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Review Article

LeverAge: A European network to leverage the multi-age workforce

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Abstract

Bringing together 150+ scholars and practitioners from 50+ countries, and funded by the European Commission, COST Action LeverAge (https://www.cost.eu/actions/CA22120/) is the first network-building project of its kind in the work and organizational psychology and human resource management (WOP/HRM) aspects of work and aging. Focused on the aging workforce, the Action aims to foster interdisciplinary and multinational scientific excellence and the translation of science to practical and societal impact across 4 years. Based on a research synthesis, we identify five broad research directions for work and aging science including work and organizational practices for a multi-age workforce, successful aging at work, the integration of age-diverse workers and knowledge transfer, aging and technology at work, and career development in later life and retirement. We provide key research questions to guide scientific inquiry along these five research directions alongside best practice recommendations to expand scholarly impact in WOP/HRM.

Keywords: age diversity at work, aging workforce, older adults and workers, age stereotyping and age discrimination, age-inclusive human resource management and practices

In the autumn of 2022, a group of us proposed a grant from the European Commission for creating a COST ("European Cooperation in Science and Technology") Action network. Funded in autumn 2023, the network (titled "A European Network to Leverage the Multi-Age Workforce," or "LeverAge") brings together researchers and practitioners to advance the science and practice of work and aging. As of this writing, COST Action LeverAge (https://www.cost.eu/actions/CA22120/) has burgeoned to include 155 participants from 116 institutions across 42 European Research Area (ERA[1]) countries and eight international partner countries (see Figure 1).[2] The make-up of the COST Action reflects the field of work and aging. 64% of COST Action LeverAge participants are women, and 36% are young researchers and innovators under the age of 40. The network brings together scientists (87%) and practitioners (13%).

Although most COST Action LeverAge participants are scholars with backgrounds in Work and Organizational Psychology (WOP) and/or Human Resource Management/Organizational Behavior (HRM/OB), we are also highly interdisciplinary, with expertise from participants in related fields such as social psychology, cognitive psychology, neuropsychology, developmental psychology, strategic management, occupational health, gerontology, human factors, sociology, and economics. Along the way, during the proposal writing process and in the course of running this nascent COST Action, we gleaned insights into the most pressing research directions and potential avenues for expanding scholarly impact in the science of work and aging. The purpose of this article is to share these insights.

Suggested research directions for work and aging science

In developing the proposal for the COST Action, we conducted a research synthesis to identify five broad topics, derived by systematically mapping research on age in the

[1]The ERA includes all COST Full/Cooperating/Partner Members (https://www.cost.eu/about/members/) and Near Neighbor Countries (https://www.cost.eu/about/strategy/cost-global-networking/). Individuals from international partner countries (https://www.cost.eu/about/strategy/cost-global-networking/) are welcome to join COST Actions with more limited funding to finance their participation in Action activities, compared to COST Full/Cooperating/Partner Member and Near Neighbor Countries.

[2]As of this writing, we are seeking participants from any of the following ERA countries: Armenia, Azerbaijan, Egypt, the Faroe Islands, Georgia, Jordan, Lebanon, Libya, Luxembourg, Malta, Morocco, Palestine, and Syria. Interested participants from these countries should have demonstrable experience in one of the following fields: WOP, HRM/OB, strategic management, social/developmental psychology, cognitive/neuropsychology, occupational health, gerontology, human factors, sociology, or economics.
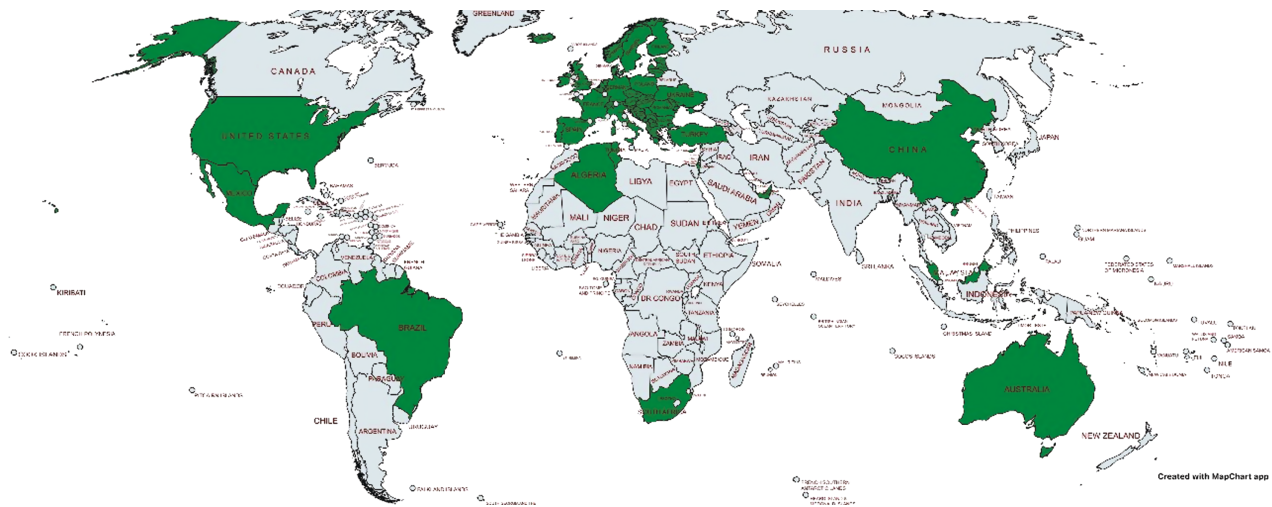
Figure 1. The COST Action LeverAge network: a snapshot in time. Countries currently in the COST Action LeverAge network are highlighted.

workplace in WOP and HRM/OB, and by taking into consideration emerging practical issues in global workplace trends. Specifically, these topics were identified considering the existing and emerging research developed and presented at the Age in the Workplace Meeting (AWM) in 2019. The AWM is a conference series on age in the workplace (running every 2 years since 2011) that brings together the main experts from around the world to share research findings and develop a research agenda to address the aging workforce (e.g., https://www.rug.nl/gmw/psychology/awm2021/). Based on this analysis of research presented at the AWM, we identified five broad research directions for work and aging science, as detailed below. Figure 2 depicts these research directions, which we then used to organize the COST Action structure into five topic-specific Working Groups.

Research direction #1: Work and organizational practices for a multi-age workforce

Aging at work involves many age-related changes in physical, cognitive, and emotional capacities and skills as well as in perceptions and social roles (Ackerman & Kanfer, 2020; Beier et al., 2022). These changes affect work motivation, work behavior and performance, and occupational health and well-being across the working lifespan (Scheibe & Kooij, 2024). Work and organizational practices such as work design, training, and flexible work practices address these issues to sustain healthy and active participation in the workforce in early, middle, and later work life (Tordera et al., 2020). These practices leverage people's strengths over their lifespan, preventing loss of human capital, reducing organizational costs, and creating human capital as workers advance through their careers and roles across their lives. Despite progress in understanding work design for different ages (Fraccaroli et al., 2017), human resource practices for older workers (Boehm et al., 2021; Perek-Bialas & Turek, 2012), and interventions supporting an aging workforce (Truxillo et al., 2015), the science lacks comprehensive knowledge on supportive work and organizational practices for a multi-age workforce and their translation into interventions (Sinclair et al., 2024). In addition, existing research does not account for the diversity among
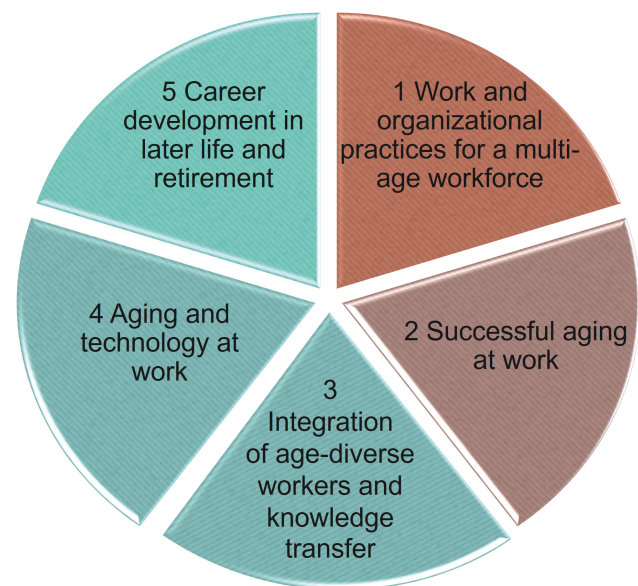
Figure 2. Five broad research directions for work and aging science. The figure's circular structure denotes that all five research directions are of equal importance.

older workers based on constellations of worker characteristics, job types, and personal life circumstances (Beier et al., 2022). As a result, organizations and managers have little guidance on how to enable healthy and productive aging at work (Tordera et al., 2020). This points toward three broad research questions:

RQ1.1: How can work and training be better designed to ensure fit between organizational and employee needs at different life stages to promote performance and well-being of all age groups?

RQ 1.2: What underlying psychological, social, and organizational mechanisms explain the effects of HR management policies, practices, and interventions on the performance and well-being of a multi-age workforce?

RQ 1.3: How should HR policies, practices, and interventions be personalized to accommodate individual differences among aging workers, and what is the participatory role of workers as co-creators of HR policies, practices, and interventions and their implementation?

Research direction #2: Successful aging at work

Successful aging at work refers to the proactive maintenance of, or adaptive recovery to maintain, high levels of ability and motivation to continue working throughout the lifespan (Kooij et al., 2020). This topic involves a broad, life-course perspective, focusing on early-career and mid-life factors and behaviors that help optimize workers' aging. Age-related changes in physiology and health can also affect the ability to function at work. This may require people to take an active role in adapting to these changes (Müller et al., 2016). At the organizational level, age-inclusive practices may prepare employees to successfully navigate a longer working life (Žnidaršič & Dimovski, 2009). At the societal level, collectivistic (group-oriented) and tight (rule-oriented) cultures may create age discrimination (Marcus & Fritzsche, 2016). Yet, despite scientific advances in understanding successful aging at work across micro-, meso-, and macro-levels of analyses, and despite an emerging consensus about what it means to age successfully at work, the field lacks an integrative approach to sustainable workforce aging that bridges the different WOP/HRM/OB disciplines (Zacher, 2015). There is little longitudinal evidence cutting across disciplines and levels on the early-career predictors and long-term consequences of successful aging at work for individuals, groups, and society (Kooij et al., 2020). Taken together, this points toward the following three broad research questions:

RQ 2.1: Which psychological mechanisms (e.g., intellectual stimulation and learning, stress and strain processes) explain the long-term trajectory of indicators of successful aging at work (e.g., work ability, motivation) to inform interventions and practices?

RQ 2.2: How do developmental changes within individuals interact with characteristics of the leader, team, or organization to impact upon and enable successful aging at work?

RQ 2.3: Can we identify long-term individual and organizational strategies that predict successful/unsuccessful aging at work to develop tailored interventions?

Research direction #3: Integration of age-diverse workers and knowledge transfer

Increasing age diversity at work is both an opportunity and a challenge (Burmeister et al., 2021). Workers of different ages bring complementary competencies to the workplace, increasing creativity, and innovation (Li et al., 2021). However, age diversity also entails the risk of age-based subgrouping processes, leading to friction, mutual stereotyping, and discrimination (Abuladze & Perek-Białas, 2018). Research on the effects of age diversity on team/organizational performance is inconclusive and needs further study (Kunze et al., 2013). Although knowledge transfer between employees from different age groups can benefit tacit knowledge and work motivation for workers with diverse ages (Burmeister et al., 2020), knowledge transfer in dyadic age relationships does not always function properly. Even though we know that employee motivation and specific organizational practices and cultural climates increase knowledge transfer success (Burmeister et al., 2018), significant gaps remain, as addressed below:

RQ 3.1: When does discrimination occur, which processes lead from stereotypes to discrimination, and which specific outcomes are affected (e.g., hiring, microaggressions, well-being)?

RQ 3.2: Which individual strategies and leadership-, team-, or organizational-level factors ensure the successful integration of, and knowledge transfer between, age-diverse individuals in teams?

RQ 3.3: How can interventions help enhance the integration of age-diverse workers and knowledge transfer, for example, by changing the cultural narrative of aging and mitigating the effects of age stereotypes?

Research direction # 4: Aging and technology at work

Work in the 21st century is marked by profound changes driven by the technological revolution, digitalization, and the emergence of artificial intelligence (AI). These changes have benefits and costs for the aging workforce. On the positive side, they can prevent physical deterioration by reducing job demands and allowing workers to continue working (Xie et al., 2023). AI also holds promise to match older job-seekers' unique knowledge/skills with open positions that benefit organizations. However, technological changes come with new challenges. Older workers may see less utility in engaging with new technology, due to their more restricted future time perspective (Fasbender et al., 2023). Old jobs are disappearing or being restructured, and new jobs are emerging. These changes are blurring the boundaries between work and private life and can diminish recovery and work–life balance, and in the long run, lead to ill-health and premature retirement (Ackerman & Kanfer, 2020; Sheng et al., 2022). Older workers may be especially challenged by these changes due to cognitive and motivational changes (Truxillo et al., 2015), but they may also better navigate remote work and career insecurity due to improved self-regulation (Scheibe et al., 2022). Taken together, this points to three broad research questions:

RQ 4.1: What are the effects of new technology use and remote work arrangements on older worker well-being and performance (e.g., technostress, enhanced temporal-spatial flexibility)?

RQ 4.2: Which training initiatives or workplace practices allow people to best adapt to technological change, and how can we design training that addresses the unique needs of older workers?

RQ 4.3: What are the HRM/OB and work design implications of AI for the multi-age workforce and how can AI be designed to create supportive, inclusive organizations for a multi-age workforce?

Research direction #5: Career development in later life and retirement

As the population ages, retirement transition/adjustment and retirees' well-being have become topics of great concern for governments and organizations. Around 25% of retirees experience a drop in well-being and health after leaving the workforce, and scholars have recommended that retirement preparation should start early because this can affect adjustment in later life (Wang et al., 2011; Zaniboni, 2015). Moreover, because pension system reforms in developed countries have included delays to or the abolishment of mandatory retirement, the design of more sustainable careers for the older workforce can prolong the working life, support a healthy transition to retirement, and slow increases in old-age dependency ratios (Rudolph et al., 2018; Wang & Huang, 2024). There is a need to better understand the boundary conditions and psychological processes involved in career transitions and bridge employment (e.g., late-life entrepreneurship) as later careers become more diverse and unpredictable (Fritzsche & Marcus, 2013). The specific psychological mechanisms behind these phenomena are not well understood, and there remain many unresolved questions regarding late career and retirement transition processes (Vignoli et al., 2021; Wang & Wanberg, 2017). These facts point toward the following research questions:

RQ 5.1: What are the contextual factors and psychological processes that affect bridge employment, late-life entrepreneurship, and other career transitions in later life?

RQ 5.2: What strategies and interventions may be developed to best promote sustainable and flexible career paths, before and after retirement, for the 21st-century workforce?

RQ 5.3: How may retirement transition schemes be designed to best accommodate the needs of different stakeholders to create a sustainably aging workforce in the context of extended working life?

Best practice recommendations to expand the scholarly impact

As summarized above, there is a wealth of opportunities for scientific inquiry into all aspects of work and aging research. To advance the science, we offer the following best practice recommendations based on our experience in preparing the proposal and managing both the COST Action and the bi-annual AWMs.

Best practice recommendation #1: Harness the power of networks

We searched the last decade of COST Actions funded by the European Commission, from 2013 to 2023, the years for which detailed descriptions of funded COST Actions were available (see: https://www.cost.eu/cost-actions-event/browse-actions/). Of 654 funded Actions in that time, only five (0.75%) involved management or organizational scholars in a substantive capacity (see: https://www.cost.eu/actions/CA19103/; https://www.cost.eu/actions/CA18236/; https://www.cost.eu/actions/CA16206/; https://www.cost.eu/actions/IS1409/; https://www.cost.eu/tag/tn1302/). Only one COST

Action (the present COST Action, LeverAge) was led by WOP or HRM/OB scholars. This should ring alarm bells. The sister disciplines of WOP and HRM/OB have much to offer society, such as advances in the science and practice of teams, leadership, job attitudes, and work motivation to name a very few. Yet the data suggest that as a field, we have failed to create complex collaborations both inside and outside of our disciplines. The COST Action program offers a promising way forward for the pan-European side of our community; our colleagues around the world may also benefit by searching for funding sources or other initiatives aimed at creating like networks. Indeed, effectively harnessing the power of networks naturally will lead to the successful implementation of the ensuing recommendations below.

Best practice recommendation #2: Create globally inclusive collaborations

Since its inception in 2015 until 2023, *Work, Aging and Retirement* (*WAR*) has published 257 articles of any type (editorial, commentary, review, and empirical articles). The article's authors come from many countries around the world and there have been plenty of multinational collaborations. However, although the aging workforce is a pressing problem in both the fully industrialized (e.g., North America and most of Western Europe) and the newly industrialized world (e.g., Eastern Europe and the BRICS nations, Chand & Tung, 2014; Rudolph et al., 2018), the latter is not well represented. Hence, there is a pressing need to study work and aging in non-WEIRD ("Western Educated Industrialized Rich Democracies," Heinrich et al., 2010) countries. Covering over 80% of all Eastern European countries and including participation from partners across the world, COST Action LeverAge is one such collaboration. Other positive recent exemplars include the Late Life Workplace Index (LLWI) project by Jurgen Deller and colleagues (https://www.leuphana.de/en/portals/later-life-workplace-index.html) and Project GLOBE 2020 by Mansour Javidan and colleagues (https://globeproject.com/). We need more such global collaborations to best understand the psychological mechanisms and social forces at play within the lived experiences of older and younger adults in a globally aging workforce. After all, talent exists in every place. It is incumbent upon us to find, grow, and integrate that talent into our existing research networks in the best service of our mutual science.

Best practice recommendation #3: Judiciously foster interdisciplinarity

It is commonly taken as an article of faith that scholarship involving more disciplines is always better than scholarship involving fewer disciplines. A deeper inspection, however, belies this maxim. For example, an animal scientist studying fish would not fit into a network of mostly WOP and HRM/OB scholars; nor would an engineering scientist age 60+ fit simply because they are an older worker. A network with 500 experts from 50 broadly different disciplines is not necessarily "better" than a network with 100 experts from 10 closely related disciplines. In fact, the former may arguably produce chaos, and the latter ultimately be more productive. That is to say, the most productive use of interdisciplinarity begets not mere expansion, but *synergy*. Finding interdisciplinary synergy requires judicious consideration of the types of disciplines that may best complement a given research

project. Here, we offer three principles to help guide interdisciplinary synergy.

First, we suggest prioritizing fit with the core disciplines involved in a given research project such that only disciplines that blend with the core are included. For example, the disciplines of sociology, economics, and neuroscience blend with a project that at its core involves WOP/HRM/OB, whereas the disciplines of geology, marine biology, and astronomy do not. Second, we suggest being parsimonious with the number of different disciplines involved in a given research project. Although it is conceivable that a very wide variety of fields of knowledge may be somehow related to a given core discipline, research undertakings are always limited by time and resources. Thus, to best utilize limited time and resources and in the service of most effectively answering a given set of research questions, it is advisable to focus on including disciplines that are more closely related to the core discipline(s) of a given research project before branching out to include disciplines on the periphery. Third, we suggest that attention be paid to the particular research questions at hand when considering interdisciplinary research. For example, all else being equal, the disciplines of sociology and economics lend themselves better to research questions on comparative retirement practices across the world as opposed to research questions on the cognitive mechanisms underpinning successful aging at work, whereas the latter may better fit the disciplines of neuroscience and cognitive psychology. Hence, different disciplines may better fit different parts of a larger research project. While by no means definitive, we believe these principles are a useful starting point for WOP/HRM/OB scholars and practitioners to find synergy in multidisciplinary collaborations.

Best practice recommendation #4: Actively involve practitioners

Calls to improve practitioner engagement are hardly newsworthy. It is a perennial focus of the seemingly obligatory "practical recommendations" subsection of most research articles published in our field. However, these practices do not change the reality that the run-of-the-mill college professor does not run in the same circles as most business practitioners or policymakers. Moreover, an approach going only from scientists to practitioners fails to adhere to the scientist–practitioner model (APA, 2023), that is, science is informed by practice, and vice versa. Hence, we need to actively involve practitioners in our scientific and research networks to *learn with and from them*. The COST Action program recognizes this reality by directly incorporating practitioner involvement in Action networks as a performance benchmark. Our COST Action network includes practitioners in various capacities, such as NGO administrators, governmental policymakers, business consultants, and human resource managers. Practitioners are represented at all levels of Action engagement, including working group membership in all five of the Action's working groups, the Action management committee, and even core and additional Action leadership. We believe these facts will yield dividends in the years to come, as we grow, work, and build bridges between science and practice together through mutual communication and knowledge exchange.

Best practice recommendation #5: Be creative in communication

The first empirical study published in WOP and HRM/OB involved a few descriptive statistics and a correlation matrix between nine variables (Terman et al., 1917). Requiring only a little more beyond basic mathematical knowledge, this was quite easily accessible to laypeople. A century on, following the inexorable and seemingly endless march of technology and statistical knowledge, our methods and reporting have become much more complex—and may not benefit the clear communication of our science (Murphy, 2021). Many years of tertiary education are now needed to comprehend the typical empirical study in our field, a situation rendering them inaccessible to most members of the public. In as much as we ultimately would like our scientific findings to translate into societal impact, this situation calls for a strategic and even creative approach to the communication and dissemination of our scientific activities and findings. The COST Action program acknowledges this reality by providing funding for the development and maintenance of an Action website (www.leverage-workforce.eu) and logo (see Figure 3), funding for open-access publications, and process institutionalization via the formal role of a Science Communication Officer. Moreover, funding includes media and communications literacy training for Action leadership, and direct incorporation of communications effectiveness in the performance benchmarks via the development of an Action Science Communication Plan. Our science communication team is actively developing a social media communication strategy, which we hope to ultimately integrate with the COST Action website and newsletter. Eventually, we plan for the website to host an online platform and database for easy access to our mutual scholarship, practitioner toolboxes, evidence-based best practices for practitioners, and an educational video library so as to best translate complex scientific findings into information accessible by laypeople. We encourage others to explore avenues to institute such holistic communication processes, for it only may better our science and society when knowledge is free and available for all.

Conclusion

Bringing together 150+ scientists and practitioners from varied disciplines and professional backgrounds, COST Action LeverAge is a pioneering initiative in work and aging, and more broadly, in the disciplines of WOP and HRM/OB. We believe our science could benefit greatly by the creation of more such initiatives not just in work and aging, but also in said broader disciplines, for example, in leadership at work, work teams, work motivation, job recruitment and selection, strategic human resource management, and cross-cultural management just to name a few. Hence, we provide best practice recommendations to hopefully serve as a "blueprint" for others to follow suit. Looking forward, we have set several ambitious benchmarks to help ensure the best inquiry into the research questions detailed herein and to disseminate and communicate the resulting science to practice. Regarding the former, we have set a goal of publishing no fewer than 30 Action-supported scientific journal publications during the 4-year Action lifetime, plan to deliver annual training schools for junior scholars in future years, and have already begun to form multinational collaborations within and between

Figure 3. COST Action LeverAge logo.

the five Working Groups in the COST Action LeverAge. On the latter, we have developed an Action logo (see Figure 3), successfully launched an Action website (www.leverage-workforce.eu) and related newsletter, and have published two white papers, including on Science Communication (COST Action LeverAge, 2024b) and Action Inclusiveness (COST Action LeverAge, 2024a). We hope to enrich these nascent resources with materials readily understandable by the general public, for example, via the collation of an educational video library and practitioner toolkit. We look forward to a more open, global, and impactful science in the coming years and decades ahead.

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Author contributions

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There are no new data associated with this article.

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