

Diagnosing depression

Introduction

This activity uses depression as an example to introduce some of the difficulties involved in making reliable diagnoses of mental illnesses. Students read and discuss fictitious case studies about five students who are unhappy for a variety of reasons and look at the criteria used for screening for depression. The activity highlights why good criteria for depression matter. In Part 2 it explains how diagnostic criteria have changed over time.

Correct diagnosis of depression requires skill and experience, and teachers should not promote the idea that diagnosis is simply a matter of ticking boxes.

Sensitive discussion should be included at some point in the activity, to allow students to share their ideas on how they should behave if they suspect that one of their friends is depressed. It is also very important to be aware that there may well be a student with some level of depression in the class.

The activity

Students could discuss each case study in small groups or the activity could start with the class discussion. It may reveal different attitudes towards depression: some may be inclined to reach a clinical diagnosis while others will feel that depression is not a real disease. Most will have some personal experience of some level of depression.

Part 1

Students could work through the cases and then discuss the questions in small groups followed by a class review of their answers and a discussion of the diagnostic criteria in the student sheets.

Part 2

It may be helpful to read the text in class and discuss any parts that are unclear before going on to answer the questions individually or in small groups.

Resources

A possible starting point might be to show clips from [Health Talk Online](#) where people talk about their experiences of depression.

[The NHS web site](#) has an interactive depression indicator “Could you be depressed?” which requires answers to nine questions, corresponding to the main criteria for depression.

[The Royal College of Psychiatrists](#) provides good and supportive information on depression.

How Science Works

Aa We can never be sure that an observation is accurate or that a measurement tells us the ‘true’ value of the quantity we are measuring. We may be influenced by what we expect. Random and/or systematic errors can arise from limitations of the measuring equipment used, or our skill in using it. A single measurement of anything is therefore inherently risky.

Ab If we make repeat measurements of the same quantity, the values are likely to vary. This might be because the quantity we are measuring is changing, or because of measurement error.

Ea The topics, questions and problems that scientists choose to work on, and the methods and approaches they use, are strongly influenced by the previous work and publications of other scientists, and by established traditions and practices in that field of research.

Suggested answers to questions

Part 1

2. These case studies are very brief and it is really important to reiterate the point that diagnosis requires more than just ticking off a list of criteria. There are no right answers, as each fictitious account includes some indicators of depression, though not necessarily enough to warrant a diagnosis. A clinical diagnosis would require a set of questions and a discussion with the patient. It is quite possible that different doctors might come to different conclusions in borderline cases. Our comments on the five case studies are given below.

John is upset about his injury and the fact that he can not take part in football for a long time. He is probably just going through a bad time, rather than being clinically depressed but his parents and friends need to support him.

Clare appears to be depressed. She is not coping with recent events and her self-harm is an indicator of severe distress. The pills could indicate that she is taking un-prescribed medication or illegal drugs, or they may simply be painkillers. Weight loss is one sign of depression, though she is very active.

Jasmine shows some signs of depression such as feeling worthless, being indecisive and having sleep problems. As her father committed suicide there may be an inherited tendency towards depression. However, she may need to grieve properly for her father which she has not done before as she has needed to be supportive to her mother and brother.

Ahmed may simply be an attention seeker and be hoping that his ex-girlfriend will chase after him (although 'attention seeking' may be the sign of a disorder). His mood changes may be caused by drug taking. However, his severe mood swings could indicate bipolar disorder, a different condition from depression. He may be taking the drugs in an attempt to counteract the effects of the condition.

Rajiv is lonely and needs support. His unhappiness and sleep difficulties are depression criteria but may ease once he makes some friends.

3. Diagnosing depression is difficult and doctors will sometimes get it wrong. Is it better to over or under diagnose?

(a) What are some of the adverse consequences for an individual of a false negative diagnosis of depression?

Depression is very debilitating and they will not receive the treatment that would allow them to continue with a normal life. In extreme cases there is a risk of suicide.

(b) What are some of the adverse consequences for an individual of a false positive diagnosis of depression?

They might be given drug treatment that was not needed. Any of the drugs used to treat depression have unpleasant side effects. Some symptoms of depression mimic those of other diseases, such as Alzheimer's in the elderly. A diagnosis of depression may replace a more accurate diagnosis. There can be a social stigma attached to the diagnosis of depression, so the attitudes of friends, colleagues and employers might change (assuming they knew). The patient might alter their behaviour because they wrongly believe that they are depressed.

(c) Compare the diagnosis of an infectious disease and a mental condition, such as depression. *Infectious diseases can usually be diagnosed by identifying the pathogen concerned (or related antibodies) when samples are taken from the patient. Many infectious diseases have specific symptoms which only vary in severity between patients. Mental illness is much less easily defined and requires the recognition of a cluster of psychological, physical and social indicators. Its diagnosis is inevitably subjective to some extent, since no patient will develop all the symptoms listed, and it is a matter of judgement where the cut-off point lies. Also there are different types of depression with*

different symptoms and treatments. One of the main criteria for the clinical diagnosis of depression is a social one: is the patient unable to continue with the normal pattern of their life? In this respect there are some overlaps with non-mental illnesses: a doctor is likely to diagnose a condition such as back pain or a viral illness when s/he feels that the condition is likely to affect work or relationships. Milder conditions might be ignored.

4. Any diagnosis must be reliable, if repeated it should give the same result. A reliable set of criteria for diagnosis would mean that all patients with the same illness have the same diagnosis.
- (a) How does a set of agreed criteria for diagnosing depression help reliability?
Any doctor would use the same agreed criteria rather than applying their own different ideas. This is particularly relevant for borderline cases or those with other mental problems as well. Thus two doctors assessing the same patient are more likely to agree on the diagnosis.
- (b) The information has to be obtained mainly by questioning the patients or their relatives. Why is this a less reliable technique for gathering data than measuring levels of a substance in the blood, as might be done for a physical illness?
Different people's views on what is normal and what is unusual may vary. People's memory of how long they have been unwell or how often they have these moods is very unreliable. A blood test relies on an objective, quantifiable measurement whose reliability depends mainly on the accuracy of a machine.
- (c) There has been much discussion over whether the criteria lead to a reliable diagnosis if used with different cultural or ethnic groups. Suggest some ways in which culture may influence the reliability of the criteria.
The cultural differences between doctor and patient may inhibit honest discussion. Different cultures may have different codes of behaviour and willingness to admit to difficulties. There may be different tolerances of symptoms across different cultures
- (d) Reliable diagnosis is essential for research into drug treatments for depression. Explain why.
Evaluation of treatment requires measurement of a difference in the condition before and after the treatment. There is much pharmaceutical research into the mode of action of anti-depressant drugs, and the development of new drugs. Their development requires large scale and long term clinical studies on the effects of anti-depressants on peoples' mental state, and any side effects of the drugs. Measuring mental state is very difficult and has largely depended on self-report methods but unless the diagnosis of all patients is reliable comparisons between them and between before and after treatment will be of no value.
5. Diagnostic criteria must also be valid. They must be relevant to the illness, depression. Marital status or sexual orientation are not valid criteria, though relationship problems might be relevant in a detailed diagnostic interview.
- (a) Discuss whether or not body mass index, BMI, a measure of obesity, is a valid criterion for depression.
BMI is not a valid criterion. There are very many different conditions besides depression that might lead to under-weight or over-weight.
- (b) Suggest why none of the criteria listed above, taken on their own, are valid as a single criterion for depression.
Any one of these criteria might on their own be symptoms of other mental problems or physical disease. It is the particular combination that indicates depression.

Part 2

6. Can any set of criteria lead to a completely reliable diagnosis of a mental illness?
No. Even measurements of indicators of physical illnesses are subject to some errors, both systematic and random. The personal reporting of mental symptoms leads to far more errors.
7. People often make claims about modern society making people more depressed. Explain why it may be difficult to compare rates of depression over several decades.
The criteria and the actual labels have changed so that direct comparison is not possible.
8. DSM-II included homosexuality as a mental disorder. This was changed in 1974, following protests from gay activists at APA meetings and debates within the association.
 (a) Does this suggest that the classifications are scientifically or socially determined?
This one is strongly socially determined. The social change in attitudes to homosexuality has been very striking in recent years. Psychiatric research may have contributed a little to this shift but social pressure was the main factor. The classification has clearly followed this change in attitude.
 (b) Would it be right to conclude that all classifications are socially determined?
No one cannot generalise from one case. However attitudes to mental illness have changed over time, partly as a result of better treatments and a more humane approach to sufferers. . Inevitably, classification relies on a comparison with an accepted 'normal' situation, so this is bound to be socially determined to some extent.
9. Lifetime prevalence of depression has been recorded as about 3% in Japan and about 17% in the US. Suggest two different hypotheses to explain these striking differences in the level of diagnosis.
The difference may reflect real differences in mental health. If depression is in part caused by social factors the more individualistic and more mobile US society may cause more people to become depressed.
There may in fact be the same number of people with problems in both societies but cultural factors in the way the criteria are applied and the way people report their symptoms may lead to a different diagnosis.
10. The text attempts to explain why the old classifications of depression based on supposed cause were dropped in the 1980s.
 Describe two of the reasons given.
Unreliability of older classification
Move towards biological explanation for all depression.
Availability of drugs which, unlike psychoanalysis, do not require an explanation of an external cause.

Information for Part 2 text taken from

Alan M. Gruenberg, Reed D. Goldstein and Harold Alan Pincus (2005) Classification of Depression: Research and Diagnostic Criteria: DSM-IV and ICD-10 in Biology of Depression. From Novel Insights to Therapeutic Strategies Ed. Julio Licinio and Ma-Li Wong

Appendix

List of depression symptoms from Royal College of Physicians

Most people with depression will not have all the symptoms listed below, but most will have at least five or six.

You:

- Feel unhappy most of the time (but may feel a little better in the evenings)
- Lose interest in life and can't enjoy anything
- Find it harder to make decisions
- Can't cope with things that you used to
- Feel utterly tired
- Feel restless and agitated
- Lose appetite and weight (some people find they do the reverse and put on weight)
- Take 1-2 hours to get off to sleep, and then wake up earlier than usual
- Lose interest in sex
- Lose your self-confidence
- Feel useless, inadequate and hopeless
- Avoid other people
- Feel irritable
- Feel worse at a particular time each day, usually in the morning
- Think of suicide.

DSM-IV criteria

A. The person experiences a single major depressive episode:

For a major depressive episode a person must have experienced at least five of the nine symptoms below for the same two weeks or more, for most of the time almost every day, and this is a change from his/her prior level of functioning. One of the symptoms must be either (a) depressed mood, or (b) loss of interest.

- a. Depressed mood. For children and adolescents, this may be irritable mood.
- b. A significantly reduced level of interest or pleasure in most or all activities.
- c. A considerable loss or gain of weight (e.g., 5% or more change of weight in a month when not dieting). This may also be an increase or decrease in appetite. For children, they may not gain an expected amount of weight.
- d. Difficulty falling or staying asleep (insomnia), or sleeping more than usual (hypersomnia).
- e. Behavior that is agitated or slowed down. Others should be able to observe this.
- f. Feeling fatigued, or diminished energy.
- g. Thoughts of worthlessness or extreme guilt (not about being ill).
- h. Ability to think, concentrate, or make decisions is reduced.
- i. Frequent thoughts of death or suicide (with or without a specific plan), or attempt of suicide.

2. The persons' symptoms do not indicate a mixed episode.
3. The person's symptoms are a cause of great distress or difficulty in functioning at home, work, or other important areas.
4. The person's symptoms are not caused by substance use (e.g., alcohol, drugs, medication), or a medical disorder.
5. The person's symptoms are not due to normal grief or bereavement over the death of a loved one, they continue for more than two months, or they include great difficulty in functioning, frequent thoughts of worthlessness, thoughts of suicide, symptoms that are psychotic, or behavior that is slowed down (psychomotor retardation).

B. Another disorder does not better explain the major depressive episode.

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Introduction

Depression is a word many of us use, but it might mean anything from a temporary sadness over a disappointment to an inability to function or serious risk of suicide. Depression can be a serious and debilitating illness but unlike most infectious diseases it cannot be diagnosed by a simple laboratory test. This activity is about some of the issues involved in the diagnosis of a mental illness. You may also wish to learn more about people's experiences of depression by looking at the clips on [Health Talk Online](#).

Part 1 case studies

1. You are provided with fictitious case studies about five students who are unhappy for a variety of reasons. Which of them do you think describe someone who is clinically depressed, mentally ill rather than temporarily unhappy? Make a note of the symptoms that helped you make a judgement in each case. Discuss your diagnoses and the criteria you used with other students and/or your teacher. You will then look at criteria used by professionals.

Case studies

John aged 16 is a keen football fan who supports a premier division team and plays for his school first eleven. He spent the summer holiday at trials for a major football club, and they were extremely impressed by his talents. On returning to school he broke his leg very badly in the first match of the season, and has been told that he might not be able to play again this season, and may need surgery to repair his leg. His parents, who are very supportive, are worried about him as he spends a lot of time alone in his room, surfing the internet and listening to music. He is irritable and does not want to go out with his friends. His school has made contact saying that he has not handed in some of his coursework.

Clare is 15 and until recently was happy and outgoing. However, her parents have just split up, her dog has died and she has lost a lot of weight. She likes running and seems almost obsessive about getting up early and running several miles before school. She still goes out with her friends but is rather quiet most of the time. Last weekend when her friends met her, she kept pulling her sleeves down over her hands and was not following the conversation. They noticed some shallow cut marks on her wrists. She dropped her handbag and

some white pills fell out. She looked unkempt and did not seem to care about her appearance, and chose not to eat when her friends had lunch.

Jasmine's father committed suicide when she was three. She is now 17 and seems to have coped very well. She is very supportive of her mother and younger brother, and her academic record is good. In the last few months however, she has missed a lot of school with various illnesses. Her mother is worried about her because she does not seem to be able to make decisions and just drifts from day to day, not wanting to do anything. Her appetite is poor and she says that she feels she is worthless and unattractive. She went to the school disco recently but came home early in tears. She has difficulty sleeping.

Ahmed is 17 and is very popular at school. He likes to carry out practical jokes and enjoys taking part in school plays and musicals. When he says something in class it often makes everyone laugh. He likes sport but is not very good at it and likes to clown around. From time to time Ahmed's personality seems to alter. He becomes very quiet and subdued and goes off for long walks on his own. When spoken to he does not respond. His new girlfriend has broken up with him because he has stopped taking any notice of her. Also she saw him meeting someone near the bus station and handing over money and thinks he may be getting into drugs.

Rajiv is 18 and is starting his first term at university. Rajiv is serious minded and hard working and does not socialise much. It is the first time he has lived away from home and he is very homesick. He rings his parents every night and has not yet made any new friends. He is studying psychology and would like to be a psychiatrist or a social worker. He has difficulty sleeping as he is so stressed by university life.

2. Doctors use a standard set of criteria to help them diagnose depression. Look at the list of criteria and compare these with your own ideas. Do these criteria help with a diagnosis?

Criteria used to assess the severity of depression

Key symptoms: At least one of these, most days, most of the time for at least 2 weeks

- Low mood (feeling low, unhappy, sad or miserable, may also be very irritable mood)
- Fatigue (feeling tired or having little energy)
- Loss of interest or enjoyment

If any of above present, ask about associated symptoms:

- Poor appetite or weight loss (or weight gain)
- Difficulty sleeping
- More restless than usual or talking or moving more slowly

- Low self confidence or feeling of worthlessness
- Feeling of self reproach or guilt
- Diminished ability to concentrate or to make decisions
- Recurrent thoughts of suicide

Then ask about past, family history, associated disability and availability of social support

ICD-10 definitions

Mild depression: four symptoms

Moderate depression: five or six symptoms

Severe depression: seven or more symptoms, with or without psychotic features

Some psychiatrists will also consider whether the symptoms might be caused by other factors such as substance abuse or recent bereavement, less than two months ago. Either of these would rule out depression as a diagnosis.

If the depression alternates with manic episodes a diagnosis of bipolar disorder rather than depression is made.

3. Diagnosing depression is difficult and doctors will sometimes get it wrong. Is it better to over or under diagnose?

(a) What are some of the adverse consequences for an individual of a false negative diagnosis of depression?

(b) What are some of the adverse consequences for an individual of a false positive diagnosis of depression?

(c) Compare the diagnosis of an infectious disease and a mental condition, such as depression.

4. Any diagnosis must be reliable; if repeated it should give the same result. A reliable set of criteria for diagnosis would mean that all patients with the same illness have the same diagnosis.

(a) How does a set of agreed criteria for diagnosing depression help reliability?

(b) The information has to be obtained mainly by questioning the patients or their relatives. Why is this a less reliable technique for gathering data than measuring levels of a substance in the blood, as might be done for a physical illness?

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(d) Reliable diagnosis is essential for research into treatment of depression. Explain why.

5. Diagnostic criteria must also be valid. They must be relevant to the illness, depression. Marital status or sexual orientation are not valid criteria, though relationship problems might be relevant in a detailed diagnostic interview.

(a) Discuss whether or not body mass index, a measure of obesity, is a valid criterion for depression.

(b) Suggest why none of the criteria listed above, taken on their own, are valid as a single criterion for depression.

Part 2 Who decides on the criteria?

The symptoms that we recognise as depression have been observed for thousands of years, though different societies have described and named them in different ways. The first attempts to produce widely agreed classifications for mental illnesses began only in the twentieth century and the process continues today. Since the early 1950s two organisations have led the way in this work: the World Health Organisation, WHO, which produces the ICD¹ and the American Psychiatric Association, APA, which produces the DSM². Both ICD and DSM provide descriptions of the symptoms required to confirm a specific diagnosis. The main aims of these classification systems have been to improve communication between scientists involved in research and to help doctors discuss and improve treatment.

The first classifications for depression looked at cause as well as symptoms and distinguished between depression caused by a biological condition, called either melancholic or endogenous depression, and depression caused by stressful events, neurotic or exogenous depression. However international research showed that these early classifications did not lead to reliable diagnoses. At the same time the practice and approach of psychiatry towards depression shifted. There was a move away from psychoanalysis, which focuses on understanding life experiences, towards explanations based on biological factors, such as level of neurotransmitters, and on drug treatments, partly reflecting the availability of much better drugs.

¹ ICD International Classification of Diseases

² Diagnostic and Statistical Manual of Mental Disorders

During the 1980s a totally new approach to diagnosis was introduced reflecting the shift in psychiatry. It used sets of specific criteria similar to those in part 1, rather than the general descriptions used earlier. These criteria do not make any assumptions about cause but consider only the extent and duration of a set of symptoms. The new ideas were included in DSM-III and DSM-IV and in ICD-10. The two systems are very similar in most, though not all, ways. For example DSM separates major from minor depression whilst ICM uses three levels, mild, moderate and severe. The extent to which minor or mild depression should be treated, or simply monitored in case it becomes worse, remains in dispute.

Some psychiatrists now hope that new research will eventually lead to even better criteria based on biochemical, and genetic markers and on the results of neuroimaging and cognitive function tests.

6. Can any set of criteria lead to a completely reliable diagnosis?
7. People often make claims about modern society making people more depressed. Explain why it may be difficult to compare rates of depression over several decades.
8. DSM-II included homosexuality as a mental disorder. This was changed in 1974, following protests from gay activists at APA meetings and debates within the association.
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