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Psychopathology and Adaptive Functioning Across the Life Span: *Top-down, bottom-up, multi-informant, and multi-cultural challenges and solutions*



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This keynote address will outline some important challenges for assessment of psychopathology and adaptive functioning from age 1 to 90+ years. It will then present practical ways to meet the challenges.

Top-down and bottom-up challenges

One group of challenges concerns *top-down* and *bottom-up* models for psychopathology, differences and points of contacts between these models, how they engender taxonomies of problems, and their implications for service, research, training, and communication.

The *top-down* approach to psychopathology is exemplified by the World Health Organization's *International Classification of Diseases (ICD)* and the American Psychiatric Association's *Diagnostic and Statistical Manual of Mental Disorders (DSM)*. In the *top-down* approach, committees of experts negotiate diagnostic categories to be included in a nosological system. After choosing the categories, the experts negotiate definitions of diagnoses and of criteria for making diagnoses. This approach is 'top-down' in the sense that it begins 'at the top' with experts' concepts of disorders and then works down to criteria for determining who has each disorder. The disorders are defined categorically and are judged to be either present or absent. People who meet criteria for a particular disorder are diagnosed as having that disorder. Moreover, people who meet criteria for multiple disorders are

diagnosed as having each of the disorders for which they meet criteria. Findings that many people meet criteria for multiple disorders have generated a large literature on the 'comorbidity' (co-occurrence) of disorders.

In contrast to the *top-down* approach, the *bottom-up* approach starts with large pools of items for assessing problems. These items are used to assess large samples of people. Scores obtained on the problem items are subjected to multivariate statistical analyses in order to identify sets of problems that tend to co-occur. The sets of co-occurring problems are designated as *syndromes*. Each syndrome comprises problems that have been found to co-occur in large samples of people. The problems comprising a syndrome are analogous to the symptoms that are specified as criteria for diagnostic categories in *top-down* systems. However, in contrast to the present-versus-absent diagnostic model, syndromes are scored quantitatively to measure the *degree to which* each person manifests a particular set of problems. Thus, people obtain scores that vary on a continuum from low to medium to high. Cutpoints can be applied to the continuum of scores to mark particular ranges of scores, such as the normal, borderline, and clinical ranges. However, scores can vary within each range, as well as between ranges. Thus, people whose scores are in the normal range can differ with respect to whether they are in the low, medium, or high normal range. Similarly, people whose scores are in the clinical range can differ with respect to whether they are in the low, medium, or high clinical range. Furthermore, because people obtain scores on all syndromes that have been

found for their gender and age, they can have high scores on multiple syndromes without being assumed to have multiple disorders.

Profiles of syndrome scores graphically display the areas in which a person has mild, moderate, or severe levels of problems. Because many profile patterns are possible, the profile patterns can provide individualised pictures of people's problems. The fact that many people manifest a variety of problems is handled by documenting their particular patterns, rather than by equating deviance in multiple areas with comorbidity among different disorders. Profiles of scales for positive adaptive functioning also provide individualised pictures of people's strengths.

Current versions of the top-down and bottom-up approaches have several important points of contact. For example, they both provide fairly explicit descriptions of behavioural, emotional, thought, and social problems, rather than depending on inferences about characteristics that are unconscious or are impossible to observe for other reasons. In addition, some of the syndromes derived through bottom-up methodology comprise sets of problems like those used as criteria for certain top-down diagnostic categories. Numerous studies have reported statistically significant associations between top-down diagnoses and scores on bottom-up syndromes. Nevertheless, mismatches between top-down diagnostic categories and bottom-up syndromes and between the different assessment procedures employed by the two approaches present challenges for practitioners and researchers who wish to capitalise on the potential benefits of both approaches.

Multi-informant challenges

A second type of challenge concerns the sources of data for assessment of

psychopathology and adaptive functioning. Although it is generally accepted that assessment of children requires information from parents as well as from the children themselves, correlations between reports by mothers and fathers are not high enough to ensure that a mother will typically provide the same picture of the child as the father will. Furthermore, correlations of parents' reports with reports by teachers, clinicians, and observers are far lower than correlations between mothers and fathers. Correlations between reports by the various non-parental informants are similarly modest, while correlations of children's self-reports with adults' reports of the children's functioning are still lower.

The low cross-informant correlations do not mean that any of the informants are inherently unreliable, as good reliabilities have been obtained for reports by each type of informant. Instead, the cross-informant correlations are likely to be limited by the different samples of children's behaviour observed by each informant. The correlations may also be limited by the informants' different effects on children, by their different personal perspectives, differences in their recall of the children's behaviour, and different degrees of candour.

It is clear that assessment of children requires data from multiple adults, as well as from the children themselves. However, assessment of adults typically relies on data obtained only from the adult client via interviews, questionnaires, and tests. In contrast to the many studies of cross-informant data on child psychopathology and adaptive functioning, relatively few studies have reported cross-informant correlations for assessment of adult psychopathology. To conduct meta-analyses of agreement between informants' reports on adult

psychopathology, we manually searched some 47,000 articles published in 46 peer-reviewed journals between 1993 and 2003. Of the 47,000 articles, only 103 (0.2%) reported cross-informant correlations that met minimal scientific standards. Meta-analyses showed that correlations between clients' self-reports and reports by people who knew the client averaged only about .40 for most kinds of problems. Furthermore, correlations between pairs of informants who knew the adult clients averaged only in the .20s. Thus, the challenges of obtaining and integrating data from multiple informants pertain to assessment of adults as well as children.

Although informants' reports are sometimes sought for assessment of elderly adults whose competence is in doubt, this is seldom done in a way that facilitates systematic comparisons between reports by elderly clients versus reports by informants who know them. However, using parallel self-report and informant-report instruments that will be described in the keynote address, we obtained correlations between self-reports and informant-reports that averaged .51 for people aged 60 to 102 years. As this mean correlation was actually higher than the mean cross-informant correlation of .40 obtained for 18- to 59-year-olds, it suggests that elders' self-reports can be very useful when systematically compared with informants' reports.

Multi-cultural challenges

For a host of reasons, assessment of psychopathology and adaptive functioning faces challenges with respect to cultural differences. Many countries need to provide educational, mental health, and social services for refugees and immigrants, who number

in the millions worldwide. Differences in language, culture, socioeconomic status, education, values, and expectations challenge traditional assessment practices. Increasing sensitivity to the cultures and needs of native-born minority groups also poses challenges for assessment of psychopathology and adaptive functioning.

It is unrealistic to assume that assessment methods developed in one culture are equally applicable to people of all cultures. It is also unrealistic to assume that every cultural group will develop its own culture-specific assessment methods. This is especially unrealistic in view of the blending of cultures that is occurring throughout the world. Furthermore, assessment methods tailored to a particular cultural group may quickly become irrelevant when members of that group move or are exposed to other cultures.

In addition to being sensitive to the cultures of people who are assessed, methods must also yield data that help the users make better decisions. Considering the variety of cultural groups that may be present in many countries, assessment professionals cannot be experts in the cultures of all those who they are called on to evaluate. Instead, solutions to multi-cultural challenges require methods that can be used by professionals to make decisions about members of different cultural groups who are served by the educational, mental health, and other services that employ the professionals.

Practical ways to meet the multiple challenges

With the collaboration of colleagues from many cultures over the past few decades, our research team has developed a family of assessment instruments that are designed to meet the various challenges. An overview of the instruments and solutions will be

presented in this address, while details of the specific instruments and how to use them will be presented in the workshop by Drs. Achenbach and Rescorla.

In brief, the instruments include standardized forms for obtaining assessment data from multiple informants in developmentally appropriate ways for ages 1 to 5 years, 6 to 18 years, 18 to 59 years, and 60 to 90+ years. For children and adolescents, the instruments include versions designed for completion by parents, teachers, daycare providers, clinical interviewers, adolescents, psychological examiners who administer ability and achievement tests, and observers who record behaviour in group settings such as classrooms. For ages 18 to 90+, the instruments include self-report versions and informant versions, which can be completed by spouses, partners, relatives, grown children, friends, roommates, mental health workers, and others who know the person being assessed.

Top-down and bottom-up assessment

The assessment data yield scores for top-down DSM-oriented scales that were constructed by having mental health professionals from 20 cultures identify problem items that they judged to be very consistent with DSM diagnostic categories. Each DSM-oriented scale is scored quantitatively by summing the scores of the items that comprise the scale. The DSM-oriented scales are displayed on profiles in relation to age-specific norms for each gender:

The assessment data also yield scores for bottom-up empirically based syndrome scales that were derived by factor analysing problem scores for large samples of people who were assessed by the relevant kinds of informants. Like the DSM-oriented scales, the syndrome scales are scored quantitatively by

summing their constituent items. Also like the DSM-oriented scales, the syndrome scales are displayed on profiles in relation to age-specific norms for each gender.

The ability to score DSM-oriented scales and empirically based syndromes from the same assessment instrument makes it easy to evaluate people in terms of both the top-down and bottom-up approaches. If an individual obtains scores in the borderline or clinical range on DSM-oriented scales, the DSM should be consulted to see whether criteria for DSM diagnoses are met.

Multi-informant assessment

Parallel forms are designed to obtain data from self-reports and reports by others who know the person being assessed. The data from the different respondents are scored on parallel scales. The scales are displayed on parallel profiles in relation to norms for ratings by each type of respondent. For example, scores obtained from adolescents' self-reports are displayed on profiles in relation to norms derived from self-ratings by large, representative samples of adolescents, separately for each gender. Parents' ratings of adolescents are displayed on profiles in relation to norms derived from ratings by large, representative samples of parents. And teachers' ratings of adolescents are displayed in relation to norms derived from ratings by large, representative samples of teachers.

Hand-scored profiles scored from each informant can be visually compared to identify consistencies and disparities with respect to the scores obtained from different respondents for specific items and scales. Computer software for scoring the forms prints side-by-side displays of scores on problem items obtained from up to eight respondents. It also prints histograms that provide side-by-side comparisons of normed

DSM-oriented scale scores and syndrome scores from each respondent. This makes it easy to see at a glance whether any scale scores from any respondents are deviant and to determine whether the scales are consistently deviant across reports by different respondents. To provide a quantitative index of how well the different respondents agree, the software displays Q correlations between the ratings of problem items by each pair of respondents. To help users evaluate the levels of agreement, the 25th percentile, mean, and 75th percentile Q correlations are displayed for large reference samples of respondents.

Multi-cultural assessment

The instruments to be described in the keynote address have been translated into 69 languages. There are over 1,400 published reports of cross-cultural applications in 62 cultures. Comparisons of scores obtained by large, representative samples of children and youth in diverse cultures have shown that the mean problem scores from most of the cultures are remarkably similar; although some cultures have significantly lower or higher scores than most of the others. Work is now under way to perform multi-cultural factor analyses of data for over 60,000 children from 30 cultures to determine whether a single factor model fits all these cultures or whether multiple factor models are needed.

In summary, the keynote address will present a variety of important challenges facing assessment of psychopathology and adaptive functioning in the 21st century. It will also present practical ways to meet the challenges.