Mood Disorders and Psychotherapeutics Team-Based Learning Activity

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Abstract

Introduction: Following the publication of the fifth edition of the Diagnostic and Statistical Manual of Mental Disorders (DSM-5), this module was created by a collaborative of psychiatric educators in the University of Texas System for the Revised DSM-5 Psychiatry Clerkship Common Curriculum. To pool our resources and introduce innovation, our group of four medical schools (spread across five sites) decided to develop, peer-review, introduce, and study one curriculum. Methods: This resource specifically covers both mood disorders and the basic classes of psychopharmacology and psychotherapy and was used for third-year medical students as part of their required psychiatry clerkship. Learning involves preclass reading preparation, in-class readiness assurance exercises, and application activities. Students are graded on both group and individual performance. Results: After administration, formal end-of-course evaluations concerning team-based learning (TBL) were positive, with students agreeing or strongly agreeing with the statement “TBL increased my understanding of course material” at a rate of 79%-95%. Discussion: We believe that the multischool collaboration and peer review of this module have created a better quality resource than any of the schools would have been able to develop individually. The module adds to the choices of quality materials available for educators to use when designing their curricula, and the collaboration can serve as a model for other such endeavors.

Keywords

Team-Based Learning, Clinical Clerkship, Mood Disorders, Psychiatry, Psychotherapeutics

Educational Objectives

Diagnostic objectives: By the end of this module, learners will be able to:

1. Compare and contrast the diagnostic criteria for the mood disorders, including bereavement, premenstrual mood disorder, depression, and bipolar disorder.
2. Recognize the time frames and specifiers of mood disorders (e.g., with psychotic features).
3. Choose the most appropriate evaluation and assessment to use with a patient presenting with a mood disorder.

Therapeutic objectives: By the end of this module, learners will be able to:

1. Compare and contrast the major classes of medications used to treat mood disorders in psychiatry.
2. Compare the advantages and disadvantages of each of the major classes of medications used in psychiatry for mood disorders, including the contraindications for each.
3. Compare the advantages and disadvantages of electroconvulsive therapy, including the contraindications.
4. Identify the potentially dangerous effects of psychotropics that can be caused by idiosyncratic reactions, side effects, and drug-drug interactions.
5. Differentiate the different types of psychotherapies (dialectical behavioral therapy, cognitive behavioral therapy, exposure and response prevention, supportive psychotherapy, insight-
Introduction

In 2013, the introduction of the fifth edition of the *Diagnostic and Statistical Manual of Mental Disorders (DSM-5)* created a challenge and an opportunity for psychiatric educators. The challenge consisted of a need to revise a standing curriculum for educating medical students and other learners. The opportunity consisted of the stimulus for innovation and collaboration in going about this revision. Our objective was to create a new *DSM-5* curriculum using the pedagogy of team-based learning (TBL). To pool our resources and introduce innovation, our group (consisting of four medical schools at five sites) decided to develop, peer-review, introduce, and study one curriculum. For a discussion of our findings related to the collaborative process, please refer to the work of Levine and colleagues.

This resource covers both mood disorders and the basic classes of psychopharmacology and psychotherapy, and it adds to the body of existing materials available to educators who use TBL with preclinical students, who teach mood disorders using standardized patient encounters, and who utilize problem-based learning pedagogy. While this seems like a large amount to cover in one module, we choose to do it this way because treatment of the mood disorders, which include both depression and bipolar disorder, requires a fundamental knowledge of antidepressants, antipsychotics, mood stabilizers, benzodiazepines, and psychotherapeutic techniques. We believed that teaching the diagnosis and treatment of these disorders in one module would be helpful as a foundation for learning a great deal about psychotherapeutics. This module is designed so that clerkship students are able to appropriately diagnose and manage these disorders by the end of their psychiatry rotation.

Methods

Team Formation

Students are put into permanent teams of five to seven learners for the entirety of the psychiatry clerkship (6 weeks for the schools in this collaborative).

Advance Preparation Resources

Students are expected to read select chapters of Black and Andreasen’s *Introductory Textbook of Psychiatry*, including chapter 6 (Mood Disorders), chapter 20 (Behavioral, Cognitive, and Psychodynamic Treatments), and chapter 21 (Psychopharmacology and Electroconvulsive Therapy). Any reading that covers the mood disorders and the basics of mood stabilizers, antipsychotics, antidepressants, and benzodiazepines, as well as the fundamentals of electroconvulsive therapy and psychotherapeutic techniques, may also be used.

Facilitators will need a classroom in which students can take the Individual Readiness Assurance Test (iRAT) and then sit in teams and talk, with team members being able to hear each other. They should be able to easily see and hear all of their other classmates as well. Facilitators should be content experts and have existing knowledge of TBL pedagogy but do not need to be teaching experts to facilitate this class session.

Readiness Assurance Questions

Thirteen multiple-choice questions comprise the iRAT and the Group Readiness Assurance Test (gRAT) and may be found in the Student Packet (Appendix A). Facilitator notes are included in the Facilitator Manual (Appendix B). This document also provides question-specific references to the page numbers in the recommended reading for the answers, as well as common discussion points. Students may indicate their responses to the iRAT on an answer sheet created by the facilitator. Students may also appeal an incorrect answer by using an appeals sheet (Appendix C).
Immediate Feedback
Immediate feedback is provided on the gRAT through the use of Immediate Feedback Assessment Instrument cards available through epsteineducation.com. The appropriate card key is described in Appendix B.

Group Application Exercise
The group application exercise is contained in the Student Packet (Appendix A) and contains seven separate questions in two cases that will help the students become more adept at diagnosing and managing patients with mood disorders. Please note that the first case requires the use of a Patient Health Questionnaire-9. A blank student copy of this form is provided (Appendix D), as is a facilitator version with notes (Appendix E). Student groups may indicate their answers to multiple-choice questions using A-E cards created and provided by the facilitator or dry-erase/poster-sized Post-It boards.

Facilitation Schema
Timing breakdown (approximately 2.5 hours):
- iRAT: 20 minutes.
- gRAT: 30 minutes.
- Group discussion with faculty: 20-40 minutes.
- Application exercises: 60-70 minutes.

Results
Although we have no data specific to this module, students responded positively to the TBL curriculum in general. Each of the four schools (five sites) in the DSM-5 Psychiatry Clerkship Common Curriculum collaborative used two to eight of the modules like this one to replace or supplement traditional didactic sessions during the 2013-2014 academic year. Two of the schools (three sites) had previously used TBL for clerkship teaching, but this method was new at the other two schools. Collaborating to pool the resources of faculty at four schools facilitated the development of a new curriculum. End-of-clerkship evaluations were generally positive, with the highest evaluations coming from sites with more TBL experience. National Board of Medical Examiners (NBME) scores at the end of the clerkship stayed the same or increased slightly following implementation of these modules. Following implementation of these modules, faculty concluded that student orientation to the TBL (i.e., student understanding of the purpose of the method) was important for success. Most students preferred this method of instruction. Some narrative comments from one site’s end-of-course evaluations include the following:

- “I liked that we were forced to read for the TBL sessions as it made me study.”
- “The TBL sessions were very helpful for keeping me on track with studying. I also liked working with my peers in a team setting.”
- “I liked TBL a lot, but might have solidified that knowledge by having lectures on some subjects, maybe at the beginning of the rotation.”
- “I was far more prepared for this shelf than any other course so far.”
- “TBL was very helpful in improving group work skills and in also making the lectures more interactive and enjoyable.”
- “The TBL sessions got long some days and I found myself wishing I was studying on my own.”
- “TBL helped me to actively prepare for the exam in a way that lectures do not.”

Formal end-of-course evaluations concerning TBL were positive for the schools that used this module, with students agreeing or strongly agreeing with the statements “TBL improved my ability to work in a team” at a rate of 73%-89%, “TBL was helpful with interpersonal and communication skills” at a rate of 72%-91%, and “TBL increased my understanding of course material” at a rate of 79%-95%. All of the University of Texas System psychiatry clerkships following implementation of this curriculum posted psychiatry subject NBME scores at or above the national mean.
At one site, the average performance on the iRAT was 77%, with an average performance of 97% on the gRAT. Individual item performance (and distractors that caused incorrect scores at rates higher than 10%) can be found in Appendix B.

Performance on the application exercise is not recorded, so there are no statistics on student performance on this task. In general, most groups came close to the specific selected answers. Information on how students performed on particular questions of the application exercise can be found in Appendix B.

Discussion

Overall, faculty were pleased with the modules that we developed and with the collaboration used to create them. After development, ongoing changes were made to the modules based on feedback from the students. For example, an early question relating to vitamin deficiency as a secondary cause for depression was omitted from this module because students continually found evidence to support each distractor answer choice and indicated this in appeals. Future revisions will likely work to incorporate more medical comorbidities and physical findings so as to be in line with more integrated psychiatric experiences and testing.

Challenges of the project included managing the amount of information and revisions that went back and forth after implementation. This mood module was tried at the beginning, middle, and end of the rotations, and student feedback at multiple sites was that they wanted the module at the beginning of the clerkship. These are clinical clerkships, and the students found the reading preparation and TBL sessions helpful to prepare them for the clinical encounters and teaching rounds and thus preferred to work on the material at the beginning of the clerkship.

Although students complained about reading a textbook (as most of them study from online materials), they did not generally complain about the length or quality of the reading material. Regarding ease of use, faculty have filled in for other faculty with limited time to prepare, and the facilitator notes are helpful for faculty to teach the module.

For limitations, the preclass preparation is very important to make use of the activity, and students had variable levels of engagement with the process. Several students reported they would prefer to have protected time to study on their own and just do practice test-bank questions. We addressed this issue with a thorough orientation to the goals of TBL and why this pedagogy had been chosen. We also encouraged students who routinely perform well on exams to work on teaching and collaboration skills with peers.

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References