



CASE TEACHING NOTES

for

“Are You Blue? What Do You Do? A Case Study on Treatment Options for Depression”

by

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OVERVIEW AND BACKGROUND

This case study exercise was designed to introduce students to treatment alternatives for depression. This case was *not* designed to teach students how to make decisions about whether or not someone is depressed or suggest treatments for someone who is depressed. Rather, it was designed to show students how complicated the process of choosing a treatment is so that they will better understand the need to seek professional help for appropriate diagnosis and treatment.

The case was originally developed for use in a practice teaching session as part of a five-day Case Studies in Science Workshop held in the summer of 2000 at the University at Buffalo. It was team-taught by the authors.

The case was designed for use in a course on abnormal psychology. Versions for more advanced students and for health science students could be developed. The expert group handouts could easily be made more technical for more advanced students. In fact, students with some experience interpreting medical jargon could be given extra out-of-class time to locate their own information on the various treatment methods. One or more of the expert units might be dropped depending on the class. For example, instructors of physiological psychology, pharmacy, and neurobiology courses using this case might want to drop the psychotherapy alternative and put more emphasis on what is known about the pharmacologic mechanisms of action.

Objectives

- To introduce students to the process of looking at the comparative advantages and disadvantages of some of the major kinds of treatment for depression. This involves a brief introduction to three antidepressant medications, a natural remedy, and an example of psychotherapy.
- To help students see that treatment decisions are complex and probabilistic rather than simple black-and-white choices so they understand why these decisions are best made in consultation with a professional.
- To introduce students to the concept and potential value of “alternative” treatments or “natural remedies” for the treatment of depression.
- To make students aware of the resources for treating depression on their campus (counseling center, health center, etc.).
- To introduce students to resources beyond their textbooks for further research and investigation of available types of treatment for this and other disorders.

BLOCKS OF ANALYSIS

Tricyclic Antidepressants

Probably work by blocking reuptake of both norepinephrine and serotonin at the nerve endings. Dosage: Initially a dose of 75 mg a day increasing to 150 mg a day if needed.

Advantages:

- Helps relieve depression and is especially effective if the symptoms are of the endogenous type (if the client meets DSM-IV criteria for melancholic features).
- May take as little as one week to improve mood.
- Generic versions of the drug can cost less than \$4 a month.

Disadvantages:

- May take as long as six weeks to improve mood.
- Patients on tricyclics should be careful with alcohol, sunlight, and driving if dizzy.
- Common side effects are dry mouth, dizziness, headache, increased appetite, and constipation—less common are anxiety, insomnia and nightmares, irregular heartbeat, and confusional states.
- Elavil costs as much \$98.00.
- It is necessary to have an appointment with a physician or nurse practitioner for diagnosis and treatment (this might be available at the college health center).

Selective Serotonin Reuptake Inhibitors (SSRIs)

Presumably enhances serotonin by interfering with its reabsorption (blocks reuptake). Dosage: 20 mg a day is sufficient to obtain satisfactory antidepressant response.

Advantages:

- Effective in treatment of depression.
- This medication may be prescribed at the college health center but only after careful diagnosis by a professional.

Disadvantages:

- Effects may take four weeks.
- Side effects include stomach upset, headache, nervousness, dizziness, and insomnia (much like having had too much caffeine); sexual dysfunction may occur in a smaller number of individuals. Should not be used with other medications or herbal remedies without your doctor's approval.
- Not cheap—besides the cost of visiting your caregiver, a three-month supply of the 20-mg dose of Prozac averages around \$200. (The cost can be lower depending on the individual's medical insurance.)

Monoamine Oxidase (MAO) Inhibitors

Thought to elevate biogenic amines (norepinephrine and serotonin) by inhibiting oxidation of these neurotransmitters. Dosage should be started with one tablet (10 mg) twice daily. If tolerated, dosage may be increased by increments of one tablet (10 mg) every two to four days to achieve a dosage of four tablets daily (40 mg) by the end of the first week of treatment.

Advantages:

- Indicated for the treatment of depression.
- Appointments for professional diagnosis and treatment may be available for a minimum cost at the college health center.

Disadvantages:

- Beneficial effects may not be seen for up to three to six weeks.
- Most common side effects are nausea, dry mouth, and dizziness.
- Marplan can cause serious hypertensive crises; it is not recommended as initial therapy but should be reserved for patients who have not responded satisfactorily to other antidepressants.
- Have sometimes been fatal, resulting from eating cheese or other foods with a high tyramine content so patients should be instructed not to eat cheese (particularly strong or aged varieties), sour cream, Chianti wine, sherry, beer (including non-alcoholic beer), liqueurs, pickled herring, anchovies, caviar, liver, canned figs, raisins, bananas or avocados (particularly if overripe), chocolate, soy sauce, sauerkraut, broad beans (fava beans), yeast extracts, yogurt, meat extracts, meat prepared with tenderizers, or dry sausage.
- 120 10-mg tablets cost \$69.48. (The cost can be lower depending on the individual's medical insurance.)
- Available by prescription only, so one must have an appointment with a physician or nurse practitioner.

St. John's Wort

Evidence indicates that the inhibition of norepinephrine and serotonin reuptake may underlie the antidepressant activity. Dosage: 300 mg of St. John's Wort three times a day.

Advantages:

- Has been found to be as effective in the treatment of depression as antidepressants.
- It is considered a safe herb and incidents of adverse reactions are rare.
- Side effect with St. John's wort is mild stomach irritation.
- A one-month's supply costs \$8.10.

Disadvantages:

- It takes four to six weeks to be effective.
- Not recommended for allergic or photosensitive individuals.
- Safety for use in pregnancy has not been established.
- Decreases effectiveness of birth control pills.
- The Food and Drug Administration does not classify herbal medications as drugs and therefore St. John's Wort is not subject to quality control regulations as are standard pharmaceuticals and so it may or may not be reliable.
- Since no medical appointment is needed and therefore diagnosis by a professional is not required, a person might end up taking a substance, such as St. John's wort, that may be inappropriate for the problems the person is experiencing.

Cognitive Behavioral Therapy (CBT)

Advantages:

- CBT was found to be as effective as imipramine in the treatment of depression and it requires no medication or other substances to be ingested.
- Some health insurance programs cover costs for therapy (however, few of them cover the full cost and almost none allow an unlimited number of visits).
- College and university counseling centers often offer diagnosis and will offer this type of therapy free for a limited number of sessions if this is deemed appropriate.

Disadvantages:

- On average it may take three to seven weeks or more for the person to gain enough symptom relief.
- One needs to be in therapy from 16 to 20 weeks—this takes time, and locating a therapist in reasonable driving distance also can be a problem.
- Finding a compatible therapist is a factor which might raise difficulties.
- Most therapists now charge between \$90 and \$120 per session so the cost can be a concern. Over a one-month period, the cost can be between \$360 and \$480.
- If the therapy is ended prematurely, the client may experience this as a significant “loss” and thus have to deal with a deepened depression.

CLASSROOM MANAGEMENT

The case is run using the “jigsaw” method. This cooperative learning method was originally designed by the social psychologist Elliot Aronson to help reduce the effects of racial prejudice. When the method was studied with fifth and sixth graders (45 minutes a day three times a week for six weeks), he reported: “Such structured interdependence increases the self-esteem, the morale, the interpersonal attraction and the empathy of students across ethnic and racial divisions and also improves the academic performance of minority students without hampering the performance of the ethnic majority” (Aronson and Bridgeman 1979). This method can be used to achieve some of these goals as well as providing a change from the usual lecture method commonly found in college teaching.

The class is divided into Home Groups of five people by numbering off. The case study is handed out to the students, who are given five minutes to read the case and discuss the basic issues in their Home Groups (Home Groups-Phase 1). Each group then selects from among the group members one person to be responsible for becoming an “expert” in each of the five treatment alternatives for depression. The Expert Groups assemble at tables marked A, B, C, D, and E, where information sheets are posted. The Expert Groups have 15 minutes to read the information sheet on their treatment method and to take notes on the advantages, disadvantages, and costs of the method. The experts then return to their Home Groups (Home Groups-Phase 2), where they have 15 minutes to teach the material they have learned to their teammates, and then, as a group, to summarize what they have learned about all of the treatment alternatives. Finally, each group should pretend they are Peggy and indicate which type of professional and which treatment they would prefer to check out first and give their rationale for doing so. The case study exercise finishes with a 15-minute full class presentation and discussion of group findings in which each Home Group picks a spokesperson to present its treatment summary, decision, and rationale to the rest of the class on overheads.

The timing given above to run this case may be underestimated, especially if this is the students’ first jigsaw exercise. It could easily take twice the time estimated here. It is suggested that only three Expert

Groups be used if this is a first-time experience with beginning students. One medication, the natural remedy option, and the cognitive therapy are recommended as the topics for the Expert Groups in this case. In more biologically related classes, the two medications and the natural remedy option are recommended.

Dividing up into groups is very important. It is critical to break up friendship groups to reduce “social loafing” and off-topic conversations. Since friends tend to sit together, one way to break into groups is by having the students count off. Divide your class by five to find out how many groups you have and then count off by that number. For a group of 60, you will have 12 groups (note that your Expert Groups would then have 12 in a group, which may require some extra supervision). Then count off to 12 (be sure to tell students to remember their number—we had some international students at the summer workshop in Buffalo who had no clue as to what we were doing when we “counted off”). Next, direct each numbered group to a particular part of the room. If you have extra individuals, then you might appoint leaders for some groups. It is important that leaders be given a specific responsibility, such as making sure everyone is heard and has a chance to participate in the decision process.

It is also important to monitor both the Expert Groups and the Home Groups. This can be done by simply walking around the room and stopping by each group for a few seconds. You can spend more time, as needed, with groups or individuals having trouble (we found that students used to traditional lecture-only classrooms had some difficulty understanding the basic structure of the exercise and so needed extra guidance). Teaching Assistants (TAs) can serve as consultants to Expert Groups, helping to monitor the process and providing some of the extra guidance that may be needed.

You will want to make sure the students know the reasons for doing this as a “jigsaw” group project. Telling them your personal reasons for doing this will lend credibility to trying out this new approach. Many good students resist this method because it seems less efficient to them. By adding your endorsement, you can help these students get over their initial resistance. Tell them that this is a way of making course material more applicable to real life. This might work when simpler rationales, like pointing out that you want to try a new and different way of presenting material, aren’t effective. The key is to give the students a justification for changing their normal routine.

In addition, it is important to help motivate the students by making it clear that the student’s and teammate’s grades will depend on how good a job *each* team member does. What psychologists call “social loafing” is a major concern of students (especially good students). Making the rewards clear can reduce the fears of good students that they will be penalized because others are unmotivated. It is important to test the students individually over the material covered in this case. Including questions on the next test and the final exam are recommended. At a minimum, students can be quizzed over the material at the end of the case presentation.

Aronson and Patnoe (1997) emphasized the vital importance of the Expert Groups. It is here that individuals can use each other to make sure they understand the important aspects of the information they are to teach. They suggested that *students should actually rehearse what they were going to say to their Home Groups*. If each person has a clear idea of how to present the material, then even the weakest and most anxious students are likely to be able to be a valuable resource for their Home Groups. The mediation of these Expert Groups provides the opportunity for the less articulate and less skillful students to get help from the more adept students in organizing their report. Discussing the material with others also increases the depth of understanding and critical thinking skills of all the students.

Detailed Directions for Running the Case

- *Step 1.* Make enough copies of the case and the note-taking sheets so that each member of your class and each TA has a copy.
- *Step 2.* Make enough copies of each of the Expert Group handouts for each Home Group representative to have a copy to read. Assign one TA to each Expert Group. The TAs will need to have copies of the material ahead of time so they can be prepared to answer student questions. (You may also want to make copies of all of the handouts for each student after the exercise. These then can be available for students who were absent.)
- *Step 3.* Arrange the room so that each Home Group has enough space for its members to be seen and heard while at the same time not interfering with other groups. It helps to have signs with *numbers* that designate each Home Group. There also have to be designated spaces for the Expert Groups to read and take notes on their handouts as well as to ask questions in those groups. Signs with *letter* designations should be available to indicate the Expert Groups' workspaces.
- *Step 4.* Each Home Group will need several blank overheads and at least one wet-erase fine-point pen, or you can provide them with newsprint and markers or a chalkboard. Be sure to have in the classroom an overhead projector and screen as well as masking tape on hand or some other means to display the groups' treatment recommendations and rationale.
- *Step 5.* It is helpful to make up tentative test questions ahead of time so that the instructor and TAs can be clear about what needs to be emphasized. We recommend that you meet ahead of time with the TAs. Thirty to 45 minutes should be enough time for such a meeting, depending on how much experience with cooperative learning exercises and knowledge about treatments the TAs have.
- *Step 6.* Prepare your introduction ahead of time. It is essential that the instructor communicate clearly and confidently that she/he knows what is going to happen and why. Have the TAs pass out the case study and the note-taking sheets while you introduce the case exercise and the jigsaw method. At this time you should also introduce the TAs and explain that they are there to help the groups.
- *Step 7.* Resist the temptation to lecture. Repeatedly point out to students that the goal is to have them do the work of understanding the material and teaching it to each other as *best they can*. It doesn't hurt to tell especially anxious students that you will be making sure that all the key points will be emphasized at the end of class.
- *Step 8.* Keep careful track of time. Give students working in their Expert Groups a two-minute and a one-minute warning and then ask them to move back to their Home Groups for Phase 2. Remind them they are to come up with a clear summary of treatments and what choice they would make if they were Peggy and a rationale for it. They are also to put these on their overhead (or newsprint paper or blackboards). They should also elect a representative to present their views and they should all be ready to help this person answer any questions that the class has.
- *Step 9.* At or near the 7-minute mark of this Phase 2 Home Group exercise, remind them that they must prepare their overhead. Give them a 2-minute warning as well.

- *Step 10.* Have each Home Group present their findings. It is often best to ask for volunteers as some individuals find it anxiety-provoking to go first. If you are doing this in a large class, you may want to select five or six groups to present. When they are done, ask if any group had anything different or any point to add. You should be sure to collect and grade the overheads of all the groups.
- *Step 11.* Be sure to do a summary on the overheads or on the blackboard so students can see the importance you attach to their group work. It is valuable to highlight with a single color pen the ideas that most or all the groups came up with. Use another color to write out any important information that was missed. It is important that information from both these areas appears directly on the next test. (When we did this I was very impressed with the number of points made by the groups and the sophistication of their understanding of the complexity of making a treatment recommendation. As a class they missed very few important ideas.)
- *Step 12.* Give any related homework assignment and an example of the type of questions they are likely to see on the next test related to this exercise.
- *Step 13.* As the students leave, offer them copies of all of the Expert Group handouts.

Pre-class and Follow-up Assignments

This case was designed to require almost no pre-class preparation. Assigning a textbook reading after this class session that covers depression and each of the major types of treatments would be appropriate. (In my abnormal psychology class I have used four or five different texts and they all have sections discussing most of these treatments of mood disorders.)

It is important to see if students have taken seriously the caution against diagnosing and suggesting treatments to others. Ask some questions about this to make sure this outcome has been achieved. (I usually find that they have a much clearer idea about the need to seek professional help in making these decisions after seeing how complex the process is.)

Inviting staff in from the counseling and health centers on campus can be a good follow-up to this class session. (After doing this case, I found students were very curious about what treatments were available and how to access them.)

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INTERNET SOURCES

The Hypericum (St. John's Wort) & Depression Home Page. Site contains the complete texts of *Hypericum (St. John's Wort) and Depression* and *How to Heal Depression* as well as the latest news and information on Hypericum.

<http://www.hypericum.com>

RxList: The Internet Drug Index.

<http://www.rxlist.com>

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Image Credit: Detail of 32¢ United States Stamp, "America Survives the Depression".

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