Idiographic assessment is the measurement of variables and functional relations that have been individually selected, or derived from assessment stimuli or contexts that have been individually tailored, to maximize their relevance for the particular individual.”<sup>2</sup>

## 2. Methods and applications of idiographic assessment

Table 1 illustrates several ways assessment strategies can be individualized: (a) A subset of items can be selected from a standardized self-report questionnaire or semi-structured interview (e.g., Mumma, 2004); (b) In psychophysiological laboratory assessment, audio-taped scenarios of trauma-related stimuli can be individually constructed to match the client's real-life trauma experiences (e.g. Orr and Kaloupek, 1997); (c) The degree to which a client approximates individually selected treatment goals can be measured using a standardized format (e.g., Goal Attainment Scaling, Kiresuk et al., 1994); (d) A client can record individually selected thoughts, actions, emotions, and contexts using electronic diaries (Piasecki, Hufford, Solhan, and Trull, 2007); and (e) Individually selected activities and discussion topics can be selected for couples and families during analogue observation tasks (e.g., Heyman & Slep, 2004). As Table 1 illustrates, idiographic assessment is amenable to diverse methods and applications of assessment. Idiographic assessment has most frequently been used to measure treatment outcome, but has also been used for case formulation and in research to identify

<sup>1</sup> An article by Saul Rosenzweig (1986) in the *American Psychologist* traces some of the historical roots of an idiographic science in psychology, including Windelband and Galton's in the 1800s and Gordon Allport in the early and middle parts of the 1900s.

<sup>2</sup> Idiographic assessment contrasts with *nomothetic assessment*, in which judgments about a person are based on comparison with other persons using data from the same assessment instrument administered in a standardized manner.

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