

Views of Aging

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Abstract

This chapter provides a comprehensive overview of Views of Aging, encompassing individuals' self-perceptions of their own aging as well as age stereotypes of older people that are prevalent within a society. Views of Aging are conceptualized as a multidimensional, dynamic, context-sensitive construct shaped by life experiences, cultural narratives, and structural influences across the lifespan. Drawing on stereotype embodiment and internalization theories, the chapter explores the mechanisms through which Views of Aging are internalized and projected, and how these processes are linked to developmental outcomes across the lifespan. A key conceptual distinction is made between descriptive (beliefs about what older people are like) and prescriptive (expectations for how they should behave) Views of Aging. Research shows that while holding negative Views of Aging may have short-term benefits due to contrast effects resulting from downward comparisons, in the long run they have adverse outcomes, comprising age-based discrimination of older people, as well as reduced well-being, health, and longevity. Positive Views of Aging are generally associated with older adults' better fitness, resilience, and life satisfaction.

The chapter also addresses advancements in the measurement of Views of Aging, emphasizing the importance of multidimensional, domain-specific, and culturally sensitive tools. It also discusses intersectionality and the contextual variability of Views of Aging. The chapter suggests directions for future research, including a more systematic approach to the conceptualization and assessment of Views of Aging, improved measurement tools, exploration of cultural differences in Views of Aging, and the development of interventions aimed at reshaping aging narratives.

Keywords: views of aging, age stereotypes, self-perceptions of aging, ageism, stereotype embodiment theory, internalization, multidimensionality

Retrospective Review of the Area under Study

Introduction

Aging is a multidimensional process that encompasses biological, psychological, and social changes (Baltes, 1987). While chronological age provides an objective marker of time lived, the experience of aging is highly subjective and influenced by both individual beliefs and societal narratives (Rothermund et al., 2023). Views of Aging represent a critical nexus where biological and sociocultural influences are integrated into beliefs that shape our thinking about aging, old age, older people, and our own aging. These beliefs are not just passive reflections of a given biological or social reality but show a close association with actual development. Views of Aging provide justifications for developmental options and support that society offers to older people, but also for barriers and limitations that prevent them from participating in societal institutions and activities. Furthermore, they are associated with the way individuals actively construct their own developmental trajectories in old age.

The concept of **Views of Aging** captures this integrated perspective, encompassing both **Age Stereotypes**, which are socially shared beliefs about aging, and **Self-Perceptions of Aging**, which reflect how individuals perceive and experience their own aging process. These two dimensions mutually influence each other, shaping not only individual behaviors and attitudes but also broader societal perspectives on aging (Rothermund & de Paula Couto, 2024).

The importance of understanding Views of Aging lies in their robust and wide-ranging association with health, cognitive functioning, and overall well-being. Research has consistently shown that individuals who internalize negative age stereotypes tend to experience greater cognitive decline, reduced motivation for health-promoting behaviors, and even shorter lifespans (Diehl et al., 2021; Levy, 2009). Conversely, those with positive self-perceptions of aging are more likely to engage in proactive health behaviors, maintain higher levels of social engagement, and experience greater life satisfaction (Velaithan et al., 2024). Given these significant consequences, it is crucial to examine Views of Aging not as a static concept but as a dynamic framework that evolves over time and varies across different cultural and social contexts (Rothermund, 2024).

Our chapter builds upon and extends Diehl, Brothers, and Wahl's (2021) comprehensive review of self-perceptions and awareness of aging in the previous Handbook edition. While their chapter focused primarily on self-perceptions of aging, we broaden the perspective on Views of Aging in several important ways. First, we distinguish between Age Stereotypes and Self-Perceptions of Aging, and we investigate their dynamic interplay. Second, we explicitly integrate prescriptive views (age

norms and expectations) alongside descriptive views (beliefs about characteristics), a distinction that has gained empirical traction. Third, we distinguish between self- and other-directed impact of Views of Aging, and we discuss their contextual embeddedness, that is, how they are shaped by cultural, political, structural, and also individual factors.

Furthermore, in our chapter, we will repeatedly refer to stereotype embodiment theory (SET; Levy, 2009). The model comprises different assumptions regarding (1) the acquisition of stereotypes, (2) the transformation of age stereotypes into self-perceptions of one's own aging, and (3) the mediating pathways that translate age stereotypes and self-perceptions of aging into developmental outcomes, a process that is labelled as "embodiment." In the present chapter, we will expand and differentiate the theoretical framework proposed by Levy (2009) in several ways. A first important extension regards the distinction between descriptive and prescriptive Views of Aging, and the questions how they are interrelated. Secondly, when explaining relationships between age stereotypes and self-perceptions of aging, we distinguish between processes of internalization, distancing, and projection, which give rise to relations that differ in quality (assimilative vs. contrastive effects), and also regarding the causal directionality of the relationship (internalization vs. projection). Thirdly, we will provide a more differentiated account of the mediating pathways via which Views of Aging are linked to developmental outcomes.

From a broader perspective, research on Views of Aging connects beliefs about aging with core questions in adult development and aging: It speaks to issues of developmental plasticity (Baltes, 1987) by highlighting that development in old age is not a purely biologically programmed process, but is also a function of social stereotypes and psychological aging-related beliefs. Understanding the interconnections between development and Views of Aging is also crucial for theories of self-regulation across the life span (Brandtstädter, 2006), since age norms and stereotypes infiltrate individual expectations, developmental goals, and control beliefs. Finally, individual differences in Views of Aging also play a role in explaining developmental trajectories of cumulative advantage and disadvantage (Dannefer, 2003), as reflected in long-term disparities in health and participation, resulting from accumulated influences of exposure to age-related stereotypes, their internalization and embodiment.

Defining Views of Aging: Core Components and their Interrelations

The construct of Views of Aging is grounded in the recognition that aging is not solely a biological inevitability but is also socially constructed through prevailing attitudes, expectations, and individual experiences. Views of Aging is a multifaceted construct that encompasses different facets. Most crucially, we distinguish between age stereotypes and self-perceptions of aging, and between descriptive and prescriptive Views of Aging.

Age Stereotypes vs. Self-Perceptions of Aging

Age stereotypes constitute the societal dimension of Views of Aging. They reflect widely held beliefs about aging that influence both public perceptions of older adults and individuals' expectations for their own aging process (Rothermund & de Paula Couto, 2024). **Self-perceptions of aging** represent an individual's subjective evaluation of and expectations regarding their own aging. Accordingly, self-perceptions of aging are shaped by personal factors and experiences (Diehl et al., 2021), but they are also related to beliefs about aging in general and thus partly reflect internalized societal stereotypes. As reviewed in more detail below, age stereotypes and self-perceptions are inter-related in complex ways, and they are linked to developmental outcomes in partly distinct ways.

Descriptive vs. Prescriptive Views of Aging

Descriptive Views of Aging define how older adults are perceived, often emphasizing characteristics such as wisdom, kindness, or frailty (Rothermund & de Paula Couto, 2024). **Prescriptive Views of Aging**, in contrast, refer to how older individuals should behave, reinforcing norms or expectation that they should retire, yield professional opportunities to younger individuals (North & Fiske, 2012), or maintain an active lifestyle to counteract negative perceptions of aging (Pavlova & Silbereisen, 2013). These two overarching norms have been labelled as the disengagement norm, and the norm of active aging, respectively (de Paula Couto et al., 2022).

The distinction between descriptive and prescriptive Views of Aging has mostly centered on age stereotypes, but it can also be applied to self-perceptions of aging. In the former case, descriptive age stereotypes refer to how older adults are perceived ("Older adults are forgetful") while prescriptive age stereotypes express how they are expected to be ("Older adults should remain active"). In the latter case, descriptive self-perceptions of one's own aging contain beliefs about how one's own aging is or is expected be like ("When I am old, I will be wise"), whereas prescriptive self-perceptions of one's own aging highlight normative standards that a person endorses for their own behavior ("As an older person, I should not become a burden to others or society"; de Paula Couto & Rothermund, 2022).

The descriptive/prescriptive distinction is relevant, not only in terms of content, but also with regard to the type of impact these different types of Views of Aging have on various outcomes: While descriptive Views of Aging shape beliefs and self-evaluations about aging, prescriptive Views of Aging are assumed to predict behavioral tendencies (approach/avoidance), discrimination and experiences of social pressure.

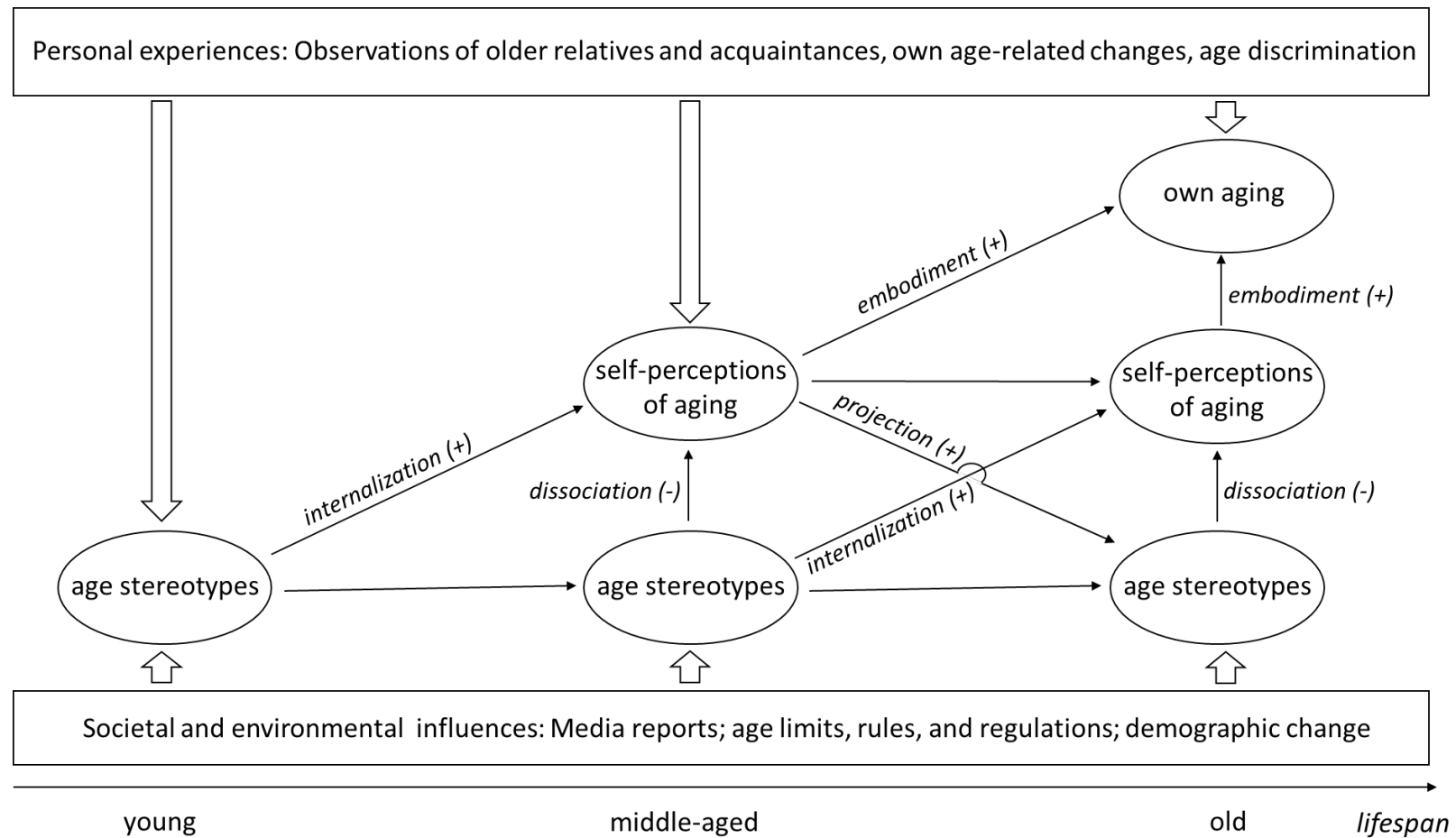
The Relationship Between Different Facets of Views of Aging

The various facets of Views of Aging are dynamically interrelated (see Figure 1). Most research focused on the relation between age stereotypes and self-perceptions of aging, identifying processes of internalization, projection, and distancing. Another important but under-researched question regards how descriptive and prescriptive Views of Aging relate to one another and may co-occur or reinforce each other across contexts.

Bidirectional relationships between age stereotypes and self-perceptions of aging. Beliefs about aging are acquired early in life, even during childhood (Vauclair et al., 2018), starting with general views of aging about old age and older people. These early beliefs are shaped by personal experiences with older people (older family members and relatives, neighbors) or through the cultural portrayal of older people in the media (how older people are described and depicted in fairy tales and children's books). Such narratives remain salient across the lifespan and are associated with how people categorize, perceive and evaluate older people, and with expectations regarding age-appropriate behaviors likewise.

Once these generalized beliefs about old age and aging have been acquired, they can become connected to self-perceptions of aging, in combination with individuals' own experiences of age-related changes. The interplay between age stereotypes and self-perceptions of aging is a complex one, and three different types of processes – internalization, projection, and dissociation – that describe how these components can relate to one another over time are characterized in the following paragraphs.

Figure 1. A lifespan model of how other- and self-related Views of Aging develop across the life span, how they are shaped by societal influences and personal experiences, and how they mutually influence each other, and shape development. Plus (+) and minus (-) signs indicate the direction of proposed links, with plus and minus signs symbolizing assimilative and contrastive relations, respectively.



Internalization. The most important process that is crucial for the impact that Views on Aging ultimately have on development is internalization. The label was introduced into the literature on Views on Aging by Rothermund and Brandtstädter (2003). Internalization describes the process by which age stereotypes taint self-perceptions of aging. Through internalization, self-perceptions of aging become assimilated to age stereotypes, with negative (positive) age stereotypes leading to self-perceptions of aging subsequently becoming more negative (positive).

The process of internalization is assumed to start already before individuals would categorize themselves as old, during midlife, as soon as individuals start to wonder how their own aging might look like. The process of internalization thus is assumed to start at a time during the lifespan when individuals do not yet have accumulated personal experiences with their own age, which makes them particularly susceptible and vulnerable for influences of negative age stereotypes. When growing older, internalization is spurred by an increased self-relevance of age-related information, with self-identification as old being a driver of internalization (Levy, 2009; Rothermund, 2024).

Shaping individuals' beliefs about their own aging is a crucial step in the process via which age stereotypes become internalized and, in turn, shape developmental processes and outcomes. Many studies have demonstrated that once age-related beliefs are applied to the self and influence how individuals perceive their own aging or their expectations about their future as older people, they act like self-fulfilling prophecies (see paragraphs below on embodiment and on the impact of Views of Aging).

Projection. While the path from age stereotypes to self-perceptions of aging is arguably most important for an understanding of how Views on Aging shape development, effects in the opposite direction have also been observed: Several studies reported that more positive (negative) self-views of older individuals predicted that their age stereotypes subsequently also became more positive (negative), which has been labelled as projection (Rothermund & Brandtstädter, 2003; see also Kornadt et al., 2017).

While being of less relevance for explaining how Views of Aging shape development in old age, the process of projection is important when it comes to understanding how beliefs about aging and old age in general can be modified via personal experiences. Part of the variability in age stereotypes apparently is due to individual's own aging experiences, suggesting that our thinking about old age and aging in general can be improved by conditions that allow individuals to age well.

Dissociation. While internalization and projection operate in assimilative ways, with (mostly negative) age stereotypes contaminating or tainting self-perceptions of aging, and (mostly positive) self-perceptions of aging ameliorating general beliefs about old age and aging, the process of

dissociation is characterized by exactly the opposite principle. By distancing oneself from the group of older people, age stereotypes exert a contrastive effect on self-perceptions of oneself as an older person (Weiss & Lang, 2012). Dissociation emphasizes the differences between oneself and the group to which one – nominally – belongs. Endorsing or being confronted with negative age stereotypes thus can enhance self-perceptions of one's own aging (Weiss & Lang, 2012; Weiss et al., 2025).

Although processes of internalization seem to outweigh processes of dissociation in the long run (Kornadt et al., 2023), acknowledging the existence of processes that produce contrastive relations between age stereotypes and self-perceptions of aging is important in order to explain beneficial effects that negative age stereotypes were sometimes shown to have (de Paula Couto et al., 2025; Kornadt et al., 2023; Pinquart, 2002; Weiss et al., 2025). These findings should not be misunderstood in suggesting that it is advantageous to harbor negative age stereotypes; they should warn us, however, against an overly simplistic and limited understanding of the complex interplay between age stereotypes and self-perceptions of aging.

Determinants, temporal characteristics, and moderating conditions of internalization, projection, and dissociation. Although internalization, projection, and dissociation are often proposed to explain the transfer effects between age stereotypes and self-perceptions of aging, systematic empirical investigations of these processes and of the determinants that influence which of these processes dominates in a particular situation are rare. To investigate directional influences, these studies either have to have a longitudinal format (Kornadt et al., 2017; Rothermund & Brandtstädter, 2003) or make use of experimental manipulations (Wirth et al., 2023) to investigate causal effects of age stereotypes on self-perceptions of aging, and vice versa.

In general, all of these processes were shown to operate in a domain-specific way, with age stereotypes in a domain mostly affecting self-perceptions of aging (or vice versa) in the same or similar domains (Kornadt et al., 2012; Wirth et al., 2023). Furthermore, recent studies suggest that whereas internalization is a process that has mostly long-term effects, distancing and dissociation typically operate within a situation and exert their effects across shorter time scales (Kornadt et al., 2023). Another study demonstrated that internalization is strongest when age-related changes are expected in the near future, whereas projection typically operates after having passed these expected transitions (Kornadt et al., 2017).

With few exceptions (Wirth et al., 2023), studies investigating the relations between age stereotypes and self-perceptions of aging have focused on descriptive Views of Aging. Extending this research to prescriptive Views of Aging is thus a clear desiderate for future research. Of particular importance is the question, whether contrastive processes of dissociation and distancing can also

be demonstrated for prescriptive Views of Aging, or whether dissociation is limited to descriptive Views of Aging.

The relation between descriptive and prescriptive Views of Aging. Another important question regards the relation between descriptive and prescriptive Views of Aging. Are these facets completely independent, do prescriptive Views of Aging simply mirror descriptive Views of Aging, or are prescriptive Views of Aging intended to counteract the problems that are ascribed to older people in descriptive age stereotypes? Theorists have mostly endorsed the latter option, assuming that prescriptive Views of Aging serve the function to compensate for assumed problems and deficits of aging. Specifically, the norm of active aging has been characterized as a demand to counteract age-related losses in health or fitness that are part of negative age stereotypes (Katz & Calasanti, 2015). Alternatively, prescriptive Views of Aging might also be understood as providing older people with options to avoid or alleviate problems that are linked to assumed age-related losses: The disengagement norm might be understood as protecting older people against challenges they can no longer fulfill, or as legitimizing withdrawal from difficult tasks.

Although these questions are of eminent theoretical importance, there is hardly any empirical evidence available regarding the mutual interrelations between descriptive and prescriptive Views of Aging. This lack of evidence is probably due to the short time since which measures assessing the endorsement of prescriptive Views of Aging have been introduced in to the field. Systematically investigating this relationship is thus a core desiderate for future research.

The Multidimensional and Context-Dependent Nature of Views of Aging

Views of Aging is not a static or monolithic concept but rather a fluid and context-dependent construct that varies across life domains, cultural settings, and demographic groups. Research has demonstrated that individuals may hold different views of aging depending on the specific domain being considered (Kornadt & Rothermund, 2011). For example, while aging may be perceived negatively in terms of physical health and mobility, it may be viewed positively in terms of wisdom and emotional regulation (Diehl et al., 2021). The multidimensionality of Views of Aging has been shown not only for descriptive age stereotypes but also has been demonstrated for prescriptive views of aging ("age norms"; Wirth et al., 2023).

Conceptualizing Views of Aging as complex and context-dependent is important for our general understanding of Views of Aging, and also for an appropriate understanding of their origins and consequences. Such a perspective emphasizes the need for a multidimensional assessment of Views of Aging, since one and the same individual can hold positive Views of Aging in one domain (leisure) while at the same time holding negative Views of Aging with regard to another domain (work). It also highlights the importance that domain-specific societal views on aging have on the lives of

older people, and of the opportunities that are offered and the barriers that are set for older people to participate in activities, resulting in domain-specific experiences of age discrimination (Voss, Wolff, et al., 2017).

The Relation between Views of Aging and Ageism

Views of Aging must be distinguished from the related but broader construct of ageism (Butler, 1980). Ageism encompasses three components: stereotypes (cognitive), prejudice (affective), and discrimination (behavioral), operating at institutional, interpersonal, and self-directed levels (Kang & Kim, 2022). Views of Aging represent the cognitive substrate – the beliefs, expectations, and perceptions of aging – that can contribute to ageist prejudice and discrimination.

Importantly, however, not all beliefs about old age and aging reflect ageism. First, Views of Aging are not always negative in nature. Although dominated by mostly negative content, age stereotypes can also be positive (assumptions that older people are experienced at work, dignified, caring, or that they deserve respect [de Paula Couto, Huang, et al., 2022; de Paula Couto & Rothermund, 2022]), and these positive beliefs are not part of ageism. It might be difficult to draw an exact line between age stereotypes and ageism, especially when positive attributes are phrased as prescriptive expectations – as it is the case with the norm of active aging, which introduces opportunities for older people to participate in meaningful activities, but also can take the form of a demand that older adults should have or develop qualities of fitness and engagement, regardless of whether they have the resources or motivation to become active. Similarly, even ascribing negative attributes to (some) older people (frailty, inflexibility) can be connected to offerings of special treatment (support, or release from tasks and obligations), which is not ageist, but can become a paternalistic practice when offers are not welcome or are turned into proscriptions and demands to disengage.

Secondly, ageism extends beyond cognition, and also includes emotional reactions (disgust, pity toward older adults) and discriminatory behaviors (employment discrimination, patronizing communication). Although affect and behavior can be influenced and shaped by beliefs, prejudice and discrimination can also have other sources (structural conditions that lead to an underrepresentation of older people and their interests in social media and “big data”; irrational affective responses towards older people that are due to idiosyncratic learning histories). These considerations show that it is important to distinguish between different components of ageism that are independent to some extent, and not to conflate or equivocate different phenomena by using these labels interchangeably.

Conclusion. The concept of Views of Aging provides a comprehensive framework for understanding how individuals and societies perceive aging. By integrating generalized age stereotypes and self-perceptions of aging, descriptive as well as prescriptive stereotypes, Views of

Aging offers valuable insights into the psychological, behavioral, and societal consequences of aging attitudes. Given its dynamic and context-dependent nature, Views of Aging may continue to evolve based on personal experiences, cultural influences, and broader societal narratives. Recognizing the impact of Views of Aging on aging trajectories highlights the importance of fostering positive perceptions of aging through education, policy initiatives, and social interventions aimed at challenging harmful stereotypes and promoting healthier aging experiences.

Measurement of Views of Aging

The measurement of Views of Aging has developed over the decades, reflecting the increasing complexity and multidimensionality of aging experiences. Views of Aging encompasses individuals' perceptions of their own aging process as well as societal attitudes towards older people. Early assessments of Views of Aging often relied on unidimensional tools focusing on either cognitive evaluations or chronological age comparisons, but contemporary approaches highlight the need for multidimensional scales that capture cognitive, affective, and behavioral dimensions (Klusmann et al., 2020). This section explores the primary methods used to measure Views of Aging, distinguishing between descriptive and prescriptive views.

Klusmann et al. (2020) proposed an eight-dimensional taxonomy that provides a comprehensive framework for assessing Views of Aging, including dimensions of awareness (implicit vs. explicit), ecosystem (individual vs. societal views), manifestation (cognitive, affective, physiological, behavioral), complexity (unidimensional vs. multidimensional), dynamics (status vs. process), balance (positive vs. negative), time perspective (past, present, future), and stability (state vs. trait). This framework suggests the necessity of employing diverse assessment tools that capture the multifaceted aspects of Views of Aging, ranging from individual self-perceptions to societal attitudes, and from transient emotional responses to stable cognitive evaluations. Klusmann et al. (2020) emphasized that while existing Views of Aging instruments predominantly assess explicit and cognitive aspects, they often neglect implicit dimensions, such as subconscious biases and affective reactions. Their review of 89 Views of Aging instruments revealed that while many tools effectively measure cognitive facets, they fall short in assessing affective responses.

Measuring Descriptive Views of Aging. Descriptive measures of Views of Aging primarily assess individuals' perceptions and stereotypes of aging. Early tools conceptualized Views of Aging as static and unidimensional constructs. While pioneering, these tools were criticized for neglecting affective and behavioral dimensions of aging and for their limited applicability across age groups (Klusmann et al., 2020). Later measures adopted a multidimensional approach by incorporating both positive and negative perceptions of aging, yet still lacked temporal references and context-specific assessments. In a recent development, Diehl et al. (2021) addressed these shortcomings by focusing

on the perception of age-related gains and losses with their Awareness of Age-Related Change (AARC) scales. Kornadt and Rothermund (2011) introduced a first comprehensive measure of domain-specific views of aging, comprising eight life domains. Their study demonstrated that Views of Aging for the different domains loaded on separate factors, indicating independence of the domain-specific stereotypes. Furthermore, the measure also included separate assessments for generalized (“Older adults are...”) and personalized (“When I am old, ...”) assessments of Views of Aging, which have been shown to reflect measures of Views of Aging that have distinct and sometimes even opposite effects on relevant developmental outcomes (de Paula Couto et al., 2025; Kornadt et al., 2023).

Measurement tools for descriptive Views of Aging primarily rely on self-report scales assessing cognitive and emotional aspects of aging perceptions. Experimental methods, such as implicit association tests and reaction-time tasks, have also been employed to investigate subconscious age biases (Hummert et al., 2002; Kornadt et al., 2016; Tseng et al., 2025). These measures, in particular the IAT, have been criticized for a lack of conceptual and predictive validity (Meissner et al., 2019; Rothermund & Wentura, 2004), and have been shown to be unrelated to explicit measures of Views of Aging (Hummert et al., 2002; Kornadt et al., 2016; Tseng et al., 2025).

The low correlations between implicit and explicit measures may not necessarily be viewed as a limitation of implicit measures. Rather, different measurement modalities might capture complementary processes central to Views of Aging. Implicit measures might reflect automatic associations formed through repeated cultural exposure and early socialization – the “gut feelings” and spontaneous reactions that operate outside conscious awareness. Explicit measures assess, on the other hand, reflect more deliberate, controlled beliefs that individuals can articulate and potentially modify through conscious reflection. In principle, both perspectives could contribute unique information. Implicit measures may better predict spontaneous reactions in social interactions or performance under cognitive load, when controlled processing is unavailable. Explicit measures may better predict deliberate choices, such as engagement in health behaviors or planned preparation for aging.

Taking a sober look at the existing evidence, does not support such a complementary view. While explicit measures of Views of Aging have yielded a host of important findings, including relevant associations to behaviors and developmental outcomes (including behaviors [physical activity], health, longevity, and various indicators of successful aging; for details, see paragraph on “Impact of Views of Aging” below), there is little evidence connecting implicit measures of age stereotypes to relevant developmental outcomes. Previous research has shown that explicit measures in general typically have more robust and consistent associations with relevant outcomes

than implicit measures (Corneille & Gawronski, 2024). Consistent with this pattern, relatively few studies have demonstrated that implicit measures tapping into the endorsement of Views of Aging predict meaningful real-life outcomes.

The assumptions that Views of Aging operate automatically and unconsciously mostly stems from subliminal priming studies that were reported in the early days of research on implicit social cognition (Bargh et al., 1996). These studies typically do not meet strict methodological criteria that have become the norm nowadays; it seems doubtful whether these findings would survive a closer empirical scrutiny of their robustness (see failed replication attempts by Doyen et al., 2012). Some more recent studies obtained reliable immediate effects of age stereotype priming on physical and mental performance (for a review, see Meisner, 2012; related findings were obtained for age-based stereotype threat effects; see Lamont et al., 2015, for a review). These effects of age stereotype priming were found independently of awareness, indicating that unawareness is not a necessary condition for these effects to emerge. Furthermore, these studies typically compared effects of positive vs. negative age-stereotypical primes on performance, without controlling for general effects of valence priming, and none of these studies investigated whether individual differences regarding the endorsement of positive vs. negative Views of Aging modulated the effects. It is thus unclear whether the observed effects are specifically related to age stereotypes.

In sum then, although research on implicit cognition remains valuable (Corneille & Hütter, 2020), research with explicit measures of Views of Aging has proven much more rewarding and has produced a host of robust findings regarding highly relevant outcomes of clear practical relevance. Implicit measures or priming techniques currently play a more limited role, and an important goal for future work is to clarify when and for which outcomes implicit measures add incremental validity beyond explicit assessment.

Measuring Prescriptive Views of Aging. Prescriptive Views of Aging refer to societal norms and expectations about how older adults should behave or be treated. Measures in this category often assess stereotypes related to the roles and responsibilities of older people, such as the expectation for older adults to stay active, or to disengage from active social roles and prioritize altruistic behavior over personal ambitions (Wirth et al., 2023).

The most prominent instrument for assessing endorsement of (ageist) norms has been developed by North and Fiske (2013). The instrument comprises three subscales measuring the norms of *succession*, requiring older adults to give up important social roles and make way for the younger generation, *identity*, requiring older adults not to pretend to be young or assume a younger identity, and *consumption*, requiring older adults to be modest with regard to or refrain from the consumption of scarce resources. These three subscales capture the overarching norm of

disengagement, which expects that older adults should withdraw from public life, and focus on their private lives. A more recently introduced instrument captures endorsement not only of disengagement norms ("Older adults should withdraw"), but also of the norm of active aging ("Older adults should stay healthy"), which expects older adults to stay healthy, fit, up-to-date and engaged, in order to make a contribution and not become a burden to others and society (de Paula Couto, Fung, et al., 2022). Whereas the SIC scales by North and Fiske assess norms targeting older adults that are endorsed by others, the active aging and disengagement scales developed by de Paula Couto, Fung, et al. (2022) focus on norms that individuals endorse for themselves as older adults.

Both scales assess endorsement of prescriptive age stereotypes in a general manner. A systematic assessment of age norms across different life domains is still lacking. First attempts at assessing and manipulating prescriptive Views of Aging, however, already demonstrated that these norms also are represented in a context-dependent way (Wirth et al., 2023). Similarly, domain-specificity has also been demonstrated for perceived expectations of active aging (Pavlova et al., 2023).

The Impact of Views of Aging

Views of Aging have been linked to important consequences for individuals and societies through two primary pathways. First, Views of Aging are associated with how older adults are treated by others, manifesting in discrimination and exclusion across various social domains – what we term other-directed impacts. Second, Views of Aging are linked to outcomes for the individuals who hold these beliefs themselves, influencing their own aging experiences through internalized stereotypes and expectations – what we term self-directed impacts. Understanding both pathways is essential for comprehending the full scope of how age-related beliefs are connected to the aging process.

Other-directed Impacts of Views of Aging

One of the most well-documented other-directed impacts of Views of Aging is age discrimination in various social contexts (Rothermund, Klusmann, et al., 2021; Voss, Bodner, et al., 2018). In the workplace, older employees often face biases that hinder their recruitment, promotion, and retention (de Paula Couto & Rothermund, 2019). Despite legal protections such as the Age Discrimination in Employment Act, older workers continue to encounter stereotypes that label them as less competent, less adaptable, and less technologically proficient compared to their younger counterparts. These stereotypes not only limit older adults' career opportunities but also affect their psychological well-being, leading to decreased motivation and job satisfaction. The "age-stereotype paradox," described by Levy (2017), highlights the contradictory reality where societal aging trends demand a more positive outlook on aging, yet ageist stereotypes persist and intensify.

In healthcare, age discrimination manifests through inadequate care, misdiagnoses, and the under- or over-treatment due to age-based assumptions held by medical professionals (Ouchida & Lachs, 2015). Levy et al. (2020) recently estimated the annual costs of ageism in the health system of the US to exceed \$60 billion. Ouchida and Lachs (2015) indicated that healthcare providers often attribute older adults' symptoms solely to aging, neglecting proper diagnosis and treatment, which can lead to preventable health complications. Moreover, structural ageism in healthcare policies, such as limited access to certain medical procedures based on age, further exacerbates health disparities among older populations. Also, such discrimination reinforces negative societal attitudes towards aging, creating a cyclical pattern where older adults are marginalized, and younger individuals internalize similar stereotypes as they age (Voss, Bodner, et al., 2018).

Beyond direct discrimination, Views of Aging also shape societal narratives about aging in media representations, policy formulations, and public discourse. Ageist portrayals in media often depict older adults as frail, dependent, or technologically inept, further entrenching societal biases (Fraser et al., 2024). Additionally, age-based policies, such as mandatory retirement ages and age restrictions on certain services, reflect and perpetuate negative Views of Aging, limiting opportunities for older adults to contribute meaningfully to society. During the recent pandemic, narratives of aging across 20 countries exacerbated this negative Views of Aging (Ng et al., 2021). These negative portrayals of older people influence public perceptions, fostering an environment where older adults are marginalized and excluded from mainstream social interactions.

Self-directed Impacts of Views of Aging

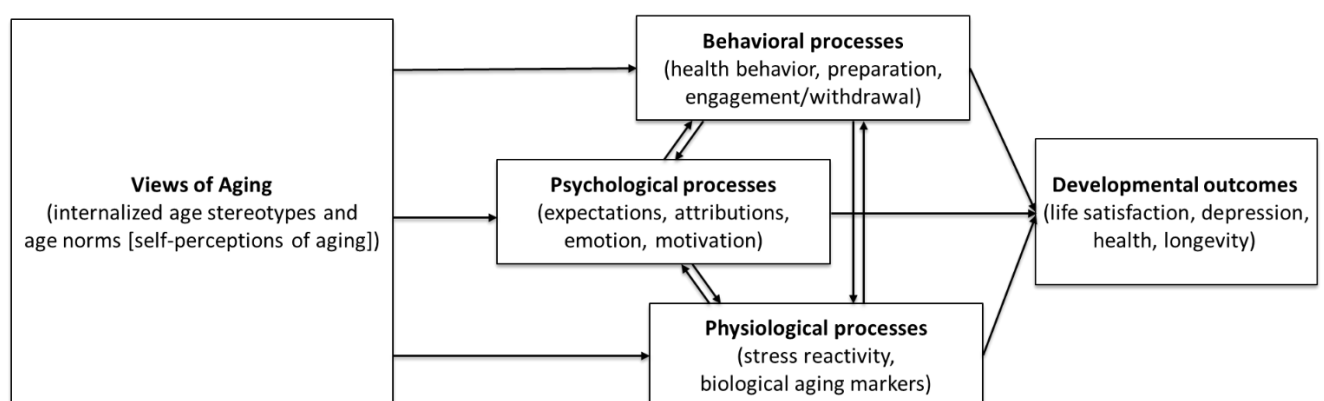
Another important consequence of Views of Aging that is often overlooked in public discourse about ageism and age discrimination relates to the effects of Views of Aging on the person who endorses these age stereotypes and age norms. These effects have been described as self-stereotyping or self-discrimination based on age-related beliefs (Rothermund, 2024).

Before highlighting effects of self-discrimination that are due to internalized age stereotypes and self-perceptions of aging, it should be noted that holding negative stereotypes about old age and aging can have short-term beneficial effects for individuals who endorse these negative age stereotypes (Kornadt et al., 2023; Pinquart, 2002). These benefits reflect the self-enhancing effects of downward social comparisons and distancing oneself from a negatively stereotyped social group (Weiss et al., 2025; Weiss & Lang, 2012). Importantly, however, these beneficial effects have been shown to be only short-lived, whereas in the long run, negative age stereotypes typically have assimilative effects on developmental outcomes, presumably because age stereotypes become internalized and then act as self-fulfilling prophecies (Kornadt et al., 2023; Levy, 2009; Rothermund, 2024).

Effects of internalized Views of Aging affect a wide range of developmental outcomes, including life satisfaction (Kornadt & Rothermund, 2011), depressive symptoms (Rothermund, 2005), health (Tully-Wilson, 2021; Wurm et al., 2017), longevity and mortality (de Paula Couto et al., 2025; Levy et al., 2002; Wurm & Schäfer, 2022), suicidal tendencies (Gendron et al., 2024), the likelihood of experiencing positive/negative life events (Voss, Kornadt, et al., 2017), experiences of age discrimination (Voss, Wolff, et al., 2017), and feeling younger vs. older (Kornadt et al., 2023). In general, compared to holding negative Views of Aging holding more positive Views of Aging predicts more positive outcomes (i.e., better health, longer life expectancy, less suicidal ideation, more positive/less negative life events, less age discrimination, feeling younger). Personalized age norms, that is, prescriptive age stereotypes, also predict relevant outcomes, with endorsement of the disengagement norm predicting worse subjective health, whereas endorsement of the norm of active aging predicts higher life satisfaction and better health (de Paula Couto, Fung, et al., 2022).

A framework for explaining self-directed effects of Views of Aging: Extending Stereotype Embodiment Theory (Levy, 2009). Age-related stereotypes, once internalized, shape an individual's self-perceptions of their own aging and influence their actual aging trajectory. As reviewed above, self-perceptions of aging then can become self-fulfilling prophecies, a process which has been labelled as embodiment (Levy, 2009; see Figure 2). Several different processes are involved in mediating the effects of self-perceptions of aging on development: In a broad taxonomy, Levy (2009) distinguishes between psychological, behavioral, and physiological pathways as potential mediators of the effects of Views of Aging on development. In the following, we will provide a differentiated overview of the processes that are involved in the psychological, behavioral, and physiological pathways of age-based self-discrimination, and we discuss how these pathways might relate to each other.

Figure 2. Three pathways that mediate effects of Views of Aging on developmental outcomes as specified by Stereotype Embodiment Theory (Levy, 2009).



The psychological pathway. Given that Views of Aging reflect beliefs that are represented in a propositional format (Casper et al., 2011; de Paula Couto, Huang, et al., 2022; Huang & Rothermund, 2023), a first and most direct influence of Views of Aging is on *cognition*. Age-related beliefs are linked to our expectations and the way we think about the future: A study by Brothers et al. (2021) showed that Views of Aging are related to the perception of age-related changes, with positive (vs. negative) Views of Aging being associated with perceiving more positive (vs. negative) age-related changes, respectively. Importantly, holding negative Views of Aging also increases the likelihood that negative events and losses are attributed to age (Rothermund, de Paula Couto, et al., 2021; see also Hess et al., 2022). Since attributions to age imply that changes are perceived as inevitable, these attributions also impact behavioral choices to counteract or undo potential losses (see below, behavioral pathway).

Another psychological process that connects Views of Aging with development involves *emotion*. Probably related to the cognitive processes that Views of Aging have on the interpretation of events and causal attributions that are made with regard to age, it is plausible that Views of Aging also shape emotional experiences of aging individuals. Support for this assumption comes from studies showing that positive (vs. negative) self-perceptions of aging increase the likelihood of corresponding daily affect (Neupert & Bellingtier, 2017; Wirth, Kornadt, et al., 2025). Age-based stereotype threat can be seen as another emotional consequence of negative Views of Aging. Salient negative age stereotypes induce fears in older people to confirm these stereotypes, or of being judged and evaluated in line with negative stereotypes (Lamont et al., 2015). These anxieties can block resources and can have a detrimental effect on actual performance (Hess et al., 2003).

Another psychological process linked to Views of Aging concerns *motivation*. Negative Views of Aging portray older people as being incompetent, lacking initiative, and having little control over their lives, which undermines their self-efficacy, and contributes to withdrawal from activities (Park et al., 2022). Furthermore, negative Views of Aging create an impression of life being less pleasurable (characterized by loneliness, frailty, and cognitive decline) or even worthless in old age, which undermines the motivation to develop individual plans for a meaningful life in old age. It may lead to a downgrading of the importance of life domains that are perceived to experience age-related loss and decline (Hess et al., 2024), and ultimately may negatively affect the will to live in old age (Levy et al., 1999). Internalized positive Views of Aging, however, will highlight the positive and unique opportunities in later life and support motivation to actively plan and prepare for this phase of life. These motivational processes can be considered to be a direct precursor of the behavioral effects of Views of Aging that are discussed in the next paragraph.

The behavioral pathway. A second pathway via which Views of Aging become self-fulfilling

prophecies is behavior: Internalized Views of Aging are linked to behavioral choices and to whether or not an aging individual will engage in certain behaviors. Accordingly, more positive Views of Aging are associated with greater engagement in health-preserving behaviors (exercise, diet, medical check-ups; see Wurm et al., 2017, for a review), and with greater preparation for old age (Kornadt & Rothermund, 2014; Kornadt et al., 2015). The connection between Views of Aging and behavior becomes particularly apparent when aging individuals have to cope with life transitions that require a new organization of behavioral routines. Accordingly, de Paula Couto, Ekerdt, et al. (2022) found that more positive Views of Aging predicted increases in engaging in leisure activities immediately after retirement.

Views of Aging are also linked to whether older adults engage with social participation and new technologies. Several studies demonstrated that decisions to retire vs. to continue working are heavily influenced by age stereotypes, with negative Views of Aging predicting a tendency to withdraw from the work domain (Weber et al., 2019). Similarly, a recent study found that negative Views of Aging predict technophobia among older adults (Köttl et al., 2021).

The physiological pathway. Levy (2009) has proposed that physiology is a third pathway via which Views of Aging are linked to important developmental outcomes. The original proposal argued that negative age stereotypes should lead to stronger stress-responses of the organism when being confronted with challenging situations, which, if encountered repeatedly, will increase the risk of cardiovascular events and related health-problems.

The studies that have been conducted to test the proposal that physiological responses are influenced by Views of Aging vary with regard to the physiological indicators that were investigated, and also with regard to the reported results. Sindi et al. (2011) analyzed the relation between self-perceptions of aging on cortisol levels, but did not find a significant correlation. Levy and Bavishi (2016) found that having more negative age stereotypes was correlated with higher levels of C-reactive protein, which is an indicator of inflammation. A study by Meija et al. (2020) investigated Cystatin C, which is an indicator of (deficient) kidney functioning, and found that negative self-perceptions of aging correlated with elevated levels of Cystatin C. Levy et al. (2016) reported that negative age stereotypes predicted higher levels of amyloid plaques and neuro-fibrillary tangles in the brain, which is a marker of Alzheimer's Disease, 20 years after the assessment of age stereotypes.

More recent studies also investigated relations between Views of Aging and biological indicators of aging (epigenetic clocks, indicators of cellular and brain aging). Pietrzak et al. (2016) found that negative age stereotypes predicted shorter telomere length, which can be considered an indicator of cellular senescence, and Levy et al. (2016) report that negative age stereotypes predicted a subsequent decrease in hippocampal volume. McLachlan et al. (2020), however, did not find a

reliable correlation between self-perceptions of aging and telomere length, and reported that correlations between self-perceptions of aging and indicators of brain aging and epigenetic markers of accelerated biological aging vanished after controlling for covariates.

In sum, the currently available findings do not provide a clear picture. First, findings are mostly correlative and do not allow strong inferences regarding the causal direction of the observed relations. Relatedly, it is often unclear how exactly an effect of Views of Aging on physiological, biological, or epigenetic markers of aging should be explained. Obviously, propositional beliefs cannot directly influence physiological states or processes, and some other process is needed to bridge the gap between cognition and physiology. Views of Aging influence emotional responses and behavior (see psychological and behavioral pathways, above), which may exert an indirect effect on physiological processes.

Finally, the pattern of findings is far from being consistent, with some studies finding relations, whereas others do not, even if the same physiological or biological indicators are investigated. Research on the physiological pathway thus is still in its infancy. Most importantly, what is lacking are clear ideas how these effects – if they are observed – should be explained (see Rothermund et al., 2023, for a conceptual framework to explain these relations).

The relation of psychological, behavioral, and physiological pathways. According to the taxonomy proposed by Levy (2009), the psychological, behavioral, and physiological pathways should be considered as distinct (but potentially interrelated) pathways through which Views of Aging may become linked to development. Given the close connection between cognition, affect, motivation, and behavior, and the fact that psychological processes and behaviors have re-percussions in the physiology of an organism, it seems likely that these pathways are interconnected (see Figure 2), with behavior being directly determined by cognition, affect, and motivation, and physiology being influenced by both psychological experiences and behavior.

Thus, rather than considering psychological, behavioral, and physiological pathways as separate and distinct routes of influence, it seems more likely that psychological (cognition, emotion, motivation), behavioral, and physiological indicators reflect different stages of the same, complex pathway that links Views of Aging to developmental outcomes. Such a view that connects psychological, behavioral, and physiological process in a joint perspective is also in line with comprehensive models of aging that aim at understanding the interplay between the different facets of the aging process (Rothermund et al., 2023).

Determinants of Views of Aging

Views of Aging, the beliefs and attitudes toward aging held by individuals and societies, are influenced by factors located at different levels (intrapersonal, social, societal), shaping how aging is perceived and experienced across different contexts and life stages (Wahl & Gerstorf, 2018). Views of Aging play a central role for individual development that reflects influences of both micro-level biological and genetic factors that shape the aging process, but also of macro-level conditions reflecting how aging is perceived and organized at the societal level. Importantly, beliefs about aging that are held and endorsed by aging individuals not just passively reflect objective facts and conditions of aging, they are also actively involved in shaping individual aging processes, and they in turn also influence biological and societal realities of aging. Figuratively stated, Views of Aging are not just in the passenger seat, they are also in the driver's seat of development.

To theoretically understand this active role of Views of Aging, it is important to view development in old age from an action perspective on lifespan development that describes individuals as producers of their own development (Lerner & Busch-Rossnagel, 1981). Beliefs about old age and aging can have diverse effects on action, they can lead to withdrawal and hopelessness, but they can also give rise to active attempts to counteract aging, to compensate or prepare for age-related changes and losses, to capitalize on the liberties and opportunities that are unique for old age, and to change the rules and conditions that govern aging in a society (Job et al., 2018; Requena et al., 2018).

In this section, we will explore how intrapersonal, interpersonal, and structural factors are associated with Views of Aging. We investigate these questions through the lens of an action perspective of lifespan development that takes into account the different contextual layers in which individual development is embedded. For clarity, we use the terms intrapersonal, interpersonal, and structural factors as follows: intrapersonal factors refer to characteristics within the person (personality, health, cognition, and self-regulatory resources), interpersonal factors refer to experiences in interaction with others (family and work relationships, healthcare encounters, and experiences of age discrimination), and structural factors refer to institutional and societal conditions that shape opportunities and constraints (retirement policies, labor market structures, and media representations).

Historical and Cultural Contexts. The macrosystem, which encompasses cultural values, norms, and historical influences, plays a pivotal role in shaping Views of Aging. North and Fiske (2015) conducted a meta-analysis revealing that more negative age stereotypes are prevalent in Eastern societies compared to Western societies due to demographic shifts and intergenerational competition for scarce resources. Voss, Kornadt, et al. (2018) further supported this by highlighting

differences in domain-specific Views of Aging between Eastern and Western cultures, attributing variations to societal expectations and historical legacies (see also de Paula Couto, Ostermeier, et al., 2022). Cross-cultural research reveals that the cultural context fundamentally shapes not only the content of Views of Aging but also the mechanisms through which they operate. Levy and Langer (1994) provided landmark evidence for cultural moderation of stereotype effects in their comparison of Chinese and American older adults. When freed from negative age stereotypes prevalent in the American culture, Chinese older adults – in a context where filial piety and respect for older adults remain culturally central – outperformed American counterparts on memory tasks. This finding demonstrates that cognitive aging trajectories are not solely determined by biological processes but are substantially shaped by cultural Views of Aging that become embodied through the pathways described in Stereotype Embodiment Theory. Further evidence on cultural differences comes from a country comparison of differences in endorsing prescriptive age stereotypes: Comparing five countries (US, Germany, Czech Republic, Hong Kong [China], Taiwan), it was found that endorsement of active aging was highest in the US, and lowest in Taiwan, whereas the reverse pattern was found for the disengagement norm (de Paula Couto, Fung, et al., 2022 [supplement]; Rothermund, 2024). These findings indicate strong influence of cultural views on aging, reflecting also structural differences regarding retirement regulations and financial provision in old age by social welfare systems. The interplay between cultural narratives and historical events establishes a societal backdrop that influences individuals' perceptions of aging, making culture an enduring and dynamic force in the bioecological system (Kornadt et al., 2022).

Policy and Structural Influences. Policies at the exosystem level significantly impact Views of Aging by shaping the social and economic conditions in which individuals age. Wahl and Iwarsson (2007) argued that aging policies related to healthcare, retirement, and social participation can either reinforce or challenge existing stereotypes of aging. For example, policies promoting active aging and lifelong learning contribute to more positive Views of Aging, while ageist employment practices and inadequate healthcare policies reinforce negative stereotypes. Policies that emphasize inclusivity and intergenerational equity have the potential to reshape societal attitudes toward aging, suggesting the exosystem's role as both a constraint and an enabler in the development of Views of Aging.

Health and Physical Well-being. The microsystem, comprising individuals' immediate environments and experiences, significantly influences Views of Aging through health and physical well-being. Stephan et al. (2020) demonstrated that increased physical activity over an 8- to 20-year period led to younger subjective age perceptions, suggesting that health behaviors directly shape how individuals perceive their aging process. Conversely, Wurm et al. (2020) found that critical health events, such as cardiovascular issues, result in older subjective age perceptions, highlighting

the bidirectional relationship between health status and Views of Aging. These findings underscore the importance of health as a dynamic factor within the microsystem that continuously interacts with individual perceptions of aging.

A critical methodological question concerns the directionality of effects: Do Views of Aging predict health changes, or do health changes primarily drive Views of Aging? Longitudinal studies with multiple waves of assessment have addressed this question directly. Sargent-Cox et al. (2012) demonstrated using cross-lagged panel analyses that Self-Perceptions of Aging predict later health outcomes significantly more strongly than health predicts later Self-Perceptions of Aging. This asymmetry supports the causal priority of Views of Aging in shaping health trajectories, although bidirectional influences certainly operate. These findings have important implications. Views of Aging represent potentially modifiable risk factors that precede health decline, suggesting promising intervention targets for health promotion.

Age Group Differences. A prominent factor in research on differences in Views of Aging regards the effects of age. Personal experiences with the aging process become incorporated in personal Views of Aging via processes of projection (Kornadt et al., 2017; Rothermund & Brandtstädter, 2003), that is, inferring attributes of a group to which one belongs from personal attributes. Accordingly, several studies documented that Views of Aging become more positive and more complex with advancing age (de Paula Couto, Ostermeier, et al., 2022; Kornadt & Rothermund, 2011; Rothermund & Brandtstädter, 2003), indicating that at least on average, actual experiences with age are more positive than what cultural stereotypes suggest, leading eventually to an age-related positive shift in generalized stereotypes. With respect to prescriptive age stereotypes, growing older is associated with a general increase in the endorsement of age norms (de Paula Couto, Fung, et al., 2022). Age trends were slightly different for active aging and disengagement, with endorsement of active aging reaching a peak around the age of 70, whereas endorsement of the disengagement norm was found to show a linear increase until the oldest age group (de Paula Couto, Fung, et al., 2022).

Given that most of these studies used cross-sectional designs for assessing age group differences in Views of Aging, it cannot be ruled out that the effects reflect a mixture of age-related and cohort differences, reflecting differences in socialization. Older generations typically have grown up under conditions in which life expectancy was lower, the health status of older people was much worse than it is nowadays, and older people typically lived with and were supported by their families. Under these conditions, older people held different roles than they do nowadays, and also showed stronger signs of wear and tear. More research is needed, employing longitudinal or cross-sequential designs, in order to disentangle cohort and age effects in Views of Aging.

Individual and Intrapersonal Differences. At the core of the bioecological model lies the

individual, whose unique characteristics and experiences shape Views of Aging. Wahl and Gitlin (2007) emphasized that individual differences in personality, cognitive styles, and life experiences contribute to diverse perceptions of aging. For instance, individuals with higher levels of openness to experience are more likely to hold positive Views of Aging, while those with neurotic tendencies may exhibit more negative aging perceptions (Moor et al., 2006; Park & Hess, 2020). Furthermore, personal control beliefs influence how individuals perceive and respond to aging-related challenges (Park et al., 2020), highlighting the psychological underpinnings of Views of Aging.

Outlook on Future Trends

The study of Views of Aging (Views of Aging) has evolved significantly over the past few decades, shedding light on the complex ways in which aging perceptions shape individual experiences and societal structures. While considerable progress has been made in understanding the psychological, behavioral, and social consequences of Views of Aging, there remain several critical gaps that future research should address. This section outlines key areas where further inquiry is necessary, emphasizing the development of Views of Aging across the lifespan, theoretical advancements, improved measurement tools, cultural differences, everyday experiences of Views of Aging, and the intricate relationship between Views of Aging and ageism. Also, emerging domains such as cognitive aging and technology use, as well as the development of interventions to modify Views of Aging, will be explored.

Development of Views of Aging across the Lifespan

Views of Aging are shaped throughout an individual's life course, influenced by cultural, societal, and personal experiences. These views develop as early as childhood, when individuals are exposed to aging-related stereotypes and cultural narratives about old age (Rothermund & de Paula Couto, 2024). Through adolescence and adulthood, personal encounters with older adults, as well as media portrayals, further solidify these conceptions, contributing to either positive or negative perspectives on aging (Klusmann et al., 2020). As individuals age, their own experiences with physical, cognitive, and social changes further refine their Views of Aging, leading to either a reinforcement or transformation of earlier beliefs (Rothermund & de Paula Couto, 2024). A lifespan perspective on Views of Aging emphasizes that these perceptions are not static; rather, they are dynamic and subject to change due to personal experiences, social interactions, and broader cultural shifts.

Methodological considerations regarding the study of changes in Views of Aging. Despite growing recognition of Views of Aging's fluid nature, much remains unknown regarding the precise

mechanisms through which Views of Aging are acquired and evolve from childhood through old age. A major reason for the lack of knowledge about changes in Views of Aging and their antecedents is the fact that most studies investigating determinants of Views of Aging comprised just a single measurement occasion in which Views of Aging and their presumed antecedents were assessed. These studies cannot capture the dynamics of Views of Aging appropriately for several reasons. On the one hand, a single assessment of Views of Aging captures only between person variance which is different from intraindividual change, and captures these changes only indirectly, if at all. A second reason why cross-sectional studies do not provide convincing evidence regarding the antecedents of changes in Views of Aging (nor of its consequences) is that the causal direction of relations between Views of Aging and reference variables is ambiguous with just a single measurement occasion. Inferences regarding the direction of influence always rest on assumptions regarding causal precedence that go beyond the actual evidence. To study the temporal dynamics of Views of Aging, and of the determinants that predict changes in Views of Aging, studies with multiple measurement occasions are needed that map actual change to variance in other factors that precede these changes. These studies can either span longer time intervals, but can only also assess variability within or across days. Alternatively, experimental manipulations of factors assumed to precede changes in Views of Aging also allow strong conclusions regarding causal influence (Wirth et al., 2023).

Future studies should examine how early socialization experiences influence the formation of age-related beliefs and how these perceptions change over time in response to life events such as career transition, health deterioration, and caregiving responsibilities. Longitudinal research that follows individuals over decades would provide valuable insights into these dynamic processes and help to identify key turning points that either reinforce or challenge existing Views of Aging.

Individual experiences as predictors of changes in Views of Aging: The role of projection processes. One particularly important aspect of lifespan development in Views of Aging research is understanding the bidirectional influence between personal experiences and societal narratives. While individuals internalize age-related beliefs from their social environment, they also actively construct and modify their own Views of Aging based on personal encounters with aging. This process of inferring group characteristics from self-related attributes and experiences has been labelled as projection (Rothermund & Brandtstädter, 2003; see also Kornadt et al., 2017). Exploring this reciprocal relationship will provide deeper insights into how individual agency interacts with cultural influences, ultimately shaping aging experiences.

Of particular interest in this regard is the question which individual attributes and experiences are projected onto which social groups. Given that individuals typically belong to numerous different

social groups, individual attributes and experiences can in principle be ascribed to different social categories (based on gender, ethnicity, nationality, occupation). Age is just one of these categories, and not all individual characteristics will be translated into personal beliefs regarding one's age group. Based on theoretical considerations regarding projection processes, it seems highly likely that experiences that are attributed to one's age are also highly likely to influence one's beliefs about old age and aging. At this point, it has to be noted, however, that attributions to age are themselves already influenced by personally endorsed views on aging. For example, in a study by Rothermund, de Paula Couto, et al. (2021), it was shown that recently experienced losses were more likely to be attributed to age if the individual held corresponding negative age stereotypes before the occurrence of the loss. In sum, these processes can explain why age stereotypes are hard to change: If experiences that confirm existing age stereotypes are preferably attributed to age, then these stereotype-confirming experiences also have a higher chance to be used for projection.

The decisive question thus is, how stereotype-inconsistent experiences can lead to changes in age stereotypes. This question is not specific for the age category, and has been investigated for various social categories, with most research attesting to the idea that stereotypes are highly resistant to change because stereotype-inconsistent evidence is typically seen as an exception from the rule, and is attributed to other factors (circumstances or other categories) or is deflected from the overall stereotype by spontaneously generating subcategories (a process labelled as "subtyping" or "subgrouping"; Kunda & Oleson, 1995; Maurer et al., 1995).

In sum, while processes of internalization have been well documented, and are well understood, the question of projection of age-related information from the individual to the stereotype remains a somewhat elusive phenomenon, especially when it comes to the incorporation of experiences that are opposed to the original age stereotype. Currently, we can only speculate how this process, for which some evidence has been accumulated (Kornadt et al., 2017; Rothermund & Brandtstädter, 2003), operates. One possibility is that in a first step, individual experiences that contradict negative age stereotypes (occupational success, falling in love, having creative ideas) are used to distance oneself from the group of older people, leading to self-enhancement and feeling younger than one's age due to downward social comparisons (Kornadt et al., 2023; Weiss & Lang, 2012). Still, due to the fact that older people are used as a reference category for these self-enhancing comparisons, these experiences become linked to beliefs about oneself as an – exceptional – older person. With time, these impressions of oneself as an older person will then permeate other-related Views of Aging as well via processes of projection proper.

No direct empirical evidence has been reported to support this theoretically derived chain of processes yet. More research has to be conducted that investigates the mediating processes and

conditions under which stereotype-inconsistent evidence can become linked to conceptions of oneself as an older person and projected onto more general age stereotypes.

Advancing measurement tools for Views of Aging

The measurement of Views of Aging has evolved significantly, requiring methods that reflect their multidimensional, domain-specific, and multidirectional nature across various age groups and targets.

Intersectionality – assessing Views of Aging referring to specific subgroups of older people.

Most previous measures of Views of Aging target older people in general, treating the group of older people as homogeneous, which is a highly simplified picture of how Views of Aging are actually represented. As early as in 1972, Susan Sontag emphasized the claim that evaluations and stereotypes of older women and older men differ in important ways (Sontag, 1972). Taking up this claim, Kornadt et al. (2013) investigated Views of Aging about older men and women in different life domains. Contrary to Sontag's expectations, their findings suggested that older women are typically evaluated more positively than older men in most domains (even with regard to appearance), although they did not compare evaluations of older men and women with views about middle-aged men and women to assess age-related differences in evaluations (see below). Research by Mary Hummert also revealed that Views of Aging are organized as separate prototypes referring to different types or subgroups of older people (Hummert, 1990).

These studies highlight the need to assess Views of Aging for specific subgroups of older people, a topic that has gained a lot of interest also in the domain of aging research recently under the label of "intersectionality". It is highly likely that separate age stereotypes are activated for different subgroups of older people that are defined by combinations of age with other social categories, for example older men vs older women, rich vs. poor older people, young-old (third age) vs. old-old (fourth age) people, older people with different ethnicities or with vs. without a history of migration, etc. Developing or adapting measurement tools to assess Views of Aging for these specific subgroups of older people, is a necessary step to better understand the stereotypes according to which specific older individuals are perceived, and what is expected from them.

Prescriptive Stereotypes – assessing views of how older people should be. By far the largest share of the Views of Aging literature focused on assessing descriptive age stereotypes, that is, measuring how older people are seen and evaluated. More recently, the focus has been expanded to include research on so-called prescriptive age stereotypes ("age norms") capturing how older people should be, and what is demanded or expected from older people (de Paula Couto, Fung, et al., 2022; North & Fiske, 2013). Based on theoretical considerations, de Paula Couto and Rothermund

(2022) argued that prescriptive and descriptive age stereotypes reflect different constructs, and should not be assumed to capture similar beliefs and content. Since research on the relation between descriptive and prescriptive Views of Aging is basically not existent, these claims still lack empirical support. The development of measures to assess these prescriptive age stereotypes is also much less developed than assessment tools for descriptive age stereotypes. In particular, while context-specific (Kornadt & Rothermund, 2011), and gender-specific (Kornadt et al., 2013) measures of descriptive age stereotypes have been developed and validated, systematic approaches to assess domain-specific or subgroup-specific prescriptive age stereotypes are still lacking (but see Wirth et al., 2023). Development of scales that systematically capture domain-specific and gender or age-group specific prescriptive age stereotypes is thus an important desiderate for future research.

Absolute vs. relative evaluations of older people. With very few exceptions, measures of Views of Aging just capture how older people are seen or evaluated. Although this is an intuitive approach if one is interested in beliefs about older people, one should be careful in interpreting these scales as expressing something that is *specific* for the group of older people. Without a reference group, it could simply be that all groups of people are evaluated in a similar way, so that attributes ascribed to older people are just the same as would also be ascribed to younger people or to people in general, without specifying their age. To identify evaluations and beliefs about older people that are specific for this age group, one has to compare the results for this target group with a reference category (e.g., young people, middle-aged people, or just people). Only the contrast between ratings for older people and a reference group that is not old is informative regarding information that is specific for the category "old". Obviously, the choice of the reference category will also influence the results of such comparisons. For example, the reference category "young" might activate stereotypes relating to this specific age group, so that the contrast between the two age groups reflects not just stereotypes of "old" but also of "young" people (see our discussion of the old/young IAT in the next paragraph). This confounding makes it difficult to determine which aspects of the evaluation are truly specific to older people versus which aspects simply reflect the inverse of youth stereotypes. To avoid this issue, we thus recommend to use an age-neutral reference group when assessing stereotypes of older people. An age-neutral reference group is one that does not evoke age-specific stereotypes—for instance, "people" or "people in general" without any age specification. By comparing evaluations of "older people" with evaluations of "people in general," researchers can observe attributes that are specifically ascribed to the older adults as a function of their age, rather than attributes that emerge from contrasting one age-stereotyped group with another.

Direct (explicit) vs indirect (implicit) assessments of Views of Aging. A critical issue regarding the assessment of stereotypes for social categories regards the tendency to respond in a biased or socially desirable way, which is especially likely for socially sensitive topics and categories (minorities).

Responses to explicit questionnaire items can easily be controlled and modified to conform with social norms and self-presentational concerns. Possible biases due to impression management tendencies are also relevant with regard to the assessment of age stereotypes. Although social awareness and condemnation of ageism is much less prominent than for other forms of discrimination like sexism or racism (Martin & North, 2022), participants might also tend to conceal their true attitudes about old age and older people and respond more positively than their actual beliefs would suggest, leading to positively biased results on standard measures of age stereotypes.

Another caveat in the assessment of age stereotypes regards the conscious accessibility of the respective beliefs and evaluations to those who hold them. Some stereotypic beliefs may be rooted in past experiences that are no longer directly accessible but may still influence spontaneous behavioral thoughts and gut feelings when being confronted with older people or when thinking about old age and aging (Greenwald & Banaji, 2017). Thus, although people who are being influenced by these negative age-related attitudes may not be consciously aware of these influences, and might not answer explicit questions with ageist responses, their thoughts and spontaneous affective reactions might still be influenced by these factors.

To overcome strategic tendencies of impression management and lack of accessibility of the sources of age stereotypes, research has used indirect measures that are less controllable and that claim to also capture attitudes and beliefs of which participants themselves might not be fully aware. The most prominent approaches to assess Views of Aging indirectly are the Implicit Association Test (IAT; Greenwald et al., 1998), semantic and affective priming measures (Wentura & Rothermund, 2014), or indirect measures of belief endorsement (the Propositional Evaluation Paradigm, PEP; Müller & Rothermund, 2019). Reported results with these measures provide a heterogeneous picture, with some Implicit Association Test studies attesting to strong implicit negative age stereotypes (Hummert et al., 2002; Nosek et al., 2002), whereas an affective priming study reported evidence for positive associations to the concept old (Chasteen et al., 2002). The largest group of studies found evidence for context-specific age stereotypes with mixed valence (Casper et al., 2011; Huang & Rothermund, 2023; Kornadt et al., 2016).

Part of the heterogeneity of these findings is due to the difference in measures, some of which have been criticized for assessing different constructs (the standard old-young Implicit Association Test has been shown to reflect salience asymmetries rather than implicit attitudes; Rothermund & Wentura, 2004). By far the clearest pattern was found for indirect measures tapping into the spontaneous endorsement of propositional beliefs, reflecting a similar pattern of separate, context-dependent age stereotypes that was also found with explicit measures, although correlations between implicit and explicit assessments were typically found to be low or non-existent (de Paula

Couto, Huang, et al., 2022; Kornadt et al., 2016). Measures that were developed to assess simple associations between concepts (e.g., old – frail) on the other hand were shown to produce either unreliable effects (simple associative priming, see Kidder et al., 2018) or construct-irrelevant variance (old-young IAT; Meissner et al., 2019).

Although promising at first sight, the introduction of indirect measures has not yet “revolutionized” the field of stereotype research, contrary to the bold claims that were made in this regard (Greenwald & Banaji, 2017). Until now, the most promising results in assessing age stereotypes indirectly were made with the Propositional Evaluation Paradigm (PEP, Müller & Rothermund, 2019; see de Paula Couto, Huang, et al., 2022). The main advantage of this indirect assessment method is that it allows researchers to assess spontaneous endorsement of stereotypic statements with a clear meaning and a high degree of complexity. Specifically, these measures have the potential to capture context-dependent age stereotypes, age stereotypes referring to specific subgroups of older people, and they can also distinguish between descriptive and prescriptive age stereotypes. Future research aiming at a systematic comparison of direct (explicit) and indirect (implicit) assessment methods of Views of Aging would profit from an indirect measurement approach that allows for similar levels of complexity and matching content in both measures, because otherwise a comparison is hardly possible.

Cultural differences in Views of Aging

Views of Aging are not universal; they vary significantly across cultures due to differences in demographic composition, social policies, and historical contexts. Understanding these variations requires addressing both cultural differences and methodological challenges inherent in cross-cultural comparisons.

Ng and Lim-Soh (2021) found that Views of Aging are shaped by country-level factors, including social welfare system, relative age disadvantage in education and financial resources, and prevailing social attitudes toward aging. Studies comparing multiple countries emphasize that intergenerational relationships and cultural norms influence whether aging is viewed positively or negatively (for a review, see Kornadt et al., 2022).

Cultural context is crucial in shaping Views of Aging, yet comparative research on this topic remains limited. Future studies should systematically examine country-level differences in Views of Aging and their underlying determinants, including demographic composition, social welfare systems, economic conditions. For instance, countries with strong intergenerational support systems and collectivist values may foster more positive Views of Aging compared to societies with individualistic orientations that emphasize youth and productivity. Understanding these variations is

helpful for developing policies that better support aging populations in diverse cultural settings.

A major problem in conducting studies that allow for a systematic analysis of country-level variables (income levels, demographic composition, value systems, individualism/collectivism) is that these studies require a large number of participating countries. Estimating effects of country-level variables typically requires that at least >20 countries are included in the study (Bryan & Jenkins, 2016). Only few data sets are available that have included the necessary numbers of countries. Typically, these multinational studies, capture only very global measures of Views of Aging (a simple measure of positive/negative general age stereotypes), which do not adequately cover the complexity of the construct, and are thus extremely limited in deriving meaningful relations between Views of Aging and cultural or country-level variables. A highly important desideratum for cross-cultural research on Views of Aging would thus be to set up a study that contains both, a large number of different indicators of Views of Aging, capturing the various dimensions of the construct (descriptive and prescriptive age stereotypes in different life domains for different relevant subgroups of older people) across a large number of countries.

Investigating cultural variations in Views of Aging will also require the development of cross-culturally valid measurement tools. Many existing Views of Aging scales have been developed in Western contexts and may not adequately capture the perspectives of individuals from non-Western cultures. Ensuring cultural sensitivity in measurement approaches will enable more accurate cross-national comparisons and a deeper understanding of the global diversity in aging perceptions. Moreover, establishing measurement invariance across cultural and age groups is essential for valid cross-national comparisons. Without evidence of invariance, observed differences in Views of Aging may reflect variations in interpretation or response styles rather than genuine cultural differences in how aging is perceived. Future lifespan-oriented research should therefore incorporate tests of measurement invariance to ensure conceptual and metric equivalence across diverse populations. Addressing these methodological challenges – including the development of culturally sensitive instruments and the testing of measurement invariance – will facilitate more comprehensive research on how cultural frameworks influence Views of Aging and inform interventions that promote positive views of aging worldwide.

Views of Aging in everyday life: A dynamic perspective

Most research on Views of Aging has focused on between-person differences, with few studies investigating its fluctuations within individuals over time. Experience sampling, daily diary methods, and momentary assessment approaches offer insights into how Views of Aging influence daily experiences. Several studies showed that everyday ageism affects both mental and physical health (Allen et al., 2022; Bodner et al., 2021) and that internalized age norms affect everyday behaviors

(Wirth, de Paula Couto, et al., 2025). To fully understand Views of Aging's role in aging, future research should explore the situational contexts in which Views of Aging are experienced, the dyadic influences of Views of Aging in relationships, and the mechanisms through which Views of Aging shape decision-making and well-being over time (Chasteen et al., 2021).

Understanding the moment-to-moment variability in Views of Aging can provide valuable insights into how aging perceptions shape daily behaviors and interactions. For instance, how do different social encounters influence Views of Aging? Are older adults more likely to experience negative Views of Aging in ageist environments? How do positive interactions with younger individuals buffer against negative aging perceptions? Another highly important topic regards how Views of Aging influence not only individual behavior and well-being in everyday life, but also how it affects the interactions with other people. From a theoretical perspective, it seems evident that concordance or discordance in aging-related beliefs and attitudes will have a marked effect on daily interactions of older couples, possible mediated by their effects on shared activities (Pauly et al., 2024). By investigating these questions, researchers can identify actionable strategies to promote healthier Views of Aging in daily life.

Relationships between Views of Aging and ageism

Views of Aging and ageism are interrelated but distinct. Ageism encompasses stereotypes (cognition), prejudice (emotion), and discrimination (behavior) related to age, affecting both younger and older adults (Kang & Kim, 2022). It manifests in three main directions: institutional ageism, interpersonal ageism, and self-directed ageism. Negative Views of Aging contribute to ageism by predisposing individuals to age discrimination, influencing how they perceive, evaluate, and behave toward older adults (Allen et al., 2022). Additionally, they reinforce self-directed ageism, leading to the internalization of negative stereotypes, inactivity and resignation in response to aging-related losses (Voss, Wolff, et al., 2017; for reviews, see Rothermund & de Paula Couto, 2024; Voss, Bodner, et al., 2018). Moreover, negative Views of Aging might "normalize" ageism, reducing societal sensitivity to ageist behaviors and preventing collective action against age discrimination (Martin & North, 2022). Of particular importance in this regard is the influence of prescriptive age stereotypes on perceived ageism; it seems straightforward to assume that endorsing expectations of disengagement or that older adults should not become a burden will reduce the sensitivity for ageist practices and behaviors. Intersectionality further amplifies ageism, as gender, race, and socioeconomic status shape the way individuals experience and respond to aging-related biases.

Future research should examine how negative Views of Aging predispose individuals to perceive, evaluate, and behave toward older adults in biased ways. Also, studies should investigate whether negative Views of Aging reduce sensitivity to age discrimination, preventing individuals from

recognizing and challenging ageist behaviors. Understanding these dynamics will be critical for developing interventions aimed at combating ageism and fostering a more age-inclusive society.

Emerging domains: Cognitive aging and technology use

Views of Aging influence various emerging domains, particularly in cognitive aging and technology use. Negative Views of Aging about cognitive decline can undermine older adults' confidence in their abilities, leading to disengagement from intellectually stimulating activities. Future studies should explore interventions that mitigate these effects, such as cognitive training programs that incorporate positive aging messages.

Similarly, Views of Aging play a crucial role in shaping attitudes toward technology. Ageist stereotypes embedded in technology design can hinder older adults' adoption of digital tools, reinforcing the digital divide (Mannheim et al., 2023). For example, the assumption that older adults are only interested in healthcare technology may prevent them from using tools for other purposes, such as entertainment or social connection, thereby worsening the digital divide. Also, Older adults who perceive aging as decline may be less willing to adopt new technologies, limiting their access to digital resources and social connections. Thus, investigating strategies to enhance technology acceptance among older populations will be essential for promoting digital inclusion.

Interventions to modify Views of Aging

Developing effective interventions to reshape Views of Aging remains both a critical goal and a complex challenge for future research. The accumulated evidence documenting harmful effects of negative Views of Aging on health, cognition, and longevity creates an ethical imperative for intervention development. However, the multifaceted nature of Views of Aging – spanning explicit and implicit processes, descriptive and prescriptive dimension, individual and societal levels – requires differentiated intervention strategies.

Differential Intervention Approaches by Target

Self-Directed vs. Other Directed Views. Interventions must distinguish between changing individuals' self-perceptions of aging vs. changing societal age stereotypes. Individual-level interventions targeting self-perceptions typically employ psychoeducation, cognitive restructuring, and experiential exercises. For example, educational programs can challenge deterministic beliefs about aging, present counter-stereotypic examples of successful aging, and encourage reappraisal of age-related changes as opportunities rather than solely losses (Wolff et al., 2014).

Societal-level interventions targeting age stereotypes require broader strategies: media campaigns

presenting diverse, realistic portrayals of older adults; intergenerational programs fostering positive contact (Ng & Lim-Soh, 2021); policy changes that combat institutional ageism; and educational initiatives in schools and workplaces (Kang & Kim, 2022). These approaches recognize that individual self-perceptions are continuously shaped by cultural narratives, requiring intervention at both levels simultaneously.

Descriptive vs. Prescriptive Views. Different dimensions of Views of Aging respond to different intervention strategies. Interventions targeting descriptive Views of Aging focus on challenging stereotypic beliefs through education and counter-examples. Participants learn about heterogeneity of aging, gains alongside losses in later life, and plasticity of aging processes. Contact with older adults who defy stereotypes can directly challenge descriptive beliefs. Interventions targeting prescriptive Views of Aging must address normative expectations and social pressures. This requires critical examination of age norms (e.g. "Should older adults disengage? Must they remain endlessly active?"), questioning their origins and validity, and developing more flexible, individualized standards. Interventions might encourage older adults to resist prescriptive pressures that conflict with personal values and goals, fostering autonomy in navigating aging.

Evidence-Based Intervention Approaches

Educational Interventions. Multiple studies report positive changes in Views of Aging following educational programs. Beyer et al. (2019) conducted a randomized controlled trial comparing exercise programs with versus without an educational component targeting self-perceptions of aging. The combined intervention produced significantly more positive self-perceptions and greater increases in physical activity compared to exercise alone, with effects maintained at follow-up (for similar findings, see Wolff et al., 2014). Importantly, changes in self-perceptions mediated the intervention's effects on physical activity, which is consistent with the proposed pathways linking from Views of Aging to health behaviors. Relatedly, the Aging^{plus} program, a brief educational intervention challenging negative aging stereotypes and promoting positive, realistic self-perceptions, was shown to improve self-perceptions of Aging and increase physical activity (Diehl et al., 2025). These effects demonstrate modifiability of Views of Aging even through relatively brief interventions. Klusmann et al. (2017) demonstrated that strengthening positive self-perceptions of aging enhanced healthy eating behaviors across the lifespan, with effects mediated by social-cognitive variables including self-efficacy and implementation intentions. These findings illustrate how modifying Views of Aging can create cascading effects on health behaviors through multiple psychological mechanisms.

Targeting Mediating Mechanisms. Recent intervention research has begun identifying key mediators that should be targeted to maximize effectiveness. Kang and Kim's (2022) systematic

review identified several promising mediators: age-group identification (fostering positive identification with one's age group), emotional responses to aging (addressing anxiety and fear), purpose in life (cultivating meaning that transcends age-related losses), and flexible goal adjustment (developing adaptive strategies for navigating age-related constraints). Interventions directly targeting these mediators may produce more substantial and sustained changes in Views of Aging.

Challenges and Future Directions

Despite promising initial findings, several challenges remain. First, most intervention studies have relatively short follow-up periods, leaving questions about long-term sustainability of changes in Views of Aging. Second, the optimal timing for interventions remains unclear: Should interventions target midlife, when Views of Aging are crystallizing but still relatively malleable (Miche et al., 2014)? Or should they target older adults experiencing age-related challenges that threaten self-perceptions? Third, individual differences moderate intervention effectiveness. Not all individuals respond equally to Views of Aging interventions, with personality traits, prior experiences, and cultural backgrounds influencing responsiveness (Park & Hess, 2020). Personalized intervention approaches that match strategies to individual characteristics may enhance effectiveness. Finally, and most critically, individual-level interventions occur within societal context that continuously reinforce ageist narratives. Wolff et al. (2018) demonstrated that population-level characteristics (distinct-level aging rates) predict individual Views of Aging, illustrating contextual constraints on individual changes. Sustainable improvements in Views of Aging require complementary efforts at societal levels, changing the cultural narrative and structural conditions that shape individual beliefs from childhood. This necessitates coalition-building across organizations, sustained media campaigns, policy advocacy, and educational system reforms-efforts like Global Campaign to Combat Ageism (<https://www.aworld4allages.org/>) by the WHO globally.

Conclusion

The study of Views of Aging is crucial for understanding how aging is perceived and experienced across the lifespan. By adopting a comprehensive, multidimensional approach, we can better capture the complexities of Views of Aging, emphasizing important distinctions between age stereotypes and self-perceptions of aging, as well as between descriptive and prescriptive Views of Aging, all of which are associated with development in specific ways. A differentiated view is also needed when trying to understand how different facets of Views of Aging mutually influence each other via processes of internalization, projection, or dissociation, and how they come to be "embodied" and shape development. With regard to the latter question, we recommend an action-perspective on

human development, which allows us to understand how Views of Aging are linked to behavioral patterns (approach vs. avoidance, preparation vs. neglect, engagement vs. disengagement) via cognitive, affective, and motivational pathways. Behavior, in turn, then produces more downstream effects on health/illness, longevity/mortality, and their physiological concomitants. Such a differentiated understanding of Views of Aging, their acquisition and development and consequences also provides a solid basis for developing interventions that aim at changing Views of Aging, or at redirecting their effects towards healthier behavior. Further research is needed to provide a more comprehensive picture of the complexity of Views of Aging, their interrelations and the processes that translate Views of Aging into relevant developmental outcomes, and also to develop strategies for effectively combatting ageism in both societal and personal contexts.

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