Chapter 1
How to Use This Book

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Welcome to Problem-Based Behavioral Science and Psychiatry. In this chapter, our aims are to illustrate how the problem-based learning process works so that you can apply it to the other cases in this textbook.

The goals of this chapter are:

1. To provide the reader with a guided experience on “how to use this textbook”
2. To review basic principles of problem-based learning and the rationale for why this approach is used
3. To illustrate, with a sample case, the processes of
   (a) “Progressive disclosure”
   (b) Identifying facts/problems, hypotheses/differential diagnoses, additional clinical information needed, and learning issues
   (c) Thinking about underlying neurobiology and other physiological mechanisms to understand the signs and symptoms of a case
4. To review the more generic process of bio-psycho-social-cultural-spiritual formulation, in order to understand the various perspectives offered by patient cases

Because a textbook is not the same as a patient encounter or face-to-face small group discussion, we are not claiming to represent problem-based learning (PBL) in a pure or “authentic” form (Barrows, 1986, 2000). However, we hope to integrate many of the principles and potential benefits of PBL into this textbook.

PBL, as described by Norman and Schmidt (1992), aims to endow learners with the skills of clinical reasoning, cooperative learning, and patient-based integration of knowledge. In its ideal form, it begins with an initial free-inquiry process, in which learners explicitly discuss hypotheses and additional lines of investigation. This is followed by a period of self-directed learning and a synthesis and application of information back to the case. The student then has an opportunity to critically evaluate the initial clinical reasoning process. Because PBL attempts to integrate information from multiple disciplines, all phases of the process emphasize attention...
to the biological, behavioral, and populational aspects of the case. Certain articles (Guerrero, 2001; Guerrero et al., 2003) have discussed how certain learning tools can be used to ensure that beneficial PBL processes actually occur in the course of studying a case. We will illustrate these tools, including “mechanistic case diagramming,” as part of this sample case.

When compared to traditional learning methods, PBL may enhance the application of concepts to clinical situations, long-term retention of knowledge, and lifelong interest in learning (Norman and Schmidt, 1992). It has been shown to improve student and faculty satisfaction and educational outcomes in numerous clinical disciplines, including family medicine, pediatrics, obstetrics, and psychiatry (Washington et al., 1999; McGrew et al., 1999; Kaufman and Mann, 1999; Curtis et al., 2001; Nalesnik et al., 2004; McParland et al., 2004). Furthermore, we believe that psychiatry and the behavioral sciences, because of the inherently integrative and holistic approaches of these subject areas, are particularly well suited for study in a PBL format (Frick, 2005; Zisook, 2005). Peters et al. (2000) reports on the longitudinal outcomes of a randomized controlled trial and concludes that the New Pathways Program at Harvard Medical School—of which PBL is one important component—improved students’ interpersonal skills and humanistic approach to patient care, with no loss in medical knowledge.

We will illustrate the problem-based learning process as applied to cases in this textbook. Typically, each chapter will begin with an introductory paragraph for a case. An example has been provided below.

Case Vignette 1.1.1 Presenting Situation: Melanie Crystal

Melanie Crystal is a 39-year-old woman who is the single mother of a 17-year-old boy. She was referred for psychiatric assessment at the local emergency room because a police officer on foot patrol found her crying and confused in a nearby parking lot. She is tearful and hostile. She told the screening nurse that she would kill herself “at the first opportunity.” On screening for substance use, she stated that she used “dope.” Needle marks were visible on both arms.

At this point, the student will see the following sign, which is a prompt to “Proceed with the PBL process” before moving on to the remainder of the case.

Please proceed with the problem-based approach!

Learning from these cases will be maximized if the student carefully digests all components of the case and engages in the clinical reasoning processes that a clinician uses to effectively evaluate and manage the case. For example, in the case above, it may be worthwhile to: