

# Health Stresses and Depressive Symptomatology in the Elderly: A Control-Process Approach

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**ABSTRACT**—*The social and life sciences need to examine pathways of successful aging to master the consequences of increased longevity and physical vulnerability of the elderly population. One of older adults' well-known problems relates to the fact that their quality of life can be threatened by physical health stresses and associated depressive symptomatology. Common health problems among older adults often contribute to depressive symptomatology, and, in turn, depressive symptoms may further compromise older adults' health. It is thus an important task to discover factors that can protect older adults from experiencing the negative emotional consequences of health stresses. Using ideas from the life-span theory of control, we show how to adaptively manage the negative consequences of health problems in the elderly. Active investments in overcoming health problems that are controllable should result in positive outcomes. In contrast, it may be beneficial for older adults to disengage from health goals that are unattainable. By adjusting their control-related behaviors to the controllability of specific health stresses, older adults can maintain their psychological and physical health.*

**KEYWORDS**—aging; control; depression; disengagement; health

More human beings live to old age today than ever before. However, the increased longevity comes at a price. Many older adults experience physical illness and disability, such as arthritis, heart disease, or diabetes. In addition, it is widely recognized that physical disease and depressive symptomatology are positively associated in the elderly, and may reciprocally influence each other. From a psychological point of view, it is thus important to understand how older individuals manage the challenges associated with physical disease and to identify processes that enhance and maintain their psychological and physical health.

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In this article, we examine the link between physical disease and depressive symptomatology, and identify adaptive processes for managing physical disease (i.e., control strategies) in the elderly. These processes may prevent older adults from experiencing the negative emotional consequences of health stresses. At the most general level, we argue that adaptive management of health stresses requires older adults to adjust their control strategies to the type of health stressor encountered. Whereas some health stresses are potentially controllable in old age (e.g., pain) and can be overcome when active control processes are used, the controllability of other health stresses is often sharply reduced (e.g., functional disabilities, such as difficulty using the toilet, dressing, or preparing meals) and may require older adults to adjust their health-related goals. The use of control processes that are functionally adjusted to the controllability of specific health stresses may alleviate the negative emotional consequences of health problems and thereby contribute to maintaining physical and psychological health.

## HEALTH STRESSES AND DEPRESSIVE SYMPTOMATOLOGY IN THE ELDERLY

One of the most robust findings in the literature is the relation between physical declines and depressive symptomatology in the elderly (Lenze et al., 2001). Indeed, the fact that many older individuals suffer from physical illness and disability places them at risk for clinical depression. For example, depressive symptomatology has been shown to be particularly high among elderly individuals with specific medical conditions, such as rheumatoid arthritis or osteoarthritis, Parkinson's disease, advanced cardiovascular disease, or stroke. Studies that focus on the functional consequences of chronic health problems (e.g., limitations in activities of daily living) also report high levels of depressive symptoms.

The relationship between health and depression is complex. First, poor health can directly influence depressive symptomatology. Those older adults who confront physical health problems are often more likely than their healthier peers to develop subsequent depressive symptoms. Second, depression may contribute to further health

problems, either directly or indirectly (Schulz, Martire, Beach, & Scheier, 2000). For example, depression has been shown to contribute to mortality in older adults. In addition, depressive symptomatology can be associated with changes in motivational, behavioral, and biological factors, thereby affecting further health declines. The reciprocal relations between depression and disease suggest that a substantial proportion of older adults is at risk of developing both physical and psychological problems.

### HOW TO MANAGE HEALTH STRESSES IN THE ELDERLY

Given the link between health stresses and depressive symptoms in older adults, it is important to explore potential moderators of this relationship. Identifying protective factors may contribute to a better understanding of the relation between health and depression and can be a tool for improving older adults' quality of life. The life-span theory of control (Heckhausen & Schulz, 1995; Schulz & Heckhausen, 1996) provides a conceptual framework for examining psychological and behavioral mechanisms that may help older adults to manage their experience of health threats. This theory distinguishes between primary and secondary control strategies that can be activated to realize important objectives and to manage failure and unattainable goals. Primary control targets the external world and involves attempts to achieve effects in the immediate environment external to the individual. In contrast, secondary control targets the self and is aimed at optimizing the individual's motivation and emotion, which are, in turn, essential resources for further primary control.

One of the important functions that primary and secondary control strategies fulfill is facilitating goal attainment. In particular, three types of control strategies support the attainment of personal goals: actively investing effort and time (i.e., selective primary control), seeking advice and help from other people (i.e., compensatory primary control), and strengthening motivational commitment for goal attainment (i.e., selective secondary control). Control strategies aimed at realizing personal goals should be particularly adaptive if they are used when the circumstances seem to favor goal attainment. Another important function of individuals' control strategies relates to the management of failure and unattainable goals. If it is not possible to realize important life goals, disengagement from them and self-protective secondary control strategies (e.g., attributing failures to external causes or comparing oneself with others who are worse off) may save control resources for attainable goals and help a person to maintain a positive view of the self.

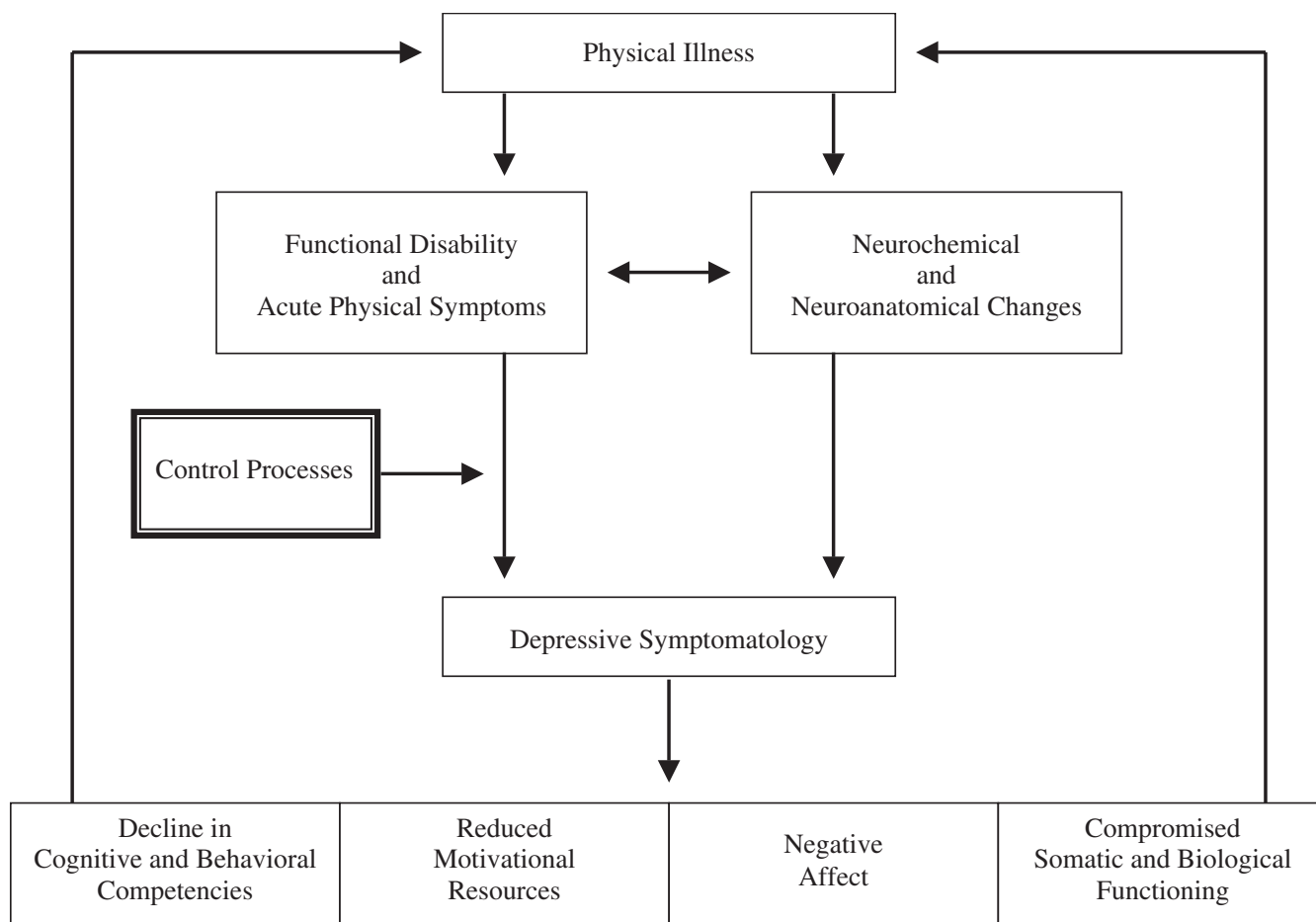
Research examining the adaptive role of control strategies across a wide range of different life domains (e.g., intimate relationships, childbearing, financial issues) has confirmed that the use of control strategies that are adjusted to the controllability of personal goals facilitates a good quality of life. In addition, evidence from a large U.S. study (Midlife Development in the United States, or MIDUS) has demonstrated that self-protective secondary control is particularly strongly associated with subjective well-being among older adults who confront a high number of health problems (Wrosch, Heckhausen, & Lachman, 2000). These findings strongly support a basic tenet of the life-span theory of control: Given that with advancing age people confront decreasing opportunities for overcoming health problems (and achieving other goals), the adaptive value of control strategies that are aimed at goal disengagement and self-protection increases in the elderly.

Figure 1 illustrates a highly simplified model of the relation between physical illness and depression and can be used to conceptualize the adaptive role of control processes in managing health stresses. One pathway in the figure addresses the direct association between physical disease and depression in the elderly. Recent work has suggested that physical illness can directly contribute to depression by causing neuroanatomical and biochemical changes (e.g., dysregulated neurotransmission). The other pathway from physical illness to depressive symptomatology emphasizes symptom-related consequences of physical illness. Physical illness, such as arthritis, hypertension, or heart disease, may affect older individuals' lives in at least two ways. First, these conditions often result in functional disabilities that limit people's abilities to carry out normal daily activities. Second, many illnesses generate acute symptoms, such as pain and difficulty breathing, which may further compromise quality of life. In turn, both types of health stresses may increase an older person's risk of experiencing depressive symptoms (e.g., Williamson, Shaffer, & Parmelee, 2000). According to the model in Figure 1, however, this is not necessarily always the case. In particular, we suggest that depressive symptomatology emerges in the elderly when control strategies are unable to adequately address health threats and losses. Thus, the influence of health stresses on depression can be attenuated or even rendered minimal if appropriate control strategies are used.

To identify specific control strategies involved in the adaptive management of health stresses among the elderly, it is necessary to consider that some health stresses are more controllable than others, and that adaptive management of health threats may require older adults to adjust their control processes to the specific opportunities for overcoming each problem. In this regard, an important implication can be drawn from the distinction between functional disabilities and acute physical problems. Functional disabilities are often relatively intractable, and a person's active efforts to overcome them may not be successful. In contrast, in many cases, the acute physical symptoms associated with disease and disability (e.g., pain) are potentially controllable. Thus, active efforts to counteract acute physical symptoms are likely to alleviate disease symptoms and reduce their negative emotional consequences.

A corollary of this proposition is that the use of control strategies that are adjusted to the controllability of specific health stresses may enhance elderly individuals' feelings of well-being in the face of age-related loss. In particular, we suggest that investment in control strategies aimed at overcoming acute physical symptoms should moderate the relation between acute physical symptoms and depressive symptomatology. Such control strategies should facilitate the achievement of those health goals that are still attainable. Older adults who have more intractable functional disabilities, by contrast, may need to activate control strategies that facilitate disengagement from unattainable health goals and protect the self. In situations in which a health problem cannot be overcome, disengagement and self-protection may alleviate distress deriving from trying to attain the unattainable, and free personal resources that can be invested in the pursuit of other meaningful and more attainable goals. In short, elderly individuals should be able to reduce their depressive symptomatology by using control strategies that are appropriate to whether the health stresses they confront are tractable or not.

Finally, it is important to note that the model presented in Figure 1 also includes several feedback loops and thus addresses the reciprocal pathways between depressive symptomatology and disease.



**Fig. 1.** Conceptual model of the role played by control processes in the association between physical illness and depressive symptomatology in the elderly.

Depression can result in declines of cognitive and behavioral competencies, reduced motivation, increased negative affect, and compromised biological functioning, thereby contributing to further health declines. A relevant implication of the proposed feedback loops is that older adults who do not succeed in adaptively controlling their acute physical symptoms and functional disabilities are at risk not only of developing high levels of depression, but also of experiencing further health declines as a consequence of their depression.

Recent research designed to test some of the predictions we have discussed has lent support to this model of health stresses, depression, and control in the elderly. In a recent study, we demonstrated that control strategies aimed at attaining health goals were associated with low levels of depressive symptoms only among older adults who reported high levels of acute physical symptoms (Wrosch, Schulz, & Heckhausen, 2002). In particular, older adults who experienced acute physical symptoms and did not activate strategies targeted at controlling those symptoms experienced elevated levels of depression. Moreover, a follow-up study showed that high levels of health-related control strategies were associated with reduced depression over time, and that high levels of depressive symptoms resulted in reduced active attempts to attain important health goals. These results support our theoretical model by demonstrating that control strategies aimed at attaining health goals are a significant moderator of the association

between acute physical symptoms and depressive symptomatology. In addition, the findings point to the conclusion that depressive symptomatology can reduce a person's motivation to actively try to attain potentially controllable health goals, and thereby may compromise older adults' physical and psychological health.

## CONCLUSION

The theoretical model and empirical research we have discussed were designed to explore the adaptive functions of control strategies among older adults who experience different types of physical health stresses. In support of the theoretical model, the research suggests that activation of appropriate control strategies may protect older adults from experiencing the negative emotional consequences of health threats. However, other parts of the model need to be tested, and more research is needed to illuminate the complex relations between physical declines, control behaviors, and depressive symptomatology in the elderly.

First, researchers need to examine in more detail how older adults can adaptively manage their functional disabilities and unattainable health goals. The proposed model suggests that self-protective control strategies and goal disengagement could reduce depression among

older adults who confront functional disabilities. However, disengagement may have negative consequences under some circumstances. If older adults disengage from unattainable goals and have no alternative goals to pursue, they may feel aimless and empty. A recent study supports this argument: Levels of emotional well-being were compromised among older adults who were able to let go of unattainable goals but reported difficulties with finding new, meaningful activities to pursue (Wrosch, Scheier, Miller, Schulz, & Carver, 2003). Thus, disengagement from unattainable health goals may be adaptive only if it leads to taking up new goals and keeps a person engaged in the pursuit of meaningful and important activities.

Second, as noted earlier, the life-span theory of control proposes three different types of control strategies that are functionally related to attaining important life goals. The research we have discussed did not differentiate among these types. However, future research on the management of health stresses in the elderly should take a more fine-grained approach to assessing the adaptive value of different control strategies across different phases of the disease and treatment process. For example, in the early stages of a potentially curable health problem, strategies related to seeking help or advice from a health expert may be particularly important. Increased motivational commitment for overcoming a health problem, by contrast, may be particularly important when individuals are confronted with a long-lasting or painful treatment process.

Third, research is needed to clarify the mechanisms linking older adults' control behaviors, depressive symptoms, and physical health. In this regard, the activation of control strategies may influence not only depression, but also other variables that play an important role in the causal link between depressive symptomatology and disease. As discussed earlier, depressive symptomatology may further compromise a person's health through behavioral, motivational, and biological processes. Our theoretical framework suggests that control-related management of health stresses influences the biological and psychological consequences of depressive symptomatology and thereby may affect older adults' health.

Finally, an important implication for future research concerns the design of interventions for elderly populations. The control strategies identified by our model could be taught to individuals confronting various health challenges. Indeed, it can be argued that some therapies (e.g., problem-solving therapy) operate on this principle, because they are designed to help the individual identify problems, think through solutions, and then act on them. In addition, it may be beneficial for older adults to learn to recognize that specific health conditions are not controllable, so that they invest their efforts in

maintaining a certain level of functioning despite their uncontrollable health conditions. Moreover, disengagement and self-protection may enable them to avoid the negative emotional consequences of illnesses by refocusing their resources on the pursuit of other meaningful and more attainable goals. In sum, by enabling elderly individuals to avoid a downward spiral characterized by high levels of health stresses, maladaptive control behaviors, and depressive symptomatology, intervention programs may contribute to increasing older adults' psychological and physical health and significantly reducing the costs for public health services.

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### Recommended Reading

- Williamson, G.M., Shaffer, D.R., & Parmelee, P.A. (Eds.). (2000). (See References)
- Wrosch, C., Schulz, R., & Heckhausen, J. (2002). (See References)
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### REFERENCES

- Heckhausen, J., & Schulz, R. (1995). A life-span theory of control. *Psychological Review*, *102*, 284–304.
- Lenze, E.J., Rogers, J.C., Martire, L.M., Mulsant, B.H., Rollman, B.L., Dew, M.A., Schulz, R., & Reynolds, C.F., III. (2001). The association of late-life depression and anxiety with physical disability: A review of the literature and prospectus for future research. *American Journal of Geriatric Psychiatry*, *9*, 113–135.
- Schulz, R., & Heckhausen, J. (1996). A life span model of successful aging. *American Psychologist*, *51*, 702–714.
- Schulz, R., Martire, L.M., Beach, S.R., & Scheier, M.F. (2000). Depression and mortality in the elderly. *Current Directions in Psychological Science*, *9*, 204–208.
- Williamson, G.M., Shaffer, D.R., & Parmelee, P.A. (Eds.). (2000). *Physical illness and depression in older adults: A handbook of theory, research, and practice*. New York: Kluwer Academic/Plenum Publishers.
- Wrosch, C., Heckhausen, J., & Lachman, M.E. (2000). Primary and secondary control strategies for managing health and financial stress across adulthood. *Psychology and Aging*, *15*, 387–399.
- Wrosch, C., Scheier, M.F., Miller, G.E., Schulz, R., & Carver, C.S. (2003). Adaptive self-regulation of unattainable goals: Goal disengagement, goal reengagement, and subjective well-being. *Personality and Social Psychology Bulletin*, *29*, 1494–1508.
- Wrosch, C., Schulz, R., & Heckhausen, J. (2002). Health stresses and depressive symptomatology in the elderly: The importance of health engagement control strategies. *Health Psychology*, *21*, 340–348.