

## Research Gaps in Geriatric Mental Health Care

Although there is already a compelling evidence base that includes empirically validated studies in the area of late-life mood disorders, there are still research gaps that make it difficult to achieve large-scale treatment goals and avert the consequences of untreated and undertreated mental health disorders in older patients. Among the areas where further research is needed are prevention of mood disorders, implementation and services research, treatment nonadherence, issues relating to gender and ethnicity, disorders in the “oldest old,” suicide, neuroscientific studies, and pharmacology.

### Introduction

Mood disorders, including major depression and bipolar disorder, are often overlooked conditions in elderly people. Research has found that these disorders are not part of the normal aging process, as once was thought.<sup>1</sup> Most clinicians are aware that failure to recognize and treat mental health disorders can lead to progressive deterioration and poor outcomes.<sup>2</sup>

Besides increasing awareness about the prevalence and impact of late-life mood disorders, researchers in the field of geriatric mental health have made progress investigating effective pharmacological and psychosocial interventions. Observations from routine clinical experience combined with data from clinical trials, longitudinal studies, and other types of research have provided a firm foundation for improving the diagnosis, treatment, service delivery, and overall understanding of late-life mood disorders. However, there are still “research gaps” where more information is needed. Additional research will help the medical community develop prevention, intervention, and treatment strategies that help improve outcomes related to late-life mood disorders, develop effective methods for dealing with concurrent behavioral health problems in older patients, and develop clinical profiles for various mood disorders based on older adults.<sup>3</sup> Other goals include:

- Develop and utilize clinical assessment tools in routine settings<sup>3</sup>
- Improve remission rates in patients who do not respond optimally to first-line treatment<sup>3</sup>

- Translate treatment efficacy during clinical trials into effective treatment real-world settings<sup>3</sup>
- Develop treatment algorithms exclusively for older patients<sup>3</sup>
- Understand response variability based on pharmacogenetics and pharmacodynamics<sup>3</sup>
- Develop a public health model for mental health care in late-life patients<sup>3</sup>
- Have a comparative paradigm for evaluating the efficacy and tolerability of various treatment agents in older adults<sup>4</sup>
- Gain more insight into the role of various types of psychosocial interventions (problem-solving therapy, interpersonal therapy, brief psychodynamic therapy, reminiscence therapy) in treating late-life mood disorders<sup>4</sup>

### Identifying the Gaps

Several reports have indicated areas in geriatric mental health where additional research is most needed. In an expert consensus statement published in the *Archives of General Psychiatry*, Jeste et al<sup>5</sup> recommended the formulation of a 15- to 25-year plan for research in the area of geriatric mental health research, with a particular focus on prevention, translating research findings from bench to bedside, large-scale intervention trials with meaningful outcome measures, and health services research. Similarly,

the Depression and Bipolar Support Alliance issued a consensus statement emphasizing the importance of further research in such areas as treatment nonadherence; mood disorders in the “oldest old” and in African Americans; suicide prevention; geriatric bipolar disorder; and geriatric mental health services.<sup>3</sup> The Report of the National Advisory Mental Health Council’s Workgroup on Aging Research also identified promising and necessary areas of research including age- and illness-related changes in pharmacokinetic and pharmacodynamic processes, cognition, social resources, and medical comorbidities.<sup>6</sup>

Although it is beyond the scope of this paper to discuss all these areas in detail, following is a selective discussion of several areas most often mentioned as requiring further research.

### Implementation and Services Research

In order to be meaningful, research results must be implemented in the clinical environments in which the intended recipients are most likely to benefit.<sup>7</sup> However, almost half of older adults with a recognized mental disorder have unmet needs for services, despite the existence of a strong evidence base that could support treatment efforts for a wide variety of mental health disorders in older adults.<sup>4</sup>

The New Freedom Commission on Mental Health found that implementation of the existing knowledge base in the area of geriatric mental health disorders continues to be a major problem and that bridging the gap is of urgent importance. On the surface, this gap is primarily the result of inadequate training in geriatric care and a failure to incorporate contemporary research findings into day-to-day care.<sup>4</sup> On a more fundamental level, the “implementation problem” is directly related to the dearth of relevant research, suggesting that pilot testing of large-scale implementation efforts are needed.<sup>4</sup>

Closely related to implementation research is services research, which includes studying not only health care delivery, economic factors, and clinician training, but also the organizational structure in which care is delivered. Knowing how to translate research findings from the lab into the clinical setting enhances the value of all research related to geriatric mental health disorders.<sup>6</sup> The NIMH has launched a variety of initiatives in the area of services research, including public health-oriented studies and systems research.<sup>7</sup>

### Treatment Nonadherence

There are few studies of the effects of treatment nonadherence in older adults. In older adults, nonadherence may be unintentional -- ie, due to forgetfulness or dementia -- or intentional, due to concern about side effects, beliefs about depression, or other causes. However, because nonadherence is associated with a high relapse risk and increased morbidity and mortality, it is important to study reasons behind it and interventions to help control it.<sup>8,9</sup>

### Ethnicity/Gender Differences

Since the National Institutes of Health (NIH) began requiring inclusion of ethnic minorities in all NIH-funded research in 1994, the mental health of older minority patients is beginning to be examined more carefully.<sup>10,11</sup> Clinical studies have reported lower rates of depression diagnoses and higher rates of psychotic diagnoses among older African-Americans compared with whites. However, there are few studies that evaluate the reasons for these differences.<sup>12</sup> Similarly, research on gender differences in risk factors for late-life mood disorders is limited. For example, although epidemiologic studies have shown that women have a higher lifetime prevalence of depression, older men are less likely to receive treatment for depression despite a higher suicide rate.<sup>13</sup>

### Prevention Studies

Prevention may be broadly defined as including reductions in incidence, severity, episode duration, burden of residual symptoms, and consequences of illness.<sup>6</sup> Studies of prevention in late-life mental disorders focus on the premise that maintaining wellness is preferable to treating a full-blown disorder. Even if early symptoms occur, preventative interventions may shorten their duration and stop the progression of severity. Successful prevention also has the potential to decrease both emotional suffering and illness-related morbidity and mortality. Research is needed to identify evidence-based prevention strategies, best practices in prevention, and ways to generate and sustain motivation for participation in prevention.<sup>14</sup>

## The "Oldest Old"

The oldest old are defined as those ages 85 years and up. There are few studies of mood disorders in this age group, but existing research suggests that the onset and course of these disorders differs from that in younger people.<sup>15</sup> For example, depression in those 85 years and older occurs frequently and is highly persistent.<sup>16</sup> Reasons for this lack of research include the fact that this group is less likely to be available for study apart from institutional settings and are more likely to have comorbid disorders. However, because they represent the fastest-growing age group in the United States, research into the particular features of mood disorders in the oldest old is greatly needed.<sup>17</sup>

## Comorbidity

Researchers suspect that myocardial infarction, heart transplantation, and congestive heart failure may be risk factors for depression in older adults, which in turn exacerbates problems with rehabilitation, recovery, and compliance with medical treatment.<sup>3</sup> Available information about how to diagnose and treat psychiatric disorders (schizophrenia, alcoholism, personality disorders, anxiety disorders, etc) in young and middle-aged patients could be modified to help broaden the diagnostic paradigm. For example, despite the prevailing notion that schizophrenia is a disease that first manifests during adolescence or early adulthood, the reality is that late-onset schizophrenia exists.<sup>5</sup> Moreover, data suggest that antidepressants and psychosocial therapy can help prevent recurrent major depression in older adults, but there is still a need for additional research in the areas of psychotic depression and depression in bipolar disorder.<sup>3</sup>

## Substance Abuse

The number of older adults who will require substance abuse treatment is estimated to reach 4.4 million in 2020, more than double the figure in 2000-2001.<sup>18</sup> Although the prevalence of comorbid mental disorders is lower among older substance abusers compared with younger age groups, high rates of comorbid mental disorders are seen in geriatric psychiatry outpatient and inpatient settings.<sup>19</sup> However, there is little information regarding the prevention, treatment, and management of substance abuse in this population, and currently available diagnostic criteria for abuse, which are based on the DSM-IV, were developed and validated in younger populations.<sup>20</sup>

## Suicide

Although adults aged 65 and older comprise only 12% of the US population, they accounted for 16% of the total number of suicides that occurred in 2004.<sup>21</sup> According to psychological autopsy studies, 90% of suicidal elderly had a major psychiatric disorder at the time of death.<sup>22</sup> White men ages 65 years and older are at especially high risk for suicide; this group has a higher rate of suicide than any other, with the exception of teenagers.<sup>23</sup> Despite these statistics, there are few controlled clinical trials on suicide intervention in older adults, and research is needed on risk factors, clinical assessment, and suicide interventions for this group.<sup>24</sup>

## Neuroscience

Early evidence suggests that chronic or recurrent depression or posttraumatic stress disorder may lead to hippocampal atrophy with a negative impact on memory formation. More importantly, researchers hypothesize that hippocampal damage lowers the threshold for recurrent depressive episodes. This type of finding only highlights the need to further study possible cognitive and affective neuroscientific aspects of mental disorders in older adults.<sup>2</sup> Related areas where research is needed include studying the neurobiology of treatment-resistant depression, the neurobiological differences in early- versus late-onset depression, the neurological impact of repeated depressive episodes across the lifespan, and neurobiological vulnerability markers and prevention strategies. There are also opportunities to learn more about geriatric mood disorders using neurochemical imaging methods to investigate the relationship among potential contributing factors to neural network abnormalities and relate these findings to the clinical features and course of geriatric mood disorders.<sup>25</sup>

## Pharmacologic Treatment

There has also been an increase in the number of pharmacologic treatment studies that focus exclusively on treating late-life mood disorders. Some important areas where work has been initiated include developing diagnostic tools to help with differential diagnosis, elucidating the link between mood disorders and dementia, developing a diagnostic and treatment paradigm for patients with bipolar disorder, and developing screening protocols for suicidal impulses in the primary care setting and amongst underserved minorities.<sup>3</sup> While NIMH concedes that there

are gaps in its portfolio with respect to the development of new pharmacologic therapies, it does have a very strong portfolio of randomized, placebo-controlled efficacy trials examining the effects of pharmacological and psychosocial treatments on mental disorders. The major challenge has been making sure that older adults are included in these studies or that the studies are separately powered to analyze outcomes in the cohort of older adults.<sup>2</sup>

## Conclusions

Research in the area of geriatric mental health care should be an ongoing, continuous, and generative process. This approach is needed to deal with the complexity of how mental health, physical health, and cognitive function interact. At no other point in the lifespan is this interaction as hard to untangle as it is in older adults.<sup>2</sup> Clearly, treating mood disorders in late-life patients is entirely different than treating younger patients, but there is one unequivocal commonality: The goal of treatment is full remission and a return to wellness. By extension, the goal of filling the research gaps in geriatric mental health care is to support the universal goal of sound mental health that starts at birth and continues until the day that life ends.<sup>3</sup>

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