Ethnopsychopharmacology and the Use of the DSM-5 Cultural Formulation Interview

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Grand Rounds
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Disclosures

None
Case #1

Young female from Puerto Rico presents to emergency department after learning she needed to give a talk to her distinguished colleagues. She presented restless, pacing, "nervousness", trembling that presented abruptly. She told ED provider she felt she was having a nervous crisis. What is likely cause of presentation?

A. Ataque de nervios
B. Caffeine intoxication
C. Intrapsychic conflict that would lead to conversion disorder
D. None of the above
Objectives

Overview of Ethnopsychopharmacology

Introduce the DSM 5 Cultural Formulation Interview

Discuss examples (using videos)
Ethnopsychopharmacology

Study of how culture and genetic differences determine and influence the response to psychotropic agents.

Highlights importance of culture and how it alters the biological efficacy of psychiatric medications through other non biological factors.
What do we mean by culture?

Culture refers to systems of knowledge, concepts, rules, and practices that are learned and transmitted across generations.

Culture includes language, religion and spirituality, family structures, life-cycle stages, ceremonial rituals, and customs, as well as moral and legal systems.
Figure 1. Factors affecting drug response.
Non Biological Factors affecting Psychopharmacology

Expectations of rapid relief of treatment and are cautious about side effects and addiction

Traditional Healing, Complimentary/alternative medicine

Language

Family interactions

Mistrust of health care system

Attention seeking at a later stage of illness

Understanding of treatment recommendations
Figure 3. Factors determining pharmacological response.
Pharmacodynamics/Pharmacokinetics

What drug does to the body

Pharmacodynamics

Pharmacokinetics

What body does to the drug

Absorption

Distribution

Metabolism

ADME

Elimination

Pharmacodynamics vs Pharmacokinetics

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What we know...

Many psychotropics metabolized by the cytochrome P 450 isoenzyme, with a differing number of functioning allele

Poor metabolizers (slow metabolizers) of the enzyme tend to develop higher plasma concentration

Intermediate metabolizer

Extensive metabolizer-majority of the population

Ultrarapid metabolizers tend to have poor response to medication might need higher doses
# Biological Aspects of Psychopharmacology

<table>
<thead>
<tr>
<th>Enzymes</th>
<th>Drugs involved</th>
<th>Incidence of Poor metabolizers</th>
</tr>
</thead>
<tbody>
<tr>
<td>CYP2D6</td>
<td>Typical and atypical antipsychotics, Tricyclic antidepressants, SSRI's, venlafaxine</td>
<td>3%-10% in Caucasians 0.5%-2.4% in Asians 4.5% in Hispanics 1.9% in African Americans</td>
</tr>
<tr>
<td>CYP2C9</td>
<td>Ibuprofen, naproxen, warfarin, tolbutamide</td>
<td>18%-22% of Asians and African Americans</td>
</tr>
<tr>
<td>CYP2C19</td>
<td>Benzodiazepines, Citalopram, clomipramine, imipramine, and propranolol</td>
<td>3%-6% in Caucasians 4%-18% in African Americans 18%-23% in Asians</td>
</tr>
</tbody>
</table>

Adapted from: Ruiz, P. The role of ethnicity in psychopharmacology International Psychiatry 2007 Vol.4 number 3
Observations made...

Lithium - African Americans appear to have higher risk of neurotoxicity/higher propensity for hypertension

African Americans may respond quicker and at lower doses to TCAs but with greater risk of neurotoxicity

Hispanics may respond at lower doses

African Americans higher risk for extrapyramidal side effects with antipsychotic use

Antipsychotics

AA cleared olanzapine 26% faster than from racial and ethnic groups

Higher clearance were more likely to discontinue medication due to inadequate response

Higher discontinuation of perphenazine and zisprasidone by Hispanics

Placebo effect

Improvements in symptoms unrelated to direct pharmaceutical action of medication

Largely shaped by culture, through the meanings, beliefs and expectations attributed both locally and globally

Accounts for 33% of positive outcomes in clinical trials of pharmaceuticals

http://pballew.blogspot.com/2014/10/a-brief-history-of-placebo-effect.html
Diet

Inducers- cruciferous vegetables (cabbage, broccoli, kale), tea

Inhibitors- corn, carrots, citrus fruit, mainly Grapefruit juice, coffee, smoking

Lin, et al. 2008
Trends

Eliminate need for accurate categories reflecting population based genetic variation to individualized psychopharmacology

Employ individualized treatment without forgetting culture and context that impacts pharmacological and non biological efficacies.
How can we evaluate for these factors?
Cultural Formulation Interview (CFI)

Culture shapes:
- Illness Narration
- Pattern of Symptoms
- How we interpret symptoms
- Perceptions of care

CFI useful:
- Uncertainty cultural presentation and diagnostic criteria
- Difficulty in judging illness severity or impairment
- Disagreement between patient and clinician on treatment
- Adherence
Core Cultural Formulation Interview

Core CFI Expansion Modules

- Explanatory model
- Level of Functioning
- Social Network
- Psychosocial Stressors
- Spirituality, Religion, and Moral Traditions
- Cultural Identity
- Coping and Help Seeking
- Patient-Clinician Relationship

Special Populations Modules

- Older Adults
- School Age Children and Adolescents
- Immigrants and Refugees

Informant Perspectives Modules

- CFI Informant Version Caregivers

Adapted from: Handbook on the Cultural Formulation Interview
Common Themes

Family systems issues

Exposure to trauma and violence

Migration Issues

Cultural Identity, Acculturation and Adjustment

Cultural Models of Illness and Healing
### Explanatory model

#### Cultural Definition of the Problem

(Explanatory Model, Level of Functioning)

<table>
<thead>
<tr>
<th>Context</th>
<th>Questions and Phrasings</th>
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</table>
| Elicit the individual’s view of core problems and key concerns. Focus on the individual’s own way of understanding the problem. Use the term, expression, or brief description elicited in question 1 to identify the problem in subsequent questions (e.g., “your conflict with your son”). | 1. What brings you here today?  
*IF INDIVIDUAL GIVES FEW DETAILS OR ONLY MENTIONS SYMPTOMS OR A MEDICAL DIAGNOSIS, PROBE:*  
People often understand their problems in their own way, which may be similar to or different from how doctors describe the problem. How would you describe your problem? |
| Ask how individual frames the problem for members of the social network. | 2. Sometimes people have different ways of describing their problem to their family, friends, or others in their community. How would you describe your problem to them? |
| Focus on the aspects of the problem that matter most to the individual. | 3. What troubles you most about your problem? |
### Perceptions of cause

#### Causes

<table>
<thead>
<tr>
<th>(Explanatory Model, Social Network, Older Adults)</th>
<th>Causes</th>
</tr>
</thead>
<tbody>
<tr>
<td>This question indicates the meaning of the condition for the individual, which may be relevant for clinical care.</td>
<td></td>
</tr>
<tr>
<td>Note that individuals may identify multiple causes, depending on the facet of the problem they are considering.</td>
<td></td>
</tr>
<tr>
<td>Focus on the views of members of the individual's social network. These may be diverse and vary from the individual's.</td>
<td></td>
</tr>
</tbody>
</table>
| 4. Why do you think this is happening to you? What do you think are the causes of your [PROBLEM]?

**PROMPT FURTHER IF REQUIRED:**
Some people may explain their problem as the result of bad things that happen in their life, problems with others, a physical illness, a spiritual reason, or many other causes.

| 5. What do others in your family, your friends, or others in your community think is causing your [PROBLEM]? |
## Supports

### Stressors and Supports

(Social Network, Caregivers, Psychosocial Stressors, Religion and Spirituality, Immigrants and Refugees, Cultural Identity, Older Adults, Coping and Help Seeking)

<table>
<thead>
<tr>
<th>Elicit information on the individual’s life context, focusing on resources, social supports, and resilience. May also probe other supports (e.g., from co-workers, from participation in religion or spirituality).</th>
<th>6. Are there any kinds of support that make your [PROBLEM] better, such as support from family, friends, or others?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Focus on stressful aspects of the individual’s environment. Can also probe, e.g., relationship problems, difficulties at work or school, or discrimination.</td>
<td>7. Are there any kinds of stresses that make your [PROBLEM] worse, such as difficulties with money, or family problems?</td>
</tr>
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Cultural Identity

ROLE OF CULTURAL IDENTITY
(Cultural Identity, Psychosocial Stressors, Religion and Spirituality, Immigrants and Refugees, Older Adults, Children and Adolescents)

Sometimes, aspects of people’s background or identity can make their [PROBLEM] better or worse. By background or identity, I mean, for example, the communities you belong to, the languages you speak, where you or your family are from, your race or ethnic background, your gender or sexual orientation, or your faith or religion.

Ask the individual to reflect on the most salient elements of his or her cultural identity. Use this information to tailor questions 9–10 as needed.

Elicit aspects of identity that make the problem better or worse.

Probe as needed (e.g., clinical worsening as a result of discrimination due to migration status, race/ethnicity, or sexual orientation).

Probe as needed (e.g., migration-related problems; conflict across generations or due to gender roles).

8. For you, what are the most important aspects of your background or identity?

9. Are there any aspects of your background or identity that make a difference to your [PROBLEM]?

10. Are there any aspects of your background or identity that are causing other concerns or difficulties for you?
Factors affecting coping

**SELF-COPING**
(Coping and Help Seeking, Religion and Spirituality, Older Adults, Caregivers, Psychosocial Stressors)

*Clarify self-coping for the problem.*

11. Sometimes people have various ways of dealing with problems like [PROBLEM]. What have you done on your own to cope with your [PROBLEM]?
## Factors affecting coping

### Past Help Seeking

(Coping and Help Seeking, Religion and Spirituality, Older Adults, Caregivers, Psychosocial Stressors, Immigrants and Refugees, Social Network, Clinician-Patient Relationship)

<table>
<thead>
<tr>
<th>Factor</th>
<th>Example</th>
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<tr>
<td>Elicit various sources of help (e.g., medical care, mental health treatment, support groups, work-based counseling, folk healing, religious or spiritual counseling, other forms of traditional or alternative healing).</td>
<td>Probe as needed (e.g., “What other sources of help have you used?”).</td>
</tr>
<tr>
<td>Clarity the individual’s experience and regard for previous help.</td>
<td></td>
</tr>
</tbody>
</table>

12. Often, people look for help from many different sources, including different kinds of doctors, helpers, or healers. In the past, what kinds of treatment, help, advice, or healing have you sought for your [PROBLEM]? 

**Probe if does not describe usefulness of help received:**

- What types of help or treatment were most useful? Not useful?

### Barriers

(Coping and Help Seeking, Religion and Spirituality, Older Adults, Psychosocial Stressors, Immigrants and Refugees, Social Network, Clinician-Patient Relationship)

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<tbody>
<tr>
<td>Clarify the role of social barriers to help seeking, access to care, and problems engaging in previous treatment.</td>
<td>Probe details as needed (e.g., “What got in the way?”).</td>
</tr>
</tbody>
</table>

13. Has anything prevented you from getting the help you need? 

**Probe as needed:**

For example, money, work or family commitments, stigma or discrimination, or lack of services that understand your language or background?
Address patients needs

<table>
<thead>
<tr>
<th>PREFERENCES</th>
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<tbody>
<tr>
<td>(Social Network, Caregivers, Religion and Spirituality, Older Adults, Coping and Help Seeking)</td>
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</table>

<table>
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<tr>
<th>Clarity individual’s current perceived needs and expectations of help, broadly defined.</th>
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<tbody>
<tr>
<td>Probe if individual lists only one source of help (e.g., “What other kinds of help would be useful to you at this time?”).</td>
</tr>
<tr>
<td>Focus on the views of the social network regarding help seeking.</td>
</tr>
<tr>
<td>Now let’s talk some more about the help you need.</td>
</tr>
<tr>
<td>14. What kinds of help do you think would be most useful to you at this time for your [PROBLEM]?</td>
</tr>
<tr>
<td>15. Are there other kinds of help that your family, friends, or other people have suggested would be helpful for you now?</td>
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Cultural elements of the relationship between the individual and the clinician

HAS A JOKE

REALIZES IT MAKES NO SENSE IN OTHER CULTURAL CONTEXTS.
<table>
<thead>
<tr>
<th><strong>CLINICIAN-PATIENT RELATIONSHIP</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>(Clinician-Patient Relationship, Older Adults)</td>
</tr>
<tr>
<td>Elicit possible concerns about the clinic or the clinician-patient relationship, including perceived racism, language barriers, or cultural differences that may undermine goodwill, communication, or care delivery.</td>
</tr>
<tr>
<td>Probe details as needed (e.g., &quot;In what way?&quot;). Address possible barriers to care or concerns about the clinic and the clinician-patient relationship raised previously.</td>
</tr>
</tbody>
</table>
Videos

www.appi.org/lewis-fernandez
But I work in a setting where using CFI will not work…

<table>
<thead>
<tr>
<th>Setting</th>
<th>Environmental Characteristics</th>
<th>Main Diagnosis</th>
<th>Main Core CFI sections</th>
</tr>
</thead>
<tbody>
<tr>
<td>Emergency departments</td>
<td>“chaotic” quick pace, multidisciplinary, diverse</td>
<td>Psychomotor agitation, psychotic episodes, suicidal behaviors, Intoxication, cultural concepts of distress</td>
<td>Cause, Context, and support, Past and current help seeking patterns</td>
</tr>
<tr>
<td>Consultation Liaison Services</td>
<td>Nonpsych units, consulting rules and expectations</td>
<td>Psychiatric complications of medical or surgical conditions. Psychiatric co-morbidities</td>
<td>Cause, context and support. Past current help seeking patterns, clinician patient relationship</td>
</tr>
<tr>
<td>Outpatient clinics</td>
<td>Regular schedules, independent assessments, mild – moderate severity</td>
<td>Mood, anxiety, personality d/o First episode psychoses</td>
<td>Same as above</td>
</tr>
<tr>
<td>Urban and rural Community Health Centers</td>
<td>Minority or immigrant patients Cultural diversity Moderate sense of urgency</td>
<td>Depressive and anxiety d/o Somatoform d/o Family interpersonal conflicts</td>
<td>Cultural definition of the problem. Cause, context and support. Self coping activities, clinician patient relationship</td>
</tr>
</tbody>
</table>
Take home points

Use the cultural formulation to address beliefs, expectations, support system, complementary or alternative medicine

Assure confidentiality (fear, shame and paranoia)

Attention to communication, address language barriers if any

With medication, start low and go slow, may need to involve family

If develop side effects lower dose or use other route of metabolism.

Provide education to reduce stigma
Ninnemann, KM. *Variability in the efficacy of Psychopharmaceuticals: contributions from pharmacogenomics, ethnopsychopharmacology, and psychosocial and psychiatric anthropologies*. Cult Med Psychiatry 2012 36:10-25


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References


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Questions/Thank you

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