ABSTRACT
People from minority backgrounds who have a mental illness experience double discrimination associated with both mental illness and race. In 2001, the Surgeon General’s landmark report on race, culture, ethnicity, and mental health compellingly documented racial and ethnic disparities in mental health care related to issues of misdiagnosis, underuse, overrepresentation, and improper treatment. The report called for sound research, including investigation into the area of psychopharmacology, to determine the extent to which the variability of an individual’s response to medications is accounted for by factors related to race, ethnicity, age, gender, family history, or lifestyle. This article will focus on the realm of ethnic psychopharmacology and propose a practice model for nurses to become culturally competent in the area of ethnic psychopharmacology.
Individuals from minority backgrounds who have a mental illness experience double discrimination associated with both mental illness and race (Kaye & Lingiah, 2000). In 2001, the Surgeon General’s landmark report entitled Mental Health: Culture, Race, and Ethnicity—A Supplement to Mental Health: A Report of the Surgeon General (U.S. Department of Health and Human Services, 2001) compellingly documented racial and ethnic disparities in mental health care surrounding issues of misdiagnosis, underuse, overrepresentation, and improper treatment. The report called for sound research, including investigation into the area of psychopharmacology, to determine the extent to which the variability of an individual’s response to medications is accounted for by factors related to race, ethnicity, age, gender, family history, or lifestyle. This article focuses on the realm of ethnic psychopharmacology and proposes a practice model for psychiatric nurses to become culturally competent in this area.

**ETHNIC PSYCHOPHARMACOLOGY**

A patient’s age, gender, size, body composition, and other variables are usually studied in psychopharmacological research; however, issues such as race and ethnicity are frequently neglected (Campinha-Bacote, 1995). Pharmacogenetic research during the past few decades has revealed significant differences among racial and ethnic groups related to the metabolism and clinical effectiveness of many important drugs. In addition, psychiatry has recently paid more attention to pharmacological issues associated with culturally and ethnically diverse patients. These joint efforts have validated the emerging field of ethnic pharmacology. Ethnic psychopharmacology has also been referred to as cross-cultural psychopharmacology, transcultural psychopharmacology, ethnopsychopharmacology, and interethnic psychopharmacology (Boroughs, Maxey, Crawley, & Levy, 2002; Cordell & Colvard 2005; Munoz & Hilgenberg, 2005; Pi, 1998; Pi & Simpson, 2005). Ethnic psychopharmacology can be defined as the field of study that investigates the effects of culture, environment, genetics, biophys-

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ology, and psychosocial factors on the prescribing and metabolism of and response to psychotherapeutic medications.

Ethnic pharmacology has sparked much controversy, which has resulted in dialectal tension when the subject is introduced. Many take the position that racial categories are more a societal construct than a scientific one and argue that caution must be exercised in promoting drugs for specific ethnic groups (Ferdinand, 2006). Others add that ethnic pharmacology is a kind of racial profiling and could easily lead to stereotyping and discrimination (Schwartz, 2001). In contrast, Satel (2000) maintained that although race is a rough biological classification, health care professionals must not be blind to its clinical application and the sound research that has been conducted in this area. Considering these divergent viewpoints, it is recommended that psychiatric nurses use caution when obtaining and applying knowledge in the field of ethnic psychopharmacology. Health care professionals must be aware of possible clinical applications of this field of study, while at the same time demonstrate respect for individual differences and similarities across racial groups.

### A Model of Cultural Competence in Ethnic Psychopharmacology

Several studies have documented racial and ethnic disparities in psychopharmacological treatment, resulting in people from minority backgrounds receiving treatment that is not in concordance with recommended practices (Knudson, Ducharme, & Roman, 2007; Kuno & Rothbard, 2002). Herbeck et al. (2004) examined the use of second-generation antipsychotic medications among African American and non-Hispanic White patients and found that African American patients were less likely than White patients to receive these medications. Pi and Simpson (2005) noted differences in prescribing patterns of second-generation antipsychotic drugs among Hispanic individuals: Hispanic individuals did not receive newer, more effective second-generation antipsychotic agents as frequently as their non-Hispanic White counterparts. Not receiving such drugs increases the risk for tardive dyskinesia and extrapyramidal symptoms and may result in less clinical improvement.

Explanations are multifaceted, but there is evidence that these racial and ethnic disparities are related to clinicians’ skills, knowledge, and biases (Pi & Simpson, 2005; Snowden, 2003). A framework for addressing clinicians’ knowledge, skills, and biases in the field of ethnic psychopharmacology is needed to affect the existing racial and ethnic disparities noted in psychopharmacological treatment.

#### CULTURAL COMPETENCE IN ETHNIC PSYCHOPHARMACOLOGY

The Process of Cultural Competence in the Delivery of Healthcare Services model defines cultural competence as the ongoing process in which health care professionals continuously strive to achieve the ability and availability to work effectively within the cultural context of clients (individuals, families, communities) (Campinha-Bacote, 1998). This model requires health care professionals to see themselves as becoming culturally competent, rather than as being culturally competent, and involves the integration of cultural desire, cultural awareness, cultural knowledge, cultural skill, and cultural encounter. The Process of Cultural Competence in the
Delivery of Healthcare Services model can be modified to develop a model of cultural competence in ethnic psychopharmacology by redefining its constructs of cultural awareness, cultural skill, and cultural knowledge.

The Process of Cultural Competence in Ethnic Psychopharmacology model (Figure) defines cultural competence in ethnic psychopharmacology as the ongoing process in which psychiatric nurses continuously examine the effects of personal biases, knowledge, and skill on the prescribing and metabolism of and response to psychotherapeutic medications. This model requires nurses to see themselves as becoming culturally competent, rather than as being culturally competent, and involves the integration of awareness, skill, and knowledge. Each of these constructs will be discussed in relationship to becoming culturally competent in the field of ethnic psychopharmacology.

**Cultural Awareness**

Cultural factors, such as one’s personal beliefs and biases about a specific cultural or ethnic group, may lead to clinician bias, which can result in unequal treatment, misdiagnosis, and overmedication (Institute of Medicine, 2003; Snowden, 2003). Cultural awareness is the deliberate process of recognizing personal biases, stereotypes, prejudices, discriminatory practices, and assumptions held about individuals who are different. Psychiatric nurses must acknowledge that disparities and inequalities exist in mental health care for racially and ethnically diverse populations and come to an awareness of how their own cultural backgrounds may affect their interpreting, assigning meaning to, and creating value judgments about their patients.

Studies have clearly documented that African American individuals are more likely to be overdiagnosed with having a psychotic disorder and more likely to be prescribed antipsychotic drugs, regardless of diagnosis. In a study of adolescents, DelBello et al. (1999) found that although there were no differences in psychotic symptoms (14% of the African American adolescents and 18% of the White adolescents were diagnosed with psychotic symptoms), African American adolescents received more antipsychotic medications. Specifically, 43% of the White patients and 68% of the non-White patients received antipsychotic medications. There are several possible explanations for this, and DelBello et al. (1999) asserted that one plausible explanation is that the clinicians perceived African American patients to be more aggressive and more psychotic and, thus, prescribed the antipsychotic agents. Studies by Lawson (1999), Strakowski, McElroy, Keck, and West (1996), and Strickland, Lin, Fu, Anderson, and Zheng (1995) also found that African American patients were more likely to be diagnosed with schizophrenia and more likely to be prescribed antipsychotic agents.

The Diagnostic and Statistical Manual of Mental Disorders, fourth edition (DSM-IV) (American Psychiatric Association [APA], 1994) attempted to address the issue of clinician bias by developing the Outline for Cultural Formulation. This outline is meant to supplement the multiaxial diagnostic assessment and address the complexity that may be encountered in applying DSM-IV criteria in a multicultural environment. Diagnosis can be confounded by differences in behavioral expressions among various ethnic and cultural groups.
ASK MNEMONIC: A WAY TO REMEMBER THE ELEMENTS OF CULTURAL COMPETENCE IN ETHNIC PSYCHOPHARMACOLOGY

Awareness: Am I aware of the disparities and inequalities that exist in the psychopharmacological treatment of racially and ethnically diverse populations, and do I recognize my own biases, stereotypes, and prejudices that may affect medication assessment and treatment of patients?

Skill: Do I know how to conduct a culturally and linguistically sensitive psychotropic medication assessment?

Knowledge: Do I have knowledge of factors (e.g., environment, genetics, cultural practices, generic drug substitution) involved in determining an ethnic group’s response to psychotropic drugs?

It provides a systematic review of the patient’s cultural background, the role of the cultural context in the expression and assessment of symptoms and dysfunction, and the effects of cultural differences on the relationship between the individual and the clinician (APA, 1994).

The outline includes questions about the cultural identity of the client, cultural explanations of the client’s illness, cultural elements of the relationship between the client and the professional, cultural factors related to the psychosocial environment and levels of functioning, and the overall cultural assessment for diagnostic care. However, Neighbors (2003) claimed the problem is that no systematic assessments of the usefulness of the outline have been performed, and as a result, its value in the diagnostic and treatment process of culturally diverse patients needs to be explored.

Research has also documented that health care professionals’ diagnostic and treatment decisions are influenced by race and ethnicity (Diggs & Berger, 2004). van Ryn and Burke (2000) examined 193 physician interactions with 842 patients (57% White, 43% African American) and noted that physicians rated African American patients as less intelligent, less educated, more likely to abuse drugs and alcohol, less likely to comply with medical advice, and more likely to lack social support than White patients, even after factors such as patient income and education were taken into consideration.

Diagnostic clarity requires psychiatric nurses to maintain objectivity in cross-cultural situations because diagnosis can be confounded by differences in behavioral expressions among various ethnic and cultural groups. For example, susto is a culture-bound syndrome noted in some Hispanic/Latino populations. Susto, or soul loss, is the belief that a frightening experience can cause illness (Bourbonnais-Spear et al., 2006). When this fright occurs, it is believed that spirits have captured the soul of the victim. Symptoms include anorexia, listlessness, apathy, and withdrawal. If unaware of this culture-bound illness, psychiatric nurses may misdiagnosis susto as clinical depression, which can lead to inappropriate treatment with an antidepressant drug.

Cultural Skill

Cultural skill involves the process of learning how to conduct a culturally sensitive psychotherapeutic medication assessment. Individuals from many cultural groups maintain attitudes and health beliefs about the properties and effects of psychotropic medications that may influence the effectiveness of or their adherence to a psychotropic drug. Gaw (2001) maintained that “non-adherence to psychotropic medication in diverse populations remains a significant detriment to successful therapeutic outcome” (p. 160). Psychiatric nurses must become skillful in assessing patients’ explanatory model of psychotropic medication.

Gaw (2001) suggested an assessment tool, called the Clinician’s Inquiry into the Meaning of Taking Psychotropic Medications, for determining medication nonadherence in clinical practice. This tool consists of 12 open-ended questions about the patient’s own explanatory model of drug effectiveness. Questions include the patient’s feelings about taking psychotropic medication; the meaning of taking psychotropic medication; religious beliefs related to taking psychotropic medication; the benefits and risks of taking psychotropic medication; the meaning of the color, size, or form of the medication; and potential fears of losing control if taking psychotropic medication. Examples of specific questions include “Do you have any feelings about taking medication?”, “What does it mean to you?”, and “Would color, size, or form of medication mean anything to you?” (Gaw, 2001, p. 158).

Gaw (2001) suggested that these questions be integrated into the interview when exploring a patient’s potential reaction to medications or when nonadherence occurs. Depending on how detailed the patient’s answers are, the assessment tool takes approximately 20 minutes for clinicians to complete. Although the tool’s effectiveness has not been systematically studied, data obtained from this kind of assessment tool can provide psychiatric nurses with insight into the patient’s
worldview of psychotropic medication and facilitate the development of strategies for enhancing medication adherence.

Conducting a psychotherapeutic medication assessment is more than simply selecting a tool and asking the patient the questions listed on the tool; such an assessment requires both linguistic and cultural skills on the part of psychiatric nurses. Language differences amplify cultural differences, further complicating communication between patient and nurse. When linguistic differences are poorly addressed, the result is often reduced understanding of and nonadherence to the drug regimen and, ultimately, poor treatment outcomes (Wilson, Chen, Grumbach, Wang, & Fernandez, 2005). Therefore, determining patients’ language preference for both spoken and written communication and assessing for limited English proficiency are among the first steps in conducting a psychotherapeutic medication assessment. When language issues pose a challenge for psychiatric nurses, the services of a medical interpreter are advisable.

Psychiatric nurses’ approach to such assessment must be culturally sensitive. For example, psychiatric nurses may wish to develop alternative styles of inquiry by adopting a more conversational approach to questioning. Munoz and Hilgenberg (2005) emphasized that it is best to ask patients specific questions about possible adverse effects of psychotropic drugs, rather than asking broad questions or waiting for the patient to voice concerns. Within some Asian cultures, patients complain infrequently; when working with these patients, psychiatric nurses may need to ask specific questions to elicit important information about a drug’s efficacy and potential side effects. Munoz and Hilgenberg (2005) suggested that when interviewing a Chinese American patient taking haloperidol (Haldol®), the psychiatric nurse might ask, “Have you noticed any unusual, involuntary movements?” to determine the presence or absence of extrapyramidal effects. Another culturally sensitive technique is to frame questions in the context of other patients or family members. For example, psychiatric nurses can say, “I know other patients who think they will lose control if they take a psychiatric drug. Do you think that?” or “What does your mother think of psychiatric medication?” Attributing explanations to another person can help patients disclose health beliefs and practices that they may feel initially uncomfortable expressing.

** Cultural Knowledge**

Cultural knowledge is the process of seeking and obtaining a sound educational foundation related to factors involved in determining an ethnic group’s response to psychotropic drugs. These factors include, but are not limited to, environmental concerns, genetics, cultural practices, and generic drug substitution.

An environmental factor noted among ethnic groups that can affect pharmacological response is diet. Certain fruits and vegetables affect the C4P 1A2 isoenzyme that metabolizes such psychotropic drugs as haloperidol and clozapine (Clozaril®). For example, a glass of grapefruit juice inhibits C4P 1A2, whereas broccoli, brussels sprouts, and cabbage induce that isoenzyme. The Hispanic diet may include a lower intake of vegetables such as cabbage, broccoli, and brussels sprouts, lower protein consumption, and greater intake of carbohydrates, which may inhibit metabolism of psychiatric drugs (Marin & Escobar, 2001).

Psychotherapeutic medications, such as antidepressant agents, that require fat to be absorbed are not as effective in patients with exceptionally low body fat or differing fat metabolism (Wandler, 2003). This is a factor to consider when caring for Ghanaians, who may differ in fat metabolism compared with Americans (Banini, Allen, Allen, Boyd, & Lartey, 2003).

Malnutrition can also influence drug response. Protein, vitamin, and mineral deficiencies can

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**KEY POINTS**

1. Studies have clearly documented existing racial and ethnic disparities in psychopharmaceutical treatment.

2. Ethnic psychopharmacology is defined as the field of study that investigates the effects of culture, environment, genetics, biophysiology, and psychosocial factors on the prescribing and metabolism of and response to psychotherapeutic medications.

3. Cultural competence in ethnic psychopharmacology requires continuous examination of the influence of one’s personal biases, knowledge, and skill in this specialty field.

4. The mnemonic ASK can provide psychiatric nurses with an aide to remember the components of cultural competence in ethnic psychopharmacology.

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We’re waiting to hear from you!
hamper the function of metabolic enzymes and alter the body’s ability to absorb or eliminate a psychotherapeutic drug. This may pose a problem for newly arriving refugees from Ethiopia/Eritrea and other East African countries where malnutrition is considered a major medical problem. When there are unexplained variations in a patient's psychotherapeutic medication, it is important for psychiatric nurses to assess the patient’s dietary habits.

Genetic research in ethnic psychopharmacology has uncovered significant differences among racial and ethnic groups in metabolism, clinical effectiveness and side effect profiles; however, most of the research applies to African American and Asian groups (Burroughs et al., 2002). Although race and ethnicity have been used as factors in determining a patient’s response to a given psychotherapeutic drug, Burroughs et al. (2002) cautioned that race should be considered an imprecise substitute for genetic variations that an individual may or may not have. Racial and ethnic groups are composed of many subpopulations, and their drug responses may be different. For example, pharmaceutical research findings on Hispanics may not take into account the interethnic variations noted in the Puerto Rican, Mexican, Columbian, Peruvian, or Cuban subgroups.

Cultural practices, such as the use of herbs, can influence psychotherapeutic drug response in ethnic groups. Many cultural and ethnic groups use herbs to treat illnesses and maintain health; these herbs may interfere with the prescribed psychotherapeutic medication. Marin and Escobar (2001) reported that Hispanic patients use herbal remedies more often than do non-Hispanic patients.

Kava root extract and Asian ginseng are examples of herbal remedies that can interfere with psychotherapeutic drugs. Kava root extract has been used to treat anxiety, stress, and insomnia. Although Pittler and Ernst (2000) suggested that kava is superior to placebo in treating anxiety, this herb is contraindicated for patients who are depressed. Kava can also potentiate drugs acting on the central nervous system, such as psychopharmacological agents. Asian ginseng root is used among some cultural groups to treat physical and mental fatigue; however, it has been noted to potentiate the action of monoamine oxidase inhibitors.

Generic substitution of a trade drug can be an issue for certain ethnic groups. Although only 10% of the active drug component of a generic drug can differ from the trade drug, greater range is allowed in the filler (Kudzma, 2001). These fillers may pose a problem for specific ethnic groups. For example, lactose, a common filler constituent, may be relied on to a greater degree by pharmaceutical companies, but it may cause unpleasant side effects in susceptible ethnic populations (Levy, 1993).

CONCLUSION
Cultural competence in ethnic psychopharmacology is an ongoing process that requires psychiatric nurses to continually address issues related to cultural awareness, skill, and knowledge in this field. The Process of Cultural Competence in Ethnic Psychopharmacology model (Figure) has been proposed as a framework to help nurses become more culturally competent in this specialty field. The mnemonic ASK (see the Sidebar on Conducting a psychotherapeutic medication assessment is more than simply selecting a tool and asking the patient the questions listed on the tool.)
Page 30 can provide psychiatric nurses with an aide to remember the model's constructs of awareness, skill, and knowledge.

REFERENCES


