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COMMENTARY

From depression to disability

The deleterious impact of depression on quality of life as well as mortality through suicide and worsening medical comorbidity is well known. Impairment and disability associated with depression is significant and equal to that attributable to cardiovascular disease and greater than that due to other chronic physical disorders, such as hypertension, diabetes, and arthritis (Wells *et al.*, 1989). Depression impacts not only the individual life of the patient but affects the health of society.

The article by Hayek *et al.* provides evidence that depression itself may have a direct causative link to disability. They report the results of an epidemiological study of depression and disability in a multicenter prospective population-based cohort of adults 75 years of age and older in Germany. The strengths of their approach lie in study design, innovative use of statistical methods, and use of a cohort who were neither depressed nor disabled at baseline. The relationship between depression and disability is complex as the authors describe in their article. Studies have shown that disability can cause depression or the relationship may be one of reciprocal influence; however, Hayek *et al.* in their study found that initial change in depressive symptoms was associated with subsequent change in disability. Change in disability was not associated with increased depression.

Depression impacts health through both biological and behavioral mechanisms. Decreased motivation leading to reduced self-care, poor nutrition, and lack of exercise can be more easily observed; however, depression may also affect health through direct alterations in the functioning of the central nervous, immune, endocrine, and cardiovascular systems. Not only major depression but also sub-threshold depressive symptoms may serve as a gateway to a broad array of physical health problems (Glaser *et al.*, 2003).

Concepts of disability emphasize underlying biological processes associated with anatomical, physiological changes, and organ dysfunction that can develop into specific motor and cognitive deficits resulting in observable functional limitations (Jette, 2009); however, disability is not purely physical but rather a construct that is affected by elements of physical and mental functioning, e.g. by socioemotional factors, such as mood and social support (Lenze *et al.*, 2001). Studies in neuroscience have suggested that emotion and cognition together motivate human behavior (Dolan, 2002) and factors such as motivation, desire, need, and purpose, which may be related to depression, may be integral to conceptualizing what is functional ability or disability.

Disability and depression are common in late-life, and the article by Hayek *et al.* supports the importance of addressing depression. Fortunately, depression is treatable and alleviation of depression has been shown to improve functional outcomes. Further elucidation of biological and psychosocial pathways of depression to disability will increase our ability to develop effective interventions that can delay disability and sustain quality of life for older adults.

Conflict of interest

None.

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