Objectives

- Examine issues of culture and genetics as they relate to care of persons by advanced practice nurses.
- Describe issues of culture as they relate to advanced clinical interviewing & assessment techniques.

Let’s Talk About Definitions

- **Culture:** norms, values, and beliefs that provide meaning for an individual, group, or community’s life.

- **Ethnicity:** common heritage shared by a particular group.

- **Race:** often thought of as genetic determinants within an individual’s biological make-up. **However,** the most Surgeon General states, “Different cultures classify people into racial groups according to a set of characteristics that are *socially* significant. In fact, there is research that indicates there are greater genetic variations *within* a racial group than *across* racial groups.”

- **Health:** “word symbol” that provides forward movement of the personality and other ongoing human processes which leads to creative, constructive, productive, personal, & community living.

- **Environment:** physiological, psychological, and social fluidity for the client and APRN.

- **Ethnopharmacology:** the study of pharmacologic responses for persons from different racial and ethnic backgrounds.

Current State of the Knowledge

- There are biological basis for variations or differences in metabolic response to agents.
  - Genetics and polymorphism in drug metabolism
  - Multiple disease states
  - Drug to drug interactions

- Environmental
  - Diet, smoking, pregnancy, stress, diurnal rhythms


Current State of the Knowledge

- Cultural
  - Attitudes, beliefs, family influences and therapy expectations.
  - Genetic responses are variant and may cause higher response & higher risk for more intense negative side effects. This is where cultural competence and physiology meet → create quality, culturally responsive care for clients.


Biological Basis for Differences

- Genetics and polymorphism in drug metabolism
  - Specific DNA regions on various chromosomes influence hepatic metabolism
  - Polymorphism: defined at least 2 distinct groups

Biological Basis for Differences

- Various types of hepatic metabolism
  - 2 phases
    - Acetylation: INH, hydralazine, procainamide
    - Oxidation: P450 isozymes
    - Glucuronidation: lorazepam, only phase II
    - Cholinesterase in plasma
    - Dehydrogenases: alcohol

Cultural Communication

Cultural Competence is Critical for Clients and FNPs

- This process includes:
  - Behavioral Perspective
  - Individual Perspective
  - Self or Outside Perspective
- All are related to biopsychosocial components within persons.
Cultural Competence

Process of knowing, appreciating, & valuing cultural differences and variations while incorporating such into your area of nursing expertise as well as in your relationships and interactions with others.


Interpersonal Relationship

- Critical to development of a successful cultural clinical interview process.
- Involves the client & MH provider’s cultural perspectives re: healthcare practices, beliefs, and importance of the environment.
- This provides a unique experience, development of expectations and pattern of interactions.
- The APRN guides the:
  - Significant, therapeutic, interpersonal process
  - Forward movement of personalities involved in the relationship

Cultural Perspectives within the APRN Care Process

- World Views
  - THINKING
  - INTERACTING
World Views: represents what a person values & how they function

Analytic (systematic):
OUTCOME ORIENTED

Relational (interactions with others):
RELATIONSHIP-BASED

Community (needs of the group):
TRANSENDENCE-MOTIVATED

Ecology (connection with the earth):
ECOLOGY-BASED

• Involves the preservation of the client’s culture in a recovery-based context.
• Utilizes negotiation to develop and extend the healthcare process and provide evidence-based holistic health care for the client.
• Utilizes critical thinking regarding cultural competence in order to repattern the client’s approach to addressing their health needs and symptom management.

Dr. Madeline Leininger, 1995

Interviewing Strategies

• Holistic Perspective
• Mental Health & Wellness
• Spiritual Connection
• Physiological Components

Culture – Focused Interview

• Focuses on the interpersonal dynamic process in order to help the client define his or her symptoms, needs.
Culturally Competent Healthcare Issues
- Genetic and ethnic influences.
- Cultural health beliefs and practices.
- Environmental variables (living, rearing, persons around a client).

Culturally Competent Healthcare Issues [Cont.]
- Healthcare professionals’ cultural perspectives and cultural competence knowledge.
- Client & others’ perspective & knowledge of cultural processes.

Cultural Interview Guidelines
- LISTEN to the client.
- EXPLAIN your perception of what the client said.
- ACKNOWLEDGE the importance of the client’s cultural perspectives.
- RECOMMENDATIONS are made according to the APRNs expertise and the client’s cultural health needs.
- NEGOTIATE to obtain successful, culturally competent healthcare.

Berlin & Fowkes, 1982
Cultural Interviewing Suggestions
Assess client’s cultural perspectives regarding:

* WHAT THEY NEED FROM YOU?
  - Meaning of wellness & distress.
  - How s/he describe the symptoms of current distress.
  - Feelings about seeking healthcare, issues of stigma.
  - How others who are important to the client feel about s/he seeking help for illness/ distress.
  - Cultural practices for treating illness/ distress.

(Caw, 2001)

Culturally Competent Education
* Provide Client Education Regarding:
  - Symptoms of their disorder/ distress.
  - Treatment approaches as they relate to their cultural practices.
  - Daily schedule needs (e.g., dietary practices, work, sleep, etc.)
  - Role & use of support systems (e.g., healthcare professionals, family, significant others)
  - Through individual &/or group health sessions

(Colom, et al., 2003)

Brokering
- Negotiation is the key for successful evidence-based holistic healthcare interviewing, assessment, treatment & follow-up!
Cultural Interviewing

- Interface of biological, psychological, and social theoretical evidence-based therapeutic foci into a **highly specialized** approach to client care.
- The focus is on the interaction and relationship in order to obtain accurate client assessment data.

Cultural Client Interviewing

Involves the interpersonal processes between you, the client, and others important for both of you!

- Communication
- Significant Others
- Health Beliefs
- Orientation
- Education
- Biopsychosocial issues: Mind-body-spirit

Healthcare Professional’s Cultural Perspective

- Disparities in mental healthcare may be influenced by societal and provider perspectives as they relate to racially and ethnically diverse persons.


**Biopsychosocial Issues & Medication Adherence**
- Genetic and ethnicity influences
- Cultural health beliefs and practices
- Environmental variables
- Healthcare professionals’ cultural perspectives
- Client’s perspective of recovery process
- OUTCOME → Treatment/action plan for client.

**Cultural Influences on Dosing Decisions**

- Biological Sex
- Body Weight
- Age
- Smoking & Alcohol Consumption
- Client Race & Ethnicity
- Diet & Nutritional Factors
- Client Prescribing Practices


**Client Cultural Health Beliefs & Practices**
- Cultural dietary practices may alter metabolism of medication and thus affect medication affect and subsequent client adherence.
  (Gaw, 2001)
- 40% of HMO clients use herbs without their provider’s knowledge.
  (Bennett & Brown, 2000)
Culturally Responsive Access to Healthcare for Clients

Available
Cultural
Responsive
Access
Accessible
Affordable


Client Recovery Processes

Ethnopharmacology
Client Influences
Psycho-Therapeutic Interventions
Client-Provider Cultural Interactions
Recovery Processes
Healthcare System Environment

Culturally Competent Assessment Strategies


Cultural Assessment of Client Medication Adherence

Assess client’s cultural perspectives regarding:

- Feelings about taking medication
- Meaning of taking medication
- How others who are important to you feel about you taking medication
- Religious attitudes about taking medication
- Benefits of taking medication
- Any meaning re: color, size, or form of medication
- Concerns of losing control when using medication.

(Gaw, 2001)
Cultural Assessment of Client Medication Adherence

Provide Client Education Regarding:

- Symptoms of their disorder
- Medication action and side effect profile
- Influence of herbal preparations with prescribed medication for their disorder
- Daily schedule (e.g., dietary practices, work, sleep, etc.)
- Role & use of support systems (e.g., healthcare professionals, family, significant others)
- Through individual &/or group sessions

(Cohen, et al., 2003)

Medication Adherence

- Influenced by genetic patterns, CYP2D6, specific alleles are now being defined that are involved in the metabolic process.
- Influenced by dietary practices
  Corn in Latina populations (slows medication metabolism).


Medication Adherence

- Influenced by use of herbal preparations.
- Influenced by health care beliefs and practices.

Biocultural Ecology

**INVIOLVES:**
- Pharmacogenetics
- Pharmacokinetics
- Pharmacodynamics
- Biocultural Ecology:
  - Skin Color and Biologic Variations
  - Diseases and Health Conditions
  - Variations in Drug Metabolism

Pharmacology

**Medication Action:**
- Target Effects
- Unwanted SE
- Toxic Effects
- Adverse Effects

**Medication Mgt.:**
- Prevention
- Contraindication
- Interactive SE

Metabolic Pathways

BREAKDOWN, DISTRIBUTION, FUNCTION
Debrisoquine-Sparteine

- Medications metabolized through this pathway:
  - Antiarrhythmics
  - Beta-blockers
  - Antidepressants
  - Antipsychotics
  - Opioids
- African, Native, & Asian-Americans are more affected by their genetic variations within this pathway.

Acetylation Pathway

- This pathway is an important factor in the determination of the rate of metabolism.
- Definition of terms:
  - Extensive ("normal" reaction) metabolizers
  - Slow ("prone to toxic reactions") metabolizers
  - Caucasian & African-Americans: 50% (slow)
  - Egyptians and Moroccans: 80% - 90% (slow)
  - Asian-Americans: 5% - 15% (slow)

Mephenytoin

- Medications metabolized within this pathway
  - Antianxiety
  - TB
  - Caffeine
  - Cardiovascular
  - Tranquilizers
- Asian and European populations are more susceptible to genetic variations within this pathway.
Oxidation

• Research has identified specific CYP450 isozymes involved in polymorphism. Genotyping is the current approach for DNA determining genetic variations.
  • 2D6: beta blockers, antipsychotics, tricyclic antidepressants
    • 7 alleles have been identified which will make prescribing even more effective for persons with genetic variations
      • There are 5 for Caucasian-Americans, 10 for Asian-Americans, and 17 for African-Americans

Oxidation

• CYP2C19: alleles 2 and 3 have been identified within this isozyme.
  • Medications: diazepam, imipramine, citalopram, mephobarbital, omeprazole.
  • Poor Metabolizers include:
    • India Indians, Japanese & other Asian-Americans: 15% - 21%
    • Caucasian-Americans: 2% - 6%
    • African-Americans: 2%

Oxidation

• CYP1A2
  • Women have a poor metabolizer response and this require less doses of medications
  • Smoking effects are located here
  • Some carcinogens are associated with this isozyme as well
  • Charbroiled meat can intensify this response
  • Caffeine also affects
Herbal Therapies

- Tricyclic Antidepressants and Antipsychotics’ actions are similar to these herbs:
  - Swertia Japonica
  - Kamikihi-to
  - Datura candida
  - Nigerian root extract
  - South American holly

Interlocking Paradigm of Cultural Competence

- Other Persons' World Views
- Communities
- Theory Factor
  - For Clinician
- World-View Factor
  - For Clinician & Client
- Orientation Factor
  - For Clinician & Client
- Process Factor
  - For Clinician

Process & Orientation Factors for APRN & Client

- Biopsychosocial Issues: Mind-body-spirit
- Communication Patterns
- Environmental & Rearing Orientation
- Significant Others in the interactive process
- Education Level
- Health Beliefs
- Culturally Competent Healthcare
Case Study
(developed by Ms. Sarah Alley, RN, BSN)

- Mrs. Z is a 68 year old Japanese American who has lived alone for the past 3-years since the death of her husband. Mrs. Z was born in Japan & moved to the U.S. with her husband 25 yrs ago.
- Mrs. Z is retired after working many years as a seamstress. Mrs. Z has been referred to you (PMHAPN) by her primary care physician for evaluation after presenting with complaints of difficulty sleeping, frequent stomach aches & low energy.
- Physical exam & laboratory work were all WNL for the primary care physician & your physical exam of Mrs. Z has produced normal findings as well.

1. What genetic variables do you need to consider in this case?
2. Think about differential diagnosis for your specialty practice.
3. What referrals are needed that include other specialty APRNs? Remember you may not be able to handle every disorder on your own, know the boundaries of your practice. See APRN FHM notes.

Case Study, continued
(developed by Ms. Sarah Alley, RN, BSN)

- Mrs. Z appears tired, her clothes are wrinkled & she has on two different shoes. Mrs. Z is currently taking OTC buprenorphine for mild arthritis in her hands, however, she is not taking any other medications at this time.
- Upon further discussion with Mrs. Z, you find out that her dog of 13 years passed away 3 weeks ago & her youngest daughter just moved out of the house after graduating from college.
- Mrs. Z needs reminding of where the bathroom is after her visit with you, although she went to the bathroom previously before her examination.

Perhaps a review of dementia and depression is needed.

Additional References
(provided by Ms. Sarah Alley, RN, BSN)

Ethnicity and Healing

Ethnicity (e.g., culture) imprints every person...it binds those common roots and separates them from those with different origins. It suffuses body and oral language, as well as the way we take in, or distance ourselves from the world and other people.

Ethnicity (e.g., culture) is a force in both the genesis and healing of disease. It contributes to the uniqueness of the experience of illness. It is the...obligation of every nurse to comprehend and...empathize...with the cultural identity of those he or she purports to provide care for.


COMMENTS, QUESTIONS

WORK THROUGH THE FOLLOWING CASE STUDY IN ORDER TO PRODUCE A CULTURALLY COMPETENT APRN PLAN FOR THE CLIENT.

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