The Preschool Age Psychiatric Assessment (PAPA): A structured parent interview for diagnosing psychiatric disorders in preschool children

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INTRODUCTION

In this chapter we describe the Preschool Age Psychiatric Assessment (PAPA), a parent interview for diagnosing psychiatric disorders in preschool children aged 2 through 5(Egger, Ascher, & Angold, 1999). The PAPA is one of a suite of interviews that employs a consistent approach to the assessment of psychopathology in childhood, adolescence, and young adulthood. The first of these interviews to be developed was the Child and Adolescent Psychiatric Assessment (CAPA) which collects information from children and adolescents aged 9 through 18 and their parents(Angold et al., 1995). The first edition of the CAPA was developed at the Institute of Psychiatry in London. It has been updated and modified repeatedly since 1986 by the Developmental Epidemiology Program at Duke University Medical Center. The CAPA has been used to assess psychiatric disorders and impairment in thousands of children in multiple research studies and has been demonstrated to be a reliable and valid measure of childhood psychopathology in children older than nine through eighteen years old(Angold & Costello, 1995).

In October of 1998, members of the National Head Start Mental Health Consortium contacted Angold and Egger and requested that we develop an interview for parents of preschoolers based on the CAPA. We had been considering the development of such a measure for some time, and this request provided the needed stimulus, including a small amount of money, for us to begin. The PAPA is derived from the CAPA, but represents a significant revision of the interview content and structure to make it relevant for the assessment of very young children. The PAPA includes all DSM-IV criteria insofar as they are relevant to younger children, all items in the Diagnostic Classification: 0-3 (DC: 0-3), an alternative psychiatric diagnostic classification for young children, as well as potentially relevant behaviors and symptoms experienced by preschoolers and their families that do not currently appear in either diagnostic system. The interview also assesses disability resulting from symptoms, family environment and relationships, family psychosocial problems, and life events. Work on the PAPA was begun in the fall of 1998, and the first edition was finalized during the summer of 1999.

While there is considerable evidence that young children experience emotional and behavioral symptoms that impede their development and interfere with their capacity to function as expected, there is no consensus that

these symptoms should be considered within a diagnostic framework. As the Angold and Egger chapter in this book on preschool nosology argues, the early data from dimensional assessment of preschool emotional and behavioral disorders and experience in developing psychiatric nosology for older children point to the feasibility and desirability of exploring the possibility of making meaningful psychiatric diagnoses in young children. We believe that the questions of whether it is clinically relevant and/or appropriate to identify psychiatric disorders in young children are empirical questions which must be addressed in a systematic way.

To begin this task, one must have adequate diagnostic tools. The PAPA grew out of the recognition that currently there is no standardized or reliable method for assessing psychiatric disorders in preschool children. Checklist measures such as the Child Behavior Checklist (CBCL),(Achenbach & Edelbrock, 1983; Achenbach & Rescorla, 2000) which identify constellations of behaviors and symptoms, and measure their frequency using Likert scales, have been used for a number of years to identify behavior that lies outside the norm for same-age peers. While information from such measures has been essential in establishing that we can identify aberrant behaviors in young children, these data do not provide information about the severity, duration, onset, or context of behaviors. The information is not specific enough to enable researchers or clinicians to make diagnoses based on either the DSM or DC:0-3 system.

The lack of diagnostic measures for preschool psychopathology has resulted partly from the absence of consensus on how disorders present at different ages during the preschool years. There are currently four diagnostic systems that could be applied to preschool children: (1 and 2) DSM-IV(American Psychiatric Association, 1994) and ICD-10(World Health Organization, 1992) which are essentially consistent with each other; (3) the DC: 0-3, an alternative diagnostic classification system developed by a group of infant psychiatrists and psychologists affiliated with the organization Zero to Three(Zero to Three, 1994). The DC:0-3, published in 1994, attempted to fill in gaps left by the DSM approach which is relatively unreflective of the developmental differences in the presentation of psychiatric symptoms in children. The DC:0-3 includes both alternative diagnoses (e.g. anxiety and depressive disorders) and new diagnostic categories (e.g. regulatory disorders). And (4) the “clinically significant” cutpoints on

symptom counts defined by checklists.

The DSM and ICD systems have never attempted to encompass the range of preschool psychopathology or offered modifications of diagnoses for this age group. DC:0-3 attempts to fill this gap but the reliability and validity of its diagnostic approach yet to be convincingly demonstrated. The CBCL cut-points, as well as the recently added "DSM-like scales" for the CBCL 1 ½ -5, have been shown to be clinically useful and, perhaps, useful as screening measures, but do not include enough specificity on frequency, duration and onset to be able to generate specific psychiatric diagnoses.

Thus, one of the great challenges in developing a structured assessment of psychopathology in young children is that the development of the measures must go hand in hand with the development of a coherent and clinically meaningful psychiatric nosology for preschool children. The measure must be inclusive of the range of possible presentations of symptoms in preschool children, so that it will be possible to test empirically the usefulness and meaningfulness of various diagnoses and the various diagnostic systems across this period of rapid developmental change.

Recently, a few studies have assessed the applicability of DSM-IV psychiatric diagnoses in young children. These studies have either used sections of interviews developed for use with older children that have been somewhat modified to be developmentally appropriate for younger children or have developed diagnoses based on clinical consensus derived from multiple sources including observational assessments and checklist measures. For example, Keenan and Wakschlag have used a portion of the K-SADS to measure DSM-IV oppositional defiant disorder (ODD) and conduct disorder (CD) symptoms and diagnoses in 2 through 5 year olds. (Keenan & Shaw, 1994; Keenan, Shaw, Walsh, Delliquadri, & Giovannelli, 1997; Wakschlag & Keenan, 2001; Wakschlag & Keenan, submitted) They are currently working on modifications of that instrument, but, at the time of writing, no version of this is available for use by others. The KSADS has also been used by other researchers for assessing disruptive disorders in five and six year olds.(Lahey et al., 1998; Shaw, Owens, Giovannelli, & Winslow, 2001; Shaw, Owens, Vondra, Keenan, & Winslow, 1996) Speltz et al used an unmodified version of the DISC to diagnose DSM-III-R ODD in 4 and 5 year

olds.(Speltz, DeKlyen, Greenberg, & Dryden, 1995; Speltz, McClellan, DeKleyn, & Jones, 1999) Joan Luby has used the modified DISC depression section in her research on preschool depression (Luby, 2000). A preschool version of the respondent-based parent Diagnostic Interview Schedule for Children (DISC) is under development and is described in chapter X.

The alternative approach has been to base diagnostic decisions on clinical consensus. In the only population-based study of preschool DSM psychiatric disorder, Lavigne and colleagues used a combination of the CBCL, observational assessments, and measures of adaptive behaviors, to make clinical consensus diagnoses of the preschoolers they studied (Arend, Lavigne, Rosenbaum, Binns, & Christoffel, 1996; Dietz, Lavigne, Arend, & Rosenbaum, 1997; Lavigne et al., 1998a; Lavigne et al., 1998b; Lavigne et al., 1998c; Lavigne et al., 1994; Lavigne et al., 1999; Lavigne et al., 1998d; Lavigne et al., 1993; Lavigne et al., 1996; Lavigne, Schulein, & Hahn, 1986). The recently funded multi-site study of the psychopharmacologic treatment of preschool attention deficit hyperactivity disorder (ADHD) (PALS study) will use a clinical consensus model for diagnosing ADHD and other disorders in their preschool aged subjects (personal communication, Lawrence Greenhill, 2001).

Most of studies examining DC: 0-3 diagnoses have used unstructured clinical interviews to make diagnoses (Boris, Zeanah, Larrieu, Scheeringa, & Heller, 1998; Dunitz, Scheer, Kvas, & Macari, 1996; Reams, 1999; Scheeringa, Peebles, Cook, & Zeanah, 2001; Scheeringa & Zeanah, 1995; Scheeringa, Zeanah, Drell, & Larrieu, 1995; Thomas & Clark, 1998; Thomas & Guskin, 2001). Michael Scheeringa and Charles Zeanah have developed a semi-structured interview for clinicians to use to assess key parent-reported symptoms of DC: 0-3 disorders, including relationship disorders(Scheeringa & Zeanah, 1994). However, this instrument lacks a glossary or definitions of the items being measured.

No published psychometric data is available on any of the measures described above. Another problem is most of these studies have targeted a specific diagnosis or group of diagnoses rather than the range of possible disorders, limiting exploration of the effects of comorbidity in this age group. Even Lavigne's study which assessed a range of psychiatric disorders, lumps specific diagnostic categories into broad categories (e.g. "disruptive

disorders" instead of discrete categories of attention deficit hyperactivity disorder, oppositional defiant disorder, or conduct disorder).

Development of a preschool measure of psychopathology faces another challenge that arises from the focus of the infant/preschool psychiatry field on prevention as much as intervention. From a developmental perspective, we are interested not only in the presentation of fully developed disorders, but also in describing the emergence of disorders. The measure must encompass not only the symptoms found in current diagnostic schema, but also early manifestations of disorders. Description of how disorders emerge over time may enable researchers and clinicians to plan interventions that prevent or ameliorate the development of problems as the child grows older.

As our brief review of the status of assessment tools for preschool psychopathology suggests, there is a need for new assessment tools for diagnosing psychiatric symptoms in disorders in preschool children. The next question is what kind of assessment should be developed.

WHY IS A STRUCTURED INTERVIEW A GOOD PLACE TO BEGIN?

While the clinical interview has always had a preeminent place in the diagnosis of psychiatric disorders, the development of structured psychiatric interviews is fairly recent. Structured interviews aim to incorporate the approaches used by clinicians to gather information on symptoms and experiences from patients, while at the same time standardize the process of obtaining the information so as to improve the consistency and reliability of the information gathered. The need for a structured approach arose from the recognition that different clinicians using unstructured approach to assess the same patient would often disagree about the individual's diagnosis. (Cantwell & Baker, 1988, 1988 #10723; Gould, Shaffer, Rutter, & Sturge, 1988; Remschmidt, 1988).

The medical decision making literature has demonstrated that clinicians are affected by information collection biases that shape the reliability of diagnostic decisions (Angold, 1999). These include the tendency to come to diagnostic determinations before they have collected all the relevant information by either selectively collecting information that confirms the diagnosis or ignore data that disconfirms the posited diagnosis. (see Achenbach, 1985

for a helpful introduction to the basics of the medical decision making literature).

As Angold laid out in a 1999 chapter (1999), the problems with unstructured clinical interviews delineate the tasks that must be accomplished by a structured interview to address these problems. Angold writes “A structured interview must fulfill these four goals :

(1) Structure information coverage, so that all interviewers will have collected all relevant information from all subjects.

(2) Define the ways in which relevant information is to be collected.

(3) Make a diagnosis only after all relevant confirmatory and disconfirmatory information has been collected.

(4) Structure the process by which relevant confirmatory and disconfirmatory information is combined to produce a final diagnosis.” (Angold, 1999, p.35)

INTERVIEWER BASED VERSUS RESPONDENT BASED INTERVIEWS

There are two different approaches to structuring the collection of information in a structured interview: "interviewer-based" (or sometimes called "investigator-based") and "respondent-based."(Angold et al., 1995) Angold describes the distinction between the two approach as a difference in what is structured: in an interviewer-based interview, the mind of the interviewer is structured, while in a respondent-based interview, it is the *questions* put to the subject that are structured.

The PAPA is an interviewer-based interview. In an interviewer-based interview, the interview schedule serves as a road map to guide the interviewer in determining whether symptoms are present on the basis of information provided by the person being interviewed. Clear definition of symptoms are provided in a detailed glossary, and the interviewer is expected to question until s/he can decide whether the symptoms described meet these definitions. It is the job of the interviewer to make the decision whether a symptom (as defined in the glossary) is present. In a respondent-based interview, the interviewer makes no decisions about the presence of symptoms. Prescribed questions are asked verbatim in a preset order, and the interviewee's responses are recorded with a

minimum of interpretation or clarification by the interviewer. The Diagnostic Interview Schedule for Children (DISC) (Costello, Edelbrock, Dulcan, Kalas, & Klaric, 1984; Edelbrock & Costello, 1990) is an example of a respondent based interview. While the respondent based approach decreases variability in content due to differing interviewing styles, it also presents a clear difficulty in that there is no control over differences in how subjects interpret questions or respond to them.

We call interviews with detailed definitions of symptom concepts "glossary-based" (cite). The PAPA provides detailed definitional glossaries at the symptom level, which means that the task of the interviewer is most clearly specified at the level of the *definition of symptoms*. Both lay and clinical interviewers can be trained to use such interviews, because clinical knowledge is built into the item definitions. The task of the interviewer is to apply these definitions to the material collected during the interview to determine whether symptoms, as defined in the glossary, are present, and if so, to what degree. Symptom definitions are provided both in the glossary and on the interview schedule, and rules are specified to allow non-clinicians to code the intensity, frequency, duration and date of onset of symptoms separately. For instance, with the symptom of "depressed mood" rules for coding the intensity of the depressed mood specify the degree of intrusiveness of the symptom into other activities, the degree of uncontrollability and the range of activities that must be affected for depressed mood to be regarded as being symptomatic. The glossary also contains guidance on how to deal with situations involving complex combinations of symptoms, and how to determine exactly which symptoms should be coded as being present. This approach has been shown to allow non-clinicians to make reliable judgments of symptom severity while using a highly flexible questioning format with heavy emphasis on getting descriptions and examples of possible pathological emotions and behaviors to ensure that codings are not based on the informant's misunderstanding of what was being asked about.(Angold & Costello, 1995; Angold et al., 1995; Costello, Angold, March, & Fairbank, 1998)

The interviewer-based approach is very well suited to preschool assessment at this point in its history. In order to produce an adequate respondent-based interview (such as the DISC) one needs a great deal of information about exactly what questions to ask, and in *what order* they should be asked if the relevant information is to be

collected. The ability to produce such an interview, therefore, depends on having solid information about the usual presentations of problems. Such a knowledge base is lacking for preschoolers. The interviewer flexibility demanded by the PAPA is a great help in such a situation. In essence, each interview can be seen as a structured *mini-focus-group* that can provide information about relevance, appropriateness, cultural sensitivity, and calibration of glossary definitions, coding rules, and questions on the schedule. We have made a great deal of use of interviewer feedback in modifying the CAPA over the years, and we expect that such feedback will be even more important for the PAPA because we start from a weaker knowledge base regarding preschoolers.

Initially, we thought that "down-aging" the CAPA would be a straightforward, even easy task. We would remove the items or sections that were obviously irrelevant to young children (e.g. stealing cars; substance abuse), re-word other items, and add a few discrete items (e.g. assess functioning at daycare as well as school). While each of these changes were necessary, they were far from sufficient. We soon understood that the task of developing a comprehensive and clinically useful interview to assess preschoolers was much more difficult and complicated than we had initially thought. From the "pared down" CAPA, we began to build the PAPA.

THE CONTENT OF THE PAPA

The current version of the PAPA includes the following sections: Family Structure and Function; Play and Peer and Sibling Relationships; Daycare\School Experiences and Behaviors; and Other Food Related Behaviors; Sleep Behaviors; Elimination Problems; Somatization; Accidents; Oppositional Defiant Disorder/Conduct Disorder; Attention Deficit Hyperactivity Disorder; Separation Anxiety; Anxious Affect; Worries; Rituals and Repetitions; Tics; Sterotypies; Reactive Attachment; Depression; Mania; Dysregulation; Life Events; PTSD; Disabilities ; Parental Psychopathology; Marital Satisfaction; Socio-economic Status.

The development of the PAPA from the CAPA included these fundamental changes:

1. We changed the DSM-IV and ICD-10 criteria so that they were relevant and measurable for young children. In some instances we removed clearly irrelevant items (e.g. rape or stealing cars from the CD section). In others we

recast items to make them more relevant to preschoolers (e.g. items on inappropriate sexual talk or play as a substitute for CAPA information about sexual history or sexual aggression). However, although we included "functional equivalents" for symptoms we cannot assume that the substituted symptom or behavior will work in the same way as the symptom used for older children. Rather we need to test their usefulness in our diagnostic algorithms.

2. We added symptoms and diagnoses included in the DC: 0-3. For a diagnosis like reactive attachment disorder this meant including symptoms found only in the DC: 0- 3 definition of the disorder, as well the symptoms in the DSM-IV criteria so that we could compare the utility of each diagnosis. For diagnoses like regulatory disorders which are unique to DC: 0-3, we had to add all of the items necessary to make this diagnosis. Operationalization of many of the symptoms described in DC: 0- 3 proved to be a challenge.

3. We added relevant items from the CBCL, as well as items from a review of the other measures assessing preschool behavior such as the Preschool Behavior Questionnaire (Behar, 1977) or the Infant-toddler social and emotional assessment (ITSEA) (Carter, Little, Briggs-Gowan, & Kogan, 1999) that are not covered in the CAPA.

4. We also reviewed the literature on preschool psychopathology and included symptoms and behaviors described in these papers that were not included in the measures we reviewed. Examples included the incorporation of alternative criteria for posttraumatic stress disorder and reactive attachment disorder in very young children as proposed by Zeanah, Boris and Scheeringa (Boris et al., 1998; Scheeringa et al., 2001; Scheeringa & Zeanah, 1995; Scheeringa et al., 1995) that differ from both the DSM-IV, ICD-10 and DC: 0-3 criteria, as well as the inclusion of items for disruptive disorders described by Keenan and Walkschlag (#13711). Whenever possible, we drew on the work of other researchers to support our modifications. Thus, for example, Keenan and Wakschlags' work on the presentation of ODD and CD in young children (Keenan & Wakschlag, 2000), Scheeringa and Zeanah's work(Scheeringa et al., 2001; Scheeringa & Zeanah, 1995; Scheeringa et al., 1995) and Harmon's work on PTSD (Bingham & Harmon, 1996), Boris and Zeanah's work on reactive attachment disorder (Boris et al., 1998); Luby's work on depression (Luby, 2000), Anders work on sleep disorders (Anders & Eiben, 2000; Anders & Eiben, 1997;

Gaylor, Goodlin-Jones, & Anders, 2001; Keener, Zeanah, & Anders, 1990), Chatoors' work on eating disorders (Chatoor, Ganiban, Colin, Plummer, & Harmon, 1998a; Chatoor, Ganiban, Harrison, & Hirsch, 2001; Chatoor, Ganiban, Hirsch, Borman-Spurrell, & Mrazek, 2000; Chatoor, Getson, Menvielle, & Brasseaux, 1997; Chatoor, Hirsch, Ganiban, Persinger, & Hamburger, 1998b), Warren's work on anxiety disorders (Warren, Emde, & Sroufe, 2000; Warren, Huston, Egeland, & Sroufe, 1997; Warren, Schmitz, & Emde, 1999) each informed our revision of the relevant sections of the PAPA.

5. We decided not to "recreate the wheel" by including diagnostic measures of constructs that already have well-validated measures. Examples include developmental delays and autism or other pervasive developmental disorders (PDDs). However, a brief developmental assessment introduces the PAPA, primarily to orient the interviewer to the developmental level of the child being discussed. Standardized developmental assessments (e.g. Vineland Adaptive Behavior(Sparrow & Cicchetti, 1989)), used in conjunction with the PAPA, would provide a complete developmental assessment. For PDDs screening items are included to signal the potential need for a more extensive assessment with a measure such as the ADOS (Lord et al., 1989; Lord, Rutter, & LeCouteur, 1994).

6. Since we do not have population-based norms for many preschool behaviors and symptoms, we realized that it is important to include assessments of areas not explicitly included in current diagnostic criteria. Thus, we developed comprehensive sections on sleep behaviors (e.g. bedtime rituals, place of sleep initiation, behaviors interfering with sleep initiation, nap history etc.); feeding history and eating behaviors; toileting history and elimination patterns; play and peer relationships; and daycare and school settings and experiences (see item 7 below for further elaboration). These sections include both developmentally appropriate and potentially pathological behaviors. Completion of these sections will provide not only an indication of problem areas, but also a portrait of the child's routines and the quality and content of daily interactions with family members, other adults, and peers. With these data will be able to begin to describe the how the child's environment interacts with the development of psychopathology.

7. In the CAPA, we had found it appropriate to divide the settings in which each child operated into "home," "school," and "elsewhere." Such a division simply does not work for preschoolers. Some children may be in preschool; others

might be in an out-of-home daycare center. Others remain home with a parent, other relative, or a non-relative caregiver. Many young children experience life in multiple settings during the week. The caregiving section of the PAPA assesses the variety of settings and variety of providers who care for the child throughout a typical week. We also assess the ratio of adult caregivers to children, as well as setting or caregiver changes in the last three months.

8. We also changed the life events sections which assesses events occurring in the life and environment of the child so as the reflect the stressors affecting young children. As in the CAPA, we look at two kinds of stressful events: Life events that have occurred in the primary period (last three months) are termed group A events. Onset for group A events are generally within the this three months period except for the items "lives/attends daycare or school in a chronically unsafe environment" and "reduction in standard of living" which may predate but extend into the primary period. Group B events are those that have occurred at any time during the child's life and include events such as physical and sexual abuse, death of a parent, natural disasters. Examples of our addition to the life events section include the inclusion of a detailed history of accidents including vehicular accidents, falls, ingestion of poisons, near drowning, burns, as well as items such as hospitalization of the child, separation of the child from significant attachment figures for more than a week, or becoming homeless. For each of the life events, we also gathered detailed information on whether the parent can link the occurrence of the life event with 21 possible changes in the child's behaviors, emotions, or relationships. Examples of problems that might be attributed to the occurrence of the life event include new or increased fears or anxieties, increased crying, regression of toileting skills or language, increased aggression, or changes in the quality of the child's relationships with his/her parents, other adults, siblings, or peers.

9. Because we have not yet explicitly identified the parameters of "disordered" behavior at different ages during the preschool years, we developed detailed assessment of the content and context of the behaviors. For example, in the oppositional behaviors section we developed a detailed assessment of tantrums. Consider the criterion for oppositional defiant disorder (ODD): child "often loses temper." In the CBCL 11/2-5, there is an item called "temper tantrums or hot temper." The parent must decide whether this item is "not true," "somewhat or sometimes true," or

"very true" for his/her child (Achenbach & Rescorla, 2000). There is a presumption that the interviewer and the interviewee, or the clinician and the patient, agree upon what constitutes a temper tantrum and what frequency "often" refers to. In considering the range of behaviors for 2 year olds compared with 5 year olds, common knowledge suggests that the average two year old will have tantrums significantly more often than 5 year olds but this higher frequency might be "normal" for 2 year olds, while the relatively lower frequency might be "abnormal" for 5 year olds. By providing a clear definition of "temper tantrums" in our glossary and by separating the presence of the symptom from the frequency and duration of the symptom, we will be able empirically to define what constitutes "often" at different ages. But even when we can determine whether the child has in the last three months had a least one "discrete episodes of excessive temper, frustration or upset, manifested by shouting, crying or stamping, and involving violence or attempts at damage directed against oneself, other people, or property," we still need more information to delineate the specific content and context of tantrums. Thus, if tantrums are present during the last three months, we also assess the content of the tantrums (e.g. the constellation of symptoms that constitute a tantrum such as hitting, biting, destructive actions), the triggers of tantrums (e.g. fatigue versus "out of the blue"), and finally the "relationship context" of the tantrum (e.g. with whom and how often the child has tantrums with central adult figures in his/her life).

10. The assessment of the "relationship context" of preschool behavior is one of the most important modification made in the development of the PAPA. Young children, much more than older school age children and adolescent, are wholly dependent on their adult caregivers who, for the most part, make decisions about the child's activities and interactions. For most symptoms and behaviors, we assess with whom and how often the symptom or behavior occurs within key relationships. We will be able to assess whether the specific behavior occurs in one or two specific relationships or is generalized across all relationships. Thus, using PAPA data, we will have the opportunity to explore one of the key tenets of infant psychiatry: the idea that clinical disturbances in infants and young children are not simply behavioral problems but relationship disturbances (Zeanah, 2000). Using these data we will also be able to examine the utility of the DC:0-3 Axis II which differs from DSM by coding relationship disturbances rather than

personality disorders.

11. Another key feature of the PAPA lies in its attempt to collect as much descriptive information as possible using as few arbitrary cut-points and skip sections as possible. Sometimes cut-points or skips have to be imposed in order to make information collection feasible, but we have tried to keep them to a minimum.

An example is "depressed mood" as defined in DSM-IV. To be coded as present, it must occur "most of the day, nearly every day. . . (during a) two week period."(American Psychiatric Association, 1994) Yet, we know so little about the presentation of symptoms in preschool children that cut points set by DSM diagnostic criteria or even "common sense" run the risk of excluding manifestations of the behavior that are in fact pathological. Since we collect separately coded information about the frequency and duration of each positive item, we will be able to set these cut points empirically. As our understanding of the presentations of psychopathology in this age group develops, we will be able to revise the PAPA or develop new assessment measures that derive their cut points and skip section from a solid foundation of knowledge.

8. We revised the assessment of disability resulting from the presence of symptoms. Like the CAPA, the PAPA separately assesses the presence of the symptoms and the presence of disabilities due to the presence of the symptom. Here we use the World Health Organization's International Classification of Functioning, Disability and Health (ICIDH-2) definition of disabilities as negative functional outcomes *resulting* from health conditions, involving significant deviation from or loss of "normal" or "expected" function.(Angold & Costello, 2000; World Health Organization, 2001) We measure disability in two areas of functioning: (1) the performance of a task or action by an individual which is called "activity" and (2) an individual's involvement in life situations which is called "participation." Activity limitations are difficulties an individual may have in the performance of activities. Participation restrictions are problems an individual may have in the manner or extent of involvement in life situations, including social relationships. The disability rating has three functions: to determine the overall affect of behaviors and feelings on broad areas of functioning in specific settings and in specific relationships, to determine the level of that impairment, and to determine if the child has received treatment for these behaviors. By separately assessing the

affect of symptoms on functioning and on the quality of the child's relationships with significant others, we can distinguish between functional impairment and distress caused by the symptoms.

In the CAPA, disability is assessed at the end of the interview for each category of symptom found to be present. In the PAPA, we conclude each module of the interview (e.g. anxiety section, sleep section etc.) with an evaluation of the disability resulting from the behaviors or emotions. First, we assess the impact of the behaviors in three different settings (home, non-parental caregiving settings such as daycare/school, other settings such as church). For example, does the child's oppositional behaviors interfere with family routines such as bath time or bed time? Does the child receive special services at school/daycare or has s/he been asked to leave a school/daycare setting because of these behaviors? Does the child's behavior prevent the family from going to a restaurant or other family outings? Second, we assess how the behavior(s) affect the child's relationships with parents, siblings, other adults and other children. Do the behaviors create discord with and/or withdrawal from relationships with these various people? Finally, we assess whether the child has received any treatment including psychosocial interventions or medications for these problems ever and in the last three months. This approach permits the respondent to attribute disability in a given area (e.g., emotional discord in relationship to the primary caregiver) to one or more symptom areas (e.g., to both anxiety and conduct disorder), and conversely to attribute disabilities in multiple areas to the same symptom (e.g., expulsion from preschool and discord in child's relationships with his/her parents to oppositional behavior).

12. Lastly we recruited a panel of reviewers with expertise in infant and young child mental health to review and critique serial drafts of the PAPA. The panel included Charles Zeanah and his group (Tulane University), Robert Emde (University of Colorado at Denver), Alice Carter (Boston University), Margaret Briggs-Gowan (Yale University), Harry Wright (University of South Carolina), Joy Osofksy (Louisiana State University), Ron Dahl (University of Pittsburgh), Dale Hay (University of Cardiff), and Roseanne Clark, Donna Weston, Jean Thomas, and other members of the DC: 0-3 workgroup.

THE STRUCTURE OF THE PAPA

Figure 1 shows a typical page of the PAPA interview schedule. The item shown is from the separation anxiety section of the interview. In the top lefthand column (labeled 1) are the name and a brief description of the symptom as a reminder to the interviewer. Fuller definitions are given in the glossary. This definition is followed by two types of questions: mandatory probes (labeled 2 and emphasized in bold and with an asterisk) and discretionary probes (labeled 3). Definitions of mandatory and discretionary probes are described below. The middle column contains coding rules and directions (labeled 4). Label 5 points out an example of the coding of the relationship context of the symptom. Code-boxes completed by the interviewer are found in the far right column (labeled 6).

Figure 1 about here

Judgments about the presence of symptoms are made by the interviewer on the basis of whether the statements of the subject conform to the definitions of symptoms, and the rules for coding them contained in the glossary. These decisions are *objective* because the task of the interviewer is to implement the rules contained in the glossary, not to make subjective judgments.

In order to implement the definitions and rules laid out in the glossary the interviewer collects information using a structured questioning sequence provided by the interview schedule. The interview schedule provides two types of questions for the interviewer to ask the subject: *mandatory* probes and *discretionary* probes.

Mandatory probes must be asked, verbatim, of all interviewees unless the information they seek is already known to the interviewer (for instance the parent has already mentioned that the particular symptom is present in response to some other probe). Mandatory probes are included to increase the uniformity of questioning among interviewers and ensure coverage of all items. We allow interviewers to skip mandatory probes if they already know the information so as to maintain the rapport between the interviewer and the interviewee since interviewees often

feel that the interviewer is not listening to them if they are asked a question for which they have already provided an answer.

Discretionary probes are suggested follow-up questions for use the mandatory probes do not provide sufficient information for the interviewer to code the item. The discretionary probes lead the interviewer through the different aspects of the symptom that need to be coded (e.g. duration, frequency, or onset of the symptom). Interviewers are also trained to ask whatever additional follow-up questions that they feel are necessary to enable them to fully code the item. In particular, they may find that information given at a particular point seems to contradict some previous statement. They are then required to sort out the apparent conflict and make the appropriate adjustments to previous codings, if necessary.

The PAPA is printed with the interview schedule appearing on the left hand page. The facing page on the right is left blank so that the interviewer can take notes and record descriptions and examples of any emotions or behaviors that are present. Clinicians are well aware of the importance of collecting descriptions and examples of a child's behavior. Asking for descriptions of the child's actual behavior goes a long way to preventing misinterpretations of the meaning of the questions being asked. We have also found that parents appreciate the opportunity to describe their child's experiences. This approach to gathering information conveys a sense of the interviewer's real interest in the child and any problems the interviewee may be having with her or him. PAPA interviewers are trained to make use of these descriptions in determining their final codings. Our data checkers also match the descriptions/examples to the codings chosen by the interviewers to ensure quality control.

The Primary Period

The PAPA focuses on the *three months* immediately preceding the interview. This is called the "primary period." Lifetime occurrence is also collected on some symptoms, such as fire-setting, suicide attempts, and certain potentially traumatic life events. The three month primary period was chosen because of concern about the reliability of memory for periods longer than this. This concern has been reinforced by our finding that the reliability of recall

of dates of onset of symptoms falls off very rapidly after three to five months in both parents and children (Angold, Erkanli, Costello, & Rutter, 1996), although the relative order of onset dates was quite reliably recalled (intraclass correlation = .68 for both parents and children). Others have also described children's particular difficulties with questions concerning dates and timing with the DISC (Breton et al., 1995), and it seems likely that the numerous dating requirements incorporated into current official diagnostic criteria add to the unreliability of diagnostic measures by demanding feats of memory for dates of which most humans (both adults and children) are incapable.

Length of the PAPA

We do not yet have data on how long each PAPA interview will take. Across nearly 6,000 parent and child interviews using the CAPA, the mean time taken was 66 minutes for parents and 59 minutes for children, of which about two thirds was accounted for by the symptom and impairment sections. The length of the interview is clearly affected by the degree of psychopathology present and, to an extent, the interactional style of the parent. As we continue to refine the PAPA based on our own use of the interview in our studies, we expect to be able to streamline the interview. We are well aware that the interview should not cause undue burden on the parents.

Making a diagnosis from a PAPA interview

The interviewer codes the PAPA after the interview is completed. This takes about a half an hour. Once the interview and its codings have been completed, data are entered into a customized computer database that can be easily modified to suit the requirements of a particular study or clinical setting. Computerized algorithms, written in SAS, generate diagnoses for DSM-IV ICD-10, DC: 0-3 and a variety of symptom, impairment, life events and family functioning scale scores. As we have emphasized, the flexibility of the PAPA data will enable us empirically to investigate the reliability and validity of these discrete diagnostic systems for young children and to examine whether clustering of symptoms suggest alternative diagnostic approaches not encompassed in the current criteria.

Data from the PAPA will make “diagnoses,” but that does not mean that any user of the PAPA is

constrained to use those diagnoses. The symptom coding system has been designed to allow maximum flexibility for the construction of all sorts of scales and categories. We believe that such flexibility is absolutely necessary in a situation in which so little is known about the constructs.

Modularization

The PAPA is modularized, so that particular sections can be used separately from the rest of the interview. In order to reduce repetitive questioning, where similar phenomena are involved in multiple diagnoses (as with sleep problems), those phenomena are usually grouped together, rather than being split up in relation to each diagnosis. However, it is an easy task to select the sections that are needed to cover a particular diagnosis.

Interviewer selection and training

The principle requirement for PAPA interviewers is that they can follow the structure provided by the interview, while showing sensitivity and intelligence in getting descriptions of behavior. CAPA trainees have included psychiatrists, psychologists, social workers, nurses, and graduate and bachelor's level personnel with little or no previous clinical experience. PAPA training requires 1 - 2 weeks of classroom work and 1 - 2 weeks of practice. Didactic training on the glossary and interview methods is interspersed with role-playing, taped and live interviews, and feedback. Certification by a qualified PAPA trainer is required before using the PAPA in the field.

FUTURE DIRECTIONS

Test Retest Study

The next critical step in the development of the PAPA is demonstration of the reliability and validity of this new measure. Our group has recently been funded by NIMH to conduct a test-retest study of the PAPA. Data collection will begin July 2001. We plan to screen over 1600 parents of children ages 2 through 5 years old in a pediatric clinic to select 200 parents whose children have evidence of emotional or behavioral problems on the CBCL

11/2-5 (top 16%) and 100 randomly selected parents whose children did not score in this subclinical or clinical range on the CBCL. We will then interview the parent about their child using the PAPA twice, with one week separating the two interviews. While data from this study will enable us to test the test-retest reliability of the measure, it will also enable us to conduct a concurrent validity study of the PAPA in relation to the CBCL 1½-5. Data from this study will also provide information on the distributions of rates of reporting of various levels of individual symptoms. We will be able to use these data to provide rational suggestions for levels of individual symptoms that should count towards diagnoses, as well as to refine and improve the PAPA.

Spanish version of the PAPA

The same group that translated the CAPA into Spanish is currently translating the PAPA, so that we can expect a Spanish version with the next year.

Computerization of the PAPA

We are also pursuing computerization of the PAPA. While there are many advantages to paper and pencil administration of the PAPA including the ability to maintain eye contact/rapport with the subject while unobstrusively taking notes, ease of movement from one part of the interview schedule to another, and the opportunity to record examples in shorthand, there are also critical disadvantages. The major difficulty is the data entry step. Currently the interviewer codes the interview schedule; it is checked to the ensure that the notes taken during the interview are consistent with the selected codings; and then these data are entered into the data base. While these multiple steps contribute to the accuracy and integrity of the data, they also are time-consuming and potentially limit the use of the interview to those with the capacity to develop and maintain such a data entry system. This is most probably not that difficult for a research program but potentially challenging for a clinician who would be interested in using the measure. A computerized version of the interview would enable us to embed the data storage and analysis within the program. Researchers or clinicians would be able to input the data and receive an immediate report on the results

of the interview.

A further step in computerization would be to develop on-line training so that interviewers could be appropriately and adequately trained in use of the PAPA without having to travel to Durham (or our trainers traveling to the site). Development of an on-line training course and remote access certification of training in the PAPA will follow computerization of the measure.

CONCLUSION

The PAPA is necessary but not sufficient

The PAPA is a necessary but not sufficient measure of psychopathology in young children. The PAPA collects symptom and impairment information from a parent (or guardian). It is, therefore, but one component in the overall assessment of the preschooler. Our research program is focused on the development of a structured parent interview as a first step in the development of comprehensive set of measures for assessing preschool psychopathology. Multiple informants including both parents, other caregivers including teachers, daycare providers, babysitters, other relatives, and the child him/herself are critical for developing an adequate representation of the child's behaviors and experiences. While data suggests that parents of preschooolers are perhaps better informants about their children than parents of older children (cite), it is also clearly established that parents' are only fair to good reporters of their child's emotions and behaviors. Numerous studies have shown that parents report significantly fewer anxiety or depression symptoms that their children themselves report experiencing. Direct observation of the child alone and in relationship to the primary parent, that occurs ideally in the home setting and at more than one point in time, will also be important for assessment of young children. Direct interviewing of the young child about his/her feelings and experiences will also be an essential component of a comprehensive assessment, particularly for the emotional disorders. Current methods include the Berkeley Puppet Interview (cite) and the MacArthur Story-Stem Battery (cite). A critical question we will be addressing is how best to combine the information from different informants and different assessment methods to make diagnostic decisions.

Clinical Implications

It is probably fair to say that clinicians do not enjoy doing respondent-based interviews very much because the questions they can ask are so highly constrained. They may not be convinced that the parent understood the question, but if they add their own questions then the advantages of using a respondent-based interview are lost, because an unstructured component has been added. On the other hand, training on an interviewer-based interview such as the PAPA is usually of interest to clinicians because it raises a number of issues about interviewing style and strategy that few have had time or encouragement to think through during their training. Thus interviewer-based interviews may be particularly suitable for use in clinical assessments. The CAPA has been used in several clinical and treatment studies.

At this point in the development of the PAPA and our understanding of the presentation of psychopathology in preschool children, the PAPA will be primarily used as a research diagnostic tool. While our understanding of how to identify and treat mental health disorders in young children is at an early stage, we are hopeful that the field will make progress in the next few years in understanding how to define and assess psychopathology in preschool children. As we demonstrate the reliability of the PAPA, refine the interview, and move forward on computerization, we will, we believe, be able to offer an instrument with potential clinical utility. Since the PAPA can be modulized, clinicians will be able to choose which sections of the PAPA to use so that they can focus on the disorders they are particularly interested in identifying. The goal of the PAPA and our research program in preschool psychopathology is to contribute to an empirically grounded picture of preschool psychiatric symptoms and disorders that can be translated into effective diagnostic, screening and treatment approaches to help young children and their families. We know, as clinicians and researchers and parents, that young children and their families are suffering because of behavioral and emotional problems. We hope that the PAPA will contribute to our understanding of how to ameliorate and/or alleviate their pain.

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