4 ABNORMAL PSYCHOLOGY

Topics

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4.1 Factors affecting diagnosis

4.1.1 Normality versus abnormality

DEFINITIONS

Abnormality—not easy to define; this section describes various existing approaches
Abnormal psychology—a study of patterns of behaviour that deviate from the accepted norms; however, abnormal psychology does not study all deviations, only those severe enough to be classified as mental disorders

ESSENTIAL UNDERSTANDING

How do we decide whether a behaviour is abnormal? The history of abnormal psychology has witnessed many approaches to answering this question. The most influential approaches are as follows.

• Abnormality as a deviation from social norms. This approach is appealing because it is based on common sense, however, it raises the question of defining social norms in various social contexts.
• Abnormality as inadequate functioning. Rosenhan and Seligman (1989) proposed seven criteria of abnormality and suggested that degrees of abnormality can be established based on combinations of these criteria.
• Abnormality as a deviation from ideal mental health. Jahoda (1958) defined six characteristics of mental health, thus focusing on the positive side of human existence. While it is a balanced description of what it means to be healthy, many elements of the model are difficult to quantify.
• Abnormality as statistical infrequency. This approach equates abnormal to statistically unusual. It provides a rigorous way to quantify abnormality based on conventions of social sciences, however, statistical norms themselves may change with the course of time.
• The medical model of abnormality avoids a single definition of abnormality altogether and instead defines each individual disorder by the system of symptoms. Classification systems are used in the medical model to provide clinicians with guidance in diagnosing disorders and delineating between them.

THEORY

Abnormality as a deviation from social norms

This approach does not belong to any particular author; rather it is a common-sense approach of defining abnormality as something that is not “acceptable” in the society.

Evaluation of the approach

Strength
It suggests a simple and intuitively appealing definition of abnormality based on common sense.

Limitations
• Abnormality is defined relative to social norms, but social norms themselves are changeable (both cross-culturally and in time).
• This approach to defining abnormality may be convenient for societies to impose control over citizens. If an individual behaves in a way that does not meet the interests of the society, this individual may be easily labeled as abnormal and even isolated. Since such a possibility exists even in theory, this approach may be ethically dangerous.
• There are cases when a behaviour is socially acceptable and yet harmful to the individual. Not including such behaviours is a drawback of the definition.
• Social norms differ depending on the context (for example, the same behaviour will be perceived differently at a rock concert and at a business meeting). This means that the definition must specify what behaviour is acceptable for what context, which is an impossible task. This makes the definition open for interpretation—another drawback.
Rosenhan and Seligman (1989)—abnormality as inadequate functioning

Rosenhan and Seligman (1989) proposed seven criteria that can be used to establish abnormality:
- suffering
- maladaptiveness (for example, inability to achieve major life goals)
- unconventional behaviour (that is, not like that of most people)
- unpredictability of actions or loss of control over actions
- irrationality (others cannot understand why the person behaves in this way)
- observer discomfort (it makes others uncomfortable to witness the behaviour)
- violation of moral standards.

Evaluation of the approach

Strengths
- It embraces more dimensions of abnormality, for example, socially acceptable behaviour that causes individual suffering.
- It operationalizes abnormal behaviour in a way that can be established by observation.

Limitations
- The definition seems to be over-inclusive. For example, public displays of affection may cause observer discomfort (especially in some cultures), but is this enough to classify it as abnormal behaviour?
- Very few behaviours meet all seven criteria.
- Sometimes criteria may contradict each other. For example, unconventional behaviour may sometimes help an individual achieve major life goals.

To account for these limitations, Rosenhan and Seligman (1989) suggested the following.
- Abnormality is a continuum rather than a black-and-white phenomenon; there exist degrees of abnormality based on how many criteria are met.
- It is a combination of criteria that is significant, not each criterion on its own.

Jahoda (1958)—abnormality as a deviation from ideal mental health

Jahoda (1958) used the idea of mental health as the starting point. She believed it was much more important to define healthy behaviour than disorders because in not defining healthy behaviour we are missing a bigger picture of human existence.

The six characteristics of ideal mental health that Jahoda (1958) proposed were:
- efficient self-perception
- realistic self-esteem
- voluntary control of behaviour
- accurate perception of the world
- positive relationships
- productivity.

Evaluation of the approach

Strengths
- It is more humanistic—it focuses on health rather than disorders.
- It provides a balanced description of what it means to be healthy.

Limitations
- It seems impossible for a person to achieve all six criteria, so most people would be classified as “not entirely healthy” in this framework.
- Some parameters are difficult to measure. For example, it may require a subjective opinion of the clinician to establish that the client’s perception of the world is “accurate”.

Abnormal as statistical infrequency

This approach looks at separate traits and behaviours rather than deciding if “the whole person” is normal or abnormal. Traits and behaviours are considered abnormal if they are defined as statistically unusual. The definition requires thresholds after which we would consider behaviour to become “unusual”. These thresholds have been defined somewhat arbitrarily in statistics for social sciences, and they link to the following thresholds of statistical significance:
- \( p < 0.05 \) (rarer than 5 cases out of 100)
- \( p < 0.01 \) (rarer than 1 case out of 100)
- \( p < 0.001 \) (rarer than 1 case out of 1,000).

Evaluation of the approach

Strengths
- It is very quantifiable: traits and behaviours are compared to those of a large representative population.
- It labels behaviours and traits, not people.
- It links to statistical criteria used elsewhere in social research.

Limitations
- Statistical norms themselves are changeable because they are defined relative to the population, and the population does not remain the same. For example, overt homosexuality is more prevalent today than it was several decades ago; the average IQ in the world gradually increases (the Flynn effect).
- Statistically infrequent behaviours are not always undesirable—one example is unusually high IQ.
The medical model of abnormality

The medical model of abnormality assumes that abnormal behaviour, much like a physical disease, has a set of symptoms and a set of causes behind those symptoms (symptomology and etiology). Symptoms may be observed, causes may be inferred and treatment should target these inferred causes.

This model avoids the need for a general definition for abnormal behaviour altogether. Instead it focuses on mental disorders one by one, defining them descriptively by a system of symptoms. All these descriptions are then brought together in a classification system. Such classification systems assume that each disorder is characterized by a defined set of symptoms that can be differentiated from other sets of symptoms (disorders). See “4.1.2 Classification systems”.

Evaluation of the approach

Strengths
- It makes diagnosis independent of clinicians' beliefs regarding what causes the disorder. Psychiatrists may disagree on the origin of a disorder, but they should be able to use the common language of observable symptoms to agree on the presence of a disorder.
- It is flexible and testable. Like any model, it can be tested against empirical observations and refined if the fit is not perfect (this takes the form of new editions of classification systems being published).

Limitations
- Many symptoms of mental illness are not as easily observed as symptoms of physical disease.
- One symptom may be an indicator of multiple disorders, and any single disorder manifests itself in a variety of symptoms. This is a difficulty that classification systems must tackle.
- The problem of threshold is relevant for this approach as well. For example, if some symptoms are present and others are not, do we still diagnose a disorder?

4.1.2 Classification systems

- Classification system—a diagnostic manual providing a system of diagnostic categories, a set of symptoms for each diagnostic category, and rules for making a diagnosis based on these sets of symptoms.
- Psychoanalytic tradition—the approach to diagnosing mental illness based on the works of Sigmund Freud and his followers, focused on identifying unconscious drives and theorizing about childhood experiences.

ESSENTIAL UNDERSTANDING

Classification systems are the foundation of the medical model of abnormality.

Examples of classification systems
- The Diagnostic and Statistical Manual (DSM) is published by the American Psychiatric Association (APA). It is currently in its fifth edition (DSM-5) and is widely used in the USA.
- The International Classification of Diseases (ICD-10) is published by the World Health Organization and is widely used in European countries.
- The Chinese Classification of Mental Disorders (CCMD-3) is also widely used.

History
- Views on mental illness have gradually changed as a result of scientific advances and social movements, and these changes are reflected in the history of classification systems (for example, the DSM).
- In the DSM, there was a major shift from establishing causes of disorders based on the clinician's interpretation of the client's behaviour to describing a set of observable symptoms and trying to create classification categories that would not overlap. In this way, the role of theory in diagnosis was gradually reduced. This might have made diagnosis more superficial, but it also allowed clinicians with diverse theoretical backgrounds to use a common language and arrive at similar diagnoses.

Challenges
Someone designing a classification system faces a variety of challenges, some of which are: explanation versus description; validity versus reliability; cross-cultural applicability.

Research
Empirical research of classification systems takes the form of investigating their validity and reliability. See “4.1.3 Validity and reliability of diagnosis”.

4 Unit 4 Abnormal psychology
History of the DSM

<table>
<thead>
<tr>
<th>Edition</th>
<th>Year</th>
<th>Characteristics</th>
</tr>
</thead>
<tbody>
<tr>
<td>DSM-I</td>
<td>1952</td>
<td>This edition was heavily based on psychoanalytic traditions: clinicians looked for origins of abnormal behaviour in childhood traumas. The focus was on establishing causes, which involved a lot of interpretation on the part of the psychiatrist.</td>
</tr>
<tr>
<td>DSM-II</td>
<td>1968</td>
<td>The publication itself was triggered by attacks from scientists (for example, behaviourists criticized using unobservable constructs such as “trauma” or “unconscious drives”) and social activists (for example, the anti-psychiatry movement viewed psychiatry as a form of social manipulation). However, DSM-II still retained a lot of psychoanalytic features; it was focused more on explaining and interpreting disorders than describing them.</td>
</tr>
<tr>
<td>DSM-III</td>
<td>1980</td>
<td>The publication was the result of doubts raised in the scientific community regarding the ability of psychiatrists to reliably differentiate between normality and abnormality. Studies such as Rosenhan (1973) questioned the validity of diagnosis. Diagnostic categories had to be made more “scientific”, and this was done by a change of focus from explaining and interpreting disorders to describing them. With a focus on describing sets of observable symptoms, DSM-III included 265 disorders organized in 5 groups (the multi-axial system).</td>
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<tr>
<td>DSM-IV</td>
<td>1994</td>
<td>DSM-III was criticized for overdiagnosis (too many people could be diagnosed with a mental disorder). In response, the diagnostic categories were revised and DSM-IV included the clinical significance criterion: symptoms were considered clinically significant if they created major distress or interfered with daily functioning. The multi-axial system was still used to characterize the patient's mental state against five dimensions, providing a more holistic approach to diagnosis.</td>
</tr>
<tr>
<td>DSM-5</td>
<td>2013</td>
<td>The multi-axial system was criticized for being artificial and not reflecting the reality of things. Ultimately, it was eliminated. Cultural variability of symptoms was emphasized and tools such as the “Cultural formulation interview” were included to help clinicians avoid cultural bias in diagnosis.</td>
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Table 4.1

Challenges in designing a classification system

Challenges involve:
- explanation versus description
- validity versus reliability—when explanation is eliminated from the process of diagnosis, it makes diagnosis more consistent across clinicians (more reliable), but leaves less room for consideration of unique individual circumstances (which may reduce validity)
- discrete diagnostic categories versus degrees of abnormality
- delineation between categories
- cross-cultural applicability
- medicalization of the population (percentage of the population that can be categorized as mentally ill).

Empirical research of classification systems

Empirical research of classification systems takes the form of establishing their validity and reliability. A good classification system should:
- allow different clinicians using it to arrive at the same diagnoses, even if their theoretical orientations are not the same
- allow a diagnosis that corresponds to the real problem experienced by the patient
- take into account cultural differences regarding reporting, demonstrating and interpreting symptoms of abnormal behaviour
- minimize potential biases in the diagnostic process.

All these aspects are investigated in multiple research studies. The medical model is just that—a model, a construct that we design to describe reality. We conduct numerous checks of how well the construct fits the observed data, and if the fit is not perfect, we modify the model and repeat the cycle of checks.

Using the example of the DSM, this research into reliability and validity of classification systems is discussed in “4.1.3 Validity and reliability of diagnosis”.

4.1.3 Validity and reliability of diagnosis

- **Comorbidity**—co-occurrence of two or more diagnoses
- **Diagnosis** (“dia” = differentiating, “gnosis” = knowledge; telling apart)—relating a pattern of abnormal behaviour (symptoms) to a certain category in the classification system
- **Misdiagnosis**—when a person is diagnosed with a disorder that does not match the actual behaviour
- **Predictive validity**—the ability of diagnosis to predict how the disorder will respond to treatment; if diagnosis is valid, the development of the disorder should be predictable
- **Reliability of diagnosis**—the extent to which different clinicians using the same classification system arrive at the same diagnosis for the same patient; also known as “inter-rater reliability”
- **Validity of diagnosis**—the accuracy of diagnosis; that is, the extent to which the diagnosis reflects the real nature of the patient’s problem
ESSENTIAL UNDERSTANDING

Validity and reliability are two essential characteristics that define the quality of diagnosis.

There are two ways to establish inter-rater reliability of diagnosis: the audio/video-recording method and the test-retest method. See “Establishing inter-rater reliability of diagnosis”.

A diagnosis is valid if it corresponds to the actual disorder.

Trade-off

There is usually a trade-off between validity and reliability of classification systems. As interpretation is eliminated from the process of diagnosis in an attempt to increase consistency across clinicians, some nuances and individual circumstances may be ignored, meaning that the diagnosis is not perfectly valid for a particular individual. See “Relationship between validity and reliability of diagnosis”.

Reliability of the DSM

Reliability of the various editions of the DSM reflects the attempts to improve consistency of diagnosis by different clinicians.

- Reliability of the early editions (DSM-I and DSM-II) was found to be very low (for example, Beck et al 1962), which triggered an initiative to make diagnostic categories more observable and eliminate interpretation from the diagnostic process.

- Reliability of DSM-III was higher, but some diagnostic categories were shown to be more reliable than others; the spread was considerable. See Di Nardo et al (1993), Williams et al (1992).

Validity of diagnosis

The key problems related to establishing validity of diagnosis are:

- heterogeneity of clinical presentation
- diagnosis based on symptomatology rather than etiology
- the issue of comorbidity
- stability of symptoms
- choosing appropriate treatment

Validity cannot be directly quantified. There are two approaches commonly used to assess validity of diagnosis.

- Assessment of systematic biases in the diagnostic process. See 4.1.4 The role of clinical biases in diagnosis.

- Assessment of psychiatrists’ ability to detect the mental disorder when the disorder is objectively known. A classic study by Rosenhan (1973) brought into question the ability of psychiatrists to tell mentally healthy people from the mentally ill (at the time when DSM-II was in use). See Rosenhan (1973).

RESEARCH Establishing inter-rater reliability of diagnosis

There are two ways to assess inter-rater reliability of diagnosis.

- The audio/video-recording method—one clinician conducts a clinical interview with the patient; this interview is recorded and the recording is given to a different clinician who then makes a diagnosis independently. The two diagnoses are compared.

- The test-retest method—two clinicians conduct interviews with the same patient independently.

The limitation of the first method is its artificiality. The diagnosis may depend, for example, on the nature of questions asked during the clinical interview or how the patient responds to non-verbal reactions of the clinician.

In a natural situation two clinicians conducting the same interview will conduct it differently, which will contribute to variance in diagnosis. However, in the audio/video-recording method the clinicians observe exactly the same behaviour—a scenario that is very unlikely in real life. As a result, estimates of reliability of diagnosis may be somewhat inflated.

The second method is much less artificial. However, the limitation is the necessity to keep the time interval between the two interviews short. If the interval is too long, the patient’s symptoms may change naturally. Inconsistencies in diagnosis will partially reflect the real changes in the patient’s behaviour, and reliability of diagnosis in this case will be underestimated.

Relationship between validity and reliability of diagnosis

Validity and reliability of classification systems tend to be inversely related: as reliability increases, validity has a tendency to decrease, and vice versa. Although theoretically a classification system may exist that enables perfectly valid diagnoses that by definition will be perfectly reliable, the reality of designing classification systems has been different.

How can this trade-off between validity and reliability be explained? To increase reliability of a classification system we need to ensure that all clinicians, irrespective
The reliability of the DSM was first found to be extremely low. For example, Beck et al. (1962) found that agreement on a specific diagnosis between two psychiatrists was only 54% on average. Reliability of DSM-II was shown to be similarly low. This caused the APA to start an initiative to make diagnostic categories in the DSM more observational and thus "scientific". Considerable changes were made in the new edition.

Research studies confirmed that there was a visible improvement in the reliability of diagnosis using DSM-III. This was also enhanced by the addition of the Structured Clinical Interview for DSM (SCID) to the diagnostic process—a standardized interview that allowed all clinicians to follow the same protocol.

However, although the improvement in reliability was obvious on average, it was not universal—reliability of diagnosis became acceptable and even excellent for some mental disorders, but remained low for some others.

Di Nardo et al. (1993) found excellent reliability for such diagnostic criteria as simple phobias and obsessive-compulsive disorder (OCD), but poor reliability for generalized anxiety disorder (GAD). Williams et al. (1992) showed that test-retest reliability for different diagnostic categories in DSM-III varied from “almost perfect” to “moderate” and “weak”. This seemed to depend mostly on whether or not a disorder has clear behavioral manifestations. For example, substance abuse has more obvious behavioral manifestations than a social phobia.

Since progress was nonetheless obvious, this line was continued and the new editions (DSM-IV and DSM-5) further refined diagnostic categories to increase consistency of diagnosis, especially for the disorders that had been associated with low reliability of diagnosis.

Paradoxically, recent studies show that reliability of DSM-5 is often lower than that of the earlier editions, even for the diagnostic categories that remained largely unchanged.

Regier et al. (2013) summarized data from field trials for the DSM-5 and reported mixed results. On the one hand, out of 23 diagnostic categories that were studied, more than half demonstrated moderate to strong reliability. On the other hand, six categories were in the weak range and three categories were in the unacceptable range. Major depressive disorder (MDD) was among the categories that had “weak” reliability of diagnosis, which is surprising because this category did not change much from the earlier editions of the DSM.

Chmielewski et al. (2015) explained this paradox by observing that modern studies of reliability of diagnosis use more rigorous methods and research procedures, as compared to earlier studies. Most importantly, field trials for DSM-5 almost exclusively used the test-retest method of establishing reliability, while earlier studies (with earlier editions of the manual) often used audio-/video-recordings. As we know, estimates of reliability in the test-retest method are more conservative, but probably closer to the reality of clinical diagnosis.

Current issues

Results of current research studies and earlier research studies are not directly comparable, but we can assume that estimates obtained from the recent studies are more realistic.

The DSM has succeeded in increasing reliability of diagnosis on average, but this remains inconsistent across diagnoses. Further work needs to be done to enhance reliability of certain diagnostic categories.
Validity of diagnosis

Validity is the extent to which diagnosis corresponds to the reality (that is, reflects the real nature of the patient's problem).

Key problems related to validity of diagnosis

- Heterogeneity of clinical presentation—one and the same disorder can manifest itself differently in different patients, so the diagnostic manual should allow for some flexibility.
- Classification is based on symptomology rather than etiology. This means that diagnostic categories will overlap, because two disorders that have distinct causes may manifest themselves in similar symptoms.
- Comorbidity—this is an issue because if disorders A and B frequently occur together, it raises the question: can they be just symptoms of a more general disorder C? In other words, the problem is where to draw the line between symptoms of the same disorder versus two different disorders.
- Stability of symptoms—some symptoms are not stable, and making a diagnosis on their basis would be incorrect, so clinicians have to ensure that the symptoms they observe are stable in time.
- Selecting treatment—diagnosis determines the type of treatment that will be prescribed, and it is important that this treatment targets the real cause of a disorder. In a sense, effectiveness of treatment is a test for validity of diagnosis.

Validity of diagnosis cannot be directly quantified, but it can be assessed through research of clinical biases. To achieve this, two ways are commonly used:

- Assessment of the extent to which diagnosis is affected by various sources of clinical bias. For example, two clinicians with different cultural backgrounds should arrive at the same diagnosis for the same patient using the same classification system, otherwise we conclude that validity of the classification system is compromised by cultural bias.
- Assessment of psychiatrists’ ability to diagnose the disorder when the disorder is objectively known (but not disclosed to the psychiatrist).

The first approach links to a variety of clinical biases in diagnosis. See “4.1.4 The role of clinical biases in diagnosis”. The second approach is rare because we cannot “objectively” know the disorder other than through diagnosis. However, it is a more direct test of validity. This approach was used in Rosenhan’s (1973) study.

RESEARCH Rosenhan (1973)—sane in insane places

Essential understanding

- Results of this classic study questioned the ability of psychiatrists to differentiate between mental health and mental illness. The study triggered the process of modifying the DSM to make diagnostic criteria more observable.

Aim

To investigate whether psychiatrists in a naturalistic setting could tell the difference between sane and insane people.

Method

Field study with elements of participant observation.

Procedure

Eight mentally healthy subjects tried to gain admission to psychiatric hospitals. In the interview with the psychiatrist the pseudo-patients followed a standard script where they complained of hearing voices that said “empty”, “hollow” and “thud”, with everything else being indiscernible. This was the only symptom they made up; they were instructed to answer all the other questions about themselves honestly. If admitted, they were also supposed to try getting out by convincing the staff that they were in fact sane.

Upon admission, the pseudo-patients stopped simulating symptoms and behaved normally. They told the staff they did not experience any symptoms any longer and sought to be discharged from the hospital. At the same time, they secretly wrote down their observations.

Results

- Seven out of eight patients were admitted to hospital with a diagnosis of schizophrenia.
- When discharged, they were all diagnosed with “Schizophrenia in remission”.
- It took the patients on average 19 days to get out of the hospital by their own means (range from 7 to 52 days).
- None of the hospital staff ever suspected that the pseudo-patients were in fact healthy.
- The normal behaviour of the pseudo-patients was often misinterpreted as symptoms of a disorder.
- The patients were largely ignored by the staff. The average amount of time spent by members of the staff with each patient was under seven minutes a day. When addressed with a question, psychiatrists would often ignore the patient and move on.

Follow-up study

Since the professional community was highly sceptical of Rosenhan’s results, he conducted another study with a hospital that was informed beforehand that pseudo-patients would be sent to seek admission there. In fact, Rosenhan did not send anyone. Staff members used a 10-point scale with each new patient to rate how likely they were to be a pseudo-patient.

Results showed that psychiatrists and staff members often rated the real patients as pseudo-patients quite confidently.

Conclusion

Rosenhan concluded that psychiatrists lacked the ability to distinguish mental disorders from sanity, which questions the validity of psychiatric diagnoses. He suggested that this alarming situation could be explained by the effect of labelling: once someone is labelled with a disorder, everything he or she does is interpreted through the lens of that disorder. This effect of labelling raises a lot of ethical considerations.
Rosenhan provided the first direct test of validity of psychiatric diagnosis (DSM-II was used at the time of the study). His results were surprising and alarming, and this attracted the attention of the scientific community to the problems of diagnosis, triggering further development of classification systems. The study has also sparked extensive research into clinical biases.

4.1.4 The role of clinical biases in diagnosis

- Clinical bias in diagnosis—a systematic deviation from accuracy in diagnosis caused by misinterpretation of the patient's behaviour; clinical bias may be associated with clinician variables and patient variables
- Clinician variables—professional background, beliefs, attitudes and other characteristics of the clinician that may cause systematic deviation in diagnosis
- Cultural syndrome—a set of symptoms specific to a particular culture (that does not exist outside of that culture)
- Expression of symptoms—cultural variations in the way symptoms of a mental disorder are usually presented in a clinical situation
- Patient variables—characteristics of the behaviour of certain groups of patients in the clinical situation that may cause misdiagnosis
- Reporting bias—differential rates of reporting symptoms of mental disorders in different cultures (may be associated with stigmatization of mental illness in traditional societies)
- Somatization—expressing symptoms of mental illness in the form of physical malfunction

ESSENTIAL UNDERSTANDING

All clinical biases in diagnosis may be broadly divided into three groups.

- Clinician variables (characteristics of the clinician that may cause certain systematic biases in diagnosis). See “Clinician variables in diagnosis”.
- Patient variables (biases related to the patient’s age, gender, race, and so on). See “Patient variables in diagnosis”.
- Cultural factors in diagnosis (which result from the clinician and the patient having different cultural backgrounds). See “Cultural factors in diagnosis”.

Clinician variables in diagnosis

Sources of bias associated with the clinician include:

- the clinician's theoretical orientation—as demonstrated, for example, in Langwieler and Linden (1993)
- the clinician's abilities (such as perspective-taking, tolerance for uncertainty, tolerance for differences)
- the clinician's cognitive biases (such as confirmation bias or illusory correlation)—see “Unit 2 Cognitive approach to behaviour” for more on cognitive biases.

RESEARCH Langwieler and Linden (1993)—the clinician’s theoretical orientation

Essential understanding

Diagnosis may be influenced by the theoretical orientation and personal attitudes of the clinician.

Aim

To find out if biases associated with clinicians’ professional background exist in real-life medical decision-making processes when the clinicians do not suspect they are participating in a study.

Method

The study focused on individual differences between clinicians while keeping the patient variables constant. The study used a combination of qualitative methods including covert observation, interviews and content analysis.

Procedure

- A pseudo-patient was trained and presented to four clinicians during the regular working hours. The pseudo-patient was a 30-year-old female physician who pretended to work as a clerk; the story she presented was designed according to DSM-III symptoms of major depressive disorder (MDD).
- Four clinicians were selected, each with a different professional background (for example, psychoanalytic training versus behaviourist). All of them gave informed consent to participate in a study on medical decision-making where a pseudo-patient would come to their office unannounced and record the whole session on a concealed tape recorder. None of the clinicians were able to actually identify the pseudo-patient.
- After the study clinicians listened to the session recording with the researchers and recalled their thoughts during the interview. Their comments while listening to the recordings were transcribed and submitted to a content analysis.

Results

- All clinicians arrived at slightly different diagnostic conclusions. For example, medication was prescribed in
some cases and not prescribed in others. Suicidal thoughts were investigated by some clinicians but not others.

- The predominant diagnostic concept (the initial diagnosis) was formed very early (in less than three minutes) in the process of the interview. In theory, assessment should come first and conclusions second, but analysis of transcripts revealed that these processes actually appeared to be interdependent: an initial conclusion was made early in the process and influenced the subsequent assessment procedures. In all cases the early concept was identical to the final diagnostic conclusion.

**Conclusion**

There are marked individual variations in the diagnostic process carried out by clinicians of varying professional and theoretical backgrounds. This therapist individuality contradicts the idea of a standardized diagnostic process and can be regarded as a bias.

### Patient variables in diagnosis

Patient variables are related to the fact that different groups of people behave differently in a diagnostic process. Patient variables may take many forms; some examples follow.

- Reporting bias—some groups experience symptoms of a disorder but fail to acknowledge them and report to professionals. See Furnham and Malik (1994).
- Somatization—some groups experience symptoms of a mental disorder in a physical form; they will report the symptoms to a physician rather than a psychiatrist. This is especially prevalent in societies where mental disorders are stigmatized. See Lin, Carter and Kleinman (1985).
- Perception of depression—some groups report different symptoms of the same disorder. For example, Payne (2012) demonstrated that clinicians misdiagnosed depression more often when clients presented culturally expressed depressive symptoms. See Payne (2012).

### RESEARCH

**Furnham and Malik (1994)—reporting bias for depression in British Asians**

**Essential understanding**

Cultural differences in the way mental disorders are perceived may influence the rate at which they are reported.

**Aim**

To investigate cross-cultural beliefs about depression.

**Background**

Statistically British Asians (immigrants from Bangladesh, India and Pakistan) are rarely diagnosed with depression. This could have three explanations:

- British Asians actually have better mental health.
- British Asians have depression but fail to report it (reporting bias).
- British Asians have depression but they report physical symptoms instead (somatization).

**Participants**

152 female subjects in two age groups: young (aged 17–28) and middle-aged (35–62). Half of the participants were Native British, the other half were of Asian origin (born and educated in India, Pakistan or Bangladesh).

**Method and procedure**

This was a quasi-experiment. Participants filled out questionnaires about their symptoms of mental illness and their beliefs about depression. Responses were compared across groups (the two IVs were culture and age).

**Results**

- Perception of depression differed among Asian and British participants. For example, Asian participants (but not British participants) believed depression is temporary and can be fixed by having a job outside the home.
- These differences were less pronounced in the group of younger women.
- Asian middle-aged women reported being depressed significantly less than the younger group.

**Conclusion**

Cultural differences exist in the way depression is perceived. These differences may be attributed to underlying cultural dimensions (such as individualism versus collectivism). These cultural differences influence the rates at which disorders are reported: people from traditional collectivistic societies tend to report depression more to relatives and less to professionals. Globalization gradually erases these cultural differences, with younger generations having less reporting bias.

### RESEARCH

**Lin, Carter and Kleinman (1985)—somatization in refugees and immigrants**

**Essential understanding**

Somatization may be prevalent among certain social groups. It prevents patients from accurately reporting symptoms of mental illness.

**Aim**

To determine the presence of somatization in certain cultural groups.
Method
Analysis of clinical record; quasi-experiment (comparison of pre-existing groups).

Participants
Chinese, Filipino, Vietnamese and Laotian patients that were undergoing treatment in US hospitals. Half of the patients were refugees (they had been forced to move due to the war in Vietnam). The other half were immigrants (it was their conscious decision to emigrate).

Procedure
The researchers analysed clinical records of patients in US primary care. They were looking for signs of somatization, which was defined as vague somatic symptoms in the absence of a clear etiology. Rates of somatization were compared across groups.

Results
• Somatization was diagnosed in 35% of patients.
• Refugees were more likely to have somatization than immigrants.
• Patients with somatization were more likely to come from a “traditional” background (with larger household sizes and lower levels of education).
• Patients with somatization were more likely to be less proficient in English.

Conclusion
Somatization is prevalent among certain social groups, such as Asian refugees and immigrants. People from traditional societies (where mental disorders tend to be stigmatized) are more prone to somatization. Refugee status also contributes to somatization, probably due to the added stress of forced relocation and acculturation.

Essential understanding
Clinical bias in diagnosis may be produced by clinicians’ insensitivity to cultural expression of symptoms.

Aim
To investigate whether misdiagnosis is associated with race of the patient or cultural specificity in the way symptoms of a disorder are presented.

Participants
239 clinicians.

Method
A 2x2 experiment. The DVs were:
• race of the patient (African American or Caucasian)
• expression of symptoms of depression (classic versus culturally specific).

Procedure
Clinicians were asked to make a diagnosis after watching four videos, which were:
• African American patient displaying classic symptoms of depression
• African American patient displaying culturally expressed symptoms
• Caucasian patient displaying classic symptoms of depression
• Caucasian patient displaying culturally expressed symptoms.

Results
Clinicians misdiagnosed depression more often when culturally expressed symptoms were presented, regardless of the race of the patient.

Conclusion
It is not the race itself that produces the bias, but clinicians’ insensitivity to culturally specific expression of symptoms. This also implies that clinicians can be trained to avoid this bias by recognizing cultural variations in the presentation of symptoms.

Cultural factors in diagnosis
Cultural dimensions started making their way into the DSM in its fourth edition. It included a “cultural formulation interview” in an appendix and a glossary of “culture-bound syndromes” (later renamed as “cultural syndromes”). More attention was given to cultural variables in DSM-5.

“Cultural syndromes” are sets of symptoms that are only recognized as illness in a particular culture. In fact, these symptoms may only exist in a given culture and nowhere else. Some examples of cultural syndromes follow.
• Ataque de nervios (“attack of the nerves”) is a syndrome found mostly among Hispanic people. Symptoms include uncontrollable screaming, trembling and partial loss of consciousness. It may be a culturally acceptable form of reaction to extreme stress.
• Shenjing shuairuo (neurasthenia) includes symptoms of fatigue, anxiety, depressed mood and general weakness. This is a diagnosis specific to Asia (especially China), and it may be a culturally accepted form of depression. Traditional medicine describes this syndrome as loss of vital energy.
• Taijin kyofusho is a syndrome specific to the Japanese and the Korean cultures. It involves a fear of interpersonal relationships based on an irrational belief that others will not be pleased about one’s physical appearance or body odour.

To avoid clinical bias, especially in today’s world where clinicians are more likely to have patients with diverse cultural backgrounds, it is important for clinicians to be trained in a way that increases their awareness about cultural syndromes.

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4.2 Etiology of abnormal psychology

4.2.1 Prevalence rates and disorders

**Definitions**

- **Bereavement exclusion**—a condition that existed in DSM-IV and stated that depression cannot be diagnosed if the symptoms occur less than two weeks after a significant loss, such as the death of a close person (this condition was removed in DSM-5)
- **Onset age of a disorder**—the average age when individuals in a given population are first diagnosed with the disorder
- **Period prevalence**—the proportion of people in a given population who have the disorder within a given time interval; typically used periods are 12-month prevalence, lifetime prevalence
- **Point prevalence of a disorder**—the proportion of people in a given population currently diagnosed with the disorder

**ESSENTIAL UNDERSTANDING**

It is important for practical reasons to characterize the spread of a disorder in a population. The main parameters used for this purpose are prevalence rate (point prevalence and period prevalence) and onset age (see “Definitions”).

Major depressive disorder (MDD) has high prevalence rates. The World Health Organization (WHO) forecasts depression to be the second leading cause of disability in the world by 2020. Prevalence rates of MDD vary across cultures. The highest prevalence estimates are found in some of the wealthiest countries in the world. At the same time, age of onset and sociodemographic correlates of major depression do not vary substantially across cultures. See *Kessler and Bromet (2013)*.

It is not easy to separate true prevalence of disorders from variations of estimates associated with:

- the classification system in use
- reporting bias
- cultural variations in the expression of symptoms—see “Factors influencing prevalence rate estimates”.

Since we can only establish prevalence rates of disorders through estimates, and our estimates are influenced by the currently used classification system and a variety of clinical biases, the topics “4.1.2 Classification systems” and “4.1.4 The role of clinical biases in diagnosis” are an indispensable part of a discussion of prevalence rates of disorders.

**RESEARCH**

*Kessler and Bromet (2013)—cross-national study of prevalence rates of depression*

**Essential understanding**

Available data indicates that there is considerable cross-cultural variability in prevalence of depression. However, other parameters such as onset age and sociodemographic correlates are found to be quite consistent across cultures.

**Aim**

To compare prevalence of depression across cultures.

**Method**

Review of publications containing epidemiological data (epidemiological surveys).

**Results**

- MDD is a commonly occurring disorder in all countries where epidemiological surveys were carried out.
- Lifetime prevalence estimates for MDD ranged widely from 1% (Czech Republic) to 16.9% (USA).
- The 12-month prevalence estimates ranged from 0.3% (Czech Republic) to 10% (USA).

**Conclusion**

Prevalence rates of MDD vary considerably across cultures. This may be due to a variety of factors including the classification system in use, the survey used to establish the symptoms, representativeness of samples used in research, as well as true prevalence.

The highest prevalence estimates are found in some of the wealthiest countries in the world. The authors suggest that this may be due to income inequality, but this requires further exploration.

**Factors influencing prevalence rate estimates**

It is important to understand that true prevalence of depression (and mental disorders in general) may be obscured by a variety of factors. In epidemiological surveys we only arrive at estimates, and these estimates may be affected by the following.

- Classification system—there is no diagnosis independent of the classification system, and any changes in the diagnostic manual will be reflected in estimates of the prevalence of disorders. For example, in DSM-5 the bereavement exclusion for depression was removed, making the diagnosis more inclusive and potentially increasing the frequency of diagnosing people with depression.
• Reporting bias—for example, some populations may fail to report symptoms of depression because mental illness is stigmatized in their society. Even if they do report the symptoms, the threshold for reporting may differ (in some populations people report even the first signs of depression; in others they may wait until their condition is already severe).
• Cultural variations in the expression of symptoms—even if people do report their symptoms, they may present them differently in the clinical situation, which (depending on the training of the psychiatrist) may lead to bias in diagnosis.

In this sense the topic “Prevalence rates and disorders” is closely linked to two other sections: “4.1.2 Classification systems” and “4.1.4 The role of clinical biases in diagnosis”. Relevant material from these sections can be used to answer questions about prevalence of disorders.

4.2.2 Explanations for disorders: Biological explanations for depression

5-HTT—serotonin transporter gene: a gene involved in the regulation of reuptake of serotonin at brain synapses
Etiology of a disorder—a set of factors that caused it; we may distinguish between biological, cognitive and sociocultural etiologies
Gene-environment correlation (rGE)—the idea that genetic predisposition can influence the environment itself and so, when viewed in development, environment is not completely independent of genotype
Gene-environment interaction (G × E)—the idea that individuals having different genotypes will react to the same environment in different ways; for example, some people may have a genetic predisposition to depression that will make them more vulnerable to stressful life events
Selective serotonin reuptake inhibitors (SSRIs)—a class of drugs that act by preventing the reuptake of excess serotonin in the synapse, increasing its concentration

ESSENTIAL UNDERSTANDING

Biological explanations for depression include genetic factors and neurochemistry (neurotransmitters and hormones).

Genetic factors
• Research into genetic etiology of depression uses the same approaches as genetic research elsewhere in psychology. Genetic heritability of depression cannot be measured directly but it can be estimated from data obtained in such methods as twin studies, family studies, adoption studies and molecular genetics.
• In twin studies, the Falconer model has been traditionally used to estimate heritability. The Falconer model assumes that phenotype is comprised of three types of influences (genetic heritability, shared environment and individual environment): A + C + E = 1. Genetic heritability in this model (A) is assessed using rMZ (similarity between monozygotic twins) and rDZ (similarity between dizygotic twins). See “1.3.1 Genes and behaviour, genetic similarities” in “Unit 1 Biological approach to behaviour”.
• Using this approach, Kendler et al (2006) demonstrated that heritability of depression was significantly higher in women (A = 42%) than in men (A = 29%), and that the relative contributions of genetic and environmental factors did not change from generation to generation. See Kendler et al (2006).

Gene-environment interaction
• These variable results in men and women highlight the importance of considering gene-environment interactions (G × E). Genes may create a susceptibility to certain environmental influences. In other words, genes may create a predisposition to depression, but it will depend on environmental factors whether or not this predisposition will be triggered. To uncover such interactions, one needs to conduct longitudinal studies.
• Silberg et al (1999) demonstrated in a longitudinal study that genetic predisposition causes girls to be more vulnerable to stressful life events. If these events occur, they are more likely than boys to respond with depression. See Silberg et al (1999).

Pinpointing a specific gene

Gene-environment correlation
Gene-environment interaction (G × E) describes the situation when individuals with different genetic predispositions react differently to the same environment. However, genetics can also influence the environment itself. This is known as gene-environment correlation (rGE). There are three types: passive rGE, evocative rGE and active rGE (also known as niche picking). See “Gene-environment correlation”.

Biological explanations other than genetics
Genetic explanations for mental disorders are linked to other biological explanations: evolution, neurotransmitters, hormones. One of the most influential theories that currently describes the role of neurotransmitters in depression is the “serotonin hypothesis”. See “The role of neurotransmitters in depression”. It is closely linked to research on treatment of depression because it implies that certain drugs that increase the level of serotonin in the brain (such as SSRIs) can be effective for reduction of symptoms. See “4.3.2 Biological treatment of depression”.

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### RESEARCH  Kendler et al (2006)—the Swedish national twin study of depression

#### Essential understanding
- In twin studies using the Falconer model, heritability of major depression is estimated at 38% on average. There are notable sex differences in heritability of depression. At the same time the estimates are stable across generations.

#### Aim
To compare genetic heritability of major depression in men and women as well as across historical cohorts.

#### Participants
42,161 twins located through the national Swedish Twin Registry. This is a nearly complete registration of all twin births in the country. Birth cohorts spanned nearly 60 years, which enabled researchers to compare results across generations.

#### Method
To assess lifetime major depression, a personal computer-assisted telephone interview was conducted with all participants using modified DSM-IV criteria.

#### Procedure
Informed verbal consent was obtained prior to the interview. Trained interviewers with adequate medical background collected data. Efforts were made to reach both members of a pair within one month.

#### Results
- Prior studies (meta-analyses) of genetic heritability of depression showed quite similar results, estimating heritability of depression at 37% on average.
- The estimated heritability of major depression for the entire sample in Kendler et al (2006) was 38%—very similar to prior results.
- No evidence was found that shared environment was of any importance as a factor of developing major depression (C = 0%).
- Heritability estimates for men were: A = 29%, E (individual environment) = 71%.
- Heritability estimates for women were: A = 42%, E =58%.
- These estimates did not differ significantly across age cohorts.

#### Conclusion
The researchers concluded that major depression was moderately heritable. They also noted that their results replicated those that had been obtained in prior studies.

#### Limitations of the research
Authors of the study acknowledge that the lifetime history of major depression was assessed at one point of time only, which may not be always reliable.

### RESEARCH  Silberg et al (1999)—genetic vulnerability to stressful life events in adolescents

#### Essential understanding
- Genetic predisposition makes adolescent girls more vulnerable to certain stressful life events than adolescent boys. This is an example of gene-environment interaction (G × E) because genotype only creates a predisposition that requires an environmental event to be triggered.

#### Aim
To investigate what causes the differences in heritability of depression in males and females. With this end, to investigate the development of depressive symptoms among boys and girls from childhood to adolescence.

#### Participants
The data used was taken from the Virginia Twin Study of Adolescent Behavioural Development—a longitudinal four-wave study of more than 1,400 male and female juvenile twin pairs who were between 8 and 16 years of age at the time of the first assessment.

#### Method
A longitudinal twin study.

#### Procedure
- Depression symptoms were assessed using the Child and Adolescent Psychiatric Interview. This interview is administered to both twins and at least one of the parents.
- A list of 39 potentially stressful past-year life events was created. These included such events as failing a grade or losing a close friend through arguments. Ratings for these events were obtained in interviews with the mothers.

#### Results
- The life events most associated with depression were similar in boys and girls. Examples included increased quarrelling between parents and failing a grade.
- Boys and girls have similar levels of depression before the age of 12, but girls’ rates of depression increase significantly faster after that age.
- Analysis showed that stressful life events had a greater impact on depressive symptoms of girls than boys, especially during and after puberty.

#### Conclusion
The effect of negative life events on depressive symptoms in adolescent girls is stronger than in boys. This suggests a genetic predisposition to experiencing particular stressful life events. In other words, girls have a genetic predisposition that makes them more vulnerable to stressful life events, at least in adolescence.
RESEARCH Caspi et al (2003)—the 5-HTT gene

Essential understanding
A functional polymorphism in 5-HTT moderates the influence of stressful life events on depression.

Aim
To investigate the relationship between stressful life events and depression in individuals with different functional polymorphisms (alleles) of the 5-HTT gene.

Participants
A representative birth cohort of 1,037 children from New Zealand.

Method
A longitudinal study. Quasi-experimental comparisons—the sample was divided into three groups:
- both short alleles of 5-HTT (s/s)—17%
- one short allele and one long allele (s/l)—51%
- both long alleles (l/l)—31%

Procedure
Participants were followed longitudinally and assessed at ages 3, 5, 7, 9, 11, 13, 15, 18, 21, 25.
- A “life history calendar” was used to assess stressful life events. It included 14 major events (such as employment, health, relationship stressors) and was administered to participants twice at age 21 and 25 (immediately before the 26th birthday).

Results
- There were no differences between the three groups in the number of stressful life events they experienced.
- However, it was found that participants with a short allele of 5-HTT (s/l and especially s/s) reacted to stressful life events with more depressive symptoms. For example, participants who had a stressful life event at age 21 demonstrated an increase in their depressive symptoms by age 26, but only if they carried a short allele of 5-HTT (s/l or s/s). Conversely, depressive symptoms of participants in the l/l group stayed on the same level.

Conclusion
The researchers concluded that 5-HTT does not influence exposure to stressful life events, but influences an individual’s reaction to these events. The study demonstrated that genetic predisposition can moderate a person’s reactivity to stressful life events—an instance of gene-environment interaction (G × E). In this sense, the study corroborates the findings of Silberg et al (1999). However, the study also succeeded in pinpointing the specific gene responsible for this increased vulnerability to stress.

THEORY
Gene-environment correlation (rGE)

Gene-environment interaction (G × E) describes the situation when individuals with different genetic predispositions react differently to the same environment. The reality is more complex, however, because if we look at it dynamically, genetics can influence the environment itself. This is known as gene-environment correlation (rGE), and there are three types.
- Passive rGE—this is when parents pass on to the child both the genes and some corresponding environment, so genes and environment are not entirely independent. For example, parents may give the child genetic predisposition to depression as well as a highly demanding environment that places the child under a lot of stress.
- Evocative rGE—this is when a person’s genotype evokes a particular environmental response. For example, a person with depression may be constantly gloomy, so people at work may stop interacting with him or her. This lack of interpersonal interaction may in turn become the environmental factor that further contributes to the person’s depression.
- Active rGE (also known as niche-picking)—this is when an individual actively selects certain environments that better match his or her genetic predisposition. For example, a child predisposed to depression may seek high-demanding situations where it is hard to succeed.

Existence of gene-environment correlations is a challenge to current research because it is not easy to study them in all their complexity. Study of them requires longitudinal research with large samples and sophisticated statistical modelling.

The role of neurotransmitters in depression

Genetic explanations for mental disorders are linked to other biological explanations.
- They are linked to evolutionary explanations (associated with genetics because evolution is the process of refining the genetic pool).
- They are linked to explanations based on the role of neurochemistry (neurotransmitters and hormones). These are linked to genetics because it is genotype that regulates neurochemicals in our body. For example, 5-HTT—the serotonin transporter gene—regulates serotonin, the neurotransmitter. See Caspi et al (2003).

There have been a variety of research studies that tried to establish the role of neurotransmitters in depression by comparing depressive symptoms in clients with varying concentrations of neurotransmitters in the brain. Among neurotransmitters that were said to influence depression, the
most influential candidate is serotonin, and the idea that its imbalance in the brain is a factor that causes depression is known as the "serotonin hypothesis". This hypothesis has been supported by evidence of two types.

- Certain drugs that were known to deplete levels of serotonin in the brain were also found to have depression-inducing effects.
- Certain drugs that were known to increase the levels of serotonin in the brain were also found to relieve symptoms of depression. For example, a class of drugs known as selective serotonin reuptake inhibitors (SSRIs) were shown to be effective against depression. SSRIs prevent reuptake of excess serotonin from the synapse, increasing its concentration in the synaptic gap.

For some of these research studies see "4.3.2 Biological treatment of depression".

4.2.3 Explanations for disorders: Cognitive explanations for depression

ESSENTIAL UNDERSTANDING
As in any other aspect of human behaviour, biological factors of depression interact with cognitive and sociocultural factors.

Theory
Cognitive explanations for depression suggest that the patterns of information processing (how an individual interprets various life events) influence the development of the disorder. See the most influential of cognitive explanations (Beck 1967).

Research
The core premise of the theory—the idea that depression is linked to faulty thinking patterns—is supported by empirical research. Here are two examples.


Criticism of the empirical studies that support cognitive explanations for depression have focused on their correlational nature: it is difficult to separate thinking that causes depression from thinking that is caused by depression. However, major support for this area of research comes from the studies of cognitive behavioural therapy (CBT) and its effectiveness compared to other methods of treatment. See "4.3.3 Psychological treatment of depression".

Beck (1967)—cognitive theory of depression

This theory suggests that cognitive factors are the major cause of depression. It highlights the importance of automatic thoughts—the semi-conscious sub-vocal narrative that naturally occurs in people's minds to accompany their daily activities. The central claim of the theory is that a change in automatic thoughts can lead to a change in behaviour. The theory identifies three elements of depression.

- The cognitive triad: negative beliefs about the self, the world and the future—these negative beliefs are deeply rooted and they influence automatic thoughts to be irrationally pessimistic.
- Negative self-schemata: when negative beliefs about the self become generalized, individuals start seeing their own fault in everything that happens to them, even if they cannot control it.
- Faulty thinking patterns: these are logical fallacies and irrational conclusions that people make because they process information is biased. Cognitive theory of depression describes a range of faulty thinking patterns, including:
  - selective abstraction (focusing on one aspect of the situation—usually the negative one—and ignoring the other aspects)
  - overgeneralization (making broad inferences on the basis of limited experience)
  - black-and-white thinking.

Cognitive theory of depression forms the basis of cognitive behavioural therapy (CBT). The core idea of this approach to treatment is that confronting the client's faulty thinking patterns with the objective reality of the situation will replace the irrational elements with more logical thinking, which will in turn affect behaviour. CBT is an influential approach to treatment. See more on its effectiveness in the section "4.3.3 Psychological treatment of depression".
Essential understanding

Negative cognitive styles increase vulnerability to depression when people confront stressful life events. The researchers define cognitive styles broadly as “the way people typically interpret or understand events in their lives” (Alloy, Abramson, Francis 1999).

Aim

To investigate whether a particular cognitive style (positive or negative) in freshmen is associated with subsequent development of depressive symptoms.

Method

Quasi-experiment (comparison of two pre-existing groups); longitudinal study.

Participants

Non-depressed college freshmen.

Procedure

At the start of the study, participants were given a questionnaire that determined their cognitive style and split into two groups based on results: low risk versus high risk for depression. Participants with a negative cognitive style (allocated to the high-risk group) typically believed that negative life events were catastrophic and that the occurrence of such events meant that they (the participants) were flawed or worthless.

Participants were then followed longitudinally for 5.5 years. Assessments included self-report measures and structured interviews.

Results

- During the first 2.5 years of follow-up, high-risk freshmen were more likely to develop major depressive disorder than low-risk freshmen (17% versus 1%).
- High-risk freshmen were also more likely than low-risk freshmen to develop suicidal thoughts and behaviour (28% versus 13%).

Conclusion

Negative cognitive styles may influence the development of major depression.

Caseras et al (2007)—attention bias

Essential understanding

Major depression is associated with biased attention—depressed people find it harder to disengage their attention from negative stimuli.

Aim

To investigate whether attention to positive versus negative stimuli is different in depressed versus non-depressed participants.

Method

Quasi-experiment (comparison of two pre-existing groups); eye-tracking technology was used to measure the variables.

Participants

43 participants recruited through a university website.

Procedure

- Depressive symptoms were assessed using a questionnaire (the Beck Depression Inventory). On the basis of the scores, participants were split into two groups—those with depressive symptoms and non-depressed.

Results

- Participants with depressive symptoms demonstrated a bias in maintenance of attention to negative pictures—but no differences were found in initial orienting.
- In other words, once depressed participants started looking at negative pictures, they found it harder to switch their attention to the other picture.

Conclusion

Negative attention bias potentially is one of the mechanisms of major depression.

4.2.4 Explanations for disorders: Sociocultural explanations for depression

ESSENTIAL UNDERSTANDING

Sociocultural explanations for depression focus on environmental factors that may increase an individual’s susceptibility to depression.

Social vulnerability factors

In an influential classic study, Brown and Harris (1978) outlined vulnerability factors that may increase the risk of developing depression: having three or more children, lack of an intimate relationship, lack of employment and loss of mother. These claims were supported in other independent research studies, with the overall conclusion that social factors are involved in the development of depression along with personal factors.
Essential understanding

Social factors play a role in the etiology of depression in old age.

Aim

To investigate (in a longitudinal study) the extent to which various social factors predict occurrence of depression in an elderly Finnish population.

Method

Longitudinal study; quasi-experimental comparison of two groups.

Procedure

• A clinical study of depression in old age was completed in Finland in 1984–85 with 1,529 participants aged 61 or older. DSM-III was used to determine the occurrence of depression.
• Those participants who were not depressed in 1984–85 were clinically interviewed and examined again in a follow-up study in 1989–90 (N = 679).
• Social variables and the occurrence of certain life events in the period 1984–89 were measured through questionnaires.

Results

• In 1989–90, 8.2% of the men and 9.3% of the women in the sample were diagnosed with depression.
• Comparison with non-depressed men revealed the most powerful predictors of depression in men: poor relationship with the spouse; a negative change in the relationship with the spouse and with the neighbours; the loss of mother while under 20 years of age; a grandchild's divorce; moving into institutional care; an alcohol problem of a close person.
• The most powerful predictors of depression in women were: the loss of father while under 20 years of age; low activity in religious events; worsening of relationships with neighbours; a decline in the social participation rate during the follow-up period; an alcohol problem of a close person; living with one's husband but without other people.

Conclusion

Social factors and changes in social ties may predict the onset of depression at old age. There are certain sex differences in the social factors of depression in old age, probably associated with differences in experiencing marital stress.

Effects of culture

Although culture probably cannot cause depression and in this sense is not a factor of depression etiology, cultural variables certainly play an important moderating role both in development and expression of depressive symptoms. For example, depression in certain traditional societies is stigmatized, which may cause people to misinterpret their symptoms and either fail to report them (reporting bias) or report them as symptoms of physical illness (somatization). See "4.1.4 The role of clinical bias in diagnosis" for more on reporting bias and somatization.
Results
There was a significant correlation in depressive symptoms between people up to three degrees of separation away. Participants were:
- 93% more likely to be depressed if a person they were directly connected to (such as a friend) was depressed
- 43% more likely to be depressed if a person within two degrees of separation (such as a friend's friend) was depressed
- 37% more likely to be depressed if a person within three degrees of separation (such as a friend's friend's friend) was depressed.

Changes in social ties (for example, acquiring new friends) predicted changes in depressive symptoms, but not vice versa.

Conclusion
Depression in one person may cause depression in people the individual is socially connected to (friends, relatives, co-workers). In this sense, symptoms of depression may spread along the network of social connections somewhat like an infectious disease.

4.3 Treatment of disorders
4.3.1 Assessing the effectiveness of treatment

| DEFINITIONS |
|-----------------|------------------|
| **Meta-analysis**—statistical analysis of data aggregated from a large number of published research papers | **Psychotherapy**—psychological approaches to the treatment of mental disorders; this section excludes treatment by medication from the concept of psychotherapy and focuses purely on psychological approaches |

ESSENTIAL UNDERSTANDING

Challenges
There are many challenges in assessing the effectiveness of treatment of disorders. These are some of the factors that need to be considered.
- **Severity of the disorder**—some treatments work better with mild disorders, others may be more effective in severe cases.
- **Treatment outcomes**—indicators of effectiveness could be an observable reduction of symptoms, self-reported improvement of quality of life, improvement of social adjustment as reported by close friends and relatives.
- **The time frame** may be short-term or long-term. Some treatments may be more effective in the short term, some in the long term.
- **Method of measuring** the therapy outcome—observable changes in a patient’s behaviour are the most reliable indicators, but they do not capture the complexity of the patient’s experiences. Self-report measures capture more aspects, but are less reliable.
- **The exact mechanism of change**—our knowledge of therapy effectiveness will be incomplete if we do not know which elements exactly cause the positive change in the client.
- **Placebo effects**—we can only conclude that a treatment is effective if it outperforms a placebo. This requires more sophisticated research designs.

Research questions
Assessing the effectiveness of psychotherapy implies answering two broad questions. Meta-analysis allows us to attempt to answer these.
- Is psychotherapy effective on average?
- What elements exactly are responsible for its effectiveness?

Current evidence
Current evidence suggests that psychotherapy in general is effective, but common (non-specific) factors may play a larger role than specific therapeutic techniques. However, due to the nature of meta-analyses, this conclusion is not applicable to all treatments and in all circumstances.

All the evidence discussed in this section deals with psychological treatment and excludes treatment by medication (such as antidepressants). For a discussion of the effectiveness of drug treatment, see "4.3.2 Biological treatment of depression".
Approaches to assessing the effectiveness of treatment

Randomized control trials (RCTs) are experiments that follow the independent measures design, where participants are randomly allocated into groups. One of the groups is given the treatment while the other one (control group) is not. Different modifications of the control group may also be used to assess the influence of potential confounding variables, as follows.

- Participants in a wait list control group do not undergo treatment immediately, but they believe their treatment will start soon. Such groups are used to ensure that the control and the experimental groups have approximately equal levels of concentration on the problem.
- A placebo control group is often used when assessing the effectiveness of medical treatment.
- A clinical management (standard care) group is often used when assessing the effectiveness of psychological treatment (talk therapy). In a clinical management group the therapist will meet with the clients, spend the same amount of time with them as in the treatment group, but no specific therapeutic techniques will be used.

Qualitative research studies are used when researchers are interested in how patients subjectively experience the treatment and interpret its outcomes. Interviews, focus groups and observations cannot be used to rigorously establish the effectiveness of a treatment, but they are useful when, for example, we want to:

- understand how a patient's cultural background affects the way the person perceives therapy
- investigate what beliefs may be counterproductive for therapy and how they can be addressed
- look at the treatment process holistically and generate new hypotheses to test later in quantitative research.

Meta-analysis is used to arrive at more balanced and reliable estimates of treatment effectiveness. A combination of results from multiple studies means that the estimates will be more representative in terms of age, gender, culture and other variables that are likely to be biased in any separate research study. Meta-analyses use quantitative measures of effectiveness, so they cannot be conducted with qualitative data.

RESEARCH Is psychotherapy effective on average?

Eysenck (1952) reviewed available data and arrived at the conclusion that psychotherapy does not work. More specifically, his analysis showed that 67% of patients spontaneously recovered in two years without any treatment, and that the rate of success with patients undergoing psychotherapy was not larger than that. However, methodological quality of research studies at that time was low: RCTs were not yet used and often the allocation to treatment and control groups was not random; meta-analysis as a method was not yet developed. This research led to multiple attempts at testing the effectiveness of psychotherapy more rigorously and improving the methodology of research itself. Meta-analysis was developed and new methods of treatment emerged.

Smith and Glass (1977) conducted a meta-analysis of 375 studies (carefully selected on the basis of their methodological quality) and concluded that psychotherapy is in fact effective. The typical therapy client in their analysis was healthier than 75% of untreated individuals (compared to 50% expected by random chance).

To further quantify the effectiveness of psychotherapy, Wampold (2007) conducted a meta-analysis comparing psychotherapy with medicine. It was demonstrated that effectiveness of psychotherapy was in fact comparable to that of some established medical practices, such as the influenza vaccine or cataract surgery. We need to keep in mind, however, that those are average estimates across all possible types of psychotherapy and many different types of mental disorders.

RESEARCH What elements explain the effectiveness of psychotherapy?

Classic meta-analyses (such as Eysenck or Smith and Glass) observed very little difference between various approaches to psychotherapy in terms of their overall effectiveness. For example, in Smith and Glass (1997) the type of therapy explained only about 10% of the variance in outcome measures.

This suggests that there should exist some common elements which are present in all (or most) approaches to psychotherapy and are responsible for its effectiveness. These elements are known as non-specific factors of psychotherapy. They are contrasted with specific factors of psychotherapy—elements that are unique to a given approach to treatment.

To analyse which elements of psychotherapy exactly are responsible for patient improvement, research studies sometimes employ the so-called “dismantling design”.

In these studies some patients undergo the full treatment programme while other patients undergo incomplete programmes where one of the elements of treatment is removed. Patient outcomes in complete and incomplete programmes are then compared. Jacobson et al (1996) is an example of a study using dismantling design. See Jacobson et al (1999).

Results of this study, as well as earlier studies by Eysenck and Glass and Smith, suggest that non-specific factors of psychotherapy may be more important in terms of its effectiveness than specific factors. Wampold (2007) suggested that three non-specific factors of psychotherapy effectiveness are especially salient: client's willingness to trust the therapist; formation of a working alliance between the therapist and the client; placebo effects. See “Non-specific factors of psychotherapy”.
Essential understanding
Full CBT was not found to be any more effective than its individual components (such as behavioural activation alone), and this may suggest that there are other non-specific factors at work that make therapy effective even in the absence of specific therapeutic techniques.

Aim
To explain the effectiveness of CBT for depression by pinpointing the components responsible for therapy outcomes.

Participants
152 outpatients with major depression according to DSM-III-R criteria.

Method
Experiment; matched pairs design.

Background
The full CBT treatment includes three major components:
• behavioural activation (such as home assignments to rehearse certain patterns of behaviour, role-plays, monitoring of daily activities)
• the teaching of skills to modify automatic thoughts (such as learning to notice automatic thoughts, analysing how rational they are)
• modification of core schemas (changing one's deep beliefs about the self, the world and the future).

According to the cognitive theory of depression, modification of core schemas is the ultimate goal of the therapy, so all three elements work together to ensure positive change in the patient.

Procedure
After being matched on such variables as severity of depression, gender and marital status, participants were randomly assigned to one of three conditions:

- the full CBT treatment (including all three core components)
- treatment that combined behavioural activation and the teaching of skills to modify automatic thoughts (the first two components)
- the behavioural activation component only.

The outcome measures were depressive symptoms, assessed through self-report questionnaires and semi-structured clinical interviews. Apart from these measures of overall effectiveness researchers also looked at measures of change in three separate domains: increased behavioural activation; decreased negative thinking; changes in core schemas. All these elements were measured by questionnaires.

Results
• There was no evidence that the complete treatment produced better outcomes than any of the two incomplete treatments.
• This was true for such outcome variables as “altering the patient’s negative thinking patterns”. Patients in all three conditions showed improvement in all three domains—increased behavioural activation; decreased negative thinking; and a positive change to the core schemas. This was puzzling because clearly the complete treatment targets negative thinking patterns and core beliefs to a much greater extent than incomplete treatments.

Conclusion
No evidence was found that full cognitive treatment is more effective than any of its components.

Discussion
One of the potential explanations of this puzzling finding is the presence of non-specific factors. Perhaps these factors were present even in the incomplete treatment protocols, rendering the therapy effective despite the absence of specific therapeutic techniques.

Non-specific factors of psychotherapy
Non-specific factors of psychotherapy could potentially explain such puzzling findings as:
• no difference between a full treatment programme and its separate components in Jacobson et al (1999)
• lack of variation between approaches to psychotherapy in terms of their overall effectiveness in Eysenck (1952) and Smith and Glass (1977).

Wampold (2007) reviewed empirical evidence and suggested that three non-specific factors of psychotherapy effectiveness are especially salient.
• Client’s willingness to trust that the therapist will provide an explanation that will help them (“I believe you will help me”)—therapists who are capable of inspiring this kind of trust may end up being more effective, and this may outweigh the effect of a particular method of treatment.
• Formation of a working alliance with the client—this entails the readiness of the client to take responsibility and work together with the therapist.
• Placebo effects—while research tries to separate placebo effects from the “real” effect of psychotherapy, in practical terms therapists may make use of placebo effects to make their clients more responsive to treatment.
4.3.2 Biological treatment of depression

**DEFINITIONS**
- **Antidepressants**—drugs that target depressive symptoms by affecting the levels of neurotransmitters in the brain
- **Fluoxetine**—an antidepressant; one of the chemicals that function as an SSRI (selective serotonin reuptake inhibitor)
- **Publication bias**—the tendency for successful trials to be published more often than unsuccessful trials
- **Response rate**—one of the indicators of the effectiveness of treatment; the percentage of participants who showed at least a 50% decrease in the scores on a standardized depression scale

**ESSENTIAL UNDERSTANDING**

**Mechanism**
Biological treatment of depression is based on the assumption that the major cause of depression is a chemical imbalance in the brain. To restore balance, we can use antidepressants—drugs that modify the level of neurotransmitters available in the synaptic gaps. There are various types of antidepressants, and their physiological mechanism is different. See “Antidepressants”.

**Effectiveness**
- A complete evaluation of effectiveness should take into account various factors such as long-term versus short-term effects and a comparison to alternative methods of treatment. For example, it has been shown that antidepressants are effective for the reduction of symptoms of depression and provide a quick result, but psychotherapy may reach the same levels of effectiveness in the long term. See “Treatment of adolescents with depression study (TADS)”.
- Conclusions on the effectiveness of antidepressants have been questioned on the grounds of the possibility of publication bias. Kirsch (2014) and Kirsch et al. (2002) demonstrated that effectiveness of antidepressants is not so obvious when published and unpublished data are combined, so there may be publication bias. See “Criticism of biological treatment”.
- This criticism, however, is only relevant to the aggregate estimates of effectiveness that average across types of patients, types of disorder, and so on. Elin et al. (1989) demonstrated, for example, that antidepressants are more effective than other treatment methods with severe depression, but not with mild and moderate depression. See “Counter-arguments to criticism”.
- Overall, it may be concluded that antidepressants are effective in a variety of situations (most notably severe symptoms that must be reduced urgently), but decisions regarding antidepressant treatment should be made after a careful cost-benefit analysis. See “Conclusion: are antidepressants effective?”.  

**Antidepressants**
Antidepressants are drugs that modify the level of neurotransmitters that have been shown to be associated with depressive symptoms.

- **Tricyclic antidepressants (TCA)** inhibit the reuptake of certain neurotransmitters, such as serotonin and noradrenaline, in the synaptic gap. This increases the concentration of this group of neurotransmitters available in the synaptic gap. TCAs have been largely replaced by other types of antidepressants because TCAs have many side effects, perhaps because they do not target one specific neurotransmitter.
  - **MAO inhibitors** decrease the activity of monoamine oxidase (MAO): a chemical that breaks down excess monoamine neurotransmitters (such as serotonin, dopamine, noradrenaline) in the synaptic gap. Since monoamines are not inhibited as much, their concentration in the synaptic gap increases.
  - **Selective serotonin reuptake inhibitors (SSRIs)** are probably the most widely used class of antidepressants. They target serotonin specifically. This also makes them ideal for scientific research into the effectiveness of antidepressant drugs. Several different chemicals function as SSRIs, the most popular of these is fluoxetine. A popular trade name for fluoxetine is Prozac.

**RESEARCH**

**Treatment of adolescents with depression study (TADS) (2004–2007)**

**Essential understanding**
- Antidepressants are effective for the reduction of symptoms of depression and provide a quick result, but psychotherapy may reach the same levels of effectiveness in the long term.
  
**Aim**
To examine the short-term and long-term effectiveness of drug treatment and psychotherapy for the treatment of depression in adolescents.

**Method**
Randomized control trial; longitudinal study.

**Participants**
13 clinics in the USA were involved in the project with 439 participants in total—adolescents aged 12–17. All participants were diagnosed with major depression.

**Procedure**
TADS was a multi-site study in the USA funded by the National Institute of Mental Health (NIMH). The study lasted 36 weeks in total and was conducted in three stages.

**Stage 1:** acute treatment (12 weeks). Participants were randomly assigned to one of four conditions:
- fluoxetine alone
There may be publication bias in the estimates of data and formulated several arguments against the Kirsch (2014) reviewed both published and unpublished limitations is the existence of publication bias.

One of the largest types of antidepressants in terms of their effectiveness. The main counter-argument to the criticism of antidepressants, Elkin et al (1989) conducted a study in which 250 patients were randomly assigned to one of four conditions (placebo, drugs and two types of psychotherapy): interpersonal psychotherapy • CBT • antidepressant medication and clinical management • placebo and clinical management.

Conclusion All three active treatments of depression outperform placebo, so both medical treatment and psychotherapy can be considered effective. The effectiveness of antidepressants for reducing the symptoms of depression supports the idea that depression is caused by a chemical imbalance in the brain.

If continued, CBT gradually reaches the same level of effectiveness as medication and even combination treatment. Therefore medication is more effective that psychotherapy in the short term, but not in the long term.

It may be suggested based on these results that antidepressants should be recommended, especially when a quick response is important (for example, when there are suicidal thoughts). Also, although antidepressants and CBT show similar response rates in the long term, people may find it harder to continue CBT because it requires more effort.

Table 4.2 Based on information available on the TADS website

<table>
<thead>
<tr>
<th>Response rate</th>
<th>12 weeks</th>
<th>18 weeks</th>
<th>36 weeks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Placebo</td>
<td>85%</td>
<td>Discontinued</td>
<td>Discontinued</td>
</tr>
<tr>
<td>Fluoxetine</td>
<td>61%</td>
<td>69%</td>
<td>81%</td>
</tr>
<tr>
<td>CBT</td>
<td>44%</td>
<td>65%</td>
<td>81%</td>
</tr>
<tr>
<td>Fluoxetine + CBT</td>
<td>71%</td>
<td>85%</td>
<td>86%</td>
</tr>
</tbody>
</table>

Stage 2: consolidation treatment (six more weeks). At the end of stage 1 clients from the placebo group were informed that they had been taking a placebo and allowed to choose any of the other three treatment conditions, but they did not participate in the study any more. Therefore stage 2 only included three groups of participants.

Stage 3: continuation treatment (18 weeks). This stage was meant to assess long-term effectiveness of treatment.

Response rates were used as the indicator of effectiveness. Response rate is the percentage of participants who showed a 50% decrease (or more) in the scores on a standardized depression scale such as the Hamilton Depression Rating Scale (HAM-D).

Results

- At the end of stage 1 combination treatment had the best response rate (71%). The response rate of fluoxetine alone was slightly lower (61%). These treatments outperformed CBT (44%) and placebo (35%).
- At the end of stage 2 CBT “caught up with” medical treatment (response rate 65% for CBT and 69% for fluoxetine). Combination treatment, however, was still slightly more effective (85%).
- At the end of stage 3 the effectiveness of combination treatment was still the same, but both other groups almost equaled combination treatment in effectiveness (81% both for fluoxetine and CBT conditions).

An abnormal psychology 23
Treatment in all groups was continued for 16 weeks. Results were as follows.

- All three active treatment conditions outperformed placebo.
- For mild and moderate depression, the three conditions did not differ substantially among themselves. However, there was a clearer advantage of medication over psychotherapy in cases of severe depression.

It can be concluded that drugs are more effective than psychological treatment for severe depression.

**Conclusion: are antidepressants effective?**

The problem with this question is that it invites the use of aggregate estimates of antidepressant effectiveness that will average across:

- the types of antidepressants
- outcome variables (for example, short-term effects versus long-term effects)
- characteristics of the disorder (such as severity, the presence of suicidal thoughts)
- characteristics of the patient (such as age, cultural background).

When we do try to arrive at such aggregate estimates, we depend on results of meta-analyses combining a large number of research studies. Findings from such meta-analyses have been inconclusive: most of them suggest that antidepressants are significantly more effective than placebo, but Kirsch et al (2002) and Kirsch (2014) raised doubts and argued that these results may be due to publication bias.

However, this concerns the aggregate estimates. There may be considerable variations depending on specific outcome variables, characteristics of the patient, characteristics of the disorder, and so on. For example, it has been demonstrated that the effectiveness of antidepressants becomes increasingly superior to other methods when the disorder is more severe initially. So, antidepressants may be the preferred method of treatment in cases of severe depression (Elkin et al, 1989).

Similarly, it has been demonstrated that antidepressants are more effective than other methods of treatment in the short-term (see TADS). Therefore they may be the preferred method in cases where quick results are necessary, for example, when suicidal thoughts are present.

It may therefore be concluded that antidepressants are effective in a variety of situations (most notably severe symptoms that must be reduced urgently), but decisions regarding antidepressant treatment and its duration should be made on a case-to-case basis after a careful cost-benefit analysis. One needs to take into account variables including side effects of medication and the willingness of the client to attend sessions of psychotherapy regularly.

### 4.3.3 Psychological treatment of depression

#### Definitions

- **Relapse rate**—recurrence of a past condition (developing symptoms of depression again a while after the treatment was discontinued).
- **Remission rate**—the percentage of participants who show little or no symptoms of depression after the treatment period.
- **Response rate**—the percentage of participants who show at least a 50% decrease in the scores on a standardized depression scale.

#### Essential understanding

**CBT**

- CBT is perhaps the most extensively studied, well-established and evidence-based method of psychological treatment of depression. It is based on Beck’s cognitive theory of depression with its assumption that depression is caused by irrational automatic thinking patterns that lead to irrational behaviour.
- CBT targets both the automatic thoughts (making them more logical) and behaviour (making it more rational and more adjusted to the environment). So the two major goals of CBT are cognitive restructuring and behavioural activation.
- Unlike many other forms of psychotherapy, CBT is highly focused on specific, well-defined problems. It is a relatively short process. The client is expected to be an active participant in the process of therapy.

**Effectiveness of CBT**

In characterizing the effectiveness of CBT, we should look at various outcome variables. Three commonly used measures are response rates, remission rates and relapse rates.

- In terms of response and remission rates, it has been demonstrated in some research studies that CBT may be as effective as medication. For example, DeRubeis et al (2005) showed that CBT equals medication in effectiveness after 16 weeks of treatment. However, this success may be dependent on the skills of the therapist. See DeRubeis et al (2005).
- In terms of relapse rates, it has been shown that the effect of CBT is more enduring than the effect of medication—it lasts longer after the therapy is discontinued. See Hollon et al (2005).
- Effectiveness of cognitive therapy could also depend on which symptoms in particular are being targeted.
Some symptoms may be more responsive to CBT, some to medication. For example, Fournier et al. (2013) demonstrated that medication and CBT targeted slightly different clusters of depressive symptoms. See Fournier et al. (2013).

**Mechanism of CBT**

Effects of CBT have been substantiated in research that revealed physiological changes in patients who went through CBT sessions. For example, Goldapple (2004) demonstrated a specific pattern of brain changes in CBT patients as compared to medication patients. See Goldapple (2004).

**Cultural differences in CBT**

Cross-cultural differences are an important dimension that needs to be taken into account when CBT is implemented. For example, Hodges and Oei (2007) concluded that traditional Chinese values enhance some elements of CBT, although they may contradict the core principle of a patient’s personal responsibility. See “Cultural aspects of CBT”.

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### RESEARCH DeRubeis et al. (2005)—response and remission rates at 8 weeks and 16 weeks

**Essential understanding**

+ CBT is as effective as medication for moderate to severe depression at 16 weeks, but this depends on the skills of the individual therapist.

**Aim**

To investigate response and relapse rates of CBT as compared to medication in the short term (8 weeks) and long term (16 weeks) for moderate to severe depression.

**Method**

Randomized control trial.

**Participants**

240 patients diagnosed with MDD, moderate to severe symptoms.

**Procedure**

Participants were randomly assigned to three groups:

- 16 weeks of antidepressant medication
- 16 weeks of CBT
- 8 weeks of placebo.

Research took place at several different research sites (with several different therapists). Depression symptoms were measured before and after therapy by the Hamilton Depression Rating Scale (HAM-D).

**Results**

- At 8 weeks both the active treatments outperformed placebo, but the response rate was slightly higher in the medication group.
- At 16 weeks response rates reached 58% both for medication and CBT.
- Remission rates at 16 weeks were also similar.
- However, results were not uniform across research sites. At one site in particular, medication turned out to be more effective than CBT.

**Conclusion**

CBT can be as effective as medication for the treatment of moderate to severe depression—but this is contingent on the therapist’s skill and experience.

<table>
<thead>
<tr>
<th></th>
<th>8 weeks</th>
<th></th>
<th>16 weeks</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Response rate</td>
<td>Response rate</td>
<td>Remission rate</td>
<td>Remission rate</td>
</tr>
<tr>
<td>Medication</td>
<td>50%</td>
<td>58%</td>
<td>46%</td>
<td></td>
</tr>
<tr>
<td>CBT</td>
<td>43%</td>
<td>58%</td>
<td>40%</td>
<td></td>
</tr>
<tr>
<td>Placebo</td>
<td>25%</td>
<td>-</td>
<td>-</td>
<td></td>
</tr>
</tbody>
</table>

Table 4.3 Findings from DeRubeis et al. (2005)

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### RESEARCH Hollon et al. (2005)—relapse rates

**Essential understanding**

+ Cognitive therapy has a more enduring effect than medication.

**Method and procedure**

Three groups of patients with moderate to severe depression were compared. They were:

- patients who responded positively to cognitive therapy and were withdrawn from treatment for 12 months
- patients who responded to medication and continued medication
- patients who responded to medication and continued to take a placebo.

**Results and conclusion**

Results showed that relapse rates were the smallest in the cognitive treatment group. This shows that CBT has an enduring effect that extends beyond the end of treatment. It also suggests that medication mainly targets the symptoms of depression but not the cause.

<table>
<thead>
<tr>
<th>Group</th>
<th>Relapse rate in 12 months</th>
</tr>
</thead>
<tbody>
<tr>
<td>Responded to CBT, withdrawn from treatment</td>
<td>31%</td>
</tr>
<tr>
<td>Responded to medication, continued medication</td>
<td>47%</td>
</tr>
<tr>
<td>Responded to medication, continued placebo</td>
<td>76%</td>
</tr>
</tbody>
</table>

Table 4.4 Findings from Hollon et al. (2005)
4.3.4 The role of culture in treatment

**Definitions**

- **Compliance with treatment**—willingness of the patient to follow the recommendations from the clinician, such as regularly taking the prescribed medicine
- **Internal model of illness**—a culturally determined schematic representation of a mental disorder (that is, the way the patient perceives his or her illness); being a type of schema, it influences the way information about the disorder is processed by the patient

**Essential understanding**

**Effects of cultural factors**

The role of culture in treatment is manifold. It stems from the cultural differences in how symptoms of mental disorders are experienced, presented and perceived (see “4.1.4 The role of clinical bias in diagnosis”). Since culture affects these aspects of mental disorders, treatment is also affected.

- Cultural factors can influence compliance with treatment. For example, it was shown in a study by Kinzie et al (1987) that cultural perceptions of antidepressant medication influence the rates of compliance with treatment among Southeast Asian patients in American clinics. See Kinzie et al (1987).
- Cultural factors can influence the patient’s internal model of illness. This model will in turn mediate all treatment efforts, so a culturally sensitive psychiatrist must strive to understand the patient’s internal model and adjust
the interventions accordingly. For example, Naeem et al. (2012) showed that it is possible to design a culturally sensitive version of CBT for local use in developing cultures such as Pakistan. See Naeem et al. (2012).

Culturally sensitive treatment
- Culturally sensitive treatment may be designed using either a top–down or a bottom–up approach. The difference is in how substantially the cultural variables are incorporated into the treatment programme. See “Culturally sensitive treatment”.
- The effectiveness of culturally sensitive treatment has been demonstrated in meta-analyses such as Griner and Smith (2006). The researchers showed that cultural adaptations are effective especially when they specifically target a particular cultural group. See Griner and Smith (2006).

Essential understanding ✪ When the patient and the therapist belong to different cultural backgrounds, patients may fail to follow the therapist’s prescriptions because these prescriptions clash with their culturally determined beliefs about mental illness. This situation may be remedied by openly discussing the issue with the patient.

The researchers examined 41 depressed Southeast Asian patients who underwent long-term treatment of depression in US clinics. All patients had been prescribed tricyclic antidepressants (TCA). The patients’ TCA blood levels were examined to determine whether they were actually taking the prescribed medicine. Results showed no detectable medicine levels in 61% of the patients.

The researchers explain that there could be several reasons for this level of non-compliance, including:
- reluctance to take drugs if they are perceived as too strong
- increased sensitivity to side effects
- social stigma associated with taking antidepressants.

At the same time, cultural attitudes towards authority may cause such patients to pretend that they are following the prescription so as not to offend the doctor. However, after a doctor–patient discussion about the problems and benefits of antidepressants, the rates of compliance significantly improved. This shows how an open discussion about the client’s cultural beliefs may positively affect treatment.

Essential understanding ✪ In certain traditional communities there exist internal models of illness that could be taken into account to develop versions of CBT that account for local needs and values.

Aim
To develop a culturally sensitive CBT programme and assess its effectiveness in the developing world (with Pakistan as an example).

Method
Qualitative research study using data from interviews and field observations.

Participants
Nine patients attending a psychiatric outpatient clinic in Pakistan.

Procedure
In interviews, participants were asked about their thoughts on their illness and the course of the treatment. Interviews were conducted in Urdu and tape recorded; transcripts were made later based on the recordings.

This data was combined with field notes from one of the authors during his clinical field practice. Inductive content analysis was applied to derive common themes emerging in the patients’ subjective interpretations.

Four themes emerged in the content analysis.
- Patients’ perceptions of depression—patients tended to mention physical symptoms much more often than mental symptoms, did not use “depression” as a label for their illness and used expressions such as “illness of poor sleep” and “tension”.
- Patients’ beliefs about the causes of depression—they attributed their illness to “problems in the environment”, “thinking too much” and “worries”. They did not recognize the existence of different types of mental illness.
- Modes of referral for help—the majority of patients were referred to the clinic by relatives.
- Patients’ knowledge about treatment of depression—they believed that they could be cured by “good quality medicine” and there were signs (although they did not talk about it) that they had been seeking help from religious healers or magicians.

Conclusion
Based on the results of this investigation, the authors were able to develop a culturally sensitive version of CBT that took local needs into account. This version of CBT used the language appropriate for the context (for example, “tension”) and focused on re-interpreting somatic symptoms as signs of depression.
Culturally sensitive treatment

Results of research which demonstrates that taking cultural perceptions into account may enhance the effectiveness of treatment in certain cultural contexts raise the question: what are the rules we should follow to design culturally sensitive treatments?

The adaptation of a treatment to a cultural context can be done using either a top–down approach or a bottom–up approach.

- **Top–down adaptations** involve relatively superficial changes to the original treatment programme, such as changing the language of delivery or hiring bicultural support staff.
- **Bottom–up adaptations** involve deeper changes to the way treatment is delivered. Such adaptations typically start with a research phase where qualitative studies are conducted to understand the nature of patients’ interpretations of the illness and the treatment (see Naeem et al 2012). Culturally sensitive treatments are then designed based on this information, sometimes going as far as acknowledging and incorporating the help of local healers (magicians).

### RESEARCH

Griner and Smith (2006)—effectiveness of culturally sensitive treatment

**Essential understanding**

- Cultural adaptation increases effectiveness of treatment, and this is especially true for specific adaptations that target a specific culture.

**Aim**

To examine the effectiveness of culturally adapted treatments of mental disorders.

**Method and procedure**

- A meta-analysis of 76 studies was conducted; only the studies that had a quantitative estimate of effectiveness were included.
- The types of cultural adaptations used in these research studies ranged from consultations with individuals familiar with the client’s culture to cultural sensitivity training for staff.

**Participants**

The total sample in the research studies included in the analysis was around 25,000 participants.

**Results**

- There was a “moderately strong” benefit of culturally adapted interventions.
- The benefit was four times stronger for same-race groups of clients than for mixed-race groups of clients.
- When the therapist spoke the client’s native language, therapy was more effective than when the therapist spoke English.

**Conclusion**

Cultural adaptations carried out for specific sub-populations (groups of clients) are much more effective than making treatment more culturally flexible in general.