

Antecedent Mechanisms of Successful Aging at Work

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Abstract

The global workforce is experiencing aging. Successful aging at work plays a crucial role in promoting productivity enhancement, career development, and work value realization among older employees, and has garnered extensive scholarly attention in recent years. Through content analysis of 74 relevant literature pieces, factors influencing successful aging at work can be summarized into four categories: organizational and work environment, adaptive strategies, proactive strategies, and personal characteristics, based on which a comprehensive model of the underlying mechanism is proposed. Future research should pursue more in-depth investigations from three perspectives: exploring the joint application of “structural” factors and interdisciplinary theories, further examining antecedents and mechanisms, and optimizing research methodologies and designs.

Full Text

Antecedent Mechanisms of Successful Aging at Work

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Abstract: The global workforce is experiencing profound aging. Successful aging at work has garnered considerable scholarly attention in recent years due to its critical role in enhancing productivity, facilitating career development, and enabling older employees to realize their work values. Through content analysis of 74 relevant studies, factors influencing successful aging at work can be categorized into four types: organizational and work environment factors, adaptive strategies, proactive strategies, and personal characteristics. Based on this synthesis, we propose a comprehensive model of the underlying mechanisms. Future research should pursue deeper investigation in three areas: exploring

“structural” factors and integrating interdisciplinary theories, further examining antecedents and mechanisms, and optimizing research methodologies and designs.

Keywords: older workers, successful aging at work, antecedent mechanism

Classification: B844: C93

Advances in economic, technological, and medical standards have significantly extended human life expectancy. Coupled with the aging of the baby boomer generation and persistently declining birth rates, population aging continues to intensify globally, making older workers a primary labor source for the foreseeable future. On one hand, aging brings declines in cognition, motivation, and work capacity [?, ?], while older workers face heightened job challenges and stress from increased unemployment risk, reduced training opportunities, and skill obsolescence [?, ?]. On the other hand, older employees possess extensive work experience and clearer self-awareness regarding their conditions and career aspirations, enabling them to actively shape their work environment and adapt to age-related changes [?, ?, ?], thereby creating greater value for organizations. Consequently, enhancing work motivation among older employees and achieving the maintenance, recovery, and growth of their work potential alongside improved performance and well-being has become a crucial direction in organizational and management psychology research [?, ?, ?].

In this context, research on aging at work has expanded considerably over the past decade, with “successful aging at work” emerging as a prominent concept. This concept primarily examines how older workers respond to age-related changes and maintain success in specific work contexts [?, ?, ?, ?]. However, successful aging at work remains a complex and broad concept. Regarding age 界定, while gerontology-focused successful aging research concentrates on individuals aged 60 and above or retired populations, studies in work contexts have not reached a consensus on defining older workers, generally focusing on younger cohorts. Common age thresholds include 55 [?, ?], 50 [?, ?], 45 [?, ?], and 40 [?, ?].

Conceptually, three perspectives define successful aging at work: (1) a comparative perspective, where employees achieve successful aging if they deviate increasingly positively from average developmental trajectories in subjective and objective work outcomes throughout their careers [?, ?]; (2) a person-job fit perspective, defining it as maintaining health, motivation, and work capacity in current and future jobs [?, ?]; and (3) a process-outcome integration perspective, viewing it as the proactive maintenance (or adaptive recovery after decline) of high-level ability and motivation to continue working [?, ?]. These varying age definitions and conceptualizations have led to diverse and converging influences on factors and theoretical explanations.

As research has proliferated, scholars have conducted several reviews. Foreign literature reviews fall into three categories: First, conceptual reviews tracing

the development of successful aging at work and related lifespan development theories to propose definitions and research frameworks [?, ?, ?, ?, ?, ?], which emphasize theoretical guidance but discuss mechanisms primarily through conceptual understanding. Second, reviews of existing empirical research, most notably Zacher et al.'s [?, ?] content analysis of six empirical articles in a special issue of *Work, Aging and Retirement*, though with limited coverage. Third, reviews from specific perspectives, such as Pak et al.'s [?, ?] conceptual review of technology's impact through job design.

Domestic research on successful aging at work remains nascent. Wang et al. [?, ?] first introduced the concept, reviewing its operationalization and linking it to late-career job crafting. Peng et al. [?, ?] provided the first comprehensive review of concepts, measurements, theoretical foundations, and empirical studies, but inadequately examined antecedents and mechanisms. Therefore, addressing these gaps, we review research progress on successful aging at work and its antecedent mechanisms to inform future studies.

Rather than reiterating well-discussed conceptual definitions, measurements, and lifespan developmental psychology foundations, we focus on three aspects: the overall research landscape, influencing factors, and underlying mechanisms. First, we conduct content analysis of 74 closely related domestic and international studies on successful aging at work. Second, we systematically review 37 studies examining antecedents, summarizing the roles of four factor categories—organizational and work environment, adaptive strategies, proactive strategies, and personal characteristics—along with theoretical applications. Third, we propose a comprehensive model of antecedent mechanisms through analyzing these factors' influence processes. Finally, we offer exploratory research recommendations to guide future theoretical and empirical work.

2.1 Systematic Literature Search and Screening Process

To ensure quality and comprehensiveness, we followed the PRISMA guidelines recommended by Moher et al. [?, ?], comprising four stages: identification, screening, eligibility, and inclusion.

Identification: Since the concept originated with Abraham and Hansson [?, ?] [?, ?], we limited the search period to 1995–2022. We searched Chinese databases (CNKI, Wanfang) and international databases (Web of Science, EBSCO, JSTOR) using keywords “工作中成功老龄化,” “职场成功老龄化,” “successful aging at work,” and “successful aging in the workplace.” To avoid omissions, we also combined “successful aging” with “older workers,” “older employees,” “workplace,” “work,” and “organization,” yielding 606 English and 4 Chinese articles.

Screening: We removed duplicates across databases (128 English, 1 Chinese) using Web of Science and CNKI as standards.

Eligibility: Given that successful aging at work spans gerontology, geriatrics,

management, psychology, and organizational behavior, we excluded 349 English and 1 Chinese articles clearly outside these fields after reviewing titles and abstracts. After full-text review, we excluded 60 articles containing search terms but not addressing both successful aging and work domains.

Inclusion: This process retained 71 articles closely related to successful aging at work (69 English, 2 Chinese). Three additional English articles were subsequently added, resulting in a final sample of 74 articles.

2.2.1 Basic Literature Information

To clarify research development trends, we conducted content analysis of the 74 articles, detailing authors' countries, institutions, and research fields chronologically (see Table 1). The term “successful aging at work” has been used for nearly 30 years, with research accelerating over the past decade. Scholars from the United States, Netherlands, and Germany have led this field, conducting extensive explorations. Research field information demonstrates the expansion from traditional gerontology and geriatrics to management, psychology, and labor studies, with future research increasingly situated within organizational and management psychology.

2.2.2 Theoretical Application in Antecedent Research

Focusing on antecedent mechanisms, we examined 37 studies treating successful aging at work as an outcome variable. Rather than detailing specific theories, we extracted theories applied at least twice and compiled representative high-citation studies (see Table 2).

Antecedent mechanism research primarily draws on lifespan developmental psychology and organizational behavior theories. Lifespan developmental theories examine how individuals balance age-related gains and losses throughout life [?, ?]. Three specific lifespan theories are most frequently used: Selective Optimization with Compensation (SOC), Socioemotional Selectivity Theory (SST), and Motivational Theory of Lifespan Development (MTLD). SOC theory is most prevalent, followed by SST. SOC theory explores the effectiveness of selection, optimization, and compensation strategies in promoting successful aging outcomes, focusing on behavioral strategies. SST addresses temporal cognition and motivation [?, ?], primarily applied to examining age-related individual factors. Similar to SOC, MTLD emphasizes behavioral strategies, summarizing control acquisition as primary and secondary control strategies [?, ?], focusing on psychological processes and behavioral choices in workplace contexts.

The most frequently used organizational behavior theories are Conservation of Resources (COR) theory and the Job Demands-Resources (JD-R) model, both concerning resource acquisition among older workers. COR theory examines organizational environmental effects from resource acquisition and protection perspectives, while JD-R analyzes impacts of job demands and resources. Other theories like role theory, organizational support theory, and self-identity theory

primarily explore how general organizational behavior variables (e.g., work roles, organizational support) influence successful aging processes.

Notably, these theories are not applied independently. Researchers increasingly combine two or more theories for comprehensive mechanism examination. Since lifespan developmental psychology often focuses on individual processes while neglecting environmental influences and person-environment interactions [?, ?], integrating lifespan theories with organizational behavior theories within multi-disciplinary frameworks represents an important future trend.

3 Influencing Factors of Successful Aging at Work

Successful aging at work integrates organizational behavior and lifespan developmental psychology, influenced jointly by organizational/work environment factors, age-related personal characteristics, and coping strategies [?, ?, ?, ?]. As a self-regulatory process, coping with aging involves both adapting to changing conditions and actively modifying them. Accordingly, we reviewed 37 antecedent studies to elaborate how four factor categories—organizational/work environment, adaptive strategies, proactive strategies, and personal characteristics—influence successful aging at work, while examining theoretical applications.

3.1 Organizational and Work Environment Factors

Organizational and work environment factors play crucial roles in older workers' successful aging [?, ?, ?]. Research primarily uses resource-related organizational behavior theories to examine structural factors—opportunities and constraints—that facilitate or hinder successful aging.

3.1.1 Job Characteristics Scholars commonly apply JD-R theory and demand-control theory to explain how job characteristics (including content and relational features) predict successful aging. The JD-R framework uniquely distinguishes potential effects of different job characteristics on older workers' motivation and illuminates health impairment processes critical to successful aging. According to JD-R theory [?, ?], job demands involve energy-depleting factors like work overload and role conflict, while job resources alleviate demand-related stress and facilitate development and goal achievement.

Research consistently demonstrates negative effects of job demands on successful aging outcomes. Physical, emotional, and mental demands reduce perceived work ability and motivation to continue working [?, ?] and decrease sustainable employability [?, ?]. For instance, work-family conflict and age discrimination create stress that consumes resources, affecting adaptability, goal setting, and demand management capacity [?, ?].

Conversely, job resources compensate for age-related resource losses and promote successful aging. Key facilitative resources include job control, autonomy,

and social support (supervisor and coworker). Control and autonomy enhance older workers' sense of control by allowing task arrangement and skill selection, while social support reduces age-related stress and discrimination, positively influencing work ability and motivation [?, ?, ?]. Additionally, learning opportunities provide conditions for developing new resources (skills and knowledge), correlating positively with leukocyte telomere length—a biological indicator of successful aging [?, ?]. Notably, job complexity, while representing high demands, is generally viewed as promoting utilization of existing knowledge and abilities and increasing focus on future opportunities [?, ?]. As Sanders and McCready [?, ?] noted based on demand-control models, healthy job design provides opportunities for decision-making, skill variety, and social networking, enhancing support, control, and work ability to achieve successful aging.

3.1.2 Organizational Environment Factors Organizations can motivate older employees and create conditions for development and career success by addressing their distinct needs and providing suitable opportunities and environments. Research focuses on management policies and leadership support, primarily explained through COR theory, career customization theory, organizational support theory, and leader-member exchange theory.

Regarding management policies, human resource management (HRM) policies represent the most studied factor. Most research adopts COR theory's logic [?, ?, ?], positing that supportive HRM policies create growth cycles in resource protection and acquisition, facilitating successful aging. For example, Pak et al. [?, ?] confirmed that adaptive, applicative, maintenance, and developmental HR practices as organizational resources help older workers retain existing or develop new personal resources, positively correlating with work ability and retirement age. Beyond holistic HRM policies, Bal et al. [?, ?] demonstrated based on career customization theory that providing personalized career choices through large-scale career customization enables older workers to align career needs with organizational expectations, enhancing organizational commitment and career success.

Concerning organizational support and leadership, supportive environments that understand employees' needs, goals, and values can alleviate age-related work stress. Cheung and Wu's research [?, ?], grounded in organizational support theory, validated perceived organizational support's positive effects on job satisfaction and successful aging. Unlike COR theory's emphasis on resource acquisition, organizational support theory highlights psychological processes of social-emotional need satisfaction and positive self-concept from organizational support. Subsequently, Cheung and Wu [?, ?] examined leadership levels, confirming through leader-member exchange theory that transformational leadership promotes all dimensions of successful aging (adaptability and health, positive relationships, career growth, goal achievement, and sustained focus), transactional leadership enhances career growth, while laissez-faire leadership negatively correlates with all dimensions.

3.2 Adaptive Strategies

Successful aging requires older workers to adopt adaptive strategies against potential losses in physical, psychological, and career resources [?, ?], focusing on adjusting goals and actions to cope with current age-related losses and work stress, reducing person-environment misfit to maintain healthy development and positive work outcomes.

3.2.1 SOC Strategies While COR theory, widely used in organizational psychology, provides direct theoretical explanation for adaptive strategies [?, ?], SOC theory from lifespan developmental psychology more explicitly specifies how individuals leverage resources against age-related losses, making it the most applied theory in adaptive strategy research.

SOC strategies represent direct application of SOC theory to older workers' aging adaptation. SOC theory summarizes general, dynamic adaptation processes throughout life, crucial for maintaining and regulating declines in physical, psychological, and social reserves. The theory [?, ?, ?] proposes that with age, growth goals decrease while more resources are allocated to maintaining current functioning and managing losses. Three strategies summarize general adaptive behaviors: **selection** involves choosing feasible and preferred goals constrained by age-related plasticity changes; **optimization** entails acquiring, refining, and coordinating resources to achieve selected goals, enriching general reserves; **compensation** employs alternative means to maintain goal pursuit when existing resources prove insufficient. Notably, various combinations of these strategies should emphasize their adaptive nature [?, ?].

SOC strategy research divides into two types: First, qualitative studies exploring SOC application in specific older worker groups. Ng and Law [?, ?] used the SOC framework to summarize how workers over 55 adapt, enriching specific content such as health-constrained priority selection, work/life preference prioritization due to flexibility, and perspective-taking regarding mortality. Second, quantitative studies treating SOC strategies as variables using standardized questionnaires. Numerous studies confirm that synchronized or coordinated use of the three strategies enables effective resource allocation, maintaining focus on work opportunities [?, ?] and positively influencing performance and ability maintenance [?, ?] and adaptation to career changes [?, ?]. Some studies combine SOC with other lifespan theories (MTLD, SST) since all emphasize adaptive lifespan development through goal selection and resource allocation. For instance, Müller and Weigl [?, ?] linked MTLD's secondary control strategies (adapting to environment) to find that SOC use for maintaining coworker relationships promotes organizational citizenship behaviors. Taneva and Arnold [?, ?] integrated SOC and SST, noting SOC strategies enable older workers to effectively address work challenges and pursue growth goals, correlating positively with thriving at work.

3.2.2 Other Adaptive Strategies Other adaptive strategies include job modifications under career adaptation and work survival strategies for protecting late-career resources. Sanders and McCready [?, ?] conducted case studies revealing that older workers adopt modifications like burden reduction, help-seeking, and pace adjustment to accommodate changing work and medical conditions.

For older workers, late-career priorities involve protecting mental and physical resources. Taneva et al. [?, ?] proposed the “surviving at work” adaptive strategy, defining it through SST as a short-term goal-driven behavioral strategy comprising “meeting requirements” and “maintaining status quo” dimensions. This involves limiting work activities and perspectives to conserve resources when facing high demands. Empirical research shows this strategy does not reduce in-role performance but decreases proactivity and extra-role performance [?, ?].

3.3 Proactive Strategies

Older workers are not merely passive recipients of environmental change but active shapers of their environments [?, ?, ?]. Proactive strategies in successful aging emphasize self-initiated, future-oriented actions to achieve person-environment fit or reduce age-related misfit.

3.3.1 Job Crafting Job crafting represents bottom-up job redesign where older workers proactively reshape task, relational, and cognitive boundaries to address aging-related changes and enhance future person-environment fit [?, ?]. Notably, although job crafting is a typical proactive behavior in organizational behavior, scholars like Kooij have integrated lifespan developmental theories with job crafting concepts, making older workers’ job crafting both proactive and adaptive. This integration reflects that proactive strategies for successful aging, like adaptive strategies, constitute self-regulatory processes requiring actions aligned with current physical, cognitive, and motivational conditions to approach or disengage from goals [?, ?]. This distinguishes older workers’ job crafting from general job crafting by emphasizing active adaptation to age-related personal and environmental changes while pursuing future development.

First, **SOC-based job crafting**. Kooij et al. [?, ?] drew on SOC theory’s three functional goals—personal growth, maintenance/recovery, and loss regulation—to propose that older workers should craft job boundaries differently than younger workers. They identified three forms: developmental crafting (growth-focused), applicative crafting (maximizing existing skills), and adaptive crafting (managing losses), all crucial for enhancing work motivation and ability [?, ?].

Second, **MTLD-integrated job crafting**. MTLT theory proposes that individuals achieve functional balance through primary control (influencing environment) and secondary control (adapting self to environment) strategies [?, ?].

Wong and Tetrick [?, ?] extended MTLT to job crafting, mapping task and relational crafting to primary control and cognitive crafting to secondary control. In aging contexts, task and relational crafting help allocate limited resources to important duties and relationships, while cognitive crafting enables altering self-perception to improve work experience consistency when tasks and relationships cannot be changed.

Third, **strengths- and interests-based job crafting**. Kooij et al. [?, ?] emphasized advantages of personal strengths resources. Since abilities and interests evolve over time [?, ?], strengths and interests crafting help older workers leverage resources by aligning task boundaries with their strengths and interests, significantly enhancing person-job fit [?, ?, ?].

3.3.2 Proactive Career Development Strategies Late-career employees experience more age-related personal and work resource losses, facing limited career planning and training opportunities compared to younger workers. Standardized management becomes less effective, necessitating enhanced proactivity and development strategies. Cheung et al. [?, ?] confirmed that developmental proactive behaviors positively influence work efficiency, challenging goal setting, and self-perceived work capacity, securing more career development opportunities. Specific strategies including relationship development, continuous learning, skill expansion, and career management also promote perceived success [?, ?].

3.4 Personal Characteristics

Personal characteristics influence successful aging through age, cognition, motivation, and emotion.

3.4.1 Age Factors Age affects successful aging through chronological and conceptual age forms. Chronological age, the most common measure, reflects declines in physiological, psychological, social, and organizational functions in late career [?, ?]. Research shows chronological age negatively correlates with developmental, promotion, security, and social motives [?, ?] and negatively impacts sustainable employability [?, ?, ?]. However, accumulated experience and self-awareness create heterogeneity among older workers, making chronological age insufficient. Scholars have expanded age concepts to include organizational age, functional age, lifespan age, and subjective (psychological) age, which reflect health, career stage, and family status. These richer, more individualized concepts show more complex relationships with positive work outcomes than chronological age. For instance, organizational age (tenure) negatively relates to continued work ability, subjective age negatively relates to self-esteem, while functional and lifespan ages positively influence work ability and motivation [?, ?, ?].

3.4.2 Cognitive Factors Cognitive decline impairs attention, focus, organization, and planning abilities, hindering successful aging [?, ?]. Future time

perspective shifts from open to limited with age [?, ?]. According to SST [?, ?], limited future time perspective leads to prioritizing short-term emotional goals, negatively correlating with work motives [?, ?]. Conversely, open future time perspective fosters positive, growth-oriented attitudes, promoting adaptability, health, positive relationships, career growth, safety, and sustained goal focus [?, ?]. Given its malleability, research emphasizes open future time perspective's positive role. Notably, as future time perspective reflects subjective time perception, some scholars include it within subjective age [?, ?].

3.4.3 Motivation and Emotional Factors Motivation and identity influence emotional experiences and behavioral choices, promoting or hindering successful aging. Promotion-focused motivation demonstrates proactivity in enhancing person-job fit, positively predicting motivation-related successful aging [?, ?]. Cognitive and emotional identity helps older workers leverage strengths and accept measures to adapt to age-related changes [?, ?]. Effective emotion regulation is crucial for maintaining person-environment fit throughout life. Emotional arousal events—those eliciting emotional responses to work-related people, objects, or experiences—consume limited psychological resources, impeding adaptive emotion regulation [?, ?]. Researchers often combine emotion regulation theory with SST, as SST emphasizes age-related prioritization of emotionally positive and intimate social goals.

4 Integrated Model of Antecedent Mechanisms for Successful Aging at Work

Based on our synthesis of four influencing factor categories, we propose a comprehensive model of antecedent mechanisms (see Figure 1 [Figure 1: see original paper]). Drawing on Kooij et al.'s conceptualization [?, ?, ?, ?], we operationalize successful aging at work outcomes as: (1) ability to continue working, measured by work ability and performance; (2) motivation to continue working, including work engagement and opportunity focus; and (3) health and well-being, encompassing physical health and job satisfaction.

4.1 Mediating Mechanisms

Organizational and work environment factors influence successful aging through adaptive and proactive strategies. For older workers, narrowing skill ranges due to environmental changes necessitate adaptive actions to alleviate stress and maintain performance, such as developing relationships, expanding skills, and managing careers to address aging challenges [?, ?]. Simultaneously, supportive work environments provide resources and conditions enabling older workers to actively manage resources through adaptive or proactive approaches to achieve career success. For example, job control facilitates SOC strategy use to enhance work ability [?, ?], while job crafting interventions stimulate strengths and interests crafting to promote person-job fit [?, ?]. Notably, both strategy types reflect behavioral changes dynamically matching work and personal needs

while adapting to aging [?, ?], thus mutually influencing and jointly promoting successful aging.

Personal characteristics also affect successful aging through these strategies. As physical conditions, cognition, and socioemotional needs change, older workers must implement adaptive or proactive behaviors to integrate resources, address current challenges, and achieve future development, such as autonomously reducing workloads, seeking help, and adjusting pace to maintain performance despite physical decline [?, ?].

4.2 Moderating Mechanisms

Organizational/work environment and personal characteristics not only directly or indirectly affect successful aging but also moderate strategy implementation in three ways.

First, these factors interact to influence successful aging. For instance, age and future time perspective moderate relationships between job resources and work ability [?, ?], while organizational climate for successful aging buffers the negative relationship between age and opportunity focus [?, ?].

Second, interactions between organizational/work environment and personal characteristics affect strategy adoption. Age moderates the relationship between job design interventions and strengths crafting, with older workers better utilizing job design to enhance person-job fit than younger workers [?, ?].

Third, these factors moderate strategy-successful aging relationships. Job complexity moderates the positive relationship between SOC strategy use and opportunity focus [?, ?], while age strengthens the SOC strategy-work ability relationship [?, ?]. Notably, three-way interactions also occur: Weigl et al. [?, ?] demonstrated that age, job control, and SOC strategy use interactively affect work ability, with the negative age-work ability relationship weakest when both job control and SOC use are high.

5 Future Research Directions

We propose future research directions in three areas: emphasizing “structural” factors and interdisciplinary theory integration, continued exploration of antecedent mechanisms, and methodological improvements.

5.1 Emphasizing “Structural” Factors and Interdisciplinary Theory Integration

Successful aging at work originated in gerontology and geriatrics, with organizational behavior scholars primarily using lifespan developmental theories. However, lifespan theories tend to focus on internal developmental processes while neglecting environmental influences [?, ?], whereas individual development depends on social-cultural conditions, groups, and organizations as “struc-

tural” factors, representing a cross-disciplinary, multilevel phenomenon [?, ?]. Scholars from occupational health psychology, work and organizational psychology, and career management have studied extended working lives [?, ?, ?, ?], beginning to combine lifespan and organizational management theories. Yet “structural” elements remain underemphasized, with research focusing more on individual agency than structural interactions [?, ?]. Future research should comprehensively examine structural factors interacting with individual characteristics and behaviors, including social groups (e.g., family), occupational roles (e.g., blue-collar workers), and institutional memberships [?, ?]. Enhanced interdisciplinary dialogue should integrate findings and theoretical perspectives, strengthening joint explanatory power between aging and organizational management theories.

5.2 Continued Exploration of Antecedent Mechanisms

Despite progress, deeper investigation is needed.

At the organizational level, while relationships between management practices, job characteristics, and successful aging have been established, questions remain. First, HRM practices are typically examined holistically, obscuring how specific measures function in optimizing versus maintaining resources. In reality, practices may emphasize one goal or achieve both (e.g., extra leave promoting recovery and learning), and modules may interact synergistically. Since examining system element interactions provides valuable information [?, ?], researchers should investigate specific practices’ independent and joint effects. Second, current research evaluates employees’ perceptions of existing practices, failing to capture how organizations can redesign jobs and implement targeted HRM to effectively enhance successful aging. Future research should emphasize intervention studies evaluating implementation processes and outcomes, exploring how managers can intervene to promote individual successful aging and how these interventions facilitate adaptive or proactive strategies, providing detailed, actionable recommendations. Finally, organizational research must connect to broader environmental contexts. Marcus [?, ?] noted that older workers’ ability and motivation to continue working may be influenced by government policies, legal environments, and industry standards. Researchers should situate organizational factors within social contexts, examining how industry characteristics, national aging policies, and age discrimination affect management practices, organizational climate, and successful aging promotion.

Regarding individual coping strategies, research tends to examine overall effects of adaptive or proactive strategies (e.g., SOC, job crafting). Since actions may have synergistic effects [?, ?], future research should systematically examine and compare mechanisms of different strategy dimensions, explore whether strategy combinations outperform single strategies, and investigate how combinations change with advancing age. Second, most studies measure strategies through self-reports, lacking independent observation and intervention research, thus failing to capture implementation processes, learning mechanisms, specific

barriers or supports, and which strategies are trainable versus inherent. These are critical questions for practical application. Finally, although adaptive and proactive strategies have different goal orientations, they increasingly influence each other. As Kooij [?, ?] proposed, successful aging requires older workers to actively change environments to meet physical, psychological, and environmental challenges. Kooij et al. [?, ?] began integrating both strategies into a self-regulatory framework, suggesting both result from person-job misfit and involve goal engagement/disengagement. When older workers can anticipate misfit changes, they adopt proactive strategies; otherwise, adaptive strategies are used. When perceived control over misfit changes is high, goal engagement occurs; otherwise, goal disengagement follows. This foresight and controllability framework provides a valuable reference for understanding, comparing, and integrating adaptive and proactive strategies.

Regarding personal factors, research has focused on time- and development-related variables. While conceptualized ages have been examined to address chronological age's limitations, two issues require attention. First, subjective age perceptions change with age and relate to important outcomes like work engagement and stress [?, ?]. Future research should validate various subjective age measures and their incremental validity. Second, conceptual ages reflecting health and cognition should be examined not merely as chronological age alternatives but as explanatory mechanisms [?, ?]. Future studies could explore moderating roles, such as how experiential age moderates chronological age's effects on opportunity recognition [?, ?]. Additionally, beyond age, research has examined time-related cognitive, motivational, and emotional regulation variables (e.g., future time perspective) based on lifespan theories. However, these studies are fragmented, hindering comparison of effects and relationships. Some research provides useful models: Zacher and Rudolph [?, ?] showed subjective age predicts job crafting depending on occupational future time perspective. Future research should examine relationships among these time-related characteristics and their joint effects on strategy selection, processes, and outcomes.

5.3 Improvements in Sampling and Methodology

Most international studies sample workers over 55, relatively neglecting mid-career individuals (approximately 35–55). In some industries (e.g., China's internet sector), 35 marks the threshold for older workers. Research shows mid-career individuals experience lower occupational well-being due to increased work-family demands and reduced resources [?, ?, ?]. Rudolph and Zacher [?, ?] note that key successful aging concepts—fertility/concern for guiding the next generation and retirement/continued work motivation—may only emerge in mid-career. Future research should thus focus more on mid-career employees, rigorously examining their characteristics and successful aging trajectories.

Methodologically, first, existing research overemphasizes quantitative methods while neglecting qualitative approaches. Ng and Law [?, ?] noted that qualitative methods excel at inductive exploration of themes and patterns. Given

multiple operational definitions and unsettled measurement scales, future research should emphasize qualitative methods like case studies tracking career trajectories to comprehensively understand successful aging processes.

Second, regarding quantitative designs, successful aging is a dynamic process [?, ?] involving two key questions: (1) how age-related psychological, physiological, and behavioral changes affect outcomes over time, requiring longitudinal tracking to capture within-person changes; and (2) how variable relationships differ across age groups or developmental stages, examining how relationships change with age [?, ?]. Current cross-sectional designs cannot capture these dynamics. Future research should emphasize longitudinal panel studies, experience sampling methods, and hybrid longitudinal designs. While longitudinal designs are advantageous, experimental studies remain ideal for establishing causality, and intervention studies reliably determine strategy effects. However, such studies are scarce. Future research should actively employ experiments and effective interventions to address age-work issues [?, ?]. For example, to determine optimal SOC training methods, systematic comparisons of intervention features are needed [?, ?], including timing, session intervals, participant composition (individual vs. group), and techniques (multimodal, goal-setting, action planning).

Finally, measurement relies heavily on subjective assessments, which cannot objectively capture actual organizational changes in age-related systems or job design [?, ?]. Future research should supplement subjective measures with independent observations, other-ratings, expert job analysis ratings, or archival data. For instance, observations, email communications, and organizational data could measure behavioral responses to external events, or narrative methods could track individual reactions.

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