# **CHAPTER 29**

# The Aging Personality and Self: Diversity and Health Issues

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Personality may be defined as the pattern of thoughts, feelings, and behaviors that shape an individual's interface with the world, distinguish one person from another, and manifest across time and situation.<sup>1-3</sup> Personality is impacted by biologic, cognitive, and environmental determinants, including the impact of culture and cohort. Theoretical approaches to personality are as varied as the breadth of the construct they attempt to describe and explain. Yet each approach, to varying degrees, emphasizes stability and change within individuals across time and situations.

The impact of personality across the adult life span touches every domain: personal, professional, spiritual, and physical. Certainly, personality characteristics have direct and indirect influences on health status, health behaviors, and behavioral interactions with health care professionals. Although no single chapter can adequately condense such rich empirical and theoretical research, we will attempt to provide a concise overview of stage models, trait theory, and social-cognitive approaches to personality. As such, we will focus on aspects of personality development among cognitively intact older adults, not personality changes that may ensue as the result of dementia.

Each section of this chapter contains four subsections. For each of the three major approaches (stage, trait, socialcognitive), we first provide an overview of classical along with the most current research on stability and maturational and environmental change within adult personality. Our focus will be on findings from longitudinal data. Second, we include cross-cultural comparisons of adult personality where available. This focus provides a unique contribution to recent reviews of adult personality and aging.<sup>4,5</sup> Third, we examine the health correlates of adult personality, focusing on morbidity and mortality, well-being, life satisfaction, positive and negative affect, anxiety, and depression. Finally, we discuss measurement issues and provide examples of current assessment instruments.

## PERSONALITY STAGES AND EGO DEVELOPMENT Ereudian theory

# Freudian theory

The psychoanalytic approach to adult personality development has its roots in the theories of Sigmund Freud. His theories encompassed four domains: level of consciousness, personality structure, defense mechanisms, and stages of psychosexual development.<sup>6,7</sup> Freudian theory postulates that adult personality is made up of three aspects: (1) the id, operating on the pleasure principle generally within the unconscious; (2) the ego, operating on the reality principle within the conscious realm; and (3) the superego, operating on the morality principle at all levels of consciousness. The interplay of these personality structures generates anxiety that must be reduced through various defense mechanisms. These mechanisms act to obscure the true, anxiety-laden reasons for one's behavior. Although seminal in the expansion of our understanding of the human psyche, Freud's specific theories receive little attention in the scientific study of personality today.<sup>6</sup> His theories are not easily amenable to scientific inquiry in that they frequently lead to nonspecific hypotheses, wherein failure to find expected effects may simply be a result of unknown defense mechanisms. Additionally, having postulated that personality development associated with his stages of psychosexual development essentially ends in adolescence, Freud's theories have limited applicability to the fields of gerontology and geriatric medicine.

## **Post-Freudian theorists**

In contrast, some post-Freudian theorists have conceptualized personality development as a continuing process focused on current interpersonal and/or family-of-origin issues as the source of individual distress and coping patterns. Carl Jung proposed that as individuals age, they achieve a balance between the expression of their masculine characteristics (animus) and feminine characteristics (anima).<sup>8,9</sup> Findings regarding increased balance of gender roles with age have emerged in different cultures, lending some support to Jung's hypothesis.<sup>2</sup>

Erik Erikson's stages of psychosocial development are perhaps the best known of the stage theories of adult personality. The sequence of Erikson's eight stages of development is based on the epigenetic principle, which means that personality moves through these stages in an ordered fashion at an appropriate rate.<sup>3,10</sup> Two of the eight stages describe personality change during the adult years. Although the identity crisis is placed in adolescence, deciding "who you are" is a continual process that is reflected throughout adulthood, even in old age.<sup>11</sup> In the midlife stage of *generativity* versus stagnation, individuals seek ways to give their talents and experiences to the next generation, moving beyond the self-concerns of identity and the interpersonal concerns of intimacy.<sup>5</sup> Successful resolution of this stage results in the development of a sense of trust and care for the next generation and the assurance that society will continue. Unsuccessful resolution of this stage results in self-absorption.

*Ego integrity versus despair* is Erikson's final stage of ego development, beginning around age 65 and continuing until death. In this stage, individuals become increasingly internally focused and more aware of the nearness of death. Successful resolution of this stage results in being able to look back on one's life and find meaning, developing a sense of wisdom before death. Alternatively, meaninglessness and despair can ensue if the process of life review results in focus on primarily negative outcomes.

Difficulties arising from attempts to empirically investigate Erikson's theory include the assertion that stages must be encountered in order and the lack of specification regarding how developmental crises are resolved so that an individual may move from one stage to the next. However, the environmental influences of culture and cohort on adult personality have been minimized. One 22-year investigation found significant age changes supportive of Erikson's theory.<sup>12</sup> Middle-aged adults expressed emotions and cognitions consistent with successful completion of more psychosocial developmental crises than younger adults. In addition, Ackerman et al found a stronger association between generativity in midlife compared with young adulthood.<sup>13</sup> Some theorists postulate that the ego integrity versus despair period initiates a process of life review.<sup>14</sup>

## Life review

The concept of life review is the exception to this lack of empirical investigation regarding stage theories of adult personality.<sup>14,15</sup> *Life review* can be thought of as a systematic cognitive-emotional process occurring late in life in which an individual thinks back across his or her life experiences and integrates disparate events into general themes. The portion of life review focusing on recall of primarily positive life experiences is reminiscence. Reminiscence has been linked to successful aging<sup>16</sup> by contributing to sustained identity formation and self-continuity, a sense of mastery, meaning, and coherence in life, and acceptance and reconciliation of one's life.<sup>17</sup> Although this approach to adult personality development can be conceptualized as a cognitive process in which identity emerges from the story of one's life, we have chosen to include it with stage models because it is most frequently described as occurring near the completion of one's life. Nevertheless, it should be acknowledged that individuals likely undergo a process of life review periodically throughout the adult years including young adulthood<sup>18</sup> and midlife.<sup>19,20</sup>

## Stage theories and diversity

Few studies investigating stage theories of personality have focused on diverse cultural or racial/ethnic groups. Most of the stage models, such as Freud's original theories, were based on highly select samples. Only a few investigations of life review have succeeded in recruiting participants reflecting the general population of interest.<sup>21-23</sup> In one study, cross-cultural evidence indicated life review programs have improved self-esteem and life satisfaction in Taiwanese elderly.<sup>24</sup> Data reflecting the broader diversity of the population is needed for examining the universality of life review and the generalizability of the basic assumptions.

## Stage theories and health

There has been limited investigation of the relation between stage approaches to adult personality and health. Once again, the exception to this rule is the investigation of life review processes. Several intervention studies support the contention that life review, in comparison with nonspecific but supportive interventions, has a positive impact on health, life satisfaction, well-being, and depression.

A recent meta-analysis on reminiscence and well-being in older adulthood demonstrated that although reminiscence was moderately (effect size 0.54) associated with life-satisfaction and well-being in older adulthood, engaging in life review had a stronger effect.<sup>17</sup> This suggests that consideration of all major life events, both positive and negative, as is typical for life review, has a greater impact on well-being in older adulthood. Furthermore, another meta-analysis by Bohlmeijer et al investigated the effects of life review on late-life depression.<sup>25</sup> Results suggested that life review and reminiscence may be an effective treatment for depressive symptoms in older adults. Additional research has supported the utility of life review interventions to decrease depressive symptoms and improve life satisfaction in the elderly.<sup>26-28</sup> Finally, participants in life review programs have demonstrated wider psychological benefits, including increased autonomy, environmental mastery, personal growth, positive relations with others, purpose in life, and self-acceptance in comparison to control groups.<sup>29</sup>

## **Measurement issues**

The primary methodological problem plaguing empirical research involving stage theory approaches to adult personality development is the lack of specification of change mechanisms and limitations in psychometrically reliable and valid measures. The most current stage approach to adult personality in our organizational scheme involves the concept of life review near the end of life. Bohlmeijer et al note the lack of standardized protocols to life review as a therapeutic technique in the delivery of interventions.<sup>17</sup>

A common methodological limitation in much of this research is the problem of making causal inferences of agerelated personality change from cross-sectional studies. In these studies, age-related differences could be observed because of the impact of aging or due to cohort differences. Without cohort-sequential data, it is impossible to tease apart these influences. Thus, although stage theories of adult personality have intuitive appeal, their contribution is limited by fuzzy delineation of constructs and methodology Replace "fuzzy"

## **Personality traits**

with "vague."

In contrast to stage approaches to adult personality development, empirical research regarding trait approaches has experienced a significant boom in recent years. The Big 5 Model of personality provides a broad framework for organizing the hundreds of traits, or individual differences, that characterize people.<sup>30</sup> These five core dimensions have been demonstrated at most life stages through extensive factor analyses of personality descriptors (e.g.,<sup>31,32</sup>). A description of the most commonly identified five factors can be found in Table 29-1.

Early studies suggested that maturational changes in personality occur in young adulthood until approximately age 30 with relative intraindividual stability in traits thereafter.<sup>33-37</sup> However, stability of personality across adulthood lacks consensus. The debate as to whether personality

## Table 29-1. The Big 5 Personality Traits<sup>30</sup>

- **Emotional Stability vs. Neuroticism.** Anxiety, depression, emotional instability, self-consciousness, hostility, and impulsiveness vs. relaxation, poise, and steadiness.
- Extraversion or Surgency. Gregariousness, assertiveness, activity level, and positive emotions vs. silence, passivity, and reserve. Culture/Intellect or Openness to Experience. Imagination, curios-
- ity, and creativity vs. shallowness, imperceptiveness, and stupidity. Agreeableness or Pleasantness. Attributes such as kindness, trust and warmth that are considered pleasant and attractive to others vs.
- hostility, selfishness, and distrust. Conscientiousness or Dependability. Encompasses organization,
- responsibility, ambition, perseverance, and hard work vs. carelessness, negligence, and unreliability.

remains stable or changes in adulthood may be based upon different criteria for determining change. Roberts and Mroczek described various forms of change including mean-level change, rank-order consistency, structural consistency, and individual differences in change.<sup>38</sup> Most often, research supporting stability refers to rank-order consistency, whereas research emphasizing change focuses on individual differences in change. Consistent with cross-sectional results,<sup>31</sup> longitudinal assessments have shown small age-related declines in neuroticism, extraversion, and openness to experience, with age-related increases in agreeableness and conscientiousness in adults up to age 70 (declines in neuroticism persisted until age 80); however, this research is often cited as supporting stability of personality in adulthood. Although mean-level changes are shown, individuals maintain their rank-order on the personality domains.<sup>39</sup> Findings from other research teams contribute support for stability<sup>40-43</sup>; see also.44

Study of variability in individual rates of change has provided support for the notion that personality may change, even in adulthood.<sup>45-48</sup> Together these studies suggest that some individuals change more or less than other individuals in terms of personality traits. Thus recent research has attempted to investigate factors that may contribute to these varying rates of individual change. In a 12-year longitudinal study of middle-aged to older men, Mroczek and Spiro found cohort, incidence of marriage or remarriage, spousal death, and memory complaints to be associated with differential rates of change in personality.<sup>47</sup> Individual differences in life circumstances were also found to be associated with differential rates of change in personality in a sample of older women.<sup>49</sup> Social support, unmet needs, health, and psychosocial needs are examples of various life circumstances found to be significant predictors of differential rates of change in older women.49 Thus specific life experiences may have an impact on personality. Consideration of the various definitions of change and the factors accounting for change is important when reviewing research on personality stability or change.

## Trait theories and diversity

Cross-cultural studies have most frequently compared non-Hispanic whites in the United States with individuals living in other countries.<sup>50-52</sup> These studies seek to estimate the effects of environment on different age cohorts by comparing adults in cultures with different recent histories. Using [AQ1] the NEO PI-R, McCrae et al studied parallels in adult personality traits across cultures in five countries: Germany, Italy, Portugal, Croatia, and South Korea.<sup>51</sup> Once again, different patterns of age changes would result if environmental factors play a major role in adult personality development. In contrast, intrinsic maturational perspectives would suggest that even widely different cultures should show similar age trends. Results showed that, across cultures, midlife adults scored higher on measures of agreeableness and conscientiousness and lower on neuroticism, extraversion, and openness than 18- to 21-year-olds. Congruence was strongest for openness and weakest for neuroticism, for which only two cultures (in Germany and South Korea) replicated the

> American pattern. Using the California Psychological Inventory (CPI), factor structures similar to the Big 5 were compared among

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adults in the United States and the People's Republic of China; comparisons revealed very similar patterns of age correlations.<sup>50,52</sup> In the Yang study, the Chinese sample was an average of 25 years younger than the U.S. sample, and age effects were smaller in the U.S. sample. Likewise, Labouvie-Vief et al found high congruence on all four personality factors derived from the CPI: extraversion, control/norm orientation, flexibility, and femininity/masculinity.<sup>50</sup> Older cohorts across cultures had lower scores on extraversion and flexibility and higher scores on control/norm orientation. Once again, age differences were more pronounced among Chinese than U.S. adults. Smaller cultural differences were found among the youngest age groups than among the oldest groups.

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In general, the results of these cross-cultural studies are consistent with the hypothesis that there are universal intrinsic maturational changes in personality.<sup>50-52</sup> Yang et al reported, however, that across the span from 18 to 65 years, age never accounted for more than 20% of the variance in CPI scale scores.<sup>52</sup> Gender did not influence the pattern of results in these cross-cultural studies. The authors differed in their interpretation of the influence of environmental factors. In the Yang and McCrae studies, the authors maintained that the results offered little support for historic cohort effects being major determinants of cross-sectional age differences in adult personality traits. Although noting the high degree of similarity in personality traits across cultural change do impact the relation between age and personality.

## Trait theories and health

There is extensive literature on the relation of adult personality and health. Neuroticism is one of the traits most frequently studied in relation to health. Neuroticism has been associated with greater reactivity to stress,<sup>53</sup> whereas high levels of personal control or mastery serve as a protective factor in regards to the impact of stress on health.<sup>54,55</sup> Siegman et al found the dominance factor derived from the Minnesota Multiphasic Personality Inventory (MMPI-2) to be an [AQ2] independent risk factor for incidence of fatal coronary heart disease and nonfatal myocardial infarction among older men with an average age of 61.56 Niaura et al found that among older men, greater hostility may be associated with a pattern of obesity, central adiposity, and insulin resistance, which can exert effects on blood pressure and serum lipids.<sup>57</sup> Finally, several studies have documented an association between personality and mortality, indicating that higher levels of neuroticism and lower levels of conscientiousness serve as risk factors of mortality.<sup>58-61</sup>

## **Measurement issues**

There are multiple instruments of personality traits that measure the Big 5.<sup>62-64</sup> Regardless of the specific measurement instrument used, however, these measures demonstrate remarkable consistency in the derivation of five dimensions of personality via factor analysis.<sup>30</sup> However, multiple methodological issues remain. One major complication of stability estimates in adult personality research involves what kind of stability is under consideration. The impact of cohort and time of measurement on trait consistency within the longitudinal studies conducted to date has not been fully considered.<sup>44</sup> Studies of gender role differences have shown that

age is not as good a predictor as the life experiences of different cohorts on personality traits of men and women across time.<sup>65-67</sup> Thus it may be that earlier-born cohorts developed more consistent personality traits earlier in life as the result of numerous social/historic and life span-related influences.

More extensive consideration of the relative impact of biologic and environmental variables on stability and change in adult personality is essential. Although the influence of genetic factors has been investigated in the development of personality among monozygotic and dizygotic twins over a 10-year period, no such investigations have addressed the contribution of genetics to the maintenance of personality across the adult age range. Regarding the impact of environmental influences, with time and age individuals may encounter fewer novel experiences.<sup>44</sup> Thus the stability of personality factors may be causally related to the decreasing novelty of the environment in which individuals live rather than genetic factors. Finally, prior research on traits has been primarily descriptive and would profit from a theory-driven approach.

# SOCIAL-COGNITIVE APPROACHES TO PERSONALITY

The social-cognitive approach to the study of adult personality and the self focuses on the processes underlying stability and change in one's perception of the self, and emphasizes the impact of necessary, adaptive adjustments in one's personality. An individual's sense of self is proposed to develop through the interaction of internal and environmental factors, influencing maturational changes and cohort differences. Although the content of the developing self may change, this model proposes that the mechanisms by which changes are integrated into the concept of self are stable. Thus the development of the self as a dynamic construct reflects one's identity, perception of possible selves, need for affiliation, and perception of the remaining life span.

# Identity and the self

Whitbourne describes a life span approach to one's core identity development. *Identity* is defined as an individual's developing sense of self, an organizing schema through which internal and external life experiences are interpreted.<sup>68</sup> Identity includes physical functioning, cognition, social relationships, and environmental experiences.<sup>69</sup> The identity process theory posits that changes in identity with age occur through assimilation, accommodation, and balance.<sup>70</sup> Successful aging consists of integrating information about the self and achieving equilibrium between assimilation and accommodation.

Whitbourne and Collins examined the self-reports of adults aged 40 to 95 years regarding the relation between identity and changes in physical functioning.<sup>71</sup> Forty-year-olds were sensitive to age-related changes. Individuals aged 65 and older reported paying particular attention to perceived changes in competence. These individuals were more likely to use identity assimilation (i.e., reinterpretation of experiences to coincide with the self) in the area of cognitive functioning than were other age groups. In a subsequent study, Sneed and Whitbourne found that identity assimilation and identity balance were associated with increased self-esteem, whereas accommodation resulted in decreased self-esteem.<sup>72</sup> Finally, in a study of identity and self- consciousness, identity

accommodation was positively associated with self-reflection and public self-consciousness.<sup>73</sup>

Researchers interested in understanding the self from a life span perspective often use the theoretical framework provided by the "possible selves" model.<sup>74</sup> The construct of "possible selves" postulates that individuals are guided in their actions by aspects of the self that represent what the individual could become, would like to become, and is afraid of becoming. Possible selves serve as psychological resources that may motivate an individual and direct future behavior.

Ryff's research provides empirical support for the concept of possible selves.75 Young, middle-aged, and older adults were asked to judge their past, present, future, and ideal selves on dimensions related to self acceptance, positive relations with others, autonomy, environmental mastery, purpose in life, and personal growth. Older people were more likely than younger adults to downwardly adjust their ideal self and to view their past more positively.75 Over a 5-year period in old age, hoped and feared possible selves were found to remain stable.<sup>76</sup> Goal orientation shifted with age, specifically older adults focused on maintenance and loss prevention, and this orientation was associated with well-being.77 A shift in goal orientation in regards to possible selves may contribute to perceived control and stability of possible selves. Perceived control over development is associated with subjective well-being across adulthood.<sup>78</sup>

#### Socioemotional selectivity theory

Carstensen's socioemotional selectivity theory (SST) focuses on the agentic choices made by adults in their social world for the purpose of regulating knowledge-oriented and emotion goals.<sup>79-81</sup> The purposeful selective reduction in social interaction begins in early adulthood, and emotional closeness remains stable or increases within selected relationships as one ages.<sup>79-81</sup> When time is perceived as open-ended, acquisition of knowledge is prioritized. When time is perceived as limited, however, emotional goals assume primacy. Older adults select social relationships in which they want to invest their resources and in which they expect reciprocity and positive affect, thereby optimizing their social networks. Thus older adult's social networks are reduced by choice, as individuals decrease contact with acquaintances but seek to maintain contact with relatives and friends as a function of increased saliency of emotional attachment to one's life goals.79-81

The perception of time left in life (future time perspective) is postulated to be fundamental to motivation and age is correlated with time perspective.<sup>82</sup> Perceiving an ending plays an important role in identity processes, such that endings promote greater self-acceptance and less striving toward an abstract ideal.<sup>75,83</sup> Thus due to changes in the perceived time left to live, older adults have been shown to be more present-oriented than concerned about the past and less concerned than young adults about the future.<sup>84</sup> Rather than age being the causal factor in shifts in self-perception and social goals, it is the inverse association of chronologic age with number of years left to live that produces observed relations.

## Social-cognitive theories and diversity

There have been few empirical investigations of cultural or racial/ethnic diversity in the study of social-cognitive approaches to adult personality development. Cross-cultural research on socioemotional selectivity theory mostly supports similarities in age differences across cultures, rather than cultural differences.

Waid and Frazier compared older Spanish-speaking natives and White non-Hispanic English-speaking natives.<sup>85</sup> Cultural differences in hoped and feared possible selves were present, primarily reflecting traditional differences in individualistic (English-speakers) and collectivist (Spanish-speakers) cultures. Common feared selves included physical concerns for English-speaking natives, and loss of loved ones for Spanishspeaking natives. Frequently cited hoped for selves included family-oriented domains for Spanish-speaking natives and advances in the abilities/education domain for Englishspeaking natives. Thus the cultural differences evident for possible selves and control revolve around differences attributed to individualistic and collectivist cultures.

Gross et al found consistent age differences in the subjective report of emotional experience and control across diverse cultures: Norwegians, Chinese-Americans, African Americans, European-Americans, and Catholic nuns.<sup>86</sup> Across all groups, older adults reported fewer negative emotional experiences and greater emotional control. Likewise, Fung et al found support for the notion that socioemotional selectivity is due to perceived limitations in time among adults in the United States and Hong Kong,87 and among adults in Taiwan and Mainland China.88

An investigation exemplifying the importance of perceived time left to live was conducted following the terrorist attacks of September 11, 2001, in the United States, and the SARS epidemic in Hong Kong. By investigating social goals before and after these events, Fung and Carstensen found increased motivation to focus on emotional goals, regardless of age.89

#### Social-cognitive theories and health

In general, empirical research regarding identity and the self has explored relations with physical health outcomes whereas research regarding socioemotional selectivity theory has focused on relations with emotional outcomes. As one advances in age, people define themselves increasingly in terms of health and physical functioning.<sup>21</sup> In a study of older adults aged 60 to 96 years, leisure was an important domain for the young-old, whereas health was the most important self-domain for the oldest-old.<sup>90</sup> It appears that adults cognitively manage their expectations and social comparison processes so that they are, in general, no less satisfied with their health status despite increasing physical limitations.

The content of possible selves and perceived control have been examined in relation to subjective well-being, health, and health behaviors. Hooker and Kaus found that having a possible self in the realm of health was more strongly related to reported health behaviors than was a global measure of health values.<sup>91</sup> Stability in perceived control provides a protective benefit to health. Older adults exhibiting variability in perceived control had poorer health, functional status, more physician visits and hospital admissions,<sup>92</sup> see also<sup>93</sup>. Individuals with higher self-efficacy, the belief that one had the ability to exert control over themselves and their envi ronments, interpret and manage stressors in ways that promote health.94

With regard to socioemotional selectivity theory, negative exchanges with one social network have a detrimental impact on daily mood, and if encountered frequently, can increase incidence of depression, whereas positive exchanges can serve to buffer the impact of negative exchanges.<sup>95</sup>

#### **Measurement issues**

Comparison of findings from studies focusing on possible selves compared with socioemotional selectivity are limited by the different measurement approaches used. The possible selves construct is measured using a questionnaire inventory (e.g.,<sup>83</sup>) Socioemotional selectivity theory, in contrast, has relied on self-report, observation of marital interactions, and card sorting of potential social partners on the basis of similarity judgments, with the resulting categories submitted to multidimensional scaling analysis.82

A strength of social-cognitive approaches is the positing of explanatory processes for personality development; the [AQ3] identification of specific, testable processes such as identity assimilation, identity accommodation, possible selves, or socioemotional selectivity promote theoretical advances via [AQ4] empirical hypotheses testing.

Social cognitive researchers interested in personality and self in later life investigate domains emphasizing growth and development in old age, and contribute to an individual's perception of possible selves, need for affiliation, and content of life review.

## SYNTHESIS AND FUTURE DIRECTIONS

In this chapter, we have reviewed the psychological literature concerning personality development across the adult life span. We considered stage, trait, and social-cognitive approaches to the study of adult personality. Within each section, we reviewed literature on diversity and health outcomes where available. We also included a measurement section highlighting particular assessment instruments and providing an overview of methodological strengths and weaknesses for each approach.

This chapter has reviewed several issues central to the conceptualization of adult personality. The issue of stability versus maturational change or cohort differences in personality development is dependent on the theory and measurement approach used. For example, the relative stability found in the trait approaches (e.g., the Big 5) may be in part a result of the aggregation of a multiple personality facets. Examination of stability at both the facet and aggregate level is needed to investigate whether personality may be dependent on genetic or biologic factors. In contrast, measurement of more precise traits (e.g., facets) may be more influenced by cognitive and environmental (i.e., cohort) influences. Thus specific individual traits would be expected to be less stable across time than the Big 5 personality aggregates. As stated in the section on trait theory, clarity in the definition of stability (i.e., intraindividual, mean-level, or ordinal) is critical to ensure that conclusions drawn from differing research methodologies are interpreted uniformly.

In the effort to tease apart the influence of environmental and biologic influences on stability and change, cross-cultural comparisons of adult personality have been particularly useful. Comparisons of adults of the same age who have experienced different environments across the life span provide evidence regarding the extent of environmental influence on personality. More research is needed, however, addressing

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personality development of very old individuals in diverse cultures. Additionally, investigation of health effects of adult personality in diverse cultures provides invaluable information for health service provision and the development of preventive interventions.

Finally, it would be useful to apply the wealth of accumulated information regarding personality across adulthood to the provision of services designed to enhance quality of life. Identification of personality processes that drive specific behaviors and choices (i.e., medical treatments) is needed. There is powerful evidence that personality characteristics can affect health status and health behaviors. For example, interventions such as life review have successfully enhanced quality of life. Using social-cognitive approaches to adult personality development and the processes of identity assimilation, identity accommodation, and socioemotional selectivity could inform interventions designed to improve the process of advance care planning for the implementation of life-sustaining or palliative treatments at the end of life.

Furthermore, applied intervention research will not only enhance service provision but also drive theoretical advances in the concept of the self in old age. For example, palliative care and/or hospice interventions designed to provide services targeting personal, physical, and spiritual needs can inform aspects of socioemotional selectivity theory involving present-time orientation and time remaining to live. Incorporating aspects of life review could also provide advances in theories driving therapeutic approaches for depression. Interventions for bereaved personal and professional caregivers and interventions for the terminally or chronically ill older adult are desperately needed. It is our contention that the time to apply our knowledge of adult personality across the life span is now, thereby deriving benefit from our accumulated knowledge and driving advances in theory.

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# KEY POINTS

The Aging Personality and Self

- Personality is the pattern of thoughts, feelings, and behaviors that shape an individual's interface with the world, distinguish one person from another, and manifest across time and situations. It is impacted by biologic, cognitive, and environmental determinants.
- Stage theorists include Freud, Jung, and Erikson (eight stages of development are based on the idea that the growing personality moves through stages in an ordered fashion). The psychoanalytic approach to adult personality encompares four domains: level of consciousness, personality structure, defense mechanisms, and stages of psychosexual development. Few studies investigating stage theories of personality have focused on diverse cultures, racial/ethnic groups, or health.
- Trait approaches are the standard method of personality assessment today with multiple instruments available. The Big 5 personality traits are: neuroticism. extraversion, openness to experience, agreeableness, and conscientiousness. Ir general, the results of cross-cultural studies are consistent with the hypothesis that there are universal intrinsic maturationa changes in personality. Neuroticism in particular has been associated with several health outcomes including stress, chronic conditions, and mortality.
- The social-cognitive approach focuses on the individual's sense of self, developing through the interaction of internal and environmental factors. Social-cognitive theories have incorporated physical health and emotional outcomes.
- The socioemotional selectivity theory focuses on the agentic choices made by adults in their social world for the purpose of regulating knowledge-oriented emotion goals. In socioemotional selectivity theory, individuals alter their environmental interactions such that optimization of emotional experience is prioritized later in life. There are few empirical investigations incorporating diverse cultural or racial/ethnic groups in the study of socialcognitive approaches to adult personality development, existing evidence suggests similar age differences across cultures.

Move this text to immediately prior to the sentence "Few studies..." New sentence should read "Erikson's eight stages of development are based on the idea that the growing personality moves through stages in an ordered fashion."

## References

- Allport GW. Personality, New York: Holt, Rinehart, and Winston: 1937 Schaie KW, Willis SL. Adult development and aging. 5th ed. New York: 2 Prentice-Hall: 2002
- 3. Phares EJ, Chaplin WF. Introduction to personality. 4th ed. New York:
- Addison Wesley Educational Publishers, 1997
- Antonucci TC. Social relations: an examination of social networks, social support, and sense of control. In: Birren JE, Schaie KW, editors. Handbook of the Psychology of Aging. 5th ed. New York: Academic Press; 2001.
- 5. Ryff CD, Kwan CML, Singer BH. Personality and aging: flourishing agendas and future challenges. In: Birren JE, Schaie KW, editors. Handbook of the Psychology of Aging. 5th ed. New York: Academic Press; 2001.
- 6. Baron RA. Psychology. 4th ed. Needham Heights, Mass: Allyn and Bacon; 1997 Freud S. Three essays on the theory of sexuality. In: Freud S, editor. The 7.
- Standard Edition, vol. VII. London: Hogarth; 1953. Jung CG. Analytical psychology: its theory and practice. New York: 8. Vintage; 1968.
- Allen-Burge R, Willis SL, Schaie KW. The aging personality and self. In: Tallis R, Fillets H, Brocklehurst JC, editors. Brocklehurst's Textbook of Geriatric Medicine and Gerontology. 5th ed. London: Churchill Livingstone; 1998
- 10. Erikson E. Childhood and society. 2nd ed. New York: Norton; 1963.
- 11. Erikson EH. Reflections on Dr. Borg's life cycle. In: Erikson EH, editor. Adulthood. New York: Norton; 1979.
- Whitbourne SK, Zuschlag MK, Elliot LB, et al. Psychosocial development 12 in adulthood: a 22-year sequential study. J Pers Soc Psychol 1992;63:260B-
- 13. Ackerman S, Zuroff DC, Moskowitz DS. Generativity in midlife and young adults: links to agency, communion, and subjective well-being. Int J Aging Hum Dev 2000;50(1):17-41.
- 14. Butler RN, Lewis MI: Aging and mental health. 3rd ed. St Louis: CV Mosby. 15. Melia SP. Continuity in the lives of elder catholic women religious. Int J
- Aging Hum Dev 1999;48(3):175-89 16. Pasupathi M, Carstensen LL. Age and emotional experience during mutual
- eminiscing. Psychol Aging 2003;18(3):430-42. 17. Bohlmeijer E, Roemer M, Cuijpers P, et al. The effects of reminiscence
- on psychological well-being in older adults: a meta-analysis. Aging Ment Health 2007;11(3):291-300.
- Cappeliez P, Lavalléee R, O'Rourke N. Functions of reminiscence in later 18 life as viewed by young and old adults. Can J Aging 2001;20(4):577-89.
- 19. Burns A, Leonard R. Chapters of our lives: life narratives of midlife and older Australian women. Sex Roles 2005;52(5-6):269-77
- 20. Holahan CK, Holahan CJ, Wonacott NL. Self-appraisal, life satisfaction, and retrospective life choices across one and three decades. Psychol Aging 1999.14(2):238-44
- 21. Freund AM, Smith J. Content and function of the self-definition in old and ery old age. J Gerontol B Psychol Sci Soc Sci 1999;54(1):P55-67.
- 22. Haight BK, Michel Y, Hendrix S. Life review: preventing despair in newly relocated nursing home residents short- and long-term effects. Int J Aging Hum Dev 1998:47(2):119-42.
- 23. Haight BK, Michel Y, Hendrix S. The extended effects of the life review in nursing home residents. Int J Aging Hum Dev 2000;50(2):151-68
- 24. Chang SO, Kim JH, Kong ES, et al. Exploring ego-integrity in old adults: a Q-methodology study. Int J Nurs Stud 2008;45(2):246-56
- 25. Bohlmeijer E, Smit F, Cuijpers P. Effects of reminiscence and life review on late-life depression: a meta-analysis. Int J Geriatr Psychiatry 2003.18(12):1088-94
- 26. Hanaoka H, Okamura H. Study on effects of life review activities on the guality of life of the elderly: a randomized controlled trial. Psychother Psychosom 2004.73(5):302-11
- 27. Mastel-Smith B, Binder B, Malecha A, et al. Testing therapeutic life review offered by home care workers to decrease depression among homedwelling older women. Issues in Ment Health Nurs 2006;27(10):1037-49
- Serrano JP, Latorre JM, Gatz M, et al. Life review therapy using 2.8 autobiographical retrieval practice for older adults with depressive symptomatology. Psychol Aging 2004;19(2):272-7
- 29. Arkoff A, Meredith GM, Dubanoski JP. Gains in well-being achieved through retrospective proactive life review by independent older women. J Humanistic Psychol 2004;44(2):204-14.
- 30. Goldberg LR. The structure of phenotypic personality traits. Am Psychol 1993;48:26-34.
- 31. Costa PT, McCrae RR. Professional manual: revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI). Odessa, Fla: Psychological Assessment Resources; 1992.
- 32. Hofer SM, Horn JL, Eber EW. A robust five-factor structure of the 16PF: strong evidence from independent rotation and confirmatory factorial invariance procedures. Pers Individ Dif 1997;23:247-69.
- 33. Costa PT, McCrae RR. Personality in adulthood: a six-year longitudinal study of self-reports and spouse ratings on the NEO Personality Inventory. J Pers Soc Psychol 1988;54:853-63.

- 34. Costa PT, McCrae RR. Personality continuity and the changes of adult life. In: Storandt M, VandenBos GR, editors. The Adult years. Continuity and Change. Washington, DC: American Psychological Association; 1989.
- Costa PT, McCrae RR. Longitudinal stability of adult personality In: Hogan R, Johnson J, Briggs S, editors. Handbook of Personality Psychology. San Diego: Academic Press; 1997
- 36. McCrae RR, Costa PT. Personality in adulthood. New York: Guilford Press; 1990
- 37. McCrae RR, Costa PT. The stability of personality: observation and evaluations. Curr Dir Psychol Sci 1994;3:173-5
- 38. Roberts BW, Mroczek D. Personality trait change in adulthood. Curr Dir Psychol Sci 2008;17(1):31-5.
- 39. Terracciano A, McCrae RR, Brant LJ, et al. Hierarchical linear modeling analyses of the NEO-PI-R scales in the Baltimore longitudinal study of aging. Psychol Aging 2005;20(3):493-506.
- 40. Allemand M, Zimprich D, Hertzog C. Cross-sectional age differences and longitudinal age changes of personality in middle adulthood and old age. J Pers 2007;75(2):323-58.
- 41. Caspi A, Roberts BW. Target article: personality development across the life course: the argument for change and continuity. Psychol Inq 2001.12(2):49-66
- 42. Lee W, Hotopf M. Personality variation and age: trait instability or measurement unreliability? Pers Individ Dif 2005;38(4):883-90.
- 43. Rantanen J, Metsäpelto RL, Feldt T, et al. Long-term stability in the big five personality traits in adulthood. Scand J Psychol 2007;48(6):511-8.
- 44. Roberts BW. DelVecchio WF. The rank-order consistency of personality traits from childhood to old age: a quantitative review of longitudinal studies. Psychol Bull 2000;126:3-25.
- 45. Helson R, Kwan VSY, John OP, et al. The growing evidence for personality change in adulthood: findings from research with personality inventories I Res Pers 2002.36(4).287-306
- 46. Jones CJ, Livson N, Peskin H, Longitudinal hierarchical linear modeling analyses of California Psychological Inventory data from age 33 to 75: an examination of stability and change in adult personality. J Pers Assess 2003:80(3):294-308.
- 47. Mroczek DK, Spiro A. Modeling intraindividual change in personality traits: findings from the normative aging study. J Gerontol B Psychol Sci Soc Sci 2003;58B(3):P153-65.
- 48. Small BJ, Hertzog C, Hultsch DF, et al. Stability and change in adult personality over 6 years: findings from the Victoria longitudinal study. J Gerontol B Psychol Sci Soc Sci 2003;58B(3):P166-76.
- 49. Maiden RJ, Peterson SA, Caya M, et al. Personality changes in the old-old a longitudinal study. J Adult Dev 2003,10:31–9.
- 50. Labouvie-Vief G, Diehl M, Tarnowski A, et al. Age differences in adult personality: findings from the United States and China. J Gerontol B Psychol Sci Soc Sci 2000;55B:4-17.
- 51. McCrae RR, Costa Jr PT, Pedroso de Lima M, et al. Age differences in personality across the adult life span: parallels in five countries. Dev Psychol 1999.35:466-77
- 52. Yang J, McCrae RR, Costa Jr PT. Adult age differences in personality traits in the United States and the People's Republic of China. J of Gerontol 1998;53B:372-83.
- 53. Mroczek DK, Almeida DM. The effects of daily stress, personality, and age on daily negative affect. J Pers 2004;72:355-78
- 54. Neupert SD, Almeida DM, Charles ST. Age differences in reactivity to daily stressors: the role of personal control. J Gerontol B Psychol Sci Soc Sci 2007;62B(4):P216-25

55. Pudrovska, et al

- [AQ8] Siegman AW, Kubzansky LD, Kawachi I, et al. A prospective study of dominance and coronary heart disease in the normative aging study. Am J Cardiol 2000;86(2):145-9
- 57. Niaura R, Banks SM, Ward KD, et al. Hostility and the metabolic syndrome in older males: the normative aging study. Psychosom Med 2000;62(1):7-16.
- Christensen AJ, Ehlers SL, Wiebe JS, et al. Patient personality and mortality: a 4-year prospective examination of chronic renal insufficiency. Health Psychol 2002;21:315-20.
- 59. Maruta T, Colligan RC, Malinchoc M, et al. Optimists vs. pessimists survival rate among medical patients over a 30-year period. Mayo Clin Proc 2000;75:140-3
- 60. Wilson RS, Bienas JL, Mendes de Leon CF, et al. Negative affect and mortality in older persons. Am J Epidemiol 2003;158:827-35
- 61. Wilson RS, Mendes de Leon CF, Bienas JL, et al. Personality and mortality in old age. J Gerontol B Psychol Sci Soc Sci 2004;59B:110-6.
- 62. Gough HG, Bradley P. California Psychological Inventory manual. 3rd ed. Palo Alto, Calif: Consulting Psychologists Press; 1996.
- 63. Costa Jr PT, McCrae RR. The NEO Personality Inventory manual. Odessa, Fla: Psychological Assessment Resources; 1985
- 64. Costa Jr PT, McCrae RR. Revised NEO Personality Inventory (NEO-PI-R) and NEO Five-Factor Inventory (NEO-FFI) professional manual. Odessa Fla: Psychological Assessment Resources; 1992.

[AQ6]

#### 182.e2 Section I / Gerontology

- Schmitt DP, Realo A, Voracek M, et al. Why can't a man be more like a woman? Sex differences in big five personality traits across 55 cultures. J Pers Soc Psychol 2008;94:168–82.
- Lynott PP, McCandless NJ. The impact of age vs. life experience on the gender role attitudes of women in different cohorts. J Women Aging 2000;12(1-2):5–21.
- 67. Schaie KW. Developmental influences on adult intelligence: the Seattle longitudinal study. New York: Oxford University Press; 2005.
- Whitbourne SK, Connolly LA. The developing self in midlife. In: Willis SL, Reid JK, editors. Life in the Middle: Psychological and Social Development in Middle Age. San Diego: Academic Press; 1999.
- Whitbourne SK. Physical changes in the aging individual: clinical implications. In: Nordhus IH, VandenBos GR, editors. Clinical Geropsychology. Washington, DC: American Psychological Association; 1998.
- Whitbourne SK. The aging individual: physical and psychological perspectives. New York: Springer, 1996.
- Whitbourne SK, Collins KJ. Identity processes and perceptions of physical functioning in adults: theoretical and clinical implications. Psychotherapy 1998;35(4):519–30.
- Sneed JR, Whitbourne SK. Identity processing styles and the need for self-esteem in middle-aged and older adults. Int J Aging Hum Dev 2001;52(4):311–21.
- Sneed JR, Whitbourne SK. Identity processes and self-consciousness in middle and later adulthood. J Gerontol B Psychol Sci Soc Sci 2003;58B:P313–9.
- 74. Markus H, Nurius P. Possible selves. Am Psychol 1986;41:954-69.
- Ryff CD. Possible selves in adulthood and old age: a tale of shifting horizons. Psychol Aging 1991;6:286–95.
- Frazier LD, Hooker K, Johnson PM, et al. Continuity and change in possible selves in later life: a 5-year longitudinal study. Basic Appl Soc Psychol 2000;22(3):237–43.
- Ebner NC, Freund AM, Baltes PB. Developmental changes in personal goal orientation from young to late adulthood: from striving for gains to maintenance and prevention of losses. Psychol Aging 2006;21(4):664–78.
- Lang FR, Heckhausen J. Perceived control over development and subjective well-being: differential benefits across adulthood. J Pers Soc Psychol 2001;81(3):509–23.
- Carstensen LL. Age-related changes in social activity. In: Carstensen LL, Edelstein BA, editors. Handbook of Clinical Gerontology. New York: Pergamon; 1987.

- Carstensen LL. Selectivity theory: social activity in life-span context. In: Schaie KW, Lawton MP, editors. Annual Review of Gerontology and Geriatrics. New York: Springer; 1991.
- Carstensen LL. Social and emotional patterns in adulthood: support for socioemotional selectivity theory. Psychol Aging 1992;7:331–8.
- Carstensen LL, Isaacowitz DM, Charles ST. Taking time seriously: a theory of socioemotional selectivity. Am Psychol 1999;54(3):165–81.
- Cross S, Markus H. Possible selves across the life span. Hum Dev 1991;34:230–55.
  E. B. Luctus M, E. Luctus M,
- Fingerman K, Perlmutter M. Future time perspective and life events across adulthood. J Gen Psychol 1995;122:95–111.
- Waid LD, Frazier LD. Cultural differences in possible selves during later life. J Aging Stud 2003;17(3):251–68.
- Gross JJ, Carstensen LL, Pasupathi M, et al. Emotion and aging: experience, expression, and control. Psychol Aging 1997;12:590–9.
- Fung HH, Carstensen LL, Lutz AM. Influence of time on social preferences: implications for life-span development. Psychol Aging 1999;14(4):595F–604F.
- Fung HH, Lai P, Ng R. Age differences in social preferences among Taiwanese and mainland Chinese: the role of perceived time. Psychol Aging 2001;16(2):351–6.

[AQ7]

- Fung HH, Carstensen LL. Goals change when life's fragility is primed: lessons learned from older adults, the September 11 attacks and SARS. Soc Cogn 2006;24(3):248–78.
- Frazier LD, Johnson PM, Gonzalez GK, et al. Psychosocial influences on possible selves: a comparison of three cohorts of older adults. Int J Behav Dev 2002;26(4):308–17.
- Hooker K, Kaus CR. Health-related possible selves in young and middle adulthood. Psychol Aging 1994;9(1):126–33.
- Chipperfield JG, Campbell DW. Stability in perceived control: implications for health among very old community-dwelling adults. J Aging Health 2004;16:116–47.
- Ruthig JC, Chipperfield JG, Perry RP, et al. Comparative risk and perceived control: implications for psychological and physical well-being among older adults. J Soc Psychol 2007;147(4):345–69.
- 94. Montpetit MA, Bergeman CS. Dimensions of control: mediational analyses of the stress-health relationship. Pers Individ Dif 2007;43(8):2237–48.
- 95. Rook KS. Emotional health and positive versus negative social exchanges: a daily diary analysis. Appl Dev Sci 2001,5(2):86–97.

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Regarding comment AQ8: Pudrovski T, Schieman S, Pearlin LI, Nguyen K. The sense of mastery as a mediator and moderator in the association between economic hardship and health in late life. Journal of Aging and Health 2005; 17(5), 634-660.