

Introduction

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This volume addresses the topic of "new frontiers in resilient aging," which is of ever-increasing significance in current gerontological and geriatric discourse and research. The topic is not only very complex, but has enormous scope and breadth, encompassing a number of psychosocial and biological models of aging, theoretical formulations, definitions, and dimensions of resilience, and the core determinants of resilience that lay the foundations for discourse and research. Resilience as a psychological construct emerged from the study of children and youth at risk, and discourse on resilience, adaptation, and healthy longevity has focused mainly on younger adults, perhaps because of a misconception that resilience capacities diminish rapidly and perhaps irreversibly after young adulthood. Currently, increased life-expectancy without the compression of morbidity and vulnerability, together with the rising costs of healthcare, has highlighted the need for greater attention to the capacity for resilience throughout adulthood and in late life.

More recently, factors that influence resilience in later life are being studied more extensively. Within the last few years the theme of resilience in an aging society has been featured prominently in a number of national and international conferences and is the subject of intensive study in institutes of health sciences, mental health, and gerontology. This confluence of events suggests that the time is ripe to highlight some of the more recent and important research and writing on the topic of resilience in later life, and to bring the strands of this rapidly emerging scholarship together to showcase the movement toward promoting healthier aging.

This volume includes representative chapters of multidisciplinary discourse and research by a number of knowledgeable and highly respected scholars who have an active interest in studying the capacity of older adults to respond to and overcome adversity and age-related losses in affective, cognitive, and social domains of function. Resilience in human functioning is perhaps most remarkable when evident in the contexts of



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life challenges and adversity in old age. In this volume we have included scholarly contributions that address issues of cognitive, social, and emotional resilience, and seek to identify some of the core elements and determinants of resilience in the face of threatened or actual losses in cognition, health status, and well-being with increasing age. We present chapters that explore broad perspectives of resilience that take into account some of the interactive dynamics, processes, and mechanisms contributing to growth and positive change, and to thriving mental and physical health and function in late life, especially in the face of disability and physical decline. According to current theorizing, thriving health implies not merely the absence of disease, but rather older adults' intensive search for positive trajectories and sources of internal strengths, and older adults' conscious pursuit of ways to attain improved levels of emotional, social, and cognitive functioning. While the idea of resilience and the awareness of potentials for growth and thriving in old age is not new, the evidence for or against it is very limited. Past formulations of resilience in the context of aging have treated it primarily as adaptive and homeostatic, emphasizing the human ability to cope with and recover from age-related losses, but only to the extent of restoring equilibrium in behavioral, cognitive, and mental-emotional functioning. In the earlier definitions of resilience the focus has been more on "coping" and "adjusting" and less on enhancing the overall health and functioning of older adults. Observant readers of the chapters included in this volume will note the paradigm shift toward looking at resilience and aging from a somewhat more positive and broadened perspective that expands the conception of resilience as normal development in the face of adversity to include facets such as recovery, plasticity, regenerative capacity, maintenance of health function (e.g., mobility) in the face of disability or disease, and access to psychosocial and technological-ecological resources that may facilitate maintenance and improvement of physical and emotional health with age.

The volume includes chapters that expand on the multidimensional aspects of internal and external sources of life-strengths and the related psychosocial resources that are the springboards of resilience in later life. Together, the thirteen chapters in this volume reveal that, throughout adulthood, the capacity and potential for growth and new learning, positive emotions, thriving mental health and meaning in life, openness to experience, and expanded life-space add to the prospects for resilience as defined by maintenance and enhancement of functioning in later life.

The contributing authors in the volume are leading researchers from a variety of disciplines ranging from psychology (clinical, social-personality, psychology of aging, and health psychology), sociology, and bio-



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gerontology to advocacy proponents of quality of life and the human rights of older adults. The array of theoretical perspectives on resilient aging presented by the contributing authors is both exciting and challenging. This volume represents a small but important beginning of an attempt to synthesize the efforts of a few of the leading theorists, researchers and clinicians who have been working on the topic of resilient aging, each from their own perspective and from their own unique conceptual framework of what the construct of resilience means to them.

Although the authors themselves have included abstracts of their chapters, we take this opportunity to present an overview of the chapters to highlight aspects of each chapter that we consider to be of particular interest.

Chapter 1. (Fry and Debats) "Sources of human life-strengths, resilience, and health"

Based on an extensive review of the literature on aging, Fry and Debats present a conceptual framework and discourse on individuals' perceptions of their most valued sources of life-strengths from the psychological perspectives of existential-humanistic theory and social-cognitive theory. They examine elements that bridge across these two perspectives and identify sets of psychosocial resources that are seen to facilitate resilience from both perspectives, and are also valued within a broad historicalcultural framework. They discuss the powerful role of both self-efficacy and control beliefs (social-cognitive orientation) and the role of personal meaning for life and religious-spiritual beliefs (existential-humanistic orientation) in maintaining and enhancing resilient functioning. In their view, resilient aging implies that in addition to confronting challenges that are already occurring with advancing age, individuals need to make effective use of their existing cognitive competencies and decision-making skills to anticipate future challenges. Resilient aging implies the need for individuals to strike a healthy balance between accumulating and preserving valued sources of life-strengths and related psychosocial resources for the future, and using valuable resources to deal with important needs in the present. From the perspective of resilient aging, they conclude that identified sources of life-strengths are critical to the development and maintenance of older adults' identity, and that some individuals function more optimally than others because they successfully identify for themselves their most valued sources of life-strengths, their meaning for life, their beliefs about control and mastery, and because they are more proactive in selecting and mobilizing psychosocial resources consistent with their overall belief systems.



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Chapter 2. (Bauer and Park) "Growth is not just for the young: growth narratives, eudaimonic resilience, and the aging self"

These authors coherently and diligently articulate a number of claims about resilience and the aging self. They integrate their own research data and reinterpret other published data to demonstrate the validity of their claims. As implicit in the title of the paper, Bauer and Park's major contention is that the slogan "growth is for the young, loss is for the old" ignores important empirical findings and oversimplifies and distorts the mindsets of older adults, and their personal concerns. They present convincing arguments to back up their claim that growth is a normative, often central concern in older adults' personal goals and that, like younger adults, older adults are at least as concerned with gain and growth as they are with loss. Older adults focus on growth not only in their personal goals but also in their autobiographical memories. Bauer and Park present a number of narratives from their research dialogues to distinguish between "growth" narratives and other narratives that focus on security, maintenance, and mere acquisition of pleasure in order to demonstrate that contrary to the common perception, growth is a prominent feature of the aging, narrative self. They conclude that older adults' heightened capacity for meaning-making, and possibly growth-oriented meaning-making, may well facilitate and enhance eudaimonic resilience that combines regulation of both affect and meaning, as contrasted with hedonistic resilience that involves the regulation of affect only.

Chapter 3. (de Grey) "Physical resilience and aging: correcting the Tithonus error and the crème brûlée error"

The author discusses the physiological basis for the confidence shared by many biogerontologists that the only way we will ever substantially extend the human lifespan is by extending people's healthy lifespan. de Grey directs attention to the "Tithonus error," which encapsulates the idea that combating aging will be done by developing ever-better geriatrics, capable of keeping people alive for longer and longer, but in a frail state. de Grey also directs attention to the "crème brûlée" error that encapsulates the idea that we can only avoid the miseries of premature death and extended frailty by avoiding many of the things that make life worth living. He points out that neither of these approaches to extending the lifespan is worthwhile and acceptable to biogerontologists. In de Grey's opinion, the best way to achieve a substantial extension of the life of a human body, in fully active, healthy, youthful condition, is to



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undertake periodic thorough repair of the cellular and molecular damage that occurs naturally with increasing age. Repair and maintenance at that level could probably be achieved using technologies already being developed on the basis of stem cells, tissue engineering, and gene therapy. From a general perspective, de Grey's ideas make perfect sense: organ transplants and joint replacements are by now common and generally accepted, so repair technologies operating at the more refined level of cells may become available before long. de Grey's views have important implications for the upkeep of resilience in that if it were not for the resistance of society to evolve more promptly in response to the needs of older adults, the interventions he suggests could alter the future lives of many individuals at risk for frailty.

Chapter 4. (Uswatte and Taub) "You can teach an old dog new tricks: harnessing neuroplasticity after brain injury in older adults"

The authors discuss the phenomenon of neuroplasticity after damage to the central nervous system (CNS), as demonstrated in animal and human experiments. Research on Constraint-Induced Movement therapy or CI therapy, which is a behaviorally based approach to physical rehabilitation, is the major focus of this chapter. This body of work, among other contributions, overthrows the reigning clinical wisdom that stroke survivors more than 1-year post-event can not benefit from additional physical rehabilitation. It also provides the first evidence that physical rehabilitation can produce large improvements in real-world arm function, and can change CNS organization and structure. It has been known for some time that parts of the brain can take over the function of damaged regions. This work shows how to encourage the reassignment process. The method involves considerable time and effort, but the results are remarkable, and hold great promise for further development. The results provide evidence for a neurophysiological basis for continued plasticity in behavior among older adults. The research findings are indeed most heartening and encouraging with respect to the prospects for interventions, mechanisms and processes now accessible for enhancing plasticity and increasing physical and perhaps emotional resilience as well.

Chapter 5. (Hertzog and Jopp) "Resilience in the face of cognitive aging: experience, adaptation, and compensation"

The authors articulate a lifespan developmental perspective on gains and losses in cognitive functioning during adulthood. Despite measurable



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age-related cognitive decline, older adults nevertheless function effectively in everyday life, and even in cognitively demanding situations. The authors contend that because individuals by and large grow and age in self-selected contexts, they can in later life successfully use expertise and knowledge, practiced routines of behavior, and reliance on sources of support in their environment to maximize their functional capacity. The major argument the authors present has vast appeal: while factors such as genetics and neuronal processes play a role in cognition, cognitive function also depends strongly on the person's efforts to maintain or enhance cognitive functioning. Failing memory can be corrected to some extent by learning techniques for remembering, and by using notes instead of relying on memory. Metacognitive self-regulation and an active lifestyle can be important means for older adults to preserve cognitive capacity and to effectively compensate for declines in cognitive mechanisms as they occur. Thus from Hertzog and Jopp's perspective, positive aging results in cognitive resilience, which helps in maintaining autonomy and effective functioning for extended periods. Attitudes, lifestyle practices, and cognition can in that sense work in a fruitful symbiosis. As Hertzog and Jopp so cogently conclude, practising self-regulation, and keeping mentally and physically active, will not only improve functioning but increase confidence and a sense of control, and thereby help to improve functioning further, toward the best that can be achieved with declines in cognitive mechanisms.

Chapter 6. (Kern and Friedman) "Why do some people thrive while others succumb to disease and stagnation? Personality, social relations, and resilience"

The authors present a discourse on the role that personality plays in resilience across the lifespan, and also with respect to its role in late life. The authors are to be commended on the wide scope of their investigation. Of immediate interest is their uniquely broadened concept of personality which according to them captures a combination of genetic, familial, social, and cultural elements. Another point of keen interest and of relevance is their concept of resilience which they define as a dynamic process that unfolds across the life-course and necessarily involves both the individual's trajectory and his or her current psychosocial context. In particular, the authors highlight findings from their work with the Terman Life Cycle Study, the longest longitudinal study conducted to date, to demonstrate how core aspects of the individuals' personalities impact on how resiliently and positively they react to life's challenges,



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and what core elements of personality contribute to an individual's resilient functioning. Against the background of their longitudinal findings the authors trace the links between personality and a number of lifespan processes, including, for example, the links between personality and resilience and early life experiences, health, longevity, and social relations. They sum up their conclusions regarding the core elements of resilience by noting that resilience is not a personality trait but rather an emergent attribute - a quality that appears with the appropriate combination of predispositions, behaviors, and socio-environmental circumstances such as divorce, marital status, social interactions, and career success, to mention a few factors influencing resilient response. Further, psychological and physical resilience are not necessarily separate entities, but are often two sides of the same coin. As Kern and Friedman note, what differentiates individuals who thrive from those who succumb to disease and stagnation is not merely their toughness or ability to recover quickly from challenge or misfortune, but rather their flexibility and adaptability in reacting to stress.

Chapter 7. (Fry and Debats) "Psychosocial resources as predictors of resilience and healthy longevity of older widows"

In this chapter, Fry and Debats report the findings of their longitudinal study on predictors of longevity/mortality of older widows. The major hypothesis that guided the study is that following spousal loss the possession of certain psychosocial resources is a key protective factor helping to enhance stress resistance and thereby reduce the risk of mortality. Although a number of previous longitudinal studies of all-cause mortality among older adults have identified several socio-demographic factors, health status factors, and personality factors that have reduced or increased the risk of mortality, the links between resilience, longevity, and psychosocial resources have not been studied as extensively. In the research reported in this chapter, Fry and Debats view resilience to be a developmental process. The 6.5-year longitudinal study of 385 older widows assessed the influence of psychosocial resource factors on their resilience and healthy longevity. Study participants were assessed at baseline on predictor measures of psychosocial resources, health-related self-reports, and psychological traits of challenge, commitment, and control. A Cox regression analysis of predictor variables was used to examine the mortality risk related to baseline measures of psychosocial resources and psychological trait measures. Those widows who survived longer had



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higher scores on spiritual resources, and on resources of family stability, social engagement, and commitment to life tasks. In contrast, high scores on control and challenge traits had an unexpected negative effect on longevity. The findings confirm that psychosocial resource factors have a significant contribution to make to resilient functioning and longevity, and also that healthy aging and longevity are consequential outcomes that can serve as indicators of personal resilience.

Chapter 8. (Martin, MacDonald, Margrett, and Poon) "Resilience and longevity: expert survivorship of centenarians"

In this chapter the authors present their research findings on three important aspects of resilience (personality, intellectual functioning, and economic and social support resources) that may contribute to the expert survivorship or longevity of centenarians. The researchers seek to discover how people come to possess the resilience characteristics required to achieve very long life, whether they are inherent in the person from birth, or whether the person acquires them through life experiences, and through what psychosocial pathways resilient people become longlived individuals. A further question is what heritable and environmental influences combine to inculcate resilience among the oldest-old. The study design is unique in that the authors take both a person-centered approach and a variable-centered approach to identifying the elements of resilience and the psychosocial resources that contribute to longevity. The findings the authors report are a synthesis, integration, and consolidation of the results derived from the perspective of three study models. In phase 1 the predictors in this model measure the direct and indirect impact of family longevity, environmental support, individual characteristics, coping abilities and styles, and nutrition on physical health, mental health, and life satisfaction. In phase 2 the question of interest is what specific resilience factors contribute to a continual survival that exceeds all normal expectations. Phase 3 is a population-based study examining both biomedical (genetics, neuropathology, blood chemistry, nutrition, health) and psychosocial elements (neuropsychology, adaptation, resources) that contribute to the exceptional longevity. Additionally, the study addresses psychosocial factors that contribute to differences in the mental health functioning, coping and adaptation of some centenarians compared to others living in similar contexts. Among the admirable features of the investigation are the ingenuity of its design, its broad scope, and its effectiveness in demonstrating that resilience is



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a developmental process, which can contribute to an exceptionally long period of survival.

Chapter 9. (Ong and Bergeman) "The socioemotional basis of resilience in later life"

In this chapter Ong and Bergeman describe select parts of their ongoing program of research studies on the nature of emotional resilience. Although their program of research involves multiple methods of data collection (i.e., longitudinal, diary, life-history interviews), in this chapter they highlight findings derived from the daily diary process component of their work, the primary goal of which is to investigate the daily context in which resilience arises in response to challenge. The authors' major contention is that the daily process approach has a distinct advantage over other approaches they have previously used in that it allows the researcher to conduct intensive, day-to-day monitoring of reported stresses. In addition to providing a framework in which to study inherently intra-individual (within-person) questions, diary methods allow individuals to report their behavior and experiences within a short time after they occurred, over the range of potentially stressful circumstances encountered in everyday life, thereby facilitating ecologically valid research. Using a daily process approach to data collection (i.e., diary methods) the authors examine how the nature of stressors, the social context, and the affective experiences of the individuals involved can affect the process of resilience in adulthood. They conclude from their series of daily process studies that positive emotions strengthen individuals' stress resistance, facilitate recovery from stress, and broaden individuals' attention and thinking. Their findings also provide the first concrete empirical evidence of the link between individuals' level of social connectedness and their biological resilience (i.e., diminished cardiovascular reactivity and more rapid recovery following negative emotional arousal) confirming that having quality social ties contributes to resilience in the face of life challenges. The results of their research on bereavement processes (indicating that the trajectory of emotion regulation following conjugal loss resembled a damped linear oscillator) provide researchers with initial empirical "guideposts" for understanding the process by which widows typically adjust to conjugal loss. Taken together, the authors' research findings add substantially to the generality of extant empirical work on positive emotions. A primary finding emerging from the research is that a significant proportion of older adults are somehow able to experience positive emotions, even in the midst of overwhelming loss. Despite



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variation in the types of stressors experienced, the results across multiple studies that the authors have conducted are remarkably consistent: positive emotions have demonstrably beneficial effects when present during times of stress.

Chapter 10. (Kessler and Staudinger) "Emotional resilience and beyond: a synthesis of findings from lifespan psychology and psychopathology"

The authors review and analyze empirical studies of emotional resilience, including several from their own extensive program of research. They looked for evidence of changes in emotional resilience with age, from the perspectives of normal successful aging as indicated by emotional well-being and emotional maturity, and from the psychopathological perspective as indicated by the frequency of depressive disorders. These are quantities rarely studied in combination, and give some illuminating new insights.

It is encouraging that the authors confirm that aging individuals typically have great emotional resilience; indeed emotional resilience tends to increase with age, except for a decline in very old age. The frequency of depressive disorders is largely constant with age until very old age, implying the ability of older adults to withstand effectively the losses and disabilities of aging, reaching the limits of their resilience only in very old age. Contrary to what older people might like to believe, emotional maturity ceases to increase beyond early adulthood, and even decreases in extreme old age. Emotional maturity, according to the authors, includes complexity of emotion-regulation, and is not the same as emotional resilience, though some researchers have not made a clear distinction. Older people who believe they are wiser now than when they were young may be disappointed to learn that a measure of personal wisdom shows no increase with age.

Positive and negative affect are often used as indicators of emotional resilience. The authors conclude that negative affect decreases with age, helping to maintain emotional resilience until advanced age, when negative affect increases. The results for positive affect are however mixed, possibly because little attention has been paid to the level of arousal. Overall, positive affect tends to decrease in advanced old age. It is noteworthy that the authors have devised ways of assessing several sub-categories of emotional state that have already helped to dissect components of emotional resilience which will give further insight into what is a very complex phenomenon. The thoughtful interpretations that the authors provide of their findings are very insightful.