



# **Encyclopedia of Human Development**

## **Middle Adulthood**

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Book Title: Encyclopedia of Human Development

Chapter Title: "Middle Adulthood"

Pub. Date: 2005

Access Date: December 11, 2015

Publishing Company: SAGE Publications, Inc.

City: Thousand Oaks

Print ISBN: 9781412904759

Online ISBN: 9781412952484

DOI: <http://dx.doi.org/10.4135/9781412952484.n411>

Print pages: 836-842

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Human development is studied by the broad field of psychology and within the subfield of developmental psychology. Developmental psychology is defined as the study of stability and change throughout the life course. From its establishment as a subdiscipline within the social, behavioral, and biological sciences, developmental psychology had proposed the idea that all humans follow a predictable developmental trajectory. Prior to the 20th century, the scientific community assumed that developmental change after adolescence or early adulthood consisted of the attainment of a developmental plateau, followed by inevitable deterioration or decline in all areas of function. Throughout the course of the 20th century, theorists slowly began to acknowledge the possibility that true developmental processes may extend beyond the early adulthood years. As researchers, and the disciplines they represented, came to recognize middle adulthood as a viable area of study, the discipline of life span developmental psychology was established as a legitimate and worthwhile enterprise. As a result of this important change in how human development was viewed, the field began to grow and expand, which has led to developmental psychology's current prominence as an area of study within the behavioral sciences.

Many advances have been made because of the previously outlined evolution of the field of developmental psychology. One of the most significant of these was the establishment of what is known as the life span perspective of human development. The life span perspective of development has led to a theoretical approach that is more comprehensive, balanced, and integrated in comparison with previous views or approaches, which tended to be more narrow and limited in scope. The life span concept helped to expand the study of human development beyond issues of infancy, childhood, adolescence, and early adulthood to include both middle and late adulthood. These changes, in turn, have led to the establishment of distinct life stages (e.g., early, middle, and late adulthood), as well as identification of specific domains of development (e.g., physical and social) within the life stages. The life span developmental stage of middle adulthood is the focus of this article. Middle adulthood is made up of (approximately) the ages from 40 through 65. Specific domains or areas of development to be addressed include the physical, the cognitive, and the psychosocial.

### **Physical Development in Middle Adulthood**

Physical development consists of changes that take place with respect to the physical body throughout middle adulthood. Some physical changes in midlife are gradual, others are more obvious in the forties and fifties, and most are much more pronounced than the physical changes of early adulthood. Researchers have divided the process of aging into two distinct types of aging, referred to as primary and secondary aging. Primary aging refers to the age-related changes that occur as a result of the passage of time; they are considered to be universal and inevitable. Secondary aging refers to changes that result from the consequences of a person's behavior, and/or society's failure to eliminate unhealthy conditions, including disease states and chronic health problems. Physical changes in middle adulthood are the result of both primary and secondary aging processes.

At some point during the years of middle adulthood, the senses begin a gradual decline in functioning. Vision is often the first sense that shows a noticeable age-related deterioration. Difficulty in reading small print is common, as is a decline in the ability to discriminate nearby objects. Presbyopia is a condition of the eye in which the lens

loses its capacity to adjust to objects at varying distances. Bifocals or reading glasses can correct these problems. Other common visual changes include decreases in the ability to drive at night, as well as difficulty with color discrimination. Finally, individuals over the age of 40 are at increased risk for glaucoma, a hereditary disease of the eye in which pressure builds up in the visual system. Visual screenings, medications, and surgery can prevent loss of vision secondary to glaucoma.

The auditory system or ability to hear may also show age-related declines in middle adulthood. Presbycusis is the term given to age-related hearing loss. Studies show that men lose the ability to hear more quickly than women do, at midlife, and that loss of hearing is greatest for high tones. People with significant hearing loss may benefit from hearing aids or from modifications in their interactions with others and the environment.

The skin also shows age-related changes in middle adulthood. Human skin is made up of three layers: an outer, protective layer; a second, supportive layer; and a third, inner layer. As individuals age, the outer layer becomes less firmly secured to the second layer, which changes the appearance of the outer layer. These changes cause the skin to sag and wrinkle. There may be an increase in concentrations of pigmentation in the skin, resulting in age spots. People who have spent extended periods of time in the sun or outdoors (unprotected) age more quickly than those who do not.

The skeletal system and the muscle-to-fat ratio begin to change during the course of midlife. Skeletal changes include weakened bones and reduction in bone density. This often leads to a condition called osteoporosis, which results from insufficient calcium levels (especially in women). An increase in overall body fat and loss of muscle mass and lean body mass are common in the forties and fifties. Regular exercise can serve to offset weight gain and loss of muscle strength or power.

Beyond alterations in the way we look, middle adulthood is also characterized by changes in the sexual reproductive systems. Although experienced by both sexes, these changes are quite different for women and men. Midlife brings a major biological change for women: the end of the ability to bear children. This transitional period, termed the climacteric, (usually) begins in the late thirties or early forties and is complete at some point in the fifties. There is considerable individual variation regarding the timing and experience of these physiological changes. The most significant change during the climacteric is a decrease in women's production of the hormone estrogen. *Menopause* is the term given to the process of the irregularity and eventual end of menstruation. Many women stop menstruating around age 40, others may continue to have regular periods into their late forties or early fifties, but most women have their last period at some point in their forties. Symptoms related to the climacteric and/or menopause include physical or somatic complications, as well as those related to decreased levels of estrogen. Some of these symptoms may be alleviated with hormone replacement therapy (HRT). While many women benefit from HRT, it is somewhat controversial with respect to the risk/benefit ratio. As with most developmental change processes, different individuals' experiences of the climacteric are quite variable, and occur on a continuum from little or no symptomology, to the presence of life-altering symptoms.

Although men do not experience the significant physiological changes that women go through, they do experience a predictable decline in sperm production levels. Production of sperm can decrease by 30% between the ages of 30 and 60. Enlargement of the prostate is also common for men at midlife. A gradual decrease in

levels of the hormone testosterone begins around age 30. Other sex-related changes that men often experience include biological alterations in sexual performance, related to processes such as ejaculation, erection occurrence and/or maintenance, or changes in the experience or frequency of orgasm. Erectile dysfunction may be an issue for men in their forties and fifties. However, the advent of medications to correct this problem has provided relief and return to normal function for many men.

Overall health status shows a decline for most people in the stage of middle adulthood. Average adults at midlife report that they suffer from aches and pains at a higher rate than when they were in their twenties and thirties. About half of adults between 40 and 60 have either a diagnosed disease process or disability or an undiagnosed health problem. Disease-related deaths increase significantly in middle adulthood, the two most prevalent causes being cardiovascular disease (CVD) and cancer. On a positive note, life expectancy for 40-year-olds is higher than ever before and has shown consistent increases over the course of the past two decades. A significant relationship exists between gender and health, with the life expectancy of women exceeding that of men. Despite this fact, women consistently describe their health as poor, suffer more chronic health conditions, and tend to be more restricted in their activities of daily living than men. The question arises as to why it is that men, on average, die younger than women, but are generally healthier while they are alive. Research indicates that the answers to these questions are multifaceted and complex. Three times as many men die from CVD than women between the ages of 45 and 55. Much of this discrepancy can be explained in terms of differences in the physiology of gender. The heart muscles of females who have CVD appear to be better able to adapt to physical stress and exertion. Women also show higher levels of recovery of physical function following a heart attack. Biosocial factors have often been shown to play a role in sex differences related to survival and recovery following CVD and other life-threatening disease processes. In addition, women are more likely to have regular medical checkups and to seek and obtain medical treatment earlier than their male counterparts.

A universal factor that can affect both general health and well-being is the degree of stress present in one's daily life. We all experience stress, which is variable, and highly individualized to the extent that various life situations are considered to be stress producing for a given person. Stress is defined as the physical and psychological effects that result from events and circumstances that one experiences as requiring greater personal, social, physical, or other resources than one currently possesses. These situations represent a threat to one's ability to meet the demands of a given situation. Research indicates that in certain circumstances stress can actually be beneficial in helping people perform at their peak. However, long-term chronic stress or the accumulation of multiple stressors can lead to both physical and psychological health problems. Stress and its related effects may be particularly important for individuals in middle adulthood for several reasons. Although stress affects people of all ages, it is during midlife that the effects of both short- and long-term stress become most apparent. The fact that it takes time for stress-related disorders to manifest, combined with the gradual loss of physical capacity often experienced at midlife, may make individuals in this life stage especially vulnerable.

Coping with stress, or stress management, is defined as any attempt to deal with stress; coping responses are also variable, and some are more or less effective than others. Positive and effective ways to deal with stress include reducing identified stressors (when feasible) and/or disclosing and discussing stressful life events with a

trusted other. Physical exercise has consistently been shown to reduce the negative effects of stress, as well as significantly slow the aging process. Negative attempts at stress reduction include responses that are characterized by increased levels of anger or aggression, avoidance or denial of stressful events, or overuse of drugs or alcohol. The process of stress management in middle adulthood has the potential to limit age-related increases in disease processes as well as reduce the severity of illnesses that may occur. Finally, the fact that mental health diseases and disorders actually occur less commonly at midlife than in adolescence or early adulthood may be related to more effective stress management in middle adulthood.

To summarize, the course of physical development in middle adulthood has been shown to involve some changes that are both universal and inevitable. However, it has also been clearly demonstrated that many aspects of physical developmental change processes are highly individualized and amenable to the positive effects of individual choices, lifestyles, and volitional behaviors. So while there are specific age-related physical decrements that one must come to accommodate and/or accept, one may also live in such a way throughout middle adulthood so as to optimize one's health and physical functioning well into late middle adulthood and beyond.

### **Cognitive Development in Middle Adulthood**

Cognitive development at midlife represents the changes that take place with respect to one's thinking, reasoning, decision-making, and problem-solving abilities. A review of the data related to cognition in middle adulthood reveals that two distinct types of cognition dominate the research. These are fluid intelligence and crystallized intelligence. Fluid intelligence refers to the ability to process and analyze basic information, as well as memory skills and the ability to detect relationships. The speed at which one can perform these tasks is also important in fluid intelligence. Crystallized intelligence refers to abilities that are dependent on accumulated knowledge and experience, sound judgment, and mastery of social conventions. Research has shown that fluid abilities predominate prior to midlife, showing a decrease as one ages, and that crystallized abilities are at their highest at midlife and beyond. However, studies also exist that demonstrate relative stability in a variety of tasks related to both fluid and crystallized intelligence. Furthermore, fluid intelligence is thought to be influenced more by conditions in the brain such as memory and processing speed, as well as by learning that is unique to the individual. The acquisition of crystallized abilities appears to be related to the degree to which these abilities are valued by an individual's culture or society. Related to the concept of the influence of culture and society is the cognitive ability referred to as practical intelligence, which is defined as a broad range of skills related to how individuals shape, select, or adapt to their physical and social environments. These skills require an individual to size up real-world situations and analyze how best to achieve goals that have a high degree of uncertainty.

Cognitive development was once thought to be the exclusive domain of childhood and adolescence, with any changes occurring at midlife limited to the decline and deterioration of function. Jean Piaget, perhaps the best known of the cognitive theorists, developed a four-stage theory of cognitive development with age-specific stages beginning in infancy and continuing into adolescence. Piaget's fourth and final stage of cognitive development is termed formal operations. This stage is characterized by the capacity for abstract, scientific thought processes. Individuals engaged in formal operational thought begin with a general theory of all possibilities

related to a specific life situation, then progress to specific hypotheses or predictions about what might occur, and finally test various hypotheses.

More recently, cognitive theorists and researchers have described stages of cognitive development that extend beyond Piaget's stage of formal operations. Termed postformal operations, or fifth stage thinking/thought, it is now widely recognized and accepted that cognitive development may continue into early, middle, and later adulthood. The dynamics of postformal operational theory include a progression from dualistic thinking, characterized by thinking in terms of concrete absolutes, or viewing life in terms of black and white, to relativistic thinking, characterized by the realization that multiple perspectives or shades of gray exist with respect to many life situations. This developmental shift in cognitive abilities occurs in early or middle adulthood, if it occurs at all. Research has shown that this advanced form of cognition is primarily the domain of midlife and includes practical intelligence and dialectical thought. Dialectical thought consists of the components of relativistic thought with the additional capacity to consider multiple perspectives simultaneously. As a more advanced level of cognitive functioning, dialectical thinking also entails the ability to integrate and synthesize information with respect to multiple perspectives, ideas, or experiences and the potential contradictions, inconsistencies, or life dilemmas. Acquisition of the capacity for dialectical thought enables individuals at midlife to effectively cope with changing perspectives of oneself, others, and the world. It becomes clear that few questions, experiences, or relationships have a single unchanging and objective answer or response. Finally, those who achieve the capacity for dialectical thought recognize that while there may be multiple perspectives regarding many life situations, some are more valid or just than others, which facilitates more effective decision making. Practical intelligence is defined as a broad range of skills related to how individuals shape, select, and adapt to their physical and social environments. The skills of practical intelligence are related to those of dialectical processes in that they require one to evaluate real-world situations and determine how best to achieve goals having a high degree of uncertainty.

The potential for postformal operational thinking occurs in late adolescence or early adulthood. The acquisition of dialectical thinking abilities most often takes place during middle adulthood. It should be noted, however, that not all adults develop the cognitive ability required for formal operations and/or fifth-stage thinking capacities.

The longheld belief that middle adulthood cognitive changes were restricted to declines in ability and function have also been refuted by the results of several studies that conclude and/or confirm that while fluid abilities often show a decline in late middle adulthood, this decline is not universal, and is subject to a variety of subjective, individual influences. Much of the data indicate that individuals at midlife can exercise their cognitive abilities, as well as utilize a host of other compensatory strategies to accommodate or make up for decreases in fluid abilities. It is widely accepted that those in the stage of middle adulthood (and beyond) can benefit from cognitive interaction and stimulation, similar to the process of exercise of the physical body. Examples of cognitive exercise include the process of remaining actively engaged with other people in work, leisure, or other situations that enable one to enjoy the benefits of daily, cognitive, human interaction. Other ways to engage or exercise the mind include any activities that involve the acquisition of new learning, problem-solving, or decision-making abilities (e.g., formal education, self-study, reading, creating, or game playing).

A great deal of research is being done on more advanced forms of cognition or intelligence such as expertise, intuition, creativity, and wisdom. The stage of middle adulthood is of particular interest to researchers because many of these cognitive constructs appear to be dependent on or positively correlated with life experience or number of years lived. An expert is defined as someone who is notably more skilled and knowledgeable about a specific intellectual topic or practical ability than is the average person. Not everyone becomes an expert as years pass, but all experts require the passage of years to develop their specific skill level. Expertise is deemed the result of training and long-term practice, which leads to more intuitive, automatic, strategic, and flexible qualities of thought.

Paul and Margaret Baltes developed a theory of adulthood development termed selective optimization with compensation (SOC) to describe the way in which individuals attempt to maintain a balance in their physical and cognitive functioning as they grow older. According to SOC, individuals seek the most effective way to compensate for physical and/or cognitive losses and to become more proficient at the things they can do well.

Cognitive developmental change processes of middle adulthood have been shown to involve much more than decreases or declines in functioning. In response to this fact, developmentalists are now looking closely at patterns of gains and losses in cognition over the course of midlife. Studies have demonstrated that virtually any or all patterns regarding change are possible, and that to ask whether cognitive abilities increase or decrease may be simplistic. These abilities may demonstrate a variable, up-and-down pattern of change. Questions to be addressed include how many and what distinct cognitive abilities are present in middle adulthood and why a particular person's specific ability might increase or decrease at any given time. Most psychologists have given up on the idea of absolutes with respect to cognitive development at midlife and are instead focusing on concepts and questions related to several cognitive abilities, each of which may show an independent pattern of rise or fall.

### **Psychosocial Development in Middle Adulthood**

Psychosocial development includes the changes that one experiences related to self-concept, personality, life experience, and generativity or personal growth. Many, if not all, of these processes are reviewed and/or take on new meaning for those in the life stage of middle adulthood. Some of these processes are universal in that most people experience a specific individual, familial, societal, or cultural phenomenon with minor variations. Other occurrences are highly individualized with respect to gender, age, ethnicity, race, religion, culture, socioeconomic status, education, and several other individual variables. Many developmental researchers and theorists describe the psychosocial change processes that (typically) occur in middle adulthood with slightly different variations or themes that represent a similar dynamic of change. Erik Erikson addresses these changes in his eight-stage developmental theory of psychosocial development that outlines specific tasks or conflicts to be accomplished or resolved at predetermined ages or stages throughout the life span. In Erikson's developmental theory, the conflict to be resolved in middle adulthood is that of generativity versus stagnation. The dynamic of this stage also involves the successful completion of the conflict/task from the stage of early adulthood (identity vs. identity diffusion), as well as preparation for the crisis/task of late adulthood (ego integrity vs. despair). Generativity is characterized by a desire or interest in helping to nurture and establish the next

generation through a variety of activities, thereby achieving a sense that one has made a significant contribution to the larger society. For some individuals, this is accomplished by the process of parenting. For others it may also involve activities such as advising, teaching, mentoring, or volunteering at civic, religious, or other charitable organizations. The dynamic to be achieved is one of turning outward from a preoccupation with the self to an expansion toward genuine care and consideration for others.

A psychological construct closely related to the concept of generativity is that of personality. Numerous personality theories have been proposed with respect to the life span (generally) and to middle adulthood (specifically). The most widely researched and accepted theory of personality that currently exists is the big-five factor theory. The big-five theory states that there are five traits or factors that have been found to be consistent and stable throughout adulthood. The five factors are neuroticism, extroversion, openness, agreeableness, and conscientiousness. Research has repeatedly demonstrated intraindividual consistency and stability with respect to levels or amounts of the big-five factors in adulthood. However, interindividual variations or differences are also present in middle and later adulthood. Whether a person ranks high or low on each of the big-five factors is determined by a unique interplay of genes, culture, and early life experiences. Continuity of the big-five factors in middle adulthood has been well established, with the general trend for most individuals to become less neurotic and open and more agreeable and conscientious. The concept of the stability of the personality construct has raised many questions regarding the relative influences of biology, environment, and individual variation or choice. One's personality and related influences possess great power over the course of one's life. Midlife is a period in the life course when most individuals choose a lifestyle and related social context. These choices include significant aspects of one's life, such as vocation, neighborhood, friendship/support network, and routine. A reasonable conclusion that may be derived from the research related to personality is that personality appears to shape one's life, rather than one's life (experiences) effecting changes in personality structure. Aspects of personality do occasionally vary in middle adulthood if life circumstances are dramatically altered in some way. Experiences such as the death of a loved one, beginning or ending a marriage or career, or the occurrence of a severe physical or mental illness may cause changes in the ways that people are known to act or behave. Most often, this indicates minor personality shifts, not dramatic changes of the personality structure.

A change process that has long been believed to be an inevitable event of middle adulthood is the midlife crisis. Defined as a period of increased anxiety, radical life reexamination, and unpredictable transformation, this concept has recently been closely studied and rethought. It is true that midlife is, for many, a time for life review, examination, reflection, and midcourse correction; however, the concept of a true crisis occurring in a majority of people's lives has largely been found to be false. Recent studies indicate that many individuals in middle adulthood (around age 40) experience a shift in life perspective from years since birth to years left to live. This process often coincides with any number of potentially troubling, personal changes. Perhaps the most obvious is a greater awareness of the biological clock coupled with the (previously outlined) physical signs of aging that occur in one's forties and fifties. Many who thought that there was ample time to accomplish life goals suddenly become aware of the finite nature of the life span.

How one reacts to the challenges and changes of midlife has more to do with personality characteristics and less to do with chronological age or present life span developmental stage. It has been proposed that the enduring nature of a true midlife crisis may be related to its ability to help some adults to cope with the frustration and disappointment caused by the previously discussed life events and still consider themselves to be fairly fortunate.

The concept of role provides a different perspective or interpretation of the various transitions of middle adulthood. All people are part of the larger social system that is made up of interlocking positions or statuses such as worker, student, or widow. A role is the content of a given social position, including the characteristics and behaviors of a person occupying that position. Several aspects of the concept of a role are important for understanding development and change processes. Each person must occupy multiple roles at the same time, which can potentially lead to friction or problems with respect to role compatibility. This situation is termed role conflict and refers to those times when two or more roles are incompatible or present differing demands for which we do not possess sufficient resources. A person may experience role strain when one's qualities or skills do not meet the demands of a particular role. The concept of roles may also help explain some changes in adult life, because certain specific roles are known to show a predictable shift as related to age. Every age or stage of adulthood has accompanying roles of greater or lesser influence with respect to role conflict, strain, or continuity.

Other important and influential factors present in middle adulthood include changes in family and other relationships, changes related to midlife career issues, as well as preparation for retirement. Family and/or relationship issues of midlife range from starting a family, to adjusting to adult children, to caring for aging or debilitated parents, to facing the challenges of divorce or remarriage. The often changing and variable nature of some or all of these factors has led researchers away from the quest for identifying universal, absolute, or predictable stages of midlife development, and more toward an approach that, while acknowledging age-related events, also gives significant consideration to individual variability.

Middle adulthood is shaped by the various life changes and crises that one experiences, both common and predictable, as well as unanticipated. The years between 40 and 65 are in some ways much the same for some individuals and very different for others. In conclusion, it may well be that what is most significant in determining the course of middle adulthood is how one copes with various crises and changes, rather than the changes themselves.

## **Summary**

The developmental stage of middle adulthood is a time of great physical, cognitive, and psychosocial change and variability. It has been shown that the degree or direction of change regarding the specific physical, cognitive, and/or psychosocial domains of development is determined by the unique interplay of a host of influences or factors. Some physical and cognitive change processes once thought to be inevitable and universal have recently come to be viewed as amenable to positive growth and change and highly dependent on the influence of factors such as lifestyle, individual choice, or social context. Many previously established myths related to midlife have been refuted or shown to be inaccurate. The stage of middle adulthood is currently experiencing a highpoint with respect to research interest and study. These efforts have produced new

knowledge and insight related to the dynamics of continuity and change over the course of midlife. While the academic community continues to gather information and present new theoretical understandings, there has been a movement toward a greater integration of previously disparate areas of developmental research and related findings.

This is a very exciting and encouraging time for the field of human development and for the study of middle adulthood. It is exciting and encouraging that those individuals in the stage of middle adulthood can utilize new information and understandings to maximize and enrich their lives.

- middle adulthood
- midlife
- dialectical thought
- later adulthood
- fluid intelligence
- climacteric
- practical intelligence

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<http://dx.doi.org/10.4135/9781412952484.n411>

See also

- [Baby Boomers](#)

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