# Midlife and mental health

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# **Key points**

- Identify the characteristics of midlife as a life course stage.
- Examine the age patterning of mental health symptoms.
- Describe stress and coping perspectives on midlife mental health.
- Summarize psychosocial and biological factors linked with midlife mental health.
- Suggest policies and practices that can support the mental health of midlife adults

#### Glossarv

Andropause Decline in testosterone among middle-aged men

Chronic Stressors Persistent and recurring demands that require adaptation over sustained periods, such as a strained marriage or difficult caregiving

**Cognitive-behavioral therapy (CBT)** A psychosocial treatment approach that helps people to recognize negative or unhelpful thought and behavior patterns

Coping Resources The personal and social attributes individuals draw upon when dealing with stress

**Interpersonal therapy (IPT)** An attachment-focused therapy focused on resolving interpersonal problems and symptomatic recovery

Mastery The personal belief that one can control and manage a stressful situation

Menopause Permanent end of women's menstruation and fertility, typically occurring in midlife

Midlife Stage in the life course between young adulthood and old age. Boundaries are generally believed to be ages 40 through

Multimorbidity The presence of two or more chronic health conditions, like diabetes or heart disease

Network Event A type of stressor that befalls a member of one's social network

Pharmacotherapy The use of medication to treat symptoms of mental illness and distress

Social Support Instrumental, emotional, and informational assistance that one receives from others

#### **Abstract**

Midlife is defined as the period of life between ages 40 and 64. During this stage, biological and social changes occur that may affect mental health. Some research reveals a U-shaped pattern in mental health, where levels of well-being are lower at midlife than in younger or older adulthood. However, these patterns vary across social strata, birth cohorts, and nations. Stress and coping models are useful frameworks for understanding mental health differentials at midlife. I identify sources of midlife stress that may affect mental health, including marital dissolution, caregiving strains, work-related stressors, young adult children's problems and physical health changes. I highlight practices and policies to treat and maintain midlife mental health, including clinical interventions and public supports for family caregivers.

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#### Introduction

Midlife is generally defined as the period of life between ages 40 and 64 (Lachman, 2004). This stage of life is marked by important biological changes, including the onset of age-related physical health problems, and role transitions like becoming a caregiver to an aged parent. These changes can undermine mental health and are among the reasons why some researchers have documented a "U-shaped" pattern in mental health, where midlife persons evidence lower levels of happiness and more frequent symptoms of distress than younger or older adults (Blanchflower and Graham, 2022). However, some scholars have countered that this pattern may differ across historical periods, national contexts, and social strata (Galambos et al., 2020). This article begins by highlighting the social significance of midlife, and describing mental health symptoms among midlife persons relative to their older or younger counterparts. I then discuss how conceptual models of stress and coping help us understand the social patterning of midlife mental health, and identify contemporary age-related stressors like marital dissolution, caregiving, work and financial strains, and adult child problems, which may have an outsized impact on midlife mental health. I conclude by highlighting clinical practices and social policies that may help to improve midlife adults' mental health.

## The significance and study of midlife

Midlife is distinct from other life course stages like adolescence or old age because it is not demarcated by clear-cut legal or biological boundaries (Lachman et al., 2015). The transition from childhood to adulthood is marked by a clear legal boundary: age 18 is the legal age of majority in many US states. Similarly, in most wealthy industrialized nations ages 65–67 mark an individual's eligibility for age-related pension programs like Social Security. Biological factors also distinguish some life course stages; for instance, menarche signifies a girl's transition from childhood to adolescence. However, the boundaries of midlife are less definitive, and instead are shaped by various biological, social, and cultural factors (Cohen, 2012). Some experts consider the biological processes of menopause and andropause as signifiers of the midlife transition for women and men, respectively. However, these biological processes are protracted and lack clear-cut start and stop dates. Menopause is defined as a point in time 12 months after a woman's last menstrual period. This transition typically begins between ages 45 and 55, and lasts about 7–10 years. Likewise, andropause is a protracted transition rather than a clearcut event. Men's testosterone production starts decreasing around age 40, although the onset and progression of decline vary widely (Sternbach, 1998). For both men and women, these age-related hormonal changes are linked with physical symptoms like fatigue, sleep troubles, diminished sex drive, and weight gain, which may contribute to mental health symptoms like depression (Martelli et al., 2021).

Social scientists tend to characterize midlife based on one's age-related social roles, such as becoming an "empty nest" parent or a caregiver to aging parents, or exiting the labor force through early retirement or disability leave (George, 1993). Classic psychological perspectives characterize life course stages in terms of the developmental challenges they pose (Erikson, 1963; Jung, 1933). Jung emphasized the importance of individuation, or achieving a balance and integration of one's strengths and weaknesses at midlife. Erikson observed that midlife adults must resolve the challenge of generativity versus stagnation. Generativity is key to successful adult development, and entails making opportunities for and nurturing the generations younger than themselves.

Although the notion of a "midlife crisis" looms large in popular culture, the timeworn stereotype of a 50-something man who trades in his long-time wife and trusty sedan for "younger models" of both is an incorrect and incomplete characterization (Freund and Ritter, 2009). An estimated 10–20% of midlife persons do report having a "crisis" (Wethington, 2000). However, this crisis typically manifests as a point of self-reflection and reassessment of past experiences, with some deciding to abandon those activities or relationships that are unrewarding in order to pursue more personally fulfilling opportunities. Some psychologists have speculated that the "Great Resignation" following the COVID-19 pandemic reflected midlife adults' recognition that they did not enjoy their jobs and desired new work options that better fit their skills, interests, and personal values (Galinsky and Kray, 2022). Likewise, the doubling rates of "gray divorce" (i.e., divorce among persons ages 50 and older) during the 1990s and 2000s have been attributed to midlife persons' recognition that they do not want to grow old with their current spouse (Brown and Lin, 2012). However, for many adults, midlife is a time of continuity rather than stark change, with deepening investment in one's long-term relationships, social roles, and commitments (Carpenter and Stockard, 2020).

Some social critics question whether midlife is a life course stage at all, and instead view the period as a cultural construction unique to the late 20th and early 21st centuries—a market segment to whom corporations can sell their goods and services (Cohen, 2012). Social scientists further note that the timing of life course transitions varies so widely on the basis of personal characteristics (socioeconomic status, most notably) that it is difficult to identify a particular event or role transition that is a marker of midlife. Rather, transitions that occur at midlife, on average, may occur at significantly older or younger ages for some individuals based on characteristics like their educational attainment. Young adults with limited schooling tend to have children early, and consequently may transition to the "empty nest" stage or even grandparenthood in their 30s and 40s. In stark contrast, persons who pursue advanced degrees often delay childbearing until their 40s and may be in their 60s when they reach the empty nest stage, and 70s when they transition to grandparenthood (Macmillan, 2005).

Persons with lower levels of educational attainment also evidence earlier onset of a broad range of health conditions that limit their physical and cognitive functioning, including accelerated disability which may hasten labor market exits (Latham, 2012). Physically strenuous jobs, typically held by persons with fewer years of schooling, also are linked with early retirement. One study of US midlife adults found that workers in white-collar professions like law, finance, and engineering tended to delay retirement

until older ages, both because their good health allowed them to work longer, and because their jobs entailed largely sedentary tasks well-matched for aging bodies. Conversely, workers in physically challenging jobs like construction, manufacturing, and nursing retired at younger ages because their health declines were incompatible with the physical demands of their work (Helppie-McFall et al., 2015).

Debates about the meaning and timing of midlife persist, in part, because scholarly and public understanding of this life stage has developed relatively recently, with most research produced in the last three decades (Infurna et al., 2020). Although midlife has been described as "the last uncharted territory in human development" (Brim, 1992: 71), contemporary scholarship in the US and worldwide is generating new insights into midlife in general, and midlife mental health specifically (Lachman, 2004; Cohen, 2012). The burst of research on midlife starting in the 1990s forward was motivated by a need to understand the experiences of the large Baby Boom cohort. In the United States, a baby "boom" occurred in the post-World War II era, with 75 million babies born between 1946 and 1964. Similar population patterns are evident in most other wealthy industrialized nations (Kinsella and He, 2009). Consequently, much of what we currently know about "midlife" is based on this particular cohort who started entering their midlife years in the late 1980s and early 1990s.

Scholarly understanding of midlife among the Baby Boom cohort has been advanced by data collected in major US studies including the Health and Retirement (HRS) Study, Midlife in the United States (MIDUS), and National Longitudinal Study of Youth 1979 (NLSY79) as well as data collected worldwide including the Survey of Health, Ageing and Retirement in Europe (SHARE); China Health Aging and Retirement Longitudinal Study (CHARLS); Mexican Health and Aging Study (MHAS); and Japanese Study of Aging and Retirement (JSTAR); and Survey of Midlife in Japan (MIDJA) study. Other studies that began as explorations of adolescence among members of the Generation X (born 1965–1980) and Millennial cohorts (born 1980 through 1994) will become valuable resources for understanding midlife, as these study participants reach their 40s and 50s. Major national surveys including the National Longitudinal Studies of Youth 1997 (NLSY97) and National Longitudinal Study of Adolescent to Adult Health (Add Health), will be pivotal in addressing debates regarding the historical persistence of the so-called "midlife nadir" in mental health (Cheng et al., 2017).

### Trends in midlife mental health

Prevailing wisdom is that midlife adults fare worse than younger and older adults with respect to their mental health (e.g., Blanch-flower and Graham, 2022). Cross-sectional studies in the United States and most industrialized nations document a "U" shaped curve, such that mental health is poorest in midlife. Empirical analyses using a range of outcomes including anxiety, worry, lone-liness, sadness, stress, pain, strain, depression, phobias, and panic (Blanchflower, 2021) as well as clinically significant mental health outcomes including major depression, mood and panic disorders, alcohol and drug abuse, and intermittent explosive disorder (Kessler and Wang, 2008) conform to this age-based curve, such that rates peak in midlife.

Cross-national analyses reveal remarkably similar trends. Blanchflower (2021) detected a midlife mental health nadir in 146 countries, including high- and low-income nations, every member nation of the European Union, the G20, the member countries of the Organisation for Economic Co-operation and Development, and roughly three-quarters of the members of the United Nations. However, other work has found exceptions to these patterns, mostly in lower-income nations or nations that were in the midst of political or economic change (e.g., Bangladesh, Iran, Moldova, Vietnam) (Blanchflower and Oswald, 2008).

Cross-sectional analyses showing that middle-aged adults are more distressed than their younger and older counterparts are potentially problematic, however, because they cannot distinguish between age and cohort effects (Galambos et al., 2020). An age effect means that there is something distinctive about the midlife years that elevates one's risk of mental health problems. For example, stressors occurring in midlife for persons across birth cohorts including intensifying work demands, medical or educational debt, the dual demands of caring for grand/children and grand/parents, and early signs of deteriorating health may contribute to mental health decrements. For an age effect to be evident, researchers would need to document that midlife persons have poorer mental health than their younger and older counterparts across history and for multiple birth cohorts.

By contrast, *cohort effects* indicate that members of a particular birth cohort, or those born at a particular point in history and who pass through important life milestones together, may be at an elevated risk of mental health problems. For example, members of the large Baby Boom cohort may be at elevated risk of depression because of high levels of competition for resources at every stage of the life course. As layoffs plagued older workers in the Great Recession of the early 2000s, members of the large Baby Boom cohort faced stiff competition for new jobs, particularly long spells of unemployment, and age discrimination in hiring. Some scholars have argued that Baby Boom men and women were raised to have lofty aspirations for their work and family lives, buoyed by their high levels of education and optimism spurred by the civil rights and women's movements of the 1960s. These high hopes led to disillusionment (especially regarding major social institutions like the government) and psychological distress in the decades that followed (Moody, 2017).

Which explanation is more convincing: age or cohort? Compelling evidence suggests that the inverted U-shaped pattern may reflect a cohort-specific phenomenon. Studies based on prior cohorts suggested that middle age may be the happiest point in the life course, where depression and anxiety symptoms are lower than in younger or older adulthood (Mirowsky and Ross, 1992). Similarly, studies using a range of midlife mental health outcomes show that Baby Boomers fare worse than their predecessors (Infurna et al., 2020). The "deaths of despair" crisis documented by Case and Deaton (2015), where midlife white men and women without 4-year college degrees are dying of suicide, drug overdoses, and alcohol-related liver disease at unprecedented rates,

appear to be confined to Baby Boom cohorts. As Generation X and Millennial adults move into midlife, researchers will have the opportunity to more definitively evaluate whether the midlife nadir in mental health is cohort-specific or a universal aspect of aging.

## Stress and coping perspectives

Conceptual models of stress and coping help us to understand why, how, and for whom the midlife years are distressing. Stress theories are based on the premise that any environmental, social, biological, or psychological demand that requires a person to adjust his or her usual patterns of behavior can carry mental and physical health consequences (Selye, 1956). Stressors come in multiple forms and may be especially common at midlife. *Life events* are acute changes that require adjustment within a relatively short time period, such as being laid off from one's job unexpectedly or the sudden death of a spouse, parent, or child. The impact of a stressful life event depends on its magnitude, expectedness, and timing, where events that are major (e.g., a loss of one's income), unexpected (e.g., sudden death of spouse) or that happen "off-time" (e.g., being widowed in midlife rather than old age) are particularly distressing (George, 1993). The impact of an event also is contingent on one's "role history" (Wheaton, 1990), or qualitative aspects of the role one is exiting or entering. Divorce from an abusive spouse or being fired from an intolerable job may enhance well-being. Conversely, loss of salient and valued roles like parent or CEO may compromise well-being. A related, but rarely investigated concept is the *non-event*; recent empirical work shows that *not* experiencing an event or transition that one had expected, such as marrying by age 40, or reaching one's career goals by midlife can undermine one's mental health (Carlson, 2012; Carr, 1997).

Whereas life events are generally thought of as single point-in-time transitions, *chronic strains* are persistent and repeated demands that require adaptation, often over long periods of time. *Status strains* arise out of one's position in the social structure, such as living in poverty. *Role strains* are conflicts or demands related to social roles, such as juggling paid work and family caregiving. Common midlife strains include caregiving, working in an unfulfilling job, or struggling to pay one's bills and debts each month (Carr, 2004). Chronic strains are considered more distressing than acute life events, as they are persistent and often reflect situations that cannot be easily changed or avoided. Chronic and acute events are closely intertwined and may occur alongside or following one another; a stressful period of spousal caregiving may precede the event of widowhood, which may in turn, may trigger financial strains. This process is referred to as *stress proliferation*, such that individuals exposed to a serious adversity are at an elevated risk for subsequent stressors (Pearlin et al., 2005). Stress proliferation is especially common among persons with fewer socioeconomic resources, as they are exposed to a greater number of stressors including premature deaths of friends and family, greater financial strain, and earlier onset of health conditions (Carr, 2019).

Network events are a type of stressor that befalls a member of one's social network; these events can cause distress for midlife adults who often are at the center of tightly knit work, family, and friendship networks and feel responsible for the well-being of these significant others (Scott et al., 2013). A network stressor, such as an adult child's incarceration or a spouse's job loss, may affect midlife mental health directly, through the distress of witnessing a loved one suffer. The impact also may be indirect, such as adding additional stressful responsibilities to one's plate, like taking on the role of custodial grandparent to an incarcerated child's child. Network members' stressful encounters also may threaten one's identity and self-esteem. For instance, midlife parents who feel personally responsible for their children's problems may become depressed or anxious (Greenfield and Marks, 2006).

Stress perspectives also help us to understand the heterogeneity of mental health symptoms experienced in midlife. Why might two people experience the same stressful event, yet one experiences serious depression and the other does not? Individuals differ with respect to the coping resources and strategies they can use to manage stress. *Coping* broadly refers to cognitive and behavioral strategies used to manage stress (Lazarus and Folkman, 1984). *Coping resources* are the personal and social attributes individuals draw upon when dealing with stress (Pearlin and Schooler, 1978). Two of the main resources midlife adults may draw on are social support and a sense of mastery. *Social support* refers to the instrumental, emotional, and informational assistance that one receives from others. *Mastery* refers to one's belief that they can control and manage a stressful situation. A high sense of mastery has direct protective effects on mental health, and also buffers against (or moderates) the harmful effects of stress (Carr and Umberson, 2013). At midlife, both social support and perceived mastery may be more abundant than at earlier stages in the life course. Persons at midlife often have long-term friendships, marriages, or parent-child relationships to draw on for support, while years of experience in negotiating life's challenges may hone one's sense of mastery and self-efficacy (Infurna et al., 2020). Other psychological resources, like the *personality traits* of dispositional optimism and conscientiousness, also help to buffer the effects of stress on mental health. For example, midlife adults coping with physical limitations reported significantly fewer depressive symptoms as their levels of trait optimism increased (Choi et al., 2022).

Coping strategies, by contrast, are the changes people make to their behaviors, thoughts, or emotions in response to the stressors they encounter (Lazarus and Folkman, 1984). The two main strategies are problem-focused coping, where one tries to alter the situation that is causing the stressor (e.g., exiting a conflicted marriage) or preventing the stressor from recurring, and emotion-focused coping, where one alters their reactions to and feelings regarding the stressor, such as finding the humor in the situation (Carver et al., 1989). Most studies concur that problem-focused tactics are more effective than emotion-focused coping in warding off distress. Problem-focused strategies are associated with lower levels of psychological distress, whereas emotion-focused strategies are related to higher levels of distress and hopelessness (Billings and Moos, 1981). However, emotion-focused coping may be particularly effective when the stressor is permanent or irreversible (e.g., Reynolds et al., 2000). For instance, midlife parents of young adult children with serious mental illness evidenced fewer depressive symptoms when they used an accommodative coping style, which enabled them to adjust their expectations downward to match the constraints they faced (Seltzer et al., 2004).

## Psychosocial influences on midlife mental health

Most research on midlife mental health has focused on the impacts of stress in two main domains: work and family (Infurna et al., 2020). Family-related stressors include divorce and early widowhood; parental death; caregiving for older or younger relatives; and problems experienced by adult children and grandchildren. Work-related stressors may include persistent spells of unemployment or underemployment; ageism (i.e., disrespectful or discriminatory treatment on the basis of one's age); premature or unwanted retirement; and the recognition that one's earlier career aspirations have gone unfulfilled. Importantly, this extensive body of work shows that the mental health impact of any particular stressful event or chronic strain varies based on characteristics of the individual and the stress inducing context. For example, while divorce is widely regarded as a source of distress, an analysis of MIDUS data found that midlife women exiting low-quality marriages evidenced boosts to their emotional well-being when the marriage ended (Bourassa et al., 2015).

A complete discussion of the many psychosocial correlates of midlife mental health is beyond the scope of this brief article (see Infurna et al., 2020 for a review). I will focus on one major midlife stressor, given its high prevalence and heterogeneity in its mental health impacts: family caregiving. In the United States today, an estimated 44 million persons have provided unpaid care to an adult—whether an adult child or aged parent; nearly 7 million provide care to both. More than half of all caregivers are in midlife, and 60% are working for pay simultaneously. The average number of hours dedicated to family care each week increases with age, with midlife caregivers ages 45–64 giving an average of 25 h of care each week (AARP, 2015). These hours may detract from other restorative and mood-enhancing activities like sleep, leisure, and visits with friends. For women, caregiving often means cutting back on paid work or leaving work altogether, imposing a significant financial toll (National Academy of Sciences, 2016). Many midlife caregivers have been called the "sandwich" generation, and provide both direct care and financial support to the parent generation above and child generation below (Friedman and Wiemers, 2019).

The chronic stress of caregiving takes short- and long-term tolls on mental health, yet also confers psychological benefits. Midlife caregivers are more likely than non-caregivers to report depression and anxiety, as well as physical signs of distress including more sleep problems and fatigue, appetite loss, weight loss, greater risk of cardiovascular disease, and death (Spillman et al., 2014). At the same time, many midlife caregivers derive a genuine sense of purpose, competence, and emotional closeness to the care recipient. Caregiving expert Richard Schulz has written widely on the positive aspects of caregiving (PAC), noting that many midlife adults derive a sense of purpose from caregiving, whereas others develop a sense of mastery as they learn and apply new skills. One recent analysis of the National Survey of Caregivers (NSOC) found that more than half of caregivers reported an increase in their ability to deal with difficult situations with an accompanying boost to their self-confidence (National Academy of Sciences, 2016). Some also report a sense of personal gratification and appreciate the opportunity to "pay back" their spouse or parent for all the support they have received in the past.

The mental health toll of caregiving is most profound and psychological benefits fewest when the caregiving experience is stressful, including caring for a parent with whom one had a conflicted relationship earlier in life, or a family member with dementia. One study of midlife caregivers found that parental caregiving was linked with poor mental health, yet the effects were especially dramatic for those who were caring for a parent (typically a mother) who had been abusive or neglectful decades earlier when the caregiver was an adolescent (Kong and Moorman, 2015). These results underscore the importance of role histories when considering the mental health impacts of midlife stressors.

Midlife adults caring for a parent with dementia also are at a particularly elevated risk of depression and anxiety. An estimated 15 million Americans, mostly midlife and older adults themselves, are caring for a loved one with dementia. The average length of time a patient lives with Alzheimer's disease or severe dementia is about 7 years, yet some patients live as many as 20 years with the condition, making it the quintessential chronic stressor for their caregivers. An estimated 60% of dementia caregivers rate their emotional stress as high or very high, and 40% suffer from depressive symptoms. Dementia caregiving can be all-consuming; they spend significantly more hours per week providing care than non-dementia caregivers, and report greater impacts on their everyday life in terms of employment complications, have less time for leisure and self-care, and experience more conflicts with family members (Richardson et al., 2013). For many dementia caregivers, the stress of caregiving ends when the care recipient dies, a life event with significant implications for midlife mental health. Death of a parent, especially a parent with whom one once was close, takes a sharp although often short-lived toll on the mental health of midlife adults. Bereaved adult children who have the social support of their spouses, children, and siblings evidence especially rapid recoveries from their symptoms of grief and sadness (Umberson, 2003).

# Biological influences on midlife mental health

Age-related hormonal changes, or the processes of menopause and andropause introduced earlier in this article, as well as other physical changes are important correlates of midlife mental health. Decreased production of ovarian hormones among menopausal women may lead to increased depressive symptoms. Although most women pass through this transition without serious depressive symptoms (Maki et al., 2010), depression risk is elevated for peri-menopausal and menopausal women who have a history of prior depression, high stress exposure, and strained relationships (Sandilyan and Dening, 2011). Experts generally agree that routine screening of (peri)menopausal women for depressive symptoms may be warranted, regardless of whether symptoms are triggered by hormonal changes or other risk factors.

Age-related decline in men's hypothalamic-pituitary-gonadal (HPG) function also may contribute to their mental health. From around age 40 forward, men experience a decline in testosterone at a rate of roughly one percent annually. As with menopause, early research speculated that declines in testosterone can cause a range of symptoms in middle-aged and older men, including depression. Yet recent research suggests that testosterone deficiency has only modest effects on mood disorders (Seidman, 2006). However, the symptoms that result from hormonal changes like sleep troubles, weight gain, diminishing sex drive, and fatigue are mechanisms implicated in depression.

Hormonal changes are not the only biological changes experienced at midlife. Some people experience the initial onset of and gradual increase in chronic conditions and functional limitations. A study of midlife from the Health and Retirement Study (HRS) found elevated levels of depressive symptoms 2 years after the initial diagnosis of cancer, chronic lung disease, and heart disease (Polsky et al., 2005). Depression also can be triggered directly by common medications that are used to treat chronic illnesses or their precursors, including beta blockers, corticosteroids, anti-Parkinson agents, and certain cancer treatments (Alexopoulos, 2005). Current trends in physical health bode poorly for the mental health of future cohorts of older adults; a 2022 study using HRS data found that recent cohorts of midlife adults, born in the 1960s and later, show higher rates of multimorbidity than their predecessors (Bishop et al., 2022). Multimorbidity refers to the presence of two or more chronic health conditions, like diabetes or heart disease. Given the well-documented linkage between multimorbidity and mental health symptoms, policies and practices to mitigate against midlife mental health problems are more important than ever.

## **Policy and practice implications**

A range of policies and practices may be critical to mitigating against midlife mental health symptoms and the social structures and processes that bear directly or indirectly on these symptoms. Pharmacotherapy is among the most prominent approaches to treating mental health symptoms at every stage in the life course. In 2020, the percentage of US adults who had taken medication for their mental health in the past 12 months was higher among midlife adults 45–64 (17.7%) and older adults ages 65+ (17.3%), compared with those ages 18–44 (15.4%) (Terlizzi and Norris, 2021). The most commonly prescribed antidepressants today are selective serotonin reuptake inhibitors (SSRIs), such as Fluoxetine (Prozac). Similar to SSRIs are serotonin and norepinephrine reuptake inhibitors (SNRIs). This newer generation of antidepressants has fewer side effects than older medications. Other commonly used treatments include anti-anxiety medications (in particular, benzodiazepines) and mood stabilizers for treating bipolar disorder

Psychotherapy or "talk therapy" as a treatment for mental health disorders has declined in usage over the past two to three decades. In 2020, just 9.2% of adults ages 45–64 had received counseling or therapy from a mental health professional in the past 12 months, a rate higher than persons ages 65+ (5%) and lower than those ages 18–44 (13%) (Terlizzi and Norris, 2021). However, its advocates believe that this approach is more effective than medication in helping patients to understand the root of their distress, and that therapy also pays attention to the social and interpersonal contexts that gave rise to one's symptoms. Through talk therapy, patients may develop strategies to cope with stress and maladaptive thoughts and behaviors. Two main approaches to psychotherapy that are consistently shown effective in treating depression, anxiety, and relationship problems are cognitive-behavioral therapy (CBT) and interpersonal therapy (IPT) (Hollon et al., 2006).

In some situations, talk therapy approaches can be more efficacious than anti-depressants and often have lasting effects (Hollon et al., 2006). However, midlife adults suffering from both physical and mental health concerns have particularly low rates of seeking care, in part because their health conditions make it difficult to access supports. A recent analysis of National Health Interview Survey (NHIS) data showed that midlife adults ages 50 to 64 who had both psychological distress and multiple morbidities reported dramatically higher odds of needing but not getting mental health care, prescription medications, or followup care (Johnson et al., 2022). Consequently, efforts to expand the use of telehealth, including use of telephone or teleconferencing consultations to receive therapy and get prescription medications, may help to diminish unmet care needs among midlife adults.

Clinical interventions, whether medications or therapy, treat the symptoms though not necessarily the underlying cause. Public policies that alter the stress-inducing context also are pivotal to enhancing midlife adults' mental health. For instance, the stressors of providing care to aging parents as well as one's spouse, children, or even grandchildren are a major source of midlife distress. Recognizing the struggles of family caregivers, in 2021 the Biden administration unveiled new programs to help support caregivers and older adults living on their own who require assistance. As part of the American Rescue Plan for Older Americans Acts, funding was dedicated to the National Family Caregiver Support Program which helps family and informal caregivers pay for in-home supports, like respite care and training. Funding for home-delivered (or "grab and go" meals) during the COVID-19 pandemic gives family caregivers a break from meal preparation, while increased support for Home and Community-Based Services (HCBS) provides funds to help find assistance with household chores, shopping, transportation, and other services that may be needed by one's aged parents. Some state governments, primarily in "blue" Democrat-led states, also provide supports. California, Massachusetts, New Jersey, New York, Rhode Island, and Washington, as well as District or Columbia, offer statewide insurance programs that allows eligible employees paid leave. Participating workers are eligible to receive a fraction of their regular pay while on leave to care for family members. These programs help to relieve the physical, emotional, and financial burden of care for midlife adults.

On a smaller scale, employers can offer accommodations to help workers, especially those with health concerns or work-family burdens that may undermine their mental health and workplace productivity. Such evidence-based initiatives might include programs to grant employees greater control over their work schedules (Kelly et al., 2011), increasing supervisor support of workers

juggling work and family demands (Kossek et al., 2019), and enhancing workplace flexibility (Moen et al., 2016). Evaluation studies have found that these strategies are effective in improving workers' sleep quality, emotional well-being, work-family conflicts, and mental health. Employers also could be more proactive in developing practices to mitigate against ageism in hiring, promotion, wrongful termination, and interpersonal interactions in the workplace (Raposo and Carstensen, 2015). Efforts to establish mixed-age work groups and emphasizing the skills and knowledge of older workers, especially in industries that place a disproportionate value on speed and knowledge of the latest technology, also may affirm older workers' self-esteem, sense of mattering, and mental health.

#### Conclusion

This article has described contemporary patterns of midlife mental health, described the ways that stress and coping models help us to understand midlife mental health, and suggested avenues for improving mental health among both current cohorts of midlife adults, the Baby Boomers, as well as future cohorts. Improving our understanding of the processes underlying distress and depression among middle-aged adults is of critical importance to policy makers and practitioners. If the documented rise of depression and anxiety in midlife reflects a cohort effect unique to the Baby Boomer cohort, then this pattern portends a dramatic increase in mental illness and demand for services among older adults in the near future. The oldest members of the Baby Boomer cohort turned 65 in 2011 and the youngest members turn 65 in 2029; thus, the upcoming decades will require expanded mental health and behavioral health services to address the psychological needs of this large cohort. Because the needs for psychiatric services among current generations of older adults are not adequately met (Karel et al., 2012), mental health patterns of the aging Baby Boom cohort may present a substantial healthcare challenge for family members, care providers, and older adults themselves.

### References

AARP, 2015. Caregiving in the U.S. 2015. AARP, Washington, DC.

Alexopoulos, G.S., 2005. Depression in the elderly. Lancet 365 (9475), 1961-1970.

Billings, A.G., Moos, R.H., 1981. The role of coping responses and social resources in attenuating the stress of life events. J. Behav. Med. 4 (2), 139-157.

Bishop, N.J., Haas, S.A., Quiñones, A.R., 2022. Cohort trends in the burden of multiple chronic conditions among aging US adults. J. Gerontol. https://doi.org/10.1093/geronb/

Blanchflower, D.G., 2021. Is happiness U-shaped everywhere? Age and subjective well-being in 145 countries. J. Popul. Econ. 34 (2), 575-624.

Blanchflower, D.G., Graham, C.L., 2022. The mid-life dip in well-being: a critique. Soc. Indicat. Res. 161 (1), 287-344.

Blanchflower, D.G., Oswald, A.J., 2008. Is well-being U-shaped over the life cycle? Soc. Sci. Med. 66 (8), 1733-1749.

Bourassa, K.J., Sbarra, D.A., Whisman, M.A., 2015. Women in very low-quality marriages gain life satisfaction following divorce. J. Fam. Psychol. 29 (3), 490.

Brim, O.G., 1992. Ambition. Basic Books, New York.

Brown, S.L., Lin, I.F., 2012. The gray divorce revolution: rising divorce among middle-aged and older adults, 1990-2010. J. Gerontol. 67 (6), 731-741.

Carlson, D.L., 2012. Deviations from desired age at marriage: mental health differences across marital status. J. Marriage Fam. 74 (4), 743-758.

Carpenter, G., Stockard, J., 2020. A Decade of Change and Continuity in Midlife. Cambridge Scholars Publishing, Cambridge.

Carr, D., 1997. The fulfillment of career dreams at midlife: does it matter for women's mental health? J. Health Soc. Behav. 38 (4), 331-344.

Carr, D., 2004. Worried Sick: How Stress Us and How to Bounce Back. Rutgers University Press, New Brunswick, NJ.

Carr, D., 2019. Golden Years: Social Inequality in Later Life. Russell Sage, New York.

Carr, D., Umberson, D., 2013. The social psychology of stress, health, and coping. In: Handbook of Social Psychology. Springer, Dordrecht, pp. 465-487.

Carver, C.S., Scheier, M.F., Weintraub, J.K., 1989. Assessing coping strategies: a theoretically based approach. J. Pers. Soc. Psychol. 56 (2), 267-283.

Case, A., Deaton, A., 2015. Rising morbidity and mortality in midlife among white non-Hispanic Americans in the 21st century. Proc. Natl. Acad. Sci. U. S. A. 112 (49), 15078–15083.

Cheng, T.C., Powdthavee, N., Oswald, A.J., 2017. Longitudinal evidence for a midlife nadir in human well-being: results from four data sets. Econ. J. 127 (599), 126–142. Choi, S.L., Namkung, E.H., Carr, D., 2022. The effect of physical limitations on depressive symptoms over the life course: is optimism a protective buffer? J. Gerontol. https://doi.org/10.1093/geronb/gbac058.

Cohen, P., 2012. In Our Prime: The Invention of Middle Age. Simon and Schuster, New York.

Erikson, E.H., 1963. Childhood and Society, second ed. Norton, New York.

Freund, A.M., Ritter, J.O., 2009. Midlife crisis: a debate. Gerontology 55 (5), 582-591.

Friedman, E.M., Wiemers, E.E., 2019. Sandwich generation. In: Gu, D., Dupre, M. (Eds.), Encyclopedia of Gerontology and Population Aging. Springer, Cham. https://doi.org/10.1007/978-3-319-69892-2\_326-1.

Galambos, N.L., Krahn, H.J., Johnson, M.D., Lachman, M.E., 2020. The U shape of happiness across the life course: expanding the discussion. Perspect. Psychol. Sci. 15 (4), 898–912.

Galinsky, A., Kray, L., 2022. How COVID Created a Universal Midlife Crisis. Los Angeles Times. May 15, 2022. https://www.latimes.com/opinion/story/2022-05-15/covid-universal-midlife-crisis. (Accessed 15 May 2022).

George, L.K., 1993. Sociological perspectives on life transitions. Annu. Rev. Sociol. 19 (1), 353-373.

Greenfield, E.A., Marks, N.F., 2006. Linked lives: adult children's problems and their parents' psychological and relational well-being. J. Marriage Fam. 68 (2), 442–454.

Helppie-McFall, B., Sonnega, A., Willis, R.J., Hudomiet, P., 2015. Occupations and work characteristics: effects on retirement expectations and timing. In: Michigan Retirement Research Center Research Paper (2015-331).

Hollon, S.D., Stewart, M.O., Strunk, D., 2006. Enduring effects for cognitive behavior therapy in the treatment of depression and anxiety. Annu. Rev. Psychol. 57, 285–315. Infurna, F.J., Gerstorf, D., Lachman, M.E., 2020. Midlife in the 2020s: opportunities and challenges. Am. Psychol. 75 (4), 470–485.

Johnson, P.J., Mentzer, K.M., Jou, J., Upchurch, D.M., 2022. Unmet healthcare needs among midlife adults with mental distress and multiple chronic conditions. Aging Ment. Health 26 (4), 775–783.

Jung, C.G., 1933. Modern Man in Search of a Soul. Harcourt Brace, New York.

Karel, M.J., Gatz, M., Smyer, M.A., 2012. Aging and mental health in the decade ahead: what psychologists need to know. Am. Psychol. 67 (3), 184-198.

Kelly, E.L., Moen, P., Tranby, E., 2011. Changing workplaces to reduce work-family conflict: schedule control in a white-collar organization. Am. Socio. Rev. 76 (2), 265–290. Kessler, R.C., Wang, P.S., 2008. The descriptive epidemiology of commonly occurring mental disorders in the United States. Annu. Rev. Publ. Health 29 (1), 115–129.

Kinsella, K., He, W., 2009. US Census Bureau, International Population Reports. US Census Bureau, Washington, DC.

Kong, J., Moorman, S.M., 2015. Caring for my abuser: childhood maltreatment and caregiver depression. Gerontol. 55 (4), 656-666.

Kossek, E.E., Little, L.M., Montanye, M., Perrigino, M.B., Wanberg, C., 2019. Changing organizations for a changing workforce: improving work-life implementation and adaptation. Acad. Manag. Proc. 2019 (1), 17281.

Lachman, M.E., 2004. Development in midlife. Annu. Rev. Psychol. 55, 305-331.

Lachman, M.E., Teshale, S., Agrigoroaei, S., 2015. Midlife as a pivotal period in the life course: balancing growth and decline at the crossroads of youth and old age. IJBD 39 (1), 20–31.

Latham, K., 2012. Progressive and accelerated disability onset by race/ethnicity and education among late midlife and older adults. J. Aging Health 24 (8), 1320-1345.

Lazarus, R.S., Folkman, S., 1984. Stress, Appraisal, and Coping. Springer, New York.

Macmillan, R., 2005. The structure of the life course: classic issues and current controversies. Adv. Life Course Res. 9, 3-24.

Maki, P.M., Freeman, E.W., Greendale, G.A., Henderson, V.W., Newhouse, P.A., Schmidt, P.J., Scott, N.F., Shively, C.A., Soares, C.N., 2010. Summary of the NIA-sponsored conference on depressive symptoms and cognitive complaints in the menopausal transition. Menopause 17 (4), 815.

Martelli, M., Zingaretti, L., Salvio, G., Bracci, M., Santarelli, L., 2021. Influence of work on andropause and menopause: a systematic review. Int. J. Environ. Res. Publ. Health 18 (19), 10074.

Mirowsky, J., Ross, C.E., 1992. Age and depression. J. Health Soc. Behav. 33 (3), 187-205.

Moen, P., Kelly, E.L., Fan, W., Lee, S.R., Almeida, D., Kossek, E.E., Buxton, O.M., 2016. Does a flexibility/support organizational initiative improve high-tech employees' well-being? Evidence from the work, family, and health network. Am. Socio. Rev. 81 (1), 134–164.

Moody, H.R., 2017. Baby boomers: from great expectations to a crisis of meaning. Generations 41 (2), 95-100.

National Academies of Sciences, Engineering and Medicine, 2016. Families Caring for an Aging America. National Academies Press, Washington, DC.

Pearlin, L.I., Schieman, S., Fazio, E.M., Meersman, S.C., 2005. Stress, health, and the life course: some conceptual perspectives. J. Health Soc. Behav. 46 (2), 205–219. Pearlin, L.I., Schooler, C., 1978. The structure of coping. J. Health Soc. Behav. 19 (1), 2–21.

Polsky, D., Doshi, J.A., Marcus, S., Oslin, D., Rothbard, A., Thomas, N., Thompson, C.L., 2005. Long-term risk for depressive symptoms after a medical diagnosis. Arch. Intern. Med. 165 (11), 1260–1266.

Raposo, S., Carstensen, L.L., 2015. Developing a research agenda to combat ageism. Generations 39 (3), 79-85.

Reynolds, P., Hurley, S., Torres, M., Jackson, J., Boyd, P., Chen, V.W., 2000. Use of coping strategies and breast cancer survival: results from the Black/White Cancer Survival Study. Am. J. Epidemiol. 152 (10), 940–949.

Richardson, T.J., Lee, S.J., Berg-Weger, M., Grossberg, G.T., 2013. Caregiver health: health of caregivers of Alzheimer's and other dementia patients. Curr. Psychiatr. Rep. 15 (7), 1–7.

Sandilyan, M.B., Dening, T., 2011. Mental health around and after the menopause. Menopause Int. 17 (4), 142-147.

Scott, S.B., Whitehead, B.R., Bergeman, C.S., Pitzer, L., 2013. Combinations of stressors in midlife: examining role and domain stressors using regression trees and random forests.

J. Gerontol. B 68 (3), 464–475.

Seidman, S.N., 2006. Normative hypogonadism and depression: does "andropause" exist? Int. J. Impot. Res. 18 (5), 415-422.

Seltzer, M.M., Greenberg, J.S., Floyd, F.J., Hong, J., 2004. Accommodative coping and well-being of midlife parents of children with mental health problems or developmental disabilities. Am. J. Orthopsychiatr. 74 (2), 187–195.

Selve, H., 1956. The Stress of Life. McGraw-Hill, New York.

Spillman, B.C., Wolff, J., Freedman, V.A., Kasper, J.D., 2014. Informal Caregiving for Older Americans: An Analysis of the 2011 National Study of Caregiving. US Department of Health and Human Services, Washington, DC.

Sternbach, H., 1998. Age-associated testosterone decline in men: clinical issues for psychiatry. Am. J. Psychiatr. 155 (10), 1310-1318.

Terlizzi, E.P., Norris, T., 2021. Mental Health Treatment Among Adults: United States, 2020. NCHS Data Brief, 419. National Center for Health Statistics, Hyattsville, MD.

Umberson, D., 2003. Death of a Parent: Transition to a New Adult Identity. Cambridge University Press, New York.

Wethington, E., 2000. Expecting stress: Americans and the "midlife crisis.". Motiv. Emot. 24 (2), 85-103.

Wheaton, B., 1990. Life transitions, role histories, and mental health. Am. Socio. Rev. 55 (2), 209-223.