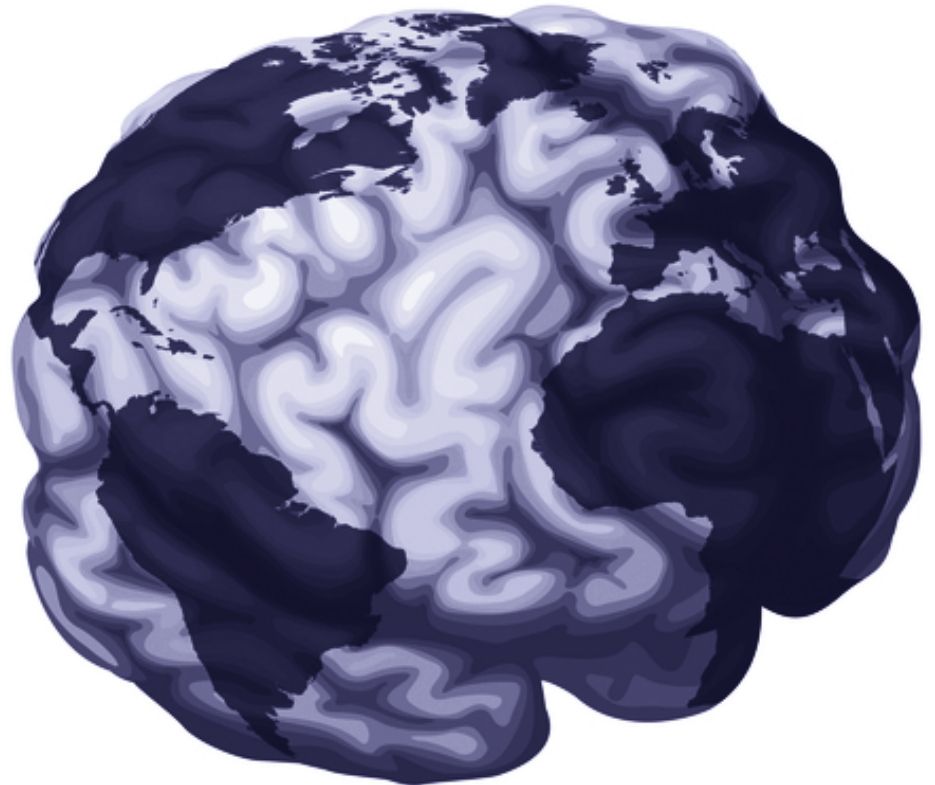


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In This Issue



The section theme of this issue of the *Residents' Journal* is "international health care acculturation." Nicole Zuber, M.D., discusses the importance of assessing cultural perspectives and the use of cultural formulations in clinical practice. Dr. Zuber elegantly presents data on demographic changes in the population and challenges minority populations face in accessing health care, as well as guidelines clinicians can use to better serve an increasingly diverse patient population. In a commentary, Billina R. Shaw, M.D., describes her experience working in Kenya to educate communities about depression in an effort to abolish the stigma surrounding this illness.

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Be Our Guest

Monifa Seawell, M.D.
Editor-in-Chief

Most issues of the *Residents' Journal* contain a selected group of manuscripts that are united by a particular theme. The theme is selected by the issue's Guest Section Editor, and the corresponding manuscripts that accompany the theme are also solicited by this individual.

Responsibilities of a Guest Section Editor

In addition to selecting a theme for their assigned issue and soliciting manuscripts from authors on the selected theme, guest editors have several additional responsibilities, including:

- performing peer review of the solicited manuscripts,
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- working directly with the Journal's editorial staff, and

- corresponding with the Editor-in-Chief to make decisions regarding a manuscript's acceptance

Becoming a Guest Section Editor

Becoming an author is an important first step for anyone interested in pursuing editor work. This is because the experience of authoring, submitting, and revising a manuscript forms an invaluable skill set that serves as the foundation for working as an editor. Our guest editors have previously had a manuscript accepted for publication in the *Residents' Journal*. Many have also served as our peer reviewers.

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We are currently seeking guest editors for the months of February 2013 and onward. If you have not authored a manuscript, we will be happy to guide you to available opportunities to help you gain the experience needed to edit a guest section. If you have previously been published in the *Residents' Journal* and are interested in serving as the Guest Section Editor of a future issue, please contact me at mseawell@med.wayne.edu.



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The Importance of Assessing Cultural Perspectives and Using Cultural Formulation

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According to the 2010 U.S. Census, the population is rapidly becoming more diverse. Specifically, the majority of growth in the total population has come from increases in the number of individuals who report their race and/or ethnicity as something other than White (1). In 2001, former Surgeon General David Satcher, M.D., released a report documenting the disparities in mental health care and services among minority populations (2). The report demonstrated that minority populations are less likely to be aware of and have access to available mental health services, often receive poorer quality of treatment, and are significantly under-represented in mental health research. Subsequent reports (3–5) have emphasized the multitude of challenges in accessing mental health care as well as the poor quality of care experienced by minority populations.

The increasing interactions between health care providers and patients from various cultural, linguistic, and socioeconomic backgrounds present a new set of demands for clinicians. Connecting patients with health care workers who may not be familiar with their customs, values, and experiences also can be challenging. Today, physicians are more likely to encounter situations that require the delivery of culturally competent care and the need to access a vast array of language services and supportive health care organizations. Addressing these challenges is important when engaging patients, particularly regarding initiating and maintaining treatment.

For the clinician, evaluation of a patient has multiple goals, including establishing a diagnosis, facilitating rapport, providing psychoeducational tools, and planning treatment. Interaction with a patient can be effected by structural factors, such as language and literacy, socioeconomic status, and communication styles.

By understanding the client's culture, the clinician can gain insight into the complex interplay between culture and mental illness, which ultimately improves physician-patient interaction. Culture has been described in many ways and a concrete, inclusive definition is difficult to establish. The term culture refers to a system of meanings in which words, behaviors, events, and symbols have attached meanings that are agreed upon by the members of a particular group. Culture is learned, dynamic, and evolving over time and can be taught and reproduced (6).

Arthur Kleinman, M.D., a prominent psychiatrist and anthropologist, has developed questions designed to elicit the health beliefs of clients. In his explanatory model (7), he applies a culturally sensitive approach to inquiring about a health problem. He suggests asking patients the following questions: What do you call your problem? What name does it have? What do you think caused your problem? Why do you think it started when it did? What does your sickness do to you? How does it work? How severe is it? Will it have a short or long course? What do you fear most about your disorder? What are the chief problems that your sickness has caused for you? These questions can help patient's understand their own condition, enhancing their health care experience.

The DSM-IV Outline for Cultural Formulation was developed as a tool to help assess the impact of culture on psychiatric illness (8). Culture plays a critical role in all aspects of mental health, and it is important for clinicians to gain knowledge of the cultural groups to which their patients belong, as well as the complex interplay between culture and illness (9, 10). Unexplored or misunderstood sociocultural differences between patients and physicians can lead to patient dissatisfaction, poor adherence to treatment, and poor health outcomes (11, 12). Weissman

et al. (11) reported that 96% of residents felt that it was important to consider a patient's culture when providing care. However, many (50%) reported receiving little or no cross-cultural training related to understanding how to address patients from different cultures or how to address relevant religious beliefs, more than half (56%) reported little or no training on how to identify patient mistrust, and many (48%) reported little or no training on relevant cultural customs and decision making structure.

The DSM-IV cultural formulation provides a systematic review of an individual's cultural background, the role of the cultural context in the expression and evaluation of symptoms and dysfunction, and the effect that cultural difference may have on the relationship between the patient and clinician. The various components of the cultural formulation are presented in Table 1 (8).

Culture can be experienced uniquely by different members of a particular group. Patients' cultural identities reflect the sociocultural influences that have created their cultural world. Aspects of an individual's cultural identity include factors such as ethnicity, race, country of origin, language, gender, age, marital status, sexual orientation, religious/spiritual beliefs, socioeconomic status, education, migration history, and level of acculturation. For immigrants and ethnic minorities, it is important to separately address the degree of the individual's identification with both the culture of origin and the host culture (when applicable). It is also important to recognize that many general classifications encompass numerous subgroups and that national origin does not define a homogeneous ethnic group, for example, there are 54 distinct ethnic groups in Vietnam. Differences exist between ethnic subgroups, and regional differences exist within countries.

TABLE 1. DSM-IV Cultural Formulation Components

Cultural Formulation	Assessment
Cultural identity of the individual	<ul style="list-style-type: none"> • Individual’s ethnic or cultural reference group(s). • Degree of involvement with both the culture of origin and the host culture (for immigrants and ethnic minorities). • Language abilities, use, and preference (including multilingualism).
Cultural explanations of the individual’s illness	<ul style="list-style-type: none"> • Predominant idioms of distress through which symptoms or the need for social support are communicated. • Meaning and perceived severity of the individual’s symptoms in relation to norms of the cultural reference group(s). • Local illness categories used by the individual’s family and community to identify the condition. • Perceived causes and explanatory models that the individual and the reference group(s) use to explain the illness. • Current preferences for and past experiences with professional and popular sources of care.
Cultural factors related to the psychosocial environment and levels of functioning	<ul style="list-style-type: none"> • Culturally relevant interpretations of social stressors, available social supports, and levels of functioning and disability. • Stresses in the local social environment. • Role of religion and kin networks in providing emotional, instrumental, and informational support.
Cultural elements of the relationship between the individual and the clinician	<ul style="list-style-type: none"> • Individual differences in culture and social status between the individual and the clinician. • Problems that these differences may cause in diagnosis and treatment (e.g., difficulties in eliciting symptoms and understanding their cultural significance or in determining whether a behavior is normal or pathological).
Overall impact of culture on diagnosis and care	Discussion of how cultural considerations specifically influence comprehensive diagnosis and care.

Cultural factors related to a patient’s psychosocial environment and level of functioning are impacted by negative life events, environmental difficulties or problems, familial or other interpersonal stress, and inadequacy of social support or personal resources. Other problems related to the context in which a patient’s difficulties may have developed include acculturation problems, discrimination, educational problems, occupational problems, housing problems, economic problems, problems with access to health care services, legal problems, war or conflict in the country of origin, and discord with nonfamily caregivers.

Cultural elements related to the relationship between the patient and the clinician encourages the clinician to explore how his or her role or clinical setting affects the patient’s experience. Similarly, clinicians should examine their own personal attitudes toward a patient’s culture or eth-

nicity because this can impact treatment and the therapeutic alliance. Self-reflection on the part of the clinician is critical. Clinicians should be aware of and understand their own personal and professional identity development and be aware of biases and limitations of knowledge and skills that might affect the clinical encounter with a patient. Furthermore, clinicians should compare cultural identity variables with regard to similarities and differences between themselves and their patients.

Several studies have demonstrated that there are multiple benefits in using the DSM-IV cultural formulation, including improving diagnostic accuracy, identifying probable misdiagnoses, providing a framework for collaboration, providing a place for sharing perspective insights, creating a language of cultural competency, promoting appropriate treatment, and creating a connection between personal

and medical frames of meaning (13–15). Adeponle et al. (13) found that many clinicians may mistake posttraumatic stress disorder for psychosis in refugee and immigrant populations due to a lack of attention to cultural factors that can affect symptom presentation (13).

The LEARN (listen, explain, acknowledge, recommend, and negotiate) model of cross-cultural communication includes the following five guidelines: listening with sympathy and understanding of the patient’s perception of the problem, explaining the problem via the clinician’s perception, acknowledging and discussing differences and similarities, recommending treatment, and negotiating an agreement (9, 16).

It is important that clinicians always be mindful of the fact that various behaviors may seem culturally insensitive and make the patient feel uncomfortable, for example, calling a patient by his or her first name (versus a title and surname), touching a patient without asking permission, making (or expecting the patient to make) direct eye contact, conducting business (i.e., taking a medical history) before establishing a personal connection, taking a blood or urine sample, patting a child on the head, or crossing one’s legs (16).

Conclusions

In facing an ever changing and diversifying patient population, it is critical that physicians recognize that cultural competency requires ongoing education and training. There are core values and skills that can help individuals be more effective and sensitive in a range of possible encounters. Cultural competency includes an eagerness for life-long learning about other cultures and must also include the capacity for self-awareness and self-examination around our own cultural values, experiences, perceptions, and sense of “norms” (9).

Dr. Zuber is a second-year child and adolescent psychiatry fellow at the Yale Child Study Center, New Haven, Conn.

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Destigmatizing Depression in Kenya

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I always assumed that stigma was a potential barrier to providing and receiving mental health care in Africa, but my experience working in Kenya as an APA SAMHSA (Substance Abuse and Mental Health Services Administration) Minority Fellow helped me to fully appreciate its impact. My purpose in going to Kenya was to increase awareness of the mental health needs of those who are living with HIV and mental illness. I also created a protocol for the assessment and treatment of depression at Kenyan HIV clinics supported by the University of Maryland School of Medicine. To accomplish my goals, I attempted to normalize major depressive disorder and combat stigma through presentations to HIV treatment providers. The talks were on basic education about depression, including its clinical presentation, diagnostic criteria, and treatment modalities. After setting the foundation, I also presented studies demonstrating poorer medical outcomes in patients with HIV and depression in the United States and Sub-Saharan Africa.

In order to give a clearer representation of depression, I included a screening of *Black*

and Blue: Depression in the African American Community, which was produced by Dr. Annelle Primm, APA Deputy Medical Director and Director of APA's Office of Minority and National Affairs. In the video, African Americans who had experienced major depression candidly discussed their experiences. As the audience listened to the personal accounts of those in the video, they appeared to be drawn into the stories. Comments by audience members were full of warmth and empathy toward those in the video. They remarked that seeing people of African descent from the United States with similar cultural beliefs helped them to realize that this pervasive phenomenon is real.

As pleased as I was with the response from the audience, I must acknowledge that the presentation was not ubiquitously well received. Many Kenyans opined that the stigma of mental illness is currently greater than that of HIV. In Kenya, there is a strongly rooted belief that mental illness is a sign of weakness or that pervasive poverty is the sole explanation for or etiology of depression. Although stigma surrounding HIV remains, public education has led to a decrease in that stigma.

Unfortunately, the Kenyan media continues to portray mental health treatment as treatment that occurs in old psychiatric institutions for individuals with severe and persistent mental illness.

This presents huge hurdles to overcome in the eradication of stigma, but I was reminded of the importance of this mission through discussions after the presentations. Many attendees commented that for the first time, they learned how prevalent depression was in their patient population. I truly felt that the intervention was effective when participants discovered that they had personally experienced a depressive disorder and planned to seek help. Despite differences between African Americans and Kenyans, it appeared that psychoeducation via culturally sensitive media portrayed the commonality of the human experience in a manner that was able to lead some to a less stigmatized view of mental illness.

Dr. Shaw is a second-year child and adolescent psychiatry fellow, University of Maryland School of Medicine, Baltimore. The APA SAMHSA Minority Fellowship Program funds were used for the international experience described in this commentary.

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Suicide of Veterans: Awareness of a Growing Problem

Margaret W. Leung, M.D., M.P.H.
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Over the past 5 years, alarming statistics of military suicides have prompted the military, the U.S. Department of Veterans Affairs (VA), and the National Institute of Mental Health (NIMH) to aggressively respond to veterans' needs. As servicemen and women return home following the end of Operation Iraqi Freedom and Operation Enduring Freedom, mental health care providers should anticipate comorbid psychiatric needs and risks for suicide in providing care to veterans.

Epidemiology of Veteran Suicide

Studies in the late 1990s and early 2000s reported conflicting data regarding whether veteran status increased the risk for suicide, compared with the general population (1, 2). However, in 2010, the VA found an alarming increase in suicide rates per 100,000 male veterans ages 18–29, with an increase from 44.99 per 100,000 to 56.77 (3). The 2007 crude rate of deaths in the general population matched by sex and age was 19.78 (4).

At the second annual Department of Defense/VA Suicide Prevention Conference, held in January 2010, Eric Shinseki, Secretary of Veterans Affairs, made the following remark: “Of the more than 30,000 suicides in this country each year, fully 20% of them are veteran suicides On average, 18 veterans commit suicide each day. Five of those 18 are under VA care at the time they take their lives” (3). Between 1980 and 1993, suicide was the third leading cause of military deaths among men; however, it is now the second leading cause of death in the U.S. military (5). In 2009, NIMH and the U.S. Army launched a 5-year study, titled “Army Study to Assess Risk and Resilience in Servicemembers,” to address the rising suicide rates among soldiers

(6). Some preliminary findings indicated that the highest suicide rate was among those currently deployed, with rates dropping after deployment, and the rate among women increased more than that for men when comparing those who had never been deployed with those currently deployed. Findings also revealed that marriage was a protective factor during deployment, and soldiers of Asian ethnicity had a higher suicide rate than other ethnicities (6).

Psychiatric Comorbidity

Prior to Operations Iraqi Freedom and Enduring Freedom, suicides were nearly three times as likely to occur among male veterans with bipolar disorder, although major depression was more commonly diagnosed, and six times as likely to occur among women with substance use disorder (7). A study conducted in 2007 reported that veterans with posttraumatic stress disorder (PTSD) and comorbid depression had a lower risk of suicide than veterans diagnosed with depression alone (8). In particular, younger depressed veterans with PTSD had a higher suicide rate than older depressed veterans with PTSD. The authors speculated that the suicide rate among veterans with PTSD may decrease in part because of the increased mental health services veterans receive specifically for this disorder, since the VA has specific initiatives and earmarked funds for treatment.

In the Operations Iraqi Freedom and Enduring Freedom era, a growing number of studies have documented substantial increases in rates of mental health diagnoses following combat. Returning Iraqi Freedom veterans who had more combat time than Enduring Freedom veterans had a higher prevalence of PTSD, suggesting a prevalence based on location

and greater frequency and intensity of combat (9). In primary care and psychiatric settings, veterans younger than 25 years presented with high rates of PTSD and substance abuse compared with those older than 40 years (10). One study reported the risk of suicide among veterans of Operations Iraqi Freedom and Enduring Freedom to be 33% greater than that for the general population, and a 77% greater risk was reported among veterans diagnosed with a mental disorder, including major depressive disorder, alcohol or drug dependence, and adjustment disorder (including PTSD) (11).

While the rates of psychiatric diagnoses and suicide appear grim, current research may underestimate the actual prevalence of psychiatric morbidity and mortality because most of the research has been focused on veterans who use VA health services, whereas most veterans seek care in non-VA medical settings. Primary care services are a critical gateway in diagnosing, treating, and referring psychiatric disorders. However, stigma and perceived barriers to care, such as being unable to schedule an appointment, remain challenges in meeting the mental health needs of veterans (12, 13). One study reported that only 23%–40% of veterans who were diagnosed with a psychiatric disorder had sought mental health care (9).

Suicide Risk Assessment

Modifiable and treatable risk and protective factors are weighed to provide a comprehensive suicide risk assessment. These factors include clinical condition (i.e., medical and psychiatric history), interpersonal relations, situational factors (i.e., employment), and demographic characteristics. A useful model of approaching risk and protective factors associated with suicide and suicidal

ideation in the veteran population is to identify factors at various stages of deployment: predeployment, deployment, and postdeployment. The “healthy soldier effect” was initially thought to keep individuals at increased suicidal risk out of the military through initial physical screens and better access to medical care. However, a physical health clearance does not always reflect stable and/or treated psychiatric disorders. In a 2011 study, premilitary physical and sexual abuse and previous suicide attempts were associated with higher rates of active suicidal ideation among veterans of Operations Iraqi Freedom and Enduring Freedom (14).

During the deployment period, worries about deployment and the environment, as well as about family and life issues, were associated with suicidal ideation. Other deployment factors that did not meet statistical significance for association with suicidal ideation included general harassment, postbattle aftermath exposures, and perceived nuclear/biological/chemical exposures. Other protective factors included increased preparation for deployment and support from within the unit from superiors (15).

The postdeployment period is a significant period of adjustment related to the military, family, as well as to society (16). Relationships developed in the combat unit may or may not be maintained following completion of duty. The transition to civilian life can be further isolating, since family members and friends do not share in veterans’ wartime experiences. As periods of deployment become longer and more frequent, restructured family systems, including illness or death of a close family member, can lead to marital problems and problems with children. Such factors have been associated with suicidal ideation as quickly as 3 months postdeployment among National Guard Troops (17). Skills obtained in the military may also have little application to civilian life, leading to financial problems as a result of difficulty finding and maintaining employment.

Suicide Prevention

The Institute of Medicine has identified three types of intervention strategies for

suicide prevention (18). Universal interventions use a population-based approach regardless of the risk of suicide, such as media campaigns and reducing access to means. Selective interventions target at-risk groups that have a higher chance of becoming suicidal, with the goal of preventing onset of suicidal behavior through interventions such as screening programs, crisis intervention, and support/skills training. Indicated interventions are designed for individuals who show early signs of suicide potential.

To date, there has been only one prevention program developed within the military to address suicide risks. The U.S. Air Force Study (19) developed a suicide prevention program in response to increases in suicides in the Air Force between 1990 and 1995. Eleven initiatives spanning the Institute of Medicine prevention strategies not only decreased the relative risk of suicide by 33% but also decreased homicide by 51% and severe family violence by 54%. Importantly, leadership involvement at the top levels of command changed the social norms with regard to seeking help.

With each generation of veterans returning from combat, unique challenges and opportunities arise during the transition needed to return to civilian life. In particular, recent veterans of Operations Iraqi Freedom and Enduring Freedom have demonstrated increased mental health risks, including suicidal ideation and completion. Growing awareness of the mental health needs of soldiers before, during, and after deployment will provide strategic areas for intervention that will hopefully result in fewer suicide attempts and improved recognition and treatment of psychiatric disorders in this population. Veterans who battled the enemy abroad will not be alone in their battle against mental illness back home.

At the time this article was accepted for publication, Dr. Leung was in the combined psychiatry/internal medicine residency program at the University of California, Davis; she is presently a staff psychiatrist at the VA Northern California Health Care System. Dr. Hsu is a fifth-year resident in the Departments of Psychiatry and Internal Medicine, University of California, Davis.

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Teaching Psychodynamic Psychotherapy to Competency

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In 2001, the Psychiatry Residency Review Committee issued new regulations that now require residents to develop competency in psychodynamic psychotherapy, among other forms of psychotherapies (1). How do residents achieve this objective? The phrase that is often cited in medical teaching is “see one, do one, teach one.” Psychodynamic psychotherapy training has traditionally followed this model. “Seeing” includes participating in one’s own personal psychotherapy and observing senior experts interview patients and conduct psychotherapies. “Doing” means spending hours treating patients and receiving one-on-one supervision. “Teaching” can begin during or after residency (2). In other words, psychodynamic psychotherapy training has traditionally consisted of four major components, namely, didactics, practice, supervision, and personal psychodynamic psychotherapy.

Didactics

Didactic lecture presenting theory and technique is an integral part of psychodynamic psychotherapy training. Over the years, a number of innovative didactic models have been proposed to improve residents’ active participation in the learning process. One example is the team-based learning used by the University of Oklahoma College of Medicine. The psychiatry department reorganized their psychodynamic psychotherapy didactic course based on team-based learning, which consist of preclass preparation (phase I), readiness assurance test (phase II), and application of concepts (phase III). Prior to each class, residents complete phase I by accessing online knowledge resources, including slide presentations, which would have traditionally been presented in the class, and reading lists tailored to each week of the

course. Class then begins with the phase II readiness assurance test, which is a multiple-choice quiz that the residents first take individually and then a second time as part of a learning team. It assesses residents’ acquisition of knowledge from the week’s learning resources. Phase III involves realistic case material and includes questions that require residents to synthesize and apply what they have learned in phases I and II. The advantage of this kind of teaching is improved resident engagement with and responsibility for the learning process (3).

Practice and Supervision

Conducting psychodynamic psychotherapy with one’s own patients is a crucial part of the learning process. As Dr. Glen O. Gabbard put it, “You do not learn a body of knowledge and simply apply it to patients. You treat patients to *learn* therapy, and it is a lifelong process” (4). The skills that can be learned by sitting with one’s own patients over time are invaluable. They include the ability to build a therapeutic alliance and to use countertransference to add to one’s understanding of the patient’s formative experience. Both skills are vital in long-term psychodynamic psychotherapy (5). Another crucial aspect of learning psychodynamic psychotherapy is regular use of supervision. Indeed, psychotherapy supervision has long been regarded as a key means by which therapist trainees learn to become effective psychotherapists. Case reviews with use of process notes have often been the mainstay of the supervision. While this method plays an important role, there are other methods of supervision as well, such as audiotaping, videotaping, and direct observation. It is worth noting that supervision is a relationship between two people. In this relationship, one person’s (the supervis-

ee’s) skills in conducting psychotherapy and his or her identity as a therapist are enhanced by the interaction with another person (the supervisor) (6). However, psychotherapy supervision is not and should not be thought of as psychotherapy, and if residents need psychotherapy, that should be provided by another professional and not by the supervisor.

Role of Personal Psychodynamic Psychotherapy

Although personal psychotherapy is not required of psychiatrists, it would benefit residents in many different ways. Dr. Adam Brenner, Associate Professor at the University of Texas Southwestern Medical Center, believes that the psychiatric residents’ personal psychodynamic psychotherapy offers a way of understanding the psychotherapeutic relationship in a way that didactic and supervisory experiences in residency cannot provide. He states, “It allows residents to become acquainted with their inner life, their conflicts, and the unconscious and often complex meanings of their behavior” (7). Similarly, Dr. Debra A. Katz, faculty and Vice Chair for Education at University of Kentucky, believes that personal psychodynamic psychotherapy is a central experience in developing a conviction about the usefulness of such psychotherapy. In addition to having therapeutic benefits, it also “helps facilitate identification as a psychodynamic psychiatrists, consolidates psychodynamic learning, strengthens overall psychotherapeutic competence, and enhances the ability to manage transference and countertransference reactions” (8). A 1998 review proposed four potential benefits of personal psychotherapy: insight into personal conflicts and behaviors, greater sensitivity

to patients' experiences, learning of effective procedures, and personal belief in the efficacy of therapy (9). Despite these benefits, today fewer psychiatry residents than ever before are engaged in personal psychodynamic psychotherapy during their training. Residents often cite time and money as barriers to such endeavors (10).

Conclusions

The new Psychiatry Residency Review Committee regulation poses new challenges to residency programs nationwide, as they are now required to teach psychodynamic psychotherapy to residents to competency. This article outlines the four major components of traditional psychodynamic psychotherapy training, namely, didactics, practice, supervision, and personal psychodynamic psychotherapy. Although the roles of the first three components have not changed much over the years, this is not the case with personal psy-

chodynamic psychotherapy. Once a major part of psychiatric training, today fewer residents are participating in personal psychodynamic psychotherapy. While personal psychodynamic psychotherapy cannot be mandated for psychiatry residents, it is reasonable that it be offered in an accessible fashion given the many advantages that this experience offers.

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The First and Last Word in Psychiatry
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The Continuing Importance of Integrating Psychotherapy Education Throughout Psychiatry Residency Training: Reflections on a “Nontherapy” Case

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Case

“Ms. H” was a 53-year-old twice-divorced woman who presented with a diagnosis of borderline personality disorder as her primary underlying psychiatric condition. She had also been diagnosed with posttraumatic stress disorder and major depressive disorder with recurrent episodes that fluctuated in severity, and she had a history of multiple psychiatric hospitalizations and suicide attempts. She was presenting for her first medication review after her case had been transferred from a psychiatry resident who had moved on in training. Intertwined with her long-standing psychiatric history was a history of multiple medical comorbidities, including medically complicated obesity, for which she recently underwent gastric bypass surgery, insulin-dependent diabetes, obstructive sleep apnea, and chronic obstructive pulmonary disease. Additionally, she was on a regimen of nearly 20 different medications, four of which were psychotropic agents. During the initial encounter, the patient was observed to ambulate with the assistance of a scooter, and she presented to her appointment unaccompanied by family or friends. She appeared older than her chronologic age, and her face seemed to tell her life’s story before she even said a word.

Ms. H reported that her daughter believed that a diagnosis of bipolar disorder was a more accurate diagnosis than borderline personality disorder, and she queried us about this. A detailed psychosocial history was obtained in order to clarify the patient’s question about her diagnosis. She described themes of chronic mood instability, with no particular pattern, a long-standing history of relationship strife and conflict, chronic suicidality, and

fears of abandonment throughout her adult life. When asked to describe her childhood, her demeanor suddenly became hostile and angry. She began using profanity in reference to her father’s physical abuse and commented that she believed that “all ... men are the same.” The intensity of Ms. H’s reaction caught the interviewer off guard. Empathic dialogue was attempted, but it seemed as though the damage was done, as the patient continued to spiral downward. She lamented, “I can’t keep talking about the past,” referencing previous therapists who had asked her to talk about her psychosocial history. She divulged that she had been perseverating on thoughts of suicide and overdosing on her medications. She stated, “When I get this way, I just feel like I want to go home and take all of my meds and die.” She described a history of multiple overdoses leading to subsequent hospitalizations, and she lived alone with nobody to watch her. She refused to go to a local mid-level mental health crisis facility. With no way of assuring her safety, the decision was made to involuntarily hospitalize the patient. Her body language and affect communicated a mixture of anger and shame as she was escorted by security to the adult inpatient psychiatric unit.

Ms. H continued to be followed by the same resident after her initial hospitalization. A preliminary treatment plan had already been started by the previous psychiatry resident who had managed her care, which included managing and attempting to simplify her medications and to encourage her to continue with group work for patients who had undergone gastric bypass surgery. While managing the pharmacologic aspects of Ms H’s care was important and admittedly a little

daunting, it did not seem to be a sufficient way to fully understand her condition and thereby to provide the best care for her.

Discussion

By their third year of training, most psychiatry residents have grown increasingly comfortable with DSM-IV diagnostic criteria of axis I and axis II pathology, as well as with the principles of psychopharmacology, and have started taking on psychotherapy cases. Psychotherapy and medication management are often considered as separate, nonintegrated treatment modalities. While it was not intended that Ms. H be a “psychotherapy patient,” her case afforded the opportunity to apply and integrate the principles of psychodynamic psychotherapy with a so-called “med check” patient care.

This dilemma has been increasingly recognized as the field of psychiatry moves into the 21st century, and the relationship between psychiatry and psychotherapy becomes more distant and compartmentalized (1). Other competing elements, such as managed care, lower reimbursements, 30-minute visits, and focus on biologic treatments, have supplanted the practicality and usefulness of psychotherapy (2–4). This overlooks an important concept in the care of our patients, which was well-articulated by George Vaillant, who stated, “Too often, psychiatrists forget that the brain was designed to process information, and not as a series of mere chemoreceptors. The limbic system was neurobiologically designed to be comforted by friendly people and not chemistry” (5).

A similar dilemma was described in a teaching case presented by Gabbard and Horowitz (6) of a 23-year old woman

diagnosed with borderline personality disorder who responded with rage and indignation toward her therapist's seemingly innocent request for clarification, which the patient perceived as disregard over her sense of humiliation. Framing Ms. H's care in more psychodynamic terms facilitated reflection on our initial and subsequent encounters and generated curiosity about the nature of our patient-doctor relationship and how aspects of our relationship were played out in her relationships with others. Four teaching points, centered on the dynamic aspects of the patient-doctor relationship, arose during our initial and subsequent encounters. First, we reflected on Ms. H's initial encounter with the treating resident and how our exchanges led to her hospitalization. Second, Ms. H was initially taking close to 20 medications and had previously been trialed on many more. This was explored through the lens of the patient-doctor relationship, as well as how she perceived the roles of the prescriber and patient. Third, her past experiences informed her present worldview and were important in understanding her responses to present-day interactions with others, including the patient-doctor relationship. Fourth, her diagnosis of borderline personality disorder had significant meaning for her, and it was important to understand what it meant to her to have this diagnosis. These teaching points underscored the basis of our patient-doctor relationship. The second and fourth points repeatedly played themselves out in the patient-doctor relationship.

Ms H's medications and medical diagnoses seemed to be as much a part of her identity as her psychiatric diagnosis. An understanding of her medical history, the medications on which she had been previously trialed, the medications she was currently taking, and how all of her medications interacted was crucial to her care. However, an understanding of what motivated us to try one medication after another would be elusive if this aspect of her care was viewed in a vacuum, separate from her psychiatric and psychosocial history. Ms. H typifies the patient who presents simultaneous medical, psychiat-

ric, and psychological challenges, which can generate frustration in patient care.

The term "borderline" is frequently used pejoratively by health care providers—by nonpsychiatrists and psychiatrists alike—as much as it is used in the diagnostic description of a patient's maladaptive personality defenses, which is often a reflection of the provider's countertransference (5). Sadly, I have been aware of other patients diagnosed with borderline personality disorder who have reported overhearing health care professionals speaking negatively about them when they thought the patient was out of earshot, often in the emergency room, which is the perfect setting for such exchanges to take place. Although Ms. H never explicitly stated that she felt marginalized or mistreated as a result of this diagnosis, her initial hope that she be diagnosed with bipolar disorder, and therefore be more "fixable" with the right biologic treatment, cannot be understated.

Conclusions

Ms. H's case profile is one to which many psychiatry trainees can relate, and it highlights the importance of integrating psychotherapy in medication management of so-called "nontherapy" cases. Gabbard and Kay (7) highlighted the continued importance of this approach and admonished against encroaching psychiatry training paradigms that are phasing psychotherapy out of psychiatrists' training in favor of a more reductionist approach to patient care. In an age of managed care, the notion of long psychotherapy sessions may need revision for many providers, but the dynamics of human development, interaction, and behavior are still as prevalent today as they were before many of our modern medicines and treatments. As demonstrated in a case conference by Allison et al. (8), even as we continue to make new technological advances, familiar themes of the development of self are still ever-present, and mental health care providers will need to know how to approach patients. Many authors have discussed the importance of continuing to teach different types of psychotherapy to psychiatry residents, underscoring the

need for this treatment in the care of our future patients (2, 3, 9, 10). As exemplified in the case of Ms. H, many patients come to us under the pretense of being a "med-management case." Thus, an integrated approach that uses both psychopharmacology and psychotherapy will continue to be important in serving our patients.

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Expressed Emotion: Relationship to Relapse and Relevance to the Psychiatric Resident

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What is Expressed Emotion? How is it Measured? How is it Related to Relapse?

Expressed emotion is a qualitative measure of the criticism, hostility, or emotional overinvolvement that a family member or significant other expresses when speaking about a loved-one who suffers from mental illness. British sociologist George Brown developed this construct in the 1950s by investigating the ways family members of patients with psychosis behaved and communicated following patients' discharge from a hospital (1). Brown found that the most critical variable for poor outcome was the level of expressed emotions shown by family members. The higher the level of emotion and hostility in the family, the higher the likelihood the patient would relapse within the next year (1). Since Brown's research, a plethora of studies on expressed emotion and its relationship to relapse has emerged. Whereas the Camberwell Family Interview was the first instrument used to measure expressed emotion, shorter versions, such as the Five Minutes Speech Sample, have since been developed but require training (2).

In this article, expressed emotion and its relationship to relapse in several disorders is discussed. Next, theorized mechanisms of relapse, etiology, development of high expressed-emotion attitudes and associated behaviors, and cross-cultural considerations are examined. The objective of this article is to present psychiatric residents with a better understanding of the influence of family systems theory so that they may better conceptualize a psychiatric case and work with the family to improve the emotional functioning of the patient.

Expressed Emotion and Relapse With Focus on Specific Illnesses

The majority of studies to date have examined relapse rates of patients with schizophrenia living in high versus low expressed-emotion environments. Buzlaff and Hooley (3) have shown that both newly diagnosed and chronic schizophrenia patients relapse more quickly in high expressed-emotion environments. This concept also applies to patients with mood disorders (4), posttraumatic stress disorder (5), and eating disorders (2). Patients with these conditions show worse clinical functioning and less favorable outcomes if they live with spouses or family members with high expressed emotion. For these conditions, criticism and hostility from the family accelerate relapse by placing the blame on the patients. The pressure from the family for the patient to recover and control his or her illness contributes to the relapse. (6). In contrast, agoraphobic and obsessive-compulsive patients have fewer relapses and greater stability in critical environments (7). This may be due to the fact that critical family members of patients with these diagnoses can actually accelerate recovery by exposing patients to anxiety provoking situations on a regular basis, thus providing a type of "exposure and response prevention therapy" (7). Similarly, in one study, patients with borderline personality disorder showed no difference in relapse after 1 year of living in high versus low expressed-emotion environments (7). Here, criticism and hostility did not appear to impact relapse. In fact, emotional "overexpression" was an indicator of better long-term outcomes (8). Hence, expressed emotion appears to

have different effects on different patient populations.

Mechanisms of Relapse

Although the exact mechanism of relapse is unknown, expressed emotion is regarded as a form of psychosocial stress with biological implications for at-risk patients (9). It is postulated that when patients experience increased levels of stress, in which family behavior is experienced as emotionally threatening, a surge of cortisol from the adrenal gland stimulates dopaminergic and glutamatergic neurotransmitter systems, ultimately contributing to psychiatric relapse (9). In one study of bipolar patients (10), the determining factor in relapse was not the patients' rating of the severity of the criticism, but rather their rating of how distressed they were because of the criticism. Interestingly, patients who reported that their relatives became more upset by their criticisms had less severe depressive symptoms at follow-up. This suggests that the stress was the patient's cognitive sense of criticism as a threat (10).

Hooley and Gotlib (9) also proposed that low expressed-emotion environments may suppress the activation of the hypothalamic-pituitary-adrenal axis and serve as a protective factor by soothing patients. Researchers have also hypothesized more dynamic interactional models that encompass the biopsychosocial vulnerability-stress model to explain the relationship between high levels of expressed emotion and relapse (9, 11). Emerging research has also focused on the dorsolateral prefrontal cortex, using functional MRI to explore the way that criticism can alter neural pathways in vulnerable individuals (12).

Etiology and Development of High Expressed-Emotion Attitudes and Associated Behaviors

Expressed emotion is a relational variable that is affected by the responses of family members to psychiatrically impaired relatives and by the characteristics of the patients themselves. In terms of patient characteristics, there seem to be no specific clinical differences between patients living in high expressed-emotion environments versus those living in low expressed-emotion environments (2). However, when patients who are experiencing symptoms decline functionally, families look for ways to cope with associated stressors while accommodating the suffering patient. The flexibility with which relatives can do this can determine the level of expressed emotion that will prevail in the family (2). According to some studies, high expressed-emotion relatives are more conscientious but less tolerant and less flexible in their approach than low expressed-emotion relatives (13). Moreover, high expressed-emotion relatives have reported more burden in their caretaking roles compared with family members who have low expressed emotion (14). Thus, expressed emotion may be a marker for relatives who are suffering more from the burden of caretaking (14). Of particular interest is the finding that relatives with high expressed emotion tend to have lower levels of psychopathology than those with low expressed emotion (15). In summary, individual personality structures of relatives appear to be highly relevant in determining expressed-emotion levels in response to patients.

According to Hooley and Gotlib (9), expressed emotion has both stable and dynamic elements. Expressed-emotion levels have been shown to decrease with family interventions (16). Nevertheless, expressed emotion also decreases independently of intervention when patients are symptomatically stabilized and discharged from hospitals. Assessments conducted 9–12 months posthospitalization demonstrated that 25%–50% of

family members had a change from high to low expressed-emotion classification (2). This improvement supports the idea that high expressed emotion is in part a response to the severity of patient illness. Nonetheless, these assessments also showed significant correlation between the initial critical comments made by relatives and those made at follow-up assessments (although the number of remarks declined sharply). Thus, there is stability in how critical certain relatives are inclined to be, yet even this fluctuates based on the severity of the illness and the stress encountered by families. Even in low expressed-emotion environments, families of patients who experience long-term chronic mental illness increase in their criticism over time. Cross-sectional data from Camberwell Family Interview surveys reported that criticism and hostility rates rose rapidly in the first few years of the course of illness, beginning with 14% of families providing care for a patient with less than 1 year of illness, rising to 35% within 1–3 years of illness onset, and peaking at 50% after 5 years of illness onset (17). Hence, early interventions may be critical in optimizing patient care.

Cross Cultural Aspects of Expressed Emotion

Examining cross-cultural differences is critical when dealing with a topic such as expressed emotion. For example, one of the Camberwell Family Interview methods used to judge the emotion level and attitudes of family members is nonverbal communication. Nonverbal meanings can differ across cultures. It is also likely that attitudes toward individuals with mental illness vary between cultures. Expressed emotion has been studied in the United States, the United Kingdom, Australia, Denmark, Poland, India, Egypt, Israel, China, Japan, Iran, and Mexico. According to Leff et al. (18), levels of expressed emotion are lower in India than in the United States and the United Kingdom. This may be due to the structure of families and traditions in Indian culture. Relative to Western cultures, a lower proportion of Indian families live in nuclear households, which possibly leads to the burden of care being shared more. This

may help families accept mental illness and reduce the stress of individual family members, decreasing relapse rates (19). Despite the noted cultural differences, the association between high expressed emotion and relapse is generally replicated across cultures.

Conclusions

Impact on patient care and the role of the psychiatric resident.

The family as a system is affected by the mental illness of a patient. Family members may also become critical and blame themselves or the patient for the inability to control the illness. All these aspects can negatively affect the patient and the family as a whole. It is therefore crucial for families to understand the clinical presentation of illness and become aware of behaviors that affect patients' recovery. The psychiatric resident is in the position to explore family dynamics and serve as a family mediator and educator while being mindful, supportive, and compassionate. Psychoeducation involves education about the illness, allowing patients and families to explore the meaning of the illness and their multiple affective responses, and specific training in communications and problem solving. This can be done without formal family therapy training by the resident. Recognizing that caregivers and families are often under inordinate amounts of stress and may have diagnosable disorders themselves should be a paramount goal of the psychiatric resident in providing optimal patient care (20). Residents are also in the position to refer families to support groups in the community that are focused on helping families to advocate and support their loved-ones while also taking care of their own mental health needs. Through psychoeducation and guidance, the resident can work with patients and families to empower them and decrease expressed emotion, thereby improving the outcome of patient care.

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The Role of Computational Neuroscience in Psychiatry

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Computational neuroscience is the science of studying neurons, neuronal networks, brain, and brain processes using computational and mathematical approaches. It involves building computer models of neurons, networks, and/or brain regions to enable the exploration of a better understanding of brain function in health and disease (1).

Computer models are mathematical representations of the behavior of the components of a system. Computers are used to solve the mathematical equations describing a system. In neuroscience, the components described could be the ions involved in generation of neuronal action potentials, the neurotransmitters involved in neuronal communication, or the different brain regions interacting to perform a particular function. The interaction of these phenomena at multiple scales is the objective of multiscale modeling (2).

Depending on the nature of the system and its components being studied, various mathematical representations are used. For instance, in the case of modeling the behavior of ions within a single neuron, differential equations (describing how things change with time and space) are used (3). In studying neuronal networks, graph theory (a branch of mathematics) could be used to describe the connections and behavior of networks. Networks are represented as points called edges and connectors between the points called nodes (4).

Why Do We Need Computer Models?

Modeling could be used to put together different types of experimental data. Vast amounts of data are currently available from the various experimental techniques used to investigate the brain, neurons, and

the different molecules involved in neuronal development and signaling.

Such data provide information about different aspects of the brain. These could range from small scales (e.g., the number of neurons and synaptic connections in a particular region) to large scales (e.g., the structural neuroimaging data of whole regions).

Additionally, brain processes can range from those that take place rapidly (e.g., voltage changes across the cell membrane of neurons on the range of milliseconds) to those that take place on much longer time periods (e.g., minutes for functional neuroimaging data or years for behavioral studies and studies of personality traits).

These data, coming from such a wide range of processes, are also derived from multiple species. All of this adds to the complexity of the picture that we need to draw about the function of the brain in order to explore pathological processes. Computer models can put such heterogeneous data together.

Schizophrenia, Neural Discoordination, and Computational Modeling

To illustrate the role computational neuroscience can play in investigating psychiatric disorders, a model for one of the pathological dimensions of schizophrenia is discussed below.

Brain oscillations (reflecting periodic changes in the activity of neuronal populations) are thought to play an important role in coordinating activities within neuronal networks and between different brain regions. Examples of these oscillations are the different EEG wave frequencies: delta, theta, beta, alpha, and gamma. It is thought that fast oscillations (in the gamma range, >30 Hz) coordinate

local activity within neuronal networks, while slower oscillations (delta and theta, 1–12 Hz in mice) coordinate activities over longer distances of neuronal networks and brain regions (5).

Abnormal coordination between networks and brain regions (neural discoordination) is thought to underlie some aspects of pathology in schizophrenia. For example, a possible explanation for auditory hallucinations is the lack of signals from the frontal lobe areas to inform the temporal regions that the thoughts and speech are self-generated (6). Disturbance in the modulation of neuronal activity by oscillations can play a role in neural discoordination.

The computer model discussed here is of an animal model for schizophrenia, hence a model of a model. Ketamine has been found to exacerbate symptoms in patients suffering from schizophrenia. Animals exposed to ketamine (*N*-methyl-D-aspartate [NMDA] receptor antagonist) could be used to replicate some of the features of the disease (7). Based on experimental data from the literature about the neuronal populations in the CA3 region of the hippocampus and their receptor profiles and their connections, a computer model of the CA3 cellular connections was built (8).

The computer model consisted of 800 pyramidal glutamatergic neurons and 400 inhibitory gamma aminobutyric acid-ergic interneurons (both slow firing and fast firing interneurons). In order to validate the model, its different aspects were compared at baseline with experimental findings. These included the rates of firing of the various neuronal populations and the amount of the various frequencies of the oscillations generated (power of various frequency bands).

After validating these properties of the model with the baseline recordings from mice, applying ketamine was simulated by blocking the NMDA receptors on the modeled neurons. The effects of ketamine on the model and on the in-vivo recordings were compared.

In the in-vivo (mice) recordings, ketamine resulted in an increase in the amount of the gamma frequency oscillations and a reduction in the amount of theta frequency oscillations. This pattern was replicated in the computer model when the NMDA receptor blockage was localized to the slow spiking interneurons only. This predicts that NMDA receptors on different cell populations do not bind to ketamine in the same way. Literature has supported this, as experimental evidence has shown that NMDA receptor properties are not the same in different neuronal populations (9). Going one step further, the changes induced by ketamine were reversed in the model by providing a continuous stimulation of the slow spiking subpopulation of interneurons. This predicts a cellular phenomenon that could be harvested to develop molecular targets for new drugs.

Future Perspectives

Computer models of whole brain regions are still in their infancy. However, I can see how such models can help our patients in the near future. Consider pa-

tients who suffer from treatment-resistant schizophrenia; their genome would be sequenced, and variations of particular genes could be identified, for example, single nucleotide variations of genes (single nucleotide polymorphisms). EEG would also be obtained. These data would then be fed into a generic computer model. This would generate computer models that are more individualized to these patients. The models could be used to test available antipsychotics and their combinations to predict what particular proteins and receptors need to be targeted in order to reverse the abnormality identified from the data. This is an example of personalized psychiatric treatment that is guided by computer models.

An important point to keep in mind is that these models are not designed to simulate disorders or patients. They are used to model some aspects of pathology. Symptoms and disorders are much more complicated, and the lives of our patients suffering from these disorders are even more complex. The hope is that these models will aid the amelioration of some symptoms, improving the quality of life for our patients.

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TEST YOUR KNOWLEDGE

In preparation for the PRITE and ABPN Board examinations, test your knowledge with the following questions. (answers will appear in the next issue)

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This month's questions are courtesy of Nicole Zuber, M.D. Dr. Zuber is a second-year child and adolescent psychiatry fellow at the Yale Child Study Center, New Haven, Conn. Please see the accompanying review article in this issue.

Question #1

Components of the DSM-IV cultural formulation include all of the following except:

- A. Cultural identity of the individual
- B. Cultural explanations of the individual's illness
- C. Cultural elements of the relationship between the individual and the clinician
- D. Cultural elements of the clinician as an individual
- E. Cultural factors related to the psychosocial environment and levels of functioning

Question #2

The LEARN acronym, representing a model of cross-cultural communication, includes all of the following guidelines except:

- A. Listening with sympathy and understanding to the patient's perception of the problem
- B. Explaining your perceptions of the problem
- C. Acknowledging and discussing the differences and similarities
- D. Negotiating an agreement
- E. Receiving treatment

ANSWERS TO JULY QUESTIONS

Question #1.

Answer: C. May be beneficial for those with growth retardation

In children with a growth trajectory more than two standard deviations below the norm, "drug holidays" have been shown to be beneficial (1). There is no consensus on recommending periods of cessation for stimulant medications, and treatment is typically chosen on a case-by-case basis. Drug holidays have been shown to improve side effects such as insomnia (2).

References

1. Pliszka S, AACAP Work Group on Quality Issues: Practice parameter for the assessment and treatment of children and adolescents with attention-deficit/hyperactivity disorder. *J Am Acad Child Adolesc Psychiatry.* 2007; 46:894

2. Martins S, Tramontina S, Polanczyk G, Eizirik M, Swanson JM, Rohde LA: Weekend holidays during methylphenidate use in ADHD children: a randomized clinical trial. *J Child Adolesc Psychopharmacol* 2004; 14:195

Question #2

Answer: D. Recent history of stroke or transient ischemic attack

There is no known contraindication for the use of atomoxetine in patients with recent history of stroke. Concurrent use with monoamine oxidase inhibitors may enhance the neurotoxic (central) effect of the drug. Pheochromocytoma is a tumor that creates a cascade release of catecholamines, including epinephrine and norepinephrine. Atomoxetine is a selective norepinephrine reuptake inhibitor and may further exacerbate unopposed sympathetic stimulation. The drug is contraindicated in patients with narrow-angle glaucoma.

We are currently seeking residents who are interested in submitting Board-style questions to appear in the Test Your Knowledge feature. Selected residents will receive acknowledgment in the issue in which their questions are featured.

Submissions should include the following:

1. Two to three Board review-style questions with four to five answer choices.
 2. Answers should be complete and include detailed explanations with references from pertinent peer-reviewed journals, textbooks, or reference manuals.
- *Please direct all inquiries and submissions to Dr. Vahabzadeh: arshya.vahabzadeh@emory.edu.

Author Information for *The Residents' Journal* Submissions

The Residents' Journal accepts manuscripts authored by medical students, resident physicians, and fellows; manuscripts authored by members of faculty cannot be accepted.

- 1. Commentary:** Generally includes descriptions of recent events, opinion pieces, or narratives. Limited to 500 words and five references.
- 2. Treatment in Psychiatry:** This article type begins with a brief, common clinical vignette and involves a description of the evaluation and management of a clinical scenario that house officers frequently encounter. This article type should also include 2-4 multiple choice questions based on the article's content. Limited to 1,500 words, 15 references, and one figure.
- 3. Clinical Case Conference:** A presentation and discussion of an unusual clinical event. Limited to 1,250 words, 10 references, and one figure.
- 4. Original Research:** Reports of novel observations and research. Limited to 1,250 words, 10 references, and two figures.
- 5. Review Article:** A clinically relevant review focused on educating the resident physician. Limited to 1,500 words, 20 references, and one figure.
- 6. Letters to the Editor:** Limited to 250 words (including 3 references) and three authors. Comments on articles published in *The Residents' Journal* will be considered for publication if received within 1 month of publication of the original article.
- 7. Book Review:** Limited to 500 words and 3 references.

Abstracts: Articles should not include an abstract.

Upcoming Issue Themes

Please note that we will consider articles outside of the theme.

October 2012

Section Theme: Psychosomatics
Guest Section Editor: David Hsu, M.D.
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November 2012

Section Theme: Transitions
Guest Section Editor: Nina Kraguljac, M.D.
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December 2012

Section Theme: Open
E-mail Editor: Monifa Seawell, M.D.
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