The role of clinical biases in diagnosis

Inquiry questions

- Since clinical diagnosis is essentially a human judgment, is it affected by the biases inherent in human thinking and decision-making?
- What can we do to minimize bias in diagnosis?
- Since the purpose of diagnosis is to understand a person’s experiences deeply and this is only possible with a subjective approach, do we even need to eliminate bias?

What you will learn in this section

- Clinician variables in diagnosis
  - Clinician’s attitudes and beliefs: Langwier and Linden (1993), four psychiatrists with different theoretical backgrounds arrived at four different diagnoses
  - Clinician’s abilities
  - Clinician’s cognitive biases: confirmation bias and illusory correlation, Chapman and Chapman (1969)
- Patient variables in diagnosis
  - Reporting bias—certain symptoms exist in the population but they go unreported: Furnham and Malik (1994), cultural perceptions of depression are different in middle-aged, but not young British Asians
  - Somatization—expressing psychological disorders in the form of physical symptoms: Kleinman (1982), somatization may serve as a coping mechanism to avoid being stigmatized in the society; Lin, Carter and Kleinman (1985), refugees are more prone to somatization than immigrants “by choice”; acculturation involves high levels of stress coupled with low levels of social support
  - Expression of symptoms—altered behaviour of the patient in a clinical context: Payne (2012), African American and Caucasian patients express their symptoms differently, but clinicians are insensitive to such cultural differences (which results in bias)
- Cultural factors in the DSM
  - Cultural formulation interview
  - Alarcon (2009): a list of factors about which information must be gathered
  - Cultural syndromes: Ataque de nervios, Shenjing shuairuo, Taijin kyofusho, Dhat syndrome

This section also links to:

- validity of diagnosis
- cognitive biases in decision-making (cognitive approach to behaviour)
- stereotypes, acculturation, globalization (sociocultural approach to behaviour).

Clinical biases in diagnosis may be associated with several groups of factors. The first broad group of factors relates to characteristics of the clinician—the so-called “clinician variables”. The second group consists of “patient variables”—overdiagnosis or underdiagnosis of certain groups based on their age, gender, race/ethnicity. The third group, which partially overlaps with the first two, consists of cultural factors in diagnosis.
**Clinician variables in diagnosis**

Sources of clinician variables may include the following (Poland and Caplan, 2004).

1. The clinician’s **attitudes and beliefs** about certain groups of individuals or disorders, for example, the psychiatrist’s professional background or theoretical orientation. **Langwierer and Linden (1993)** analysed the influence of clinician variables on the diagnosis and treatment of depression by presenting a trained pseudo-patient to four clinicians, each with a different professional background. They thought that they were treating a real patient during regular working hours. Despite similar information about the case, four different diagnoses and four different treatments were chosen. When tape recordings of the patient’s visit were analysed, it was noticed that it took no longer than three minutes for the initial diagnostic concept to emerge. This concept was then further refined and “clarified” in the clinical interview and led to the final diagnostic conclusion. Researchers concluded that diagnosis can be related to the professional background and personal attitudes of the clinician, which delineates one of the major sources of clinical bias.

2. The clinician’s **abilities**, such as perspective-taking, self-reflection, tolerance for uncertainty, tolerance for difference.

3. The clinician’s **cognitive biases**. Two examples of cognitive bias you already know (see Unit 3) that may be crucial in a clinical context are confirmation bias (the tendency to seek out information that confirms previously held beliefs) and illusory correlation (the tendency to see a relationship where it does not exist). Recall, for example, the study of **Chapman and Chapman (1969)** who investigated the ability of psychiatrists to use Rorschach’s ink blots to diagnose homosexuality.

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**Psychology in real life**

A patient reports to the clinic with symptoms suggestive of schizophrenia (hearing voices, illogical flow of thoughts, inability to interpret social situations correctly). He is 64 years old, seems detached and is highly religious. He has a rural Ugandan background, but he moved to the USA 15 years ago.

The psychiatrist is a Caucasian male coming from an upper middle-class family. He recently graduated from a medical school.

What factors can potentially cause biases in this interview? In a group list all potential biases you can think of. Then eliminate all sources of bias that do not belong to clinician variables. Group the remaining sources of bias into three categories: clinician’s attitudes and beliefs, clinician’s abilities, clinician’s cognitive biases.

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**Patient variables in diagnosis**

Sources of patient variables may include the fact that different groups of people behave differently in a clinical interview. Some groups may experience symptoms differently. Moreover, some groups may be reluctant to report psychological distress. Patient variables link to such phenomena as expression of symptoms, reporting bias, and somatization.

**Reporting bias**

You only seek professional help for mental illness if you believe you have one. What happens if you have it but refuse to accept it? The result is reporting bias—certain symptoms exist in the population, but they go unreported, so statistically it looks like a certain disorder is not prevalent in this population group. Kleinman (1977) made a distinction between disease (a biological malfunction) and illness (one’s personal reaction to the disease). Unlike disease, illness is heavily influenced by culture.

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**ATL skills: Self-management**

Reflect on your own reporting bias. For example, you have toothache but you don’t report it to the dentist, although you know early intervention is important. Or you have insomnia but don’t think it necessary to see a doctor about it.

What illnesses would you personally be reluctant to report to a professional? What illnesses go unreported most often in your culture?

For example, how “normal” is it to see a psychologist regarding marital problems in your society? How many of your friends are currently seeing a psychologist?
Furnham and Malik (1994) investigated cross-cultural beliefs about depression. They were trying to find an explanation for an earlier observation that British Asians (from Bangladesh, India and Pakistan) were rarely diagnosed with depression. They recognized several potential explanations for this.

- Depression is a western phenomenon and British Asians are genuinely healthier.
- British Asians do experience depression, but they underutilize mental health institutions despite their increased stress due to migration.
- British Asians present psychological problems somatically so they get diagnosed with physical disease instead.

The second explanation here is known as reporting bias. Of course, reporting bias is caused by a culturally mediated perception of a disorder (illness). So, a study of cross-cultural differences in these perceptions may potentially reveal the hidden mechanisms of reporting bias.

One hundred and fifty-two female subjects from middle-class backgrounds participated in the study, a group of middle-aged women (aged 35–62) and a group of younger women (17–28 years). Half of the participants were classified as Native British (born and educated in Britain); the other half were of Asian origin (India, Pakistan or Bangladesh) and had received education in their countries of origin.

All participants filled out questionnaires that targeted both their symptoms of mental illness and their beliefs about depression and anti-depressive behaviours.

The results showed that perception of depression differed among Asian and British participants. For example, Asian (but not British) women tended to agree with the following statements.

- “Having a job outside the home helps keep women from getting depressed.”
- “When feeling depressed, it is more helpful to talk it over with a family member than with a friend.”
- “Feeling depressed is no different from feeling depressed about something.”

Interestingly, the differences were less pronounced in the group of younger women. This shows how globalization gradually influences younger representatives of traditional cultures.

Finally, Asian middle-aged women reported being depressed significantly less often than the other three samples. This could be attributed to their (culturally influenced) perceptions of depression. The authors of the study explained this cross-cultural difference by the underlying individualist-collectivist dimension, with the increased role of the extended family in the east and a tendency to explain distress by lack of fit into society (for example, lack of job).

**ATL skills: Research**

There are two independent variables in Furnham and Malik’s study with two levels each: culture (British versus Asian) and age (middle-aged versus young). This means that the study followed a 2x2 design. Note, however, that the study is quasi-experimental: researchers did not randomly allocate participants to the groups, which limits our ability to make cause-and-effect inferences from the study findings.

1. Name the dependent variables and how they were operationalized.
2. Describe the interaction between two independent variables. Use this format: “A report less depression and use more collectivist explanations of the illness than B, but only if A are ___ (younger/older)”.
3. Which of the three potential explanations for the fact that British Asians are rarely diagnosed with depression is best supported by the results of Furnham and Malik’s study? Why?

**Discussion**

Reporting bias exists. Discuss what ethical considerations this connects to. In today’s globalized world should we (as a global community) educate people from collectivist societies about the importance of reporting depression? Or should we respect the existing cultural norms and support them in ways of coping with depression that they already use (for example, keeping busy with household chores, spending more time with relatives, and so on)?
Somatization

Somatization refers to expressing psychological disturbance in the form of physical symptoms. Somatization is linked to reporting bias, because in social groups where somatization is prevalent potential patients could report their illness to physicians rather than mental health professionals. Some researchers point to somatization as an example of a culturally different manifestation of mental illness.

Kleinman (1982) found that Chinese patients expressed depression and other psychological problems mainly through somatic symptoms (for example, “I have a headache” instead of “I am sad”). He explains this tendency to “transform” psychological distress into physical symptoms by severe stigma attached to mental illness in Chinese and many other Asian cultures. In these societies somatization serves as a coping mechanism because it allows you to get support from your social network and provides a temporary relief from everyday responsibilities.

People in transition (cultural or geographical) were also shown to be prone to somatization. Certain groups of migrants, for example, have been forced to move because of war in their home countries, but their traditional society discourages them from displaying signs of weakness. This means that acculturation for these people involves high levels of stress coupled with low levels of social support.

Lin, Carter and Kleinman (1985) reviewed the clinical records of Chinese, Filipino, Vietnamese and Laotian patients in US primary care to determine the presence of somatization. A distinction was made between refugees and immigrants. About half of the patients had been born and raised in Vietnam and had been forced to migrate as refugees due to the war. A second group of patients had lived in China, Taiwan or Hong Kong, and it was their conscious choice to emigrate to the USA.

Somatization was defined as vague somatic symptoms such as headache, abdominal pain, dizziness and insomnia in the absence of a clear etiology. Somatization was diagnosed in 35% of patients. Refugees were more likely to have somatization than immigrants. Patients with somatization were more likely than patients with physical disorders to have a large household size and lower levels of education. Both these variables (household and school) point to how “traditional” the cultural background of the patient is. They were also more likely to be less proficient in English (this probably relates to lack of social support in the new country).

The authors concluded that somatization was one of the most important clinical problems in Asian refugees and immigrants. The more “traditional” their society was, the more they seemed to be prone to somatization. Refugee status also seems to be an important contributor to somatization.
**Expression of symptoms**

It has been firmly established that diagnosed rates of mental illness differ across cultural groups. For example, Hispanics are diagnosed with schizophrenia 1.5 times more often than Caucasians. African Americans, compared to Caucasians, are diagnosed more frequently with schizophrenia, substance abuse and dementia (DelBello et al., 2001). As you know, these observed differences could be due to multiple factors: genuinely existing differences, biased judgment of the clinician or altered behaviour of the patient in the clinical context. If altered behaviour is the case, we talk about cross-cultural differences in the expression of symptoms, for example, in the study of Steele and Aronson (1995) on “stereotype threat” in IQ testing. As you have seen, the testing situation itself activated stereotypical expectations, causing African-American subjects to unintentionally modify their behaviour so that the test score was lower (and in accordance with the stereotype). Something similar may be happening in psychiatric diagnosis, especially when the patient and the clinician have different cultural backgrounds: the patient might modify his or her behaviour unintentionally, trying to better fit into the clinician’s schemas.

**Payne (2012)** showed 239 clinical workers and therapists four specially designed clinical videos and asked them to make diagnostic judgments. In two videos an actor played the role of a depressed man with classic symptoms of MDD. In the other two videos the actor “displayed” culturally expressed African-American symptoms of depression. The latter were established on the basis of prior studies that identified the key differences in the symptoms of depressed African-American patients compared with depressed Caucasian patients. Finally, the actor was either African American or Caucasian. The two actors were of similar age and physical appearance and they were dressed identically. Other confounding variables were also standardized as much as possible.

Broadly speaking, racial differences in clinical diagnosis may be the result of two factors: either the clinician’s racial bias or genuine differences in the prevalence and expression of disorders. It is important to keep in mind these potential explanations, as when making an inference about clinician racial bias it has to be confirmed that the alternative explanation (genuine differences) has been excluded.

As applied to Payne’s study, the **clinician bias hypothesis** would suggest that African-American and Caucasian patients exhibit similar depression symptoms but clinicians mistakenly judge these symptoms differently because of personal prejudices, cultural ignorance, and so on. Conversely, the **cultural variance hypothesis** would suggest that African-American and Caucasian clients express their symptoms differently, but clinicians are insensitive to such cultural differences (which results in bias). Note that both explanations assume that the client actually has the disorder (depression); it is only the way symptoms are expressed that differs.

<table>
<thead>
<tr>
<th>How often were patients misdiagnosed?</th>
<th>Classic symptoms</th>
<th>Culturally expressed symptoms</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>African-American patient</strong></td>
<td>Group 1: not often</td>
<td>Group 3: often</td>
</tr>
<tr>
<td><strong>Caucasian patient</strong></td>
<td>Group 2: not often</td>
<td>Group 4: often</td>
</tr>
</tbody>
</table>

▲ Table 5.3 Results from Payne (2012)

The study did not directly support the clinician racial bias hypothesis, as no significant differences were found between clients of either race if they presented the same symptoms (for example, African-American clients presenting classic depressive symptoms were not misdiagnosed more often than Caucasian clients presenting the same symptoms). However, clinicians misdiagnosed depression more often when culturally expressed depressive symptoms were presented by
clients of either race (see Table 5.3). The study lends support to the cultural variation hypothesis but not to the clinician racial bias hypothesis. It was concluded that it is not race itself that produces bias in diagnosis, but culturally specific expression of symptoms (which clinicians seem to be unaware of). This is good news: racial bias in diagnosis exists, but at least it is not caused by overt racism. The study suggests that clinicians can be better trained to recognize culturally specific expression of symptoms, which will potentially decrease bias and increase validity of diagnosis.

![Screen shots from Payne’s study (2012)](image)

Cultural factors in the DSM

As you have seen, prior to the publication of DSM-III attention of the psychiatric community was focused on increasing reliability of diagnostic categories, often at the expense of validity. As a result, DSM-III was criticized for lack of inclusion of cultural factors—disorder classifications were viewed as largely universal. DSM-IV represented some progress in terms of acceptance of cultural dimensions. Arguably, this progress could not be called considerable: it boiled down to including a “cultural formulation interview” in an appendix in the manual, and listing an incomplete glossary of “culture-bound syndromes”. In DSM-5 cultural considerations were incorporated at a much deeper level. The cultural formulation interview also was refined and updated.

**Psychology in real life**

Review information on the cultural formulation interview in DSM-5: [https://www.multiculturalmentalhealth.ca/clinical-tools/cultural-formulation/](https://www.multiculturalmentalhealth.ca/clinical-tools/cultural-formulation/)

When you drafted the questions to be used in an interview with Anoushka, to what extent did you incorporate cultural considerations in your interview? Go back to your initial draft, review it and consider adding questions in line with the cultural formulation interview.

**Exercise**

If you want to do additional research and make a presentation in class, review this article: “Expression and treatment of depression among Haitian immigrant women in the United States: Clinical observations” (Guerda et al, 2007) published in *American Journal of Psychotherapy*: [https://tinyurl.com/grpboog](https://tinyurl.com/grpboog)

Based on the case studies outlined in the article, make a visual to compare three types of culturally specific presentations of depression: Douleur de Corps (pain in the body), Soulagement par Dieu (relief through God) and Lutte sans Victoire (fighting a winless battle).

**Alarcon (2009)** argues that cultural dimensions of diagnosis have often been incorporated in real-life psychiatric practices through vague declarations of the importance of cultural factors, but rarely given genuine and deep consideration. He suggests a list of factors about which information must be gathered in a well-structured clinical interview.

- Cultural variables: language, religion and spirituality, traditions and beliefs, migration history and level of acculturation. These should all be covered in the initial stage of the clinical interview, setting the stage for further investigation.
- Family data: he suggests that family is in itself a cultural (or micro-cultural) variable. This includes areas such as how the patient was raised, social interactions and community celebrations.
- Environmental influences in the culture: media, political structures, rules of public behaviour, rituals, schooling norms, and so on.
- Explanatory models: how the patient and the relatives explain the origin and the evolution of the symptoms. To know how the patients themselves explain their disorder may be crucial in seeing this disorder from the perspective of the reality in which it emerged.
- Patient’s self-reported strengths and weaknesses: this information is also cultural since it is a product of self-observation, so it reflects culturally determined views of the patient about the possible coping resources.

**TOK**

Suppose you have gained knowledge of the five groups of cultural factors listed above. Will this allow you to better understand your patient who has a different cultural background? Undoubtedly it will improve your understanding to some extent, but will this improvement be large enough to make the qualitative “leap” from non-understanding to understanding?

Discuss the difference between knowledge and understanding. Does it require something else, in addition to a knowledge of cultural context, to understand your client’s mental problem? If it does, what is required exactly?

It could be useful to conduct research online to explore the difference between two theories: epistemology (theory of knowledge) and hermeneutics (theory of understanding). How are they different?

**Cultural syndromes**

A culture-bound syndrome is a set of symptoms that are only recognized as illness in a specific culture. The term was included in DSM-IV, which listed the most common culture-bound conditions in Appendix I. Culture-bound syndromes were defined in the DSM-IV as recurrent, locality-specific patterns of aberrant behaviour and troubling experience that may or may not be linked to a particular diagnostic category. In DSM-5 the notion of “culture-bound syndromes” was replaced by “cultural syndromes”.

The following examples of cultural syndromes are currently listed in DSM-5.

*Ataque de nervios* (translated from Spanish as “attack of nerves”)—this is a syndrome found predominantly in Hispanic people as well as in the Philippines. Symptoms include uncontrollable screaming, trembling, sensation of heat in the chest and head, partial loss of consciousness and impulsive acts. Often individuals who experience an episode of Ataque do not subsequently remember it. Some scholars argue that this syndrome is a culturally acceptable reaction to stress within the Hispanic community (Steinberg, 1990).

*Shenjing shuairuo* (neurasthenia)—this condition may be metaphorically referred to as “weakness of the nerves” and includes symptoms of fatigue, anxiety, headache, weakness and generally depressed mood. In DSM-IV it was shifted from the main section of the manual to the culture-bound syndromes appendix. The condition is thought to be specific to Asia. Shenjing shuairuo (which translates from Chinese as a “nervous breakdown”) might be a culturally acceptable diagnosis that avoids being associated with a stigma of a mental disorder (stigmatization is stronger in traditional eastern societies). Traditional Chinese medicine describes this syndrome as a depletion of qi (vital energy).

*Taijin kyofusho*—fear of interpersonal relationships, a syndrome thought to be specific to the Japanese and the Korean culture. The syndrome includes being embarrassed about yourself or having a fear that others will not be pleased with one’s appearance or body odour. The set of symptoms boils down to trying to avoid embarrassing others with one’s presence. As a result of this extreme self-consciousness, sufferers’ heart rate increases in the presence of others, they may have irrational beliefs about their body, face or bodily functions, and they may have panic attacks when around people, among other symptoms. The syndrome is believed to stem from emotional trauma and is more prevalent in men.
Dhat syndrome—this is found in male patients in the cultures of the Indian subcontinent. Patients complain about premature ejaculation or impotence and believe that they are passing semen in their urine, which has no objective medical signs. This syndrome has been related to traditional Hindu beliefs that view semen as a “vital fluid”, and an excessive loss of semen may be associated with the loss of life energy.

**Exercise**

Find out more and make short presentations in class about other cultural syndromes currently included in DSM-5: Khyal cap, Ghost sickness, Kufungisisa, Maladi moun, Susto.

Do you think Anoushka’s case might be a cultural syndrome?