Personality and Mood Adaptivity with Aging

Dr. Scott B. Patten, MD, PhD, Associate Professor, Departments of Community Health Sciences and Psychiatry, Faculty of Medicine, University of Calgary, Calgary, AB.

Introduction
The term depression can refer either to an emotion, such as sadness, or to a set of depressive disorders. As an emotion, depression is a universal experience, which likely explains why people naturally understand feelings of depression, on an intuitive level, as a reaction to undesirable life events. However, intuition tends not to be clinically useful for depressive disorders, and can even act as a barrier to effective communication and clinical decision-making. Of course, when depression really does represent a non-pathological reaction to a negative life event, empathic and intuitive understanding is completely appropriate, but a mental disorder should not be diagnosed in these circumstances. It is critical to be able to distinguish normal emotional reactions from the potentially dangerous and usually destructive manifestations of depressive disorders. This distinction is particularly important in the elderly, who may experience a variety of losses such as financial security, health and loved ones. Bereavement in relation to such losses may be normal and adaptive, whereas the emergence of a mood disorder—even if triggered by such events—is typically destructive and can be dangerous.

It is often difficult for patients and physicians to understand the distinction between normal or adaptive forms of depression and depressive disorders. This can lead to misperceptions, such as the patient viewing antidepressant medication as a “crutch” rather than a real treatment, or the failure of the patient to accept treatment altogether. The contemporary view on making this distinction—as embodied in the Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition—has an empirical rather than conceptual basis by emphasizing the reliance on signs and symptoms rather than etiological judgements. When people are depressed, they may identify problems or stressors as “causing” their depression. However, after recovery it often emerges that these causal attributions reflected negative perceptions and distorted cognitions rather than being of true etiological significance. This demonstrates the importance of using empirical diagnostic criteria, but also points to some of the problems that will arise when attempts are made to apply them in the elderly, particularly in the context of psychosocial stressors and losses that many elderly people must face.

Empirical Approach to Understanding Depression
Adopting a purely empirical approach to understanding depressive disorders has many advantages (e.g., enhanced reliability of the diagnostic criteria), and seems to comfortably fit within the modern climate of evidence-based medicine. The practice of evidence-based medicine emphasizes empirically valid scientific evidence as the key underpinning of effective medical decision-making. Certain conditions, such as essential hypertension, can be effectively identified and treated empirically even in the face of unknown etiology or in the absence of an etiological framework. It may, therefore, be argued that clinicians need not have any kind of etiological model at their disposal for the diagnosis of depressive disorders. In the example of hypertension, it may be enough to know the profile of beneficial and adverse effects associated with a particular treatment. In principle, the same kind of reasoning could be applied to depression: a certain set of diagnostic criteria is met, particular treatments are shown by valid studies to be safe and effective, practice guidelines are readily available to direct the treatment, and so on.

The depressive disorders, however, are different in some respects. For example, compared to most other medical conditions they tend to be experienced differently: it is easier to understand a physical condition in objective terms than it is to understand depression, which is confounded with powerful emotions and altered styles of thinking. The occurrence of a depressive episode is typically associated with a sense of personal and emotional immediacy, so that a purely empirical approach may be an uncomfortable fit in clinical practice. In the absence of a conceptual basis for distinguishing normal emotional changes from mood disorders, some patients will have difficulty accepting or understanding the role of treatment. Furthermore, because other medical conditions can cause symptoms that overlap with the depressive syndrome (e.g., fatigue), physicians may encounter ambiguities in the application of purely empirical diagnostic strategies. It is important that clinicians have meaningful ways of understanding the depressive disorders, and patients, if they are to be engaged in treatment, often need these as well. These comments are particularly applicable in the elderly, who often experience many losses and stresses and in whom comorbid physical conditions often make diagnosis more difficult. But what is the best way to conceptualize the depressive disorders in the elderly?

Conceptions of Depressive Disorders
In the past several decades, there have been major advances in the scientific understanding of the depressive disorders. These advances have occurred on a vari-
Depressive disorders are conceptualized as “a pathological stress response gone awry”. This literature ties together several sets of findings concerning the biology of depression. These models can help explain the effects of early life events, since a long-standing impact of early trauma on CRF systems has been demonstrated in rodents, in non-human primates and in humans following trauma during development. Exaggerated activity of the stress response system can also help explain neuroendocrine changes in relation to major depression (hypercortisolism, failure of dexamethasone suppression), aspects of the symptomatic presentation of depression and even mechanisms of antidepressant activity.

One of the most appealing aspects of these emerging conceptualizations of the depressive disorders as disturbances of stress response systems is their capacity to integrate pathological and non-pathological dimensions of depression. Depressed mood, as an emotional response to stressful life events, may be a component of a normally functioning stress response system. An elderly patient experiencing sadness as part of an emotional reaction to a loss of status or function, a role transition (e.g., retirement) or the death of a loved one may be undergoing an adaptive reaction. The outward manifestations of a reactive depression may represent intact functioning of stress response systems. Here, depression may be a component of an adaptive process that will, in turn, lead to a healthier outcome. Indeed, the very existence of sadness as a universal emotion has prompted some authors to hypothesize an evolutionary purpose for it.

Perhaps the stress response system, at least in some people, can be overwhelmed in a way that leads to a self-perpetuating pathological state. Clinicians are most likely to observe the pathological dynamics of depressive disorders in their elderly patients on the levels of emotional expression, altered behaviour and altered thinking style, even though at a neurochemical level these changes may represent pathological dynamics within stress response systems. Pathological dynamics of this self-perpetuating variety may be clinically evident in the form of the numerous positive feedback loops and “vicious cycles” that are keys to the cognitive and behavioural perspectives on depression (e.g., depression leading to distorted cognitions, in turn leading to increased depression; negative expectations leading to diminished activity levels, in turn leading to reduced levels of pleasant or rewarding activities and finally to more depression). The distinction between bereavement and major depression implicitly acknowledges an adaptive quality to depression, even to severe depression. If the function of depression is allostatic (to re-establish equilibrium in response to environmental changes), sufficiently severe depressive symptoms may contribute to a self-perpetuating pathological state by impairing rather than re-establishing effective functioning.

As noted above, stressful life events, particularly during development, may lead to a hypersensitivity of the stress response system, potentially creating a diathesis for such events.

Adaptation in the Elderly

Issues of adaptivity are particularly relevant to aging patients. From a psychosocial perspective, aging presents a series of challenges to adaptation. For some individuals, many of these challenges involve losses (deaths within one’s social network, occupational and social role transitions, etc.). In elderly persons with age-related cognitive declines or in those with a rigid set of coping strategies, any adaptive function of depression may be overwhelmed more easily, leading to the emergence of maladaptive dynamics. In turn, this may lead to the perpetuation of depressive morbidity. The presumed adaptive function of the depressive syndrome may have fewer positive benefits if it is more difficult for an elderly person to adapt to these changes. In addition, many of the potentially destructive elements of depression (diminished appetite, cognitive changes, sleep disturbance) may have a greater impact in the elderly because of the higher frequency of fronts, including behavioural, cognitive, neurochemical and psychopharmacological, as well as in the functional imaging field. The scientific understanding of these conditions is evolving in new and exciting directions. This evolution has particular relevance for mental health in aging since emerging conceptualizations of the depressive disorders emphasize adaptation and adaptability as key elements of emotional function and dysfunction. Age-related changes in psychological functioning, including age-related cognitive decline and, perhaps, personality style, may represent important factors in the occurrence and course of mood disorders in the geriatric population. It is reasonable to ask whether any of these scientific advances can, in a conceptual sense, help us understand the depressive disorders and, in particular, distinguish them from non-pathological emotional changes in elderly patients.

Historically, mood disorders have been conceptualized as a deficiency state. For example, observations of reserpine and methyldopa-induced depression and the efficacy of tricyclic antidepressants historically lead to a norepinephrine deficiency hypothesis. Today, discussion on the Internet and in the lay press often perpetuates the impression that depression represents a deficiency of one or more neurotransmitters. With the ascendency of serotonin-specific reuptake inhibitors, serotonin has been frequently singled out as a culprit. However, direct scientific evidence of such a deficiency has not been forthcoming.

Depressive disorders are also sometimes conceptualized as an imbalance of neurotransmitters, leading to the vague but popular term “chemical imbalance”. Within the scientific literature, however, the trend has been towards the development of more sophisticated and satisfying ways of conceptualizing these conditions. Nemeroff, for example, has put forward a stress-diathesis model, depicting the depressive disorders as physiological disturbances resulting from over-reactivity of stress response systems, with a particular focus on corticotropin-releasing factor (CRF). Here, depressive disorders are conceptualized as “a pathological stress response gone awry”. This literature ties together several sets of findings concerning the biology of depression. These models can help explain the effects of early life events, since a long-standing impact of early trauma on CRF systems has been demonstrated in rodents, in non-human primates and in humans following trauma during development. Exaggerated activity of the stress response system can also help explain neuroendocrine changes in relation to major depression (hypercortisolism, failure of dexamethasone suppression), aspects of the symptomatic presentation of depression and even mechanisms of antidepressant activity.

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Personality and Mood Adaptivity of medical comorbidities in this group. Hence, rather than resulting in improved adaptation (as depression in its non-pathological context may be presumed to do), depression may more easily translate into a dynamic involving increasing dysfunction and clinical deterioration in the elderly. It should also be emphasized, however, that a negative dynamic of this sort is by no means inevitable or even probable. Many elderly persons maintain excellent physical health and, by virtue of experience and knowledge, may possess more maturity and more effective coping mechanisms than younger people. The epidemiological literature does not generally identify elevated rates of DSM-defined major depression in community-dwelling elderly. On the other hand, DSM criteria may miss a large proportion of depressive morbidity in the elderly, and instruments that detect a broader spectrum of depression produce much higher prevalence rates.

Clinical Implications in the Elderly

These hypotheses about depressive disorders predict that depression in the elderly may be particularly context-sensitive. As in the case of dementia, in which some individuals with cognitive impairment continue to function well in a familiar environment but manifest a clinically significant syndrome of dysfunction and behavioural disturbance in another environment, maintaining environmental stability and support of coping may be important to facilitate recovery from major depression. Since normalization of the stress response system can be facilitated by treatment, these concepts also reinforce the need for delivery of appropriate treatment to those with depressive disorders.

These concepts can also help with diagnosis in those especially difficult diagnostic situations, in which some symptoms of depression are intermixed with symptoms potentially attributable to physical conditions. These conceptualizations suggest that the emergence of depression will be characterized by the appearance of a set of symptoms (depressed mood, loss of interest, sleep and appetite disturbances, fatigue, psychomotor changes, negative thinking, thoughts of death or suicide, etc.), as well as by a recognizable dynamic involving a deterioration of functioning in relation to the demands of that person’s environment.

Clinicians must, of course, be cautious in adopting and applying conceptual frameworks. For the foreseeable future, empirical evidence will remain the most solid basis for clinical decision making. A conceptual framework, if mistaken for an empirical fact, can become a negative force. Some of the ideas underlying the stress-diathesis model presented above have recently been challenged, and a definitive pathophysiological explanation for the depressive disorders currently remains elusive. However, as the scientific literature advances, increasingly coherent ways of understanding the depressive disorders are emerging. This will ultimately lead to more sophisticated ways of understanding and managing these conditions, and issues of adaptivity and biological-psychosocial interaction will likely figure prominently in these conceptualizations.

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