

Circles Inside Squares: A Graphic Organizer to Focus Diagnostic Formulations

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When parents bring their child or adolescent for consultation with a mental health professional, they are usually frustrated, worried, and confused. They may have a litany of complaints about symptoms and problematic behaviors exhibited by their son or daughter, and the entire family is likely to feel bewildered, caught up in intense, conflicting emotions. One of the most important services a clinician can offer in this situation is to provide a clear formulation of the presenting problems so that all involved can grasp underlying problems in the context of stresses and strengths of the child and family.

I have developed a simple graphic that seems useful as a tool to organize my diagnostic formulations. This graphic consists of two separate squares within which are overlapping circles of a Venn diagram. It can be used to present a clinician's view of the patient's present life situation and to focus conversation between patient, family members, and clinician about how best to understand, prioritize, and respond to the current dilemmas of the patient and family.

Near the end of an initial consultation, I draw a moderately large square on a paper to represent the patient as a person. Within this square, I note several important strengths of the patient—e.g., “very bright,” “good at fixing things,” “hard worker,” “loyal to family,” “great soccer player,” “excellent guitar player.” I feel that it is important to begin with recognition of the patient's strengths to counteract the tendency of patient and family during an initial consultation to focus solely on the patient's weaknesses and failures. I want to make explicit my recognition of the patient as not simply a bundle of

problems, but as a person who has strengths as well as impairments. During a consultation that has focused on a child's serious difficulties in schoolwork and family life, it seems important to recognize that this child also is the best pitcher on his little league team, well-liked by several close friends, or kind to her little sister.

After mentioning and writing important strengths in the “patient square,” I draw several overlapping circles within that square to represent each appropriate diagnosis, perhaps one circle for attention-deficit/hyperactivity disorder (ADHD) overlapped with others for reading disorder and disorder of written expression, as well as another for anxiety. (See the Venn diagram in Figure 1 for an illustration.) The overlap indicates the extent to which impairments of one disorder are similar to or interacting with impairments of other disorders.

Most patients have one or more comorbid disorders in addition to their primary diagnosis; this model provides a way to highlight one problem while also recognizing other impairments that complicate the situation. I use the largest circle to represent the diagnosis that describes the problems that are most important at the present time; additional diagnoses are represented in sizes proportional to their apparent importance.

Sometimes in the initial session, I am uncertain about how to conceptualize and label a specific problem. An example might be a child who clearly has ADHD, but also has chronic and fairly severe difficulties in getting along with peers, lacks empathy, often annoys classmates with inappropriate comments, and tends to avoid contact with others of the same age outside school. In the first consultation, I may be uncertain as to whether the child suffers from Asperger's disorder or social anxiety in combination with ADHD. At that point, I might draw a circle and label it “social problems with other kids” and add a couple of question marks to indicate that we do not yet have a clear understanding of those specific difficulties.

Accepted July 28, 2005.

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0890-8567/05/4412-1309©2005 by the American Academy of Child and Adolescent Psychiatry.

DOI: 10.1097/01.chi.0000183463.64648.a5

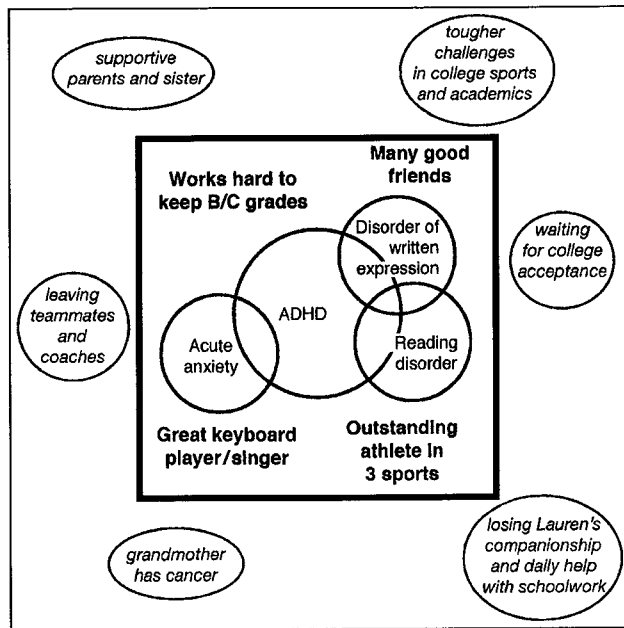


Fig. 1 The inner square shows key strengths and impairments of a 17-year-old boy as he was preparing for transition from high school to college. Venn circles within that square identify overlapping diagnostic categories that currently apply. The outer square highlights important supports and stressors in his immediate environment.

After the patient square and overlapping circles are drawn and discussed, I draw a larger square around the first square, this one to represent the environment in which the patient lives and attends school or works. In this square, important environmental supports and stressors are noted. These might include supports such as “Dad’s help with math,” “lots of friends at school,” “playing on a little league team with a great coach,” and “Grandma always around after school.” Also in this square, I note environmental stressors such as “just moved into this neighborhood,” “picked on by two big kids on the school bus,” “Grandma is very sick,” “big sister just moved out to go to college,” “Dad got laid off,” “older brother gets drunk a lot,” and “parents getting divorced.”

In presenting the drawing, I explain that this represents how I am presently thinking about the patient’s problems and situation. I ask the patient and family to react to the drawing, to express their agreements or disagreements with the formulation, and to suggest important strengths or stressors that I have left out. I also ask them whether the circles I have drawn are too big or too small to represent accurately the way they see the problems at this time.

Family members do not always agree in their reactions to these drawings. Sometimes one parent wants to emphasize a problem that the other parent feels is far less important. Sometimes the child has an altogether different view of the situation. Discussion of how we should correct or improve my drawing often elicits differing opinions within the family about the nature and relative importance of the presenting problems, stressors, and supports, differences that otherwise may not become explicit in the early stages of consultation. Getting these differences on the table at the outset can be useful in assessing family alliances and in developing a treatment plan that takes into account the realities of contrasting viewpoints among various family members. If there are important differences of opinion, then those might be reflected in the drawing as questions for further study.

Figure 1 illustrates a diagnostic formulation drawn for Jim, a 17-year-old boy whose parents brought him for consultation shortly after he experienced an acute panic attack in early December of his senior year of high school. Jim’s friends had taken him to the emergency department because of his sudden shortness of breath, acute chest pains, and diaphoresis one day after school. When evaluation indicated that these were anxiety symptoms and not indicators of coronary problems, Jim and his parents were relieved but mystified. They could not understand how this strong, healthy football player, with no history of anxiety problems, could suddenly experience such acute anxiety.

While in fourth grade, Jim had been diagnosed with ADHD, reading disorder, and disorder of written expression. Since that time, he had continued to take stimulant medication for his ADHD symptoms. He had received special education services and private tutoring in reading and writing skills until ninth grade. Since starting high school, he had earned grades slightly above average without any special education services.

As we developed the drawing, Jim’s mother suggested that her son might actually have depression because he had seemed less animated at home during recent months, especially since the successful conclusion of his team’s football season. Jim’s father argued that the panic attack was probably his son’s delayed reaction to loss of a paternal uncle who had suffered a fatal heart attack 1 year earlier.

Jim said he was aware of no special stressors except that he had been working hard to prepare his college applications; he had finally completed them on the same

day he was taken to the hospital. Jim acknowledged that he had felt some letdown since football season had ended, but he claimed he was looking forward to playing football in college.

My initial drawing highlighted Jim's strengths as an outstanding athlete in several sports, his popularity in a large group of friends, and his sustained efforts to get good grades in spite of his earlier learning problems and persistent ADHD. He responded that most of the credit for his good grades should go to his girlfriend, Lauren. "The medicine doesn't help that much anymore. Ever since ninth grade, she's been the one who makes me study and helps me review, and she helps me write my papers." This led to his tearful exclamation: "That's what really scares me, I don't know what I'm going to do without her next year when I have to go away to college and she'll still be here in high school."

In light of this additional information, I revised the drawing to reflect Jim's previously unrecognized fear that he would not be able to survive academically or emotionally away from the daily academic and emotional support of his girlfriend. This helped to focus a treatment plan that included adjustments in his medication, planning for support services to assist with his persisting problems in reading comprehension and writing papers, and a course of psychotherapy to help Jim cope with his fears about the transition to college.

For each patient, I try to develop and show in the initial drawing my working model of their present situation and relative importance of various problems, adapted to their current ability to understand. We use this model to discuss immediate tactics and longer-term strategies for addressing identified targets for treatment. I may mark arrows on the drawing to indicate a medication or other treatment intervention to be made now or planned for later to target a particular set of symptoms. After this, families often want to take home a copy of the drawing for further discussion or to keep in mind what we have planned and issues or disagreements that remain to be resolved. I try to emphasize that this is simply a working model, one that is likely to require changes as together we increase our understanding of the situation and people involved.

The usefulness of this drawing is not limited to the initial consultation session. Often during subsequent sessions, I take the drawing out of the chart and use it to focus my inquiries about how treatment

interventions are working or not working. Several times during the course of treatment, I often redo the drawing to represent improvement or exacerbation of symptoms and to incorporate newly recognized strengths, stressors, and/or problems that had not been identified in the initial consultation and may require changes in the formulation or treatment plan. The drawing can evolve to reflect ongoing changes in the patient and family and in my evolving clinical understanding of their situation. Changes in my clinical judgment as to how much family members are ready to hear, recognize, and understand may also be reflected in the drawing.

This simple graphic organizer is useful not only in facilitating communication with the patient and family but also in providing a structure for thinking about comorbidity of diagnoses in the present context of the specific patient and family. Much of the recently increased attention to comorbidity in child psychopathology has been focused on research using group data (Jensen, 2003). Although it is important to develop research paradigms that take comorbidity into account, it is also essential that comorbidity be contextualized to each individual clinical case.

Most patients seeking mental health care have impairments that cannot be adequately understood with just one diagnostic category (Brown, 2000, 2005; Caron and Rutter, 1991). Often multiple diagnoses are needed to describe a patient's difficulties, not because the patient "has" many disorders, but because current psychiatric nosology separates into discrete categories functional impairments that may be caused by common underlying impairments (Brown, 2005; Pennington, 2002). It is helpful for patients, family, and clinicians to give serious attention from the outset of treatment to the full range of overlapping impairments, including problems that may be subclinical, not fully meeting categorical diagnostic criteria, because these, too, may affect the patient's course or response to treatment (Kendell and Jablensky, 2003).

Another advantage of this graphic organizer is its explicit incorporation of strengths and stressors of the patient and family into the diagnostic formulation. This uses the perspective of developmental psychopathology, which emphasizes the importance of interpersonal and social context for maladaptive behavior, looking at the complex interplay of protective and risk factors, particularly within changing family systems and subsystems (Cummings et al., 2000).

A third benefit of the use of this graphic organizer is that it provides a convenient way to structure collaboration among patient, family, and clinician. By involving these three parties together in the processes of identifying problems, stressors, and strengths, setting priorities for treatment, and monitoring the effectiveness of treatment interventions, the clinician can strengthen mutual understanding and improve reciprocal communication. Such collaboration can significantly increase patient and family compliance with treatment recommendations. It may also help to improve chances that the difficulties experienced by the patient and family will be reduced while their adaptive capacities are increased.

Disclosure: Dr. Brown receives research support from Eli Lilly, McNeil Consumer Pharmaceuticals, and GlaxoSmithKline; is a consultant/advisory board member for Eli Lilly, McNeil Consumer Pharmaceuticals, Novartis, and Shire; and is a speaker for Eli Lilly, Janssen-Cilag,

McNeil, Novartis, Shire, and Wyeth. He receives publication royalties from American Psychiatric Press, PsychCorp, and Yale University Press.

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Psychosocial Risk Associated With Newborn Screening for Cystic Fibrosis: Parents' Experience While Awaiting the Sweat-Test Appointment

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Background: The psychosocial effects on parents of infants with abnormal results in cystic fibrosis (CF) newborn screening (NBS) that uses genetic testing remain unclear. *Methods:* Twenty-eight individuals representing 14 families participated in grounded theory interviews \approx 6 months after their child's positive NBS results for CF. Participants also completed the Center for Epidemiologic Studies Depression Scales (CES-D) at their infant's sweat-test appointment ($n = 51$) and/or \approx 6 months after the sweat test ($n = 35$). *Results:* Most parents experienced high levels of emotional distress during their wait for the sweat-test appointment (CES-D score, mean \pm SD: 16.5 \pm 6.7; 43.1% in the clinical range; median wait: 7 days; range: 3–35 days). CES-D scores of these parents were also significantly higher than those of comparison parents. Interviews showed that parental cognitive uncertainty and emotional distress were influenced by the parents' prior knowledge of NBS, CF, and their carrier status; parents' adjustment to their new baby; and the physicians' approach to informing parents. Parents' coping strategies involved requesting a sweat test as soon as possible, searching for information, assessing the infant's risk/health, seeking support, praying, or not talking with others. *Conclusions:* The waiting period from notification regarding positive NBS results to diagnostic test results can be psychologically distressing to parents, causing depressive symptoms that vary depending on their perceptions about the likelihood that their infant has CF. Implications for future research examining psychosocial interventions for NBS are discussed. *Pediatrics* 2005;115:1692–1703.