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What do we expect from younger workers? Assessing and understanding workplace youngism

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CIÊNCIAS SOCIAIS
E HUMANAS

Department of Social and Organisational Psychology

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"De tudo ficaram três coisas: a certeza de que ele estava sempre começando, a certeza de que era preciso continuar e a certeza de que seria interrompido antes de terminar. Fazer da interrupção um caminho novo. Fazer da queda um passo de dança, do medo uma escada, do sono uma ponte, da procura um encontro."

O Encontro Marcado, Fernando Sabino

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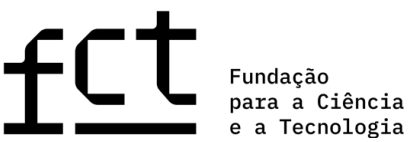
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Resumo

A presente dissertação analisou o idadismo dirigido aos trabalhadores mais jovens (jovenismo no trabalho) focando-se nos estereótipos prescritivos de idade em relação a estes. Uma revisão de escopo de 108 artigos mapeou a literatura sobre jovenismo no trabalho, sugerindo que a investigação futura deve focar-se nos trabalhadores mais jovens, desenvolver instrumentos específicos, explorar antecedentes e consequências mais sistematicamente e considerar mais contextos culturais (Capítulo 2). Cinco estudos utilizando oito amostras foram realizados. Um instrumento para avaliar os estereótipos prescritivos de idade em relação aos trabalhadores mais jovens foi desenvolvido e validado em Portugal e dos EUA (N = 154; N = 788; N = 584) confirmando-se uma escala com 25 itens, oito fatores de primeira ordem e três fatores de segunda ordem: Humildade-Deferência, Lealdade-Pertença e Vitalidade-Inovação. Revelaram-se expectativas ambivalentes dirigidas aos trabalhadores mais jovens, que devem, simultaneamente, aceitar um estatuto social inferior e exibir elevada competência semelhante à de grupos com alto estatuto (Capítulo 3). Dois estudos examinaram experimentalmente (N = 179; N = 213) se transgredir um estereótipo prescritivo face a trabalhadores mais jovens leva a consequências negativas para esses trabalhadores relativamente a perceções de justiça e apoio à decisão, e a perceções de características pessoais. Os resultados destacam a importância dos estereótipos prescritivos de idade como moderadores da relação entre a idade e o comportamento, predizendo resultados importantes (Capítulo 4). Esta dissertação contribuiu para o estudo do idadismo no trabalho, expandindo o conhecimento sobre o jovenismo e os estereótipos prescritivos de idade.

Palavras-chave: idadismo, jovenismo, trabalhadores mais jovens, estereótipos prescritivos de idade.

PsycINFO Classification Categories and Codes:
3020 Group & Interpersonal Processes
3660 Organizational Behavior

Abstract

This dissertation examined the understudied topic of ageism toward younger workers (workplace youngism), focusing on prescriptive age stereotypes. A scoping review of 108 peer-reviewed articles first mapped the workplace youngism literature, suggesting that future research should focus directly on younger workers, develop specific instruments, explore antecedents and consequences of youngism more systematically, and consider diverse cultural contexts (Chapter 2). A total of five studies were then conducted resorting to eight samples. A measure assessing younger worker prescriptive stereotypes by using a culturally decentred approach was developed and validated in Portugal and the US (N = 154; N = 788; N = 584). The results confirmed a measure with 25 items, eight first-order factors, and three second-order factors: Humility-Deference, Loyalty-Belonging, and Vitality-Innovation conveying the beliefs that younger workers should accept a lower social status, yet exhibit competence similar to higher-status groups. The scale was labelled Workplace Ambivalent Youngism Scale (WAYS) (Chapter 3). Two experiments in the context of personnel decisions (N = 179; N = 213) examined whether violating (vs. adhering to) a younger worker prescriptive age stereotype by a younger (vs. middle-aged or older) worker, impacted fairness and person perceptions and decision support. The results highlight the importance of prescriptive age stereotypes as moderators of the relationship between target age and target behavior predicting important work-related outcomes (Chapter 4). Overall, this work contributes to the study of workplace ageism by expanding knowledge on workplace youngism, as well as examining younger worker prescriptive age stereotypes and their implications.

Keywords: ageism, youngism, younger workers, prescriptive age stereotypes.

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General Index

Acknowledgments iii
Resumo vii
Abstract ix
Index of Tables xv
Index of Figures xv
Chapter 1: Introduction 1
1.1. The contemporary relevance of workplace youngism 3
1.2. Ageism and its psychological bases 5
1.2.1. What is ageism and how does it differ from other “isms”? 5
1.2.2. Main concepts and theoretical frameworks 7
1.2.3. Insights from workplace oldism research 8
1.2.4. The other side of the coin: youngism 9
1.3. Stereotypes 14
1.3.1. Descriptive stereotypes and metastereotypes 15
1.3.2. Prescriptive stereotypes and backlash dynamics 17
1.4. Consequences of workplace youngism 20
1.4.1. Prescriptive stereotypes and organizational justice 21
1.4.2. Prescriptive stereotypes and person perception 23
1.5. Thesis overview 25
Chapter 2: Workplace youngism: A scoping review of ageism towards younger workers 27
2.1. Abstract 27
2.2. Introduction 28
2.2.1. Purpose and objectives of the review 30
2.3. Methods 30
2.3.1. Information sources 31
2.3.2. Eligibility criteria 31
2.3.3. Screening studies 32
2.3.4. Data extraction 32
2.3.5. Data collation and summarizing 33
2.4. Results 34
2.4.1. How has workplace youngism been assessed? 34

2.4.2. What are the main theories and conceptual approaches used to investigate workplace youngism? 50
2.4.3.What are the main antecedents and consequences of workplace youngism? 59
2.5. Discussion 69
2.5.1. Future directions 72
2.5.2. Limitations 79
2.5.3. Conclusion 80
Chapter 3: What do we expect from younger workers? Development and validation of the Workplace Ambivalent Youngism Scale (WAYS) 81
3.1. Abstract 81
3.2. Introduction 82
3.2.1. Workplace youngism 83
3.2.2. Prescriptive stereotypes towards younger workers 84
3.2.3. Cultural decentering of instruments 87
3.2.4. Overview of studies 87
3.3. Study 1: Identification of prescriptive age stereotypes towards younger workers 88
3.3.1. Method 88
3.3.2. Results 89
3.4. Study 2: Exploratory Factor Analysis (EFA) 90
3.4.1. Method 90
3.4.2. Results 91
3.5. Study 3: Confirmatory Factor Analysis (CFA) 92
3.5.1. Method 93
3.5.2. Results 94
3.6. Discussion 101
3.6.1. Implications for research and practice 101
3.6.2. Limitations and future research 103
3.6.3.Conclusion 104
Chapter 4: Consequences of younger worker prescriptive age stereotypes 107
4.1. Introduction 107
4.1.1.Consequences of prescriptive stereotypes: fairness perceptions 109
4.1.2. Consequences of prescriptive stereotypes: person perceptions 110
4.1.3. Research overview 111
4.2. Study 1: Vitality-Innovation 114

4.2.1. Methods 114
4.2.2. Results 116
4.3. Study 2: Humility-Deference 120
4.3.1. Methods 120
4.3.2. Results 123
4.4. Discussion 130
4.4.1. Limitations and future research 133
4.4.2. Conclusion 134
Chapter 5: Conclusion 137
5.1. Summary of main findings 138
5.1.1. What is known regarding workplace youngism? 138
5.1.2. What are the prescriptive age stereotypes towards younger workers, and how to assess them? 140
5.1.3. What are the consequences of endorsing prescriptive age stereotypes towards younger workers? 141
5.2. Theoretical contributions and practical implications 143
5.3. Limitations and suggestions for future research 147
5.4. Closing remarks 151
References 153
Annexes 173
Annex A: Confirmatory Factor Analysis survey (Chapter 3) 173
Annex B: The three dimensions, eight subdimensions, and 25 final items of the WAYS (Chapter 3) 194
Annex C: MPlus codes for measurement invariance (Chapter 3) 195
Annex D: Experimental study survey: Humility-Deference (Chapter 4) 203
Annex E: Vignettes studies 1 and 2 (Chapter 4) 220

Index of Tables

Table 2.1. The 108 publications and the main characteristics of their studies. 35

Table 2.2. Main characteristics of the 55 experimental vignette studies on workplace youngism using hypothetical targets. 44

Table 2.3. Antecedents and consequences of workplace youngism, levels of ageism expression, and participant perspective 60

Table 2.4. Antecedents and consequences of experimental studies according to levels of ageism expression. 64

Table 2.5. Summary of recommendations for future research on workplace youngism. 77

Table 3.1. Results from Principal Component Analysis (PCA) 91

Table 3.2. Fit indices for alternative models 95

Table 3.3. Results of invariance tests 98

Table 3.4. Descriptive statistics and correlations for WAYS dimensions and related measures 100

Index of Figures

Figure 1.1. Overview of the problem, research questions, and chapters 26

Figure 2.1. PRISMA flowchart of screening process and included studies 33

Figure 4.1. Hypotheses 1 and 2 112

Figure 4.2. Hypotheses 3 and 4 113

Figure 4.3. Interaction between target age and target behavior predicting distributive justice perceptions 124

Figure 4.4. Overall justice perceptions predicted by the interaction between target behavior, target age, and stereotype endorsement 125

Figure 4.5. Decision support predicted by the interaction between target behavior, target age, and stereotype endorsement 126

Figure 4.6. Interaction between target age and target behavior predicting competence perceptions 128

Figure 4.7. Warmth perceptions predicted by the interaction between target behavior, target age, and stereotype endorsement 129

Figure 4.8. Morality perceptions predicted by the interaction between target behavior, target age, and stereotype endorsement 130

CHAPTER 1

Introduction

Increased longevity represents one of the greatest achievements of modern societies, with benefits such as economic growth and job creation, centered around products and services designed to meet the needs and preferences of seniors (often referred to as the "silver economy"). Longer lives associated with the tendency to postpone retirement age, resulted in a higher probability of younger and older workers interacting in the workplace, which increases the importance of studying ageism and intergenerational relations in the workplace (North & Fiske, 2013b; World Health Organization, 2021). Workplace ageism (age-based negative attitudes, Nelson 2002) has negative implications both for individuals and organizations, such as lower job satisfaction, organizational commitment, self-esteem, and overall self-rated health, and increased depressive symptoms (e.g., Hassell & Perrewé, 1993; Marchiondo et al., 2019). Despite age discrimination being legally prohibited across Europe (under Directive 2000/78—General Framework for Equal Treatment in Employment and Occupation) and in Portugal (through Article 59 of the Constitution and Article 24 of the Portuguese Labour Code), ageism remains a persistent issue, also in Portugal (Marques, 2016).

Research about workplace ageism has focused on ageism towards older workers, overlooking the fact that ageism can also be directed at younger people (also referred to as youngism, Francioli & North, 2021), also in the work context (e.g., de la Fuente-Núñez et al., 2021; Finkelstein et al., 2015). In line with that, the literature reviews and meta-analyses that summarize findings on workplace ageism (e.g., Bae & Choi, 2022; Bal et al., 2011; Cebola et al., 2021; Finkelstein et al., 2015; Ng & Feldman, 2012; Perry & Parlamis, 2006; Posthuma & Campion, 2009; Truxillo et al., 2015) primarily focus on ageism directed at older workers.

Stereotypes are crucial for understanding ageism because they shape how people perceive and treat individuals based on their age, influencing both attitudes and behaviors toward different age groups. Among the different types of stereotypes, prescriptive stereotypes ("should-do" expectations regarding what individuals of a certain social group are to do, North & Fiske, 2013b) are especially important because they function as social norms in the sense that, by not complying with them, individuals are targeted with backlash – social or economic penalties for overstepping social boundaries (Rudman et al., 2012). Despite their critical implications, prescriptive stereotypes have been studied mostly concerning gender and ethnicity, also in the work context. To the best of our knowledge, North and Fiske (2013a,b)

were the only ones to approach prescriptive age stereotypes toward older people. Although their work originally did not focus on the workplace, it has been later applied to work settings (e.g., Hanrahan et al., 2023; North & Fiske, 2016). What is known from this research and research on social groups other than younger workers is that the endorsement of prescriptive stereotypes has important implications in terms of organizational justice perceptions (e.g., Caleo 2016, 2018) and perceived personal characteristics (e.g., Hanrahan et al., 2023; North and Fiske, 2013b), and is therefore likely to be highly relevant for the organizational context.

De la Fuente-Núñez et al.´s (2021) pioneering review on ageism towards younger populations concluded that research on ageism towards the younger has been mainly a "side-effect" of research on ageism towards older people. In most research to date, the young merely serve as a comparison group, and as a result limited insight is gained into specific manifestations of ageism facing the young. In the employment sector specifically, the effects of ageism on younger people have been largely understudied (de la Fuente-Núñez et al., 2021). The need for further studies about ageism targeting younger populations, including younger workers, was also highlighted by the World Health Organization (2021) as crucial for informing strategies and policies developed to address this issue. Yet, for this purpose the development of specific measures - reliable, valid, and ideally applicable across diverse cultural contexts, to mitigate the cultural bias that has been pervasive in psychological research (Henrich et al., 2010) - is paramount. To date, there is no measure assessing prescriptive age stereotypes towards younger workers.

In this dissertation, our overall aim was to expand knowledge on the understudied topics of ageism towards younger workers and prescriptive age stereotypes in the workplace. Specifically, I aimed to address three main questions. We first asked: *"What is known regarding workplace youngism?"* To examine this question, we conducted a scoping review on ageism towards younger workers in Chapter 2, which was guided by three broad questions: 1) How has workplace youngism been assessed?, 2) What are the main theories and conceptual approaches used to investigate workplace youngism?, and 3) What are the main antecedents and consequences of workplace youngism? Second, we asked, *"What are the prescriptive age stereotypes towards younger workers, and how to assess them?"* To answer this question, we developed and validated a scale measuring prescriptive age stereotypes towards younger workers across three studies, all of them resorting to both US and Portuguese samples (Chapter 3). Our third research question was: *"What are the consequences of endorsing prescriptive age stereotypes towards younger workers, regarding organizational justice perceptions and person perceptions?"* To examine this, we conducted two experimental studies testing the

consequences of endorsing two different dimensions of prescriptive stereotypes toward younger workers (Chapter 4).

We expect this research will contribute to the existing knowledge on workplace youngism, and prescriptive age stereotypes toward younger workers and their consequences.

1.1.The contemporary relevance of workplace youngism

A universal feature of social and economic development in the modern era is the widespread shift towards a longer life expectancy and smaller families derived from lower fertility rates. According to the United Nations Department of Economic and Social Affairs (2024), by 2080, the global population of individuals aged 65 or older is projected to reach 2.2 billion and outnumber those under 18. Portugal has one of the lowest fertility rates in the world, with an average of 1.4 births per woman in 2019 (FFMS, 2020).

The significant increase in the average human lifespan, driven by advances in public health, nutrition, personal hygiene, and medicine, is one of the greatest achievements of social and economic development. However, those changes can also bring challenges — one notable example is the pressure an aging population places on social security and pension systems. Consequently, many European member states have raised their retirement age (Eurofound, 2017), thus prolonging working lives, which increases the probability of a higher number of younger and older workers interacting in the workplace. Research has shown that age diversity can not only foster creativity but also enhance the potential for conflict in organizations (e.g., Horwitz & Horwitz, 2007; Milliken & Martins, 1996). The risk of conflict and perceived competition among different age groups in a more diverse workforce highlights the importance of addressing ageism – broadly defined as negative attitudes based on age (Nelson, 2009; World Health Organization, 2021). Kunze et al. (2011) found that higher levels of age diversity were linked to greater perceptions of age discrimination within companies, which, in turn, negatively affected overall organizational performance. Ageism in the workplace negatively affects organizations and individuals, manifesting itself throughout the entire employment lifecycle: from recruitment and hiring to the period of employment, and during dismissal or retirement processes (e.g., Bal et al., 2011; Fleischmann & Koster, 2018; Snape & Redman, 2003).

The lion's share of research on ageism has been dedicated to ageism directed at older people (e.g., Iversen et al., 2009; Marques et. al, 2020), also in the work context (e.g., Finkelstein et al., 2015; Posthuma & Campion, 2009; Truxillo et al., 2015). However, research has shown

that ageism can target younger people as well (e.g., de la Fuente-Núñez et al., 2021), referred to as youngism (Francioli & North, 2021). The 2021 Global Report on Ageism by the World Health Organization (World Health Organization, 2021) dedicated a chapter to reviewing the scale, impact, and determinants of ageism against younger people, demonstrating a growing recognition of its relevance. Research has shown that younger people are perceived by older people as using too much slang, having poor communication skills, and being difficult, entitled, and service-focused (e.g., Agrawal, 2017; Deal et al., 2010; Stein, 2013). Despite beliefs that age discrimination is mostly experienced by older individuals, data from the European Social Survey has shown that on average across the 28 countries participating in the survey, the prevalence of ageism was particularly pronounced for the youngest age group (15 to 24 years old), compared to older adults. Fifty percent of individuals in this younger age group reported experiencing either overt or subtle forms of discrimination (e.g., being ignored or patronized) due to their age (Abrams et al., 2011). In line with that, Francioli et al.'s (2024) research with a representative national sample, found that US adults reported less favorable sentiments towards young adults than toward other age groups.

In the employment sector, young people in many Western countries face an alarmingly high unemployment rate. As many as two-thirds of young people seeking employment are unable to find jobs, or they are forced to accept positions that are well below their skill level (Furnham, 2015). In Portugal, a report by the Youth Employment Observatory (Rodrigues et al., 2022) states that unemployment among young people is more than 2.5 times higher than overall unemployment. The proportion of young people with involuntary temporary job contracts in Portugal is much higher than the European average. The prevalence of flexible contractual relations explains the notable rise in youth unemployment during the COVID-19 pandemic crisis. Adding to those challenges is the growing presence of older workers in the workplace, which may lead younger employees to perceive a reduction in job opportunities, despite research indicating that the participation of older workers in the workforce can boost overall employment levels (e.g., Berkman et al., 2015).

Consistent with the employment barriers faced by younger workers and with findings concerning ageism toward the younger population in general, findings from the European Working Conditions Survey show that "age discrimination is, unsurprisingly, an age-specific phenomenon" (Eurofound, 2017, p. 29). Perceived age discrimination was found to be more prevalent among younger employees than in other age groups, with more than 10% of the younger workers reporting discrimination. While perceived discrimination for being "too young" decreases after the age of 35, it often shifts to discrimination for being "too old" once

employees reach 50. In comparison, around 7% of employees aged 60 and older reported experiencing age-based discrimination. The Eurofound (2017) has also reported results on perceived adverse social behavior, referring to verbal abuse, unwanted sexual attention, threats, or humiliating behaviors. Interestingly, adverse social behavior was also most common for workers up to the age of 35 years old when compared to older age groups, with a higher percentage of younger women reporting adverse social behavior compared to younger men. The prevalence of age discrimination towards younger workers was likewise identified in a study with a representative sample of more than 1,000 Portuguese workers that mirrored the national population in terms of age, gender, and geographic location. Results obtained indicate that 33.5% of Portuguese workers of all ages reported moderate to high levels of age discrimination and that younger workers (from 18 to 35 years old) were the most affected, with 42.3% reporting moderate or high levels of age discrimination (Patient et al., 2024).

Despite evidence showing that younger workers are targeted with ageism, workplace youngism (which scholars have also referred to as "reverse age discrimination") remains largely overlooked by research (Finkelstein et al., 2015; Truxillo et al., 2015). Although they may differ in various ways, both younger and older workers alike face negative stereotypes (e.g., Finkelstein et al., 2013) and generally have fewer resources and less influence compared to their middle-aged counterparts (North & Fiske, 2012), who constitute the "idealized standard against which other age groups are judged'' (Finkelstein, 2013, p. 21). It is therefore crucial that age and work research includes the younger workers in its agenda, so that the particularities of workplace youngism can be better understood, and policymakers can be provided with the evidence to combat discrimination on the grounds of any age.

1.2. Ageism and its psychological bases

1.2.1. What is ageism and how does it differ from other "isms"?

The gerontologist and psychiatrist Robert Butler first coined the term "age-ism" in 1969, referring to it as another form of bigotry, which unlike the other "isms" (racism and sexism), tended to be overlooked by society. In Butler's words, "age-ism reflects a deep-seated uneasiness on the part of the young and middle-aged – a personal revulsion to and distaste for growing old, disease, disability, and a fear of powerlessness, 'uselessness', and death" (Butler, 1969, p. 243). In his seminal work, Butler referred to ageism as prejudice by one age group

toward other age groups, additionally stating that "Age-ism is also seen in other groups. The young may not trust anyone over 30, but those over 30 may not trust anyone younger" (Butler, 1969, p. 244). Nonetheless, the bulk of the research on ageism focuses on ageism against older persons (e.g., Nelson, 2002, 2016). The conceptualization of ageism itself is strongly connected to old age as can be seen in Iversen et al.´s (2009) proposed definition, which is based on 27 existing definitions of ageism from the literature: "Ageism is defined as negative or positive stereotypes, prejudice and/or discrimination against (or to the advantage of) elderly people on the basis of their chronological age or on the basis of a perception of them as being 'old' or 'elderly'." (p. 15).

Although still focusing on older persons, Iversen's (2009) definition incorporates important elements of the most contemporary conceptualization of the term, which acknowledges the tripartite concept of attitudes from social psychology, and by which ageism is understood to involve an affective (prejudice), cognitive (stereotypes), and behavioral (discrimination) component (e.g., Levy & Banaji, 2002). Since our thoughts, feelings, and actions are interconnected, the relationship between stereotypes, prejudice, and discrimination is multidirectional (Fiske, 2014). One advantage of the tripartite model of attitudes is that it divides ageism into its fundamental components, providing a more thorough understanding of the phenomenon and enabling the development of targeted interventions (Patient et al., 2024).

A more recent definition by the World Health Organization (2021) also emphasized the tripartite model, proposing that "ageism refers to the stereotypes (how we think), prejudice (how we feel) and discrimination (how we act) directed towards others or oneself based on age" (World Health Organization, 2021, p.2). The World Health Organization's definition is more inclusive by acknowledging that ageism can be directed at any age.

Another important characteristic of ageism is that, although often associated with negative attitudes, each component of the tripartite model can be negative or positive (e.g., Kite & Wagner, 2002; Operario & Fiske, 2003). Thus ageism, as with the other "isms", can be ambivalent in nature. Ageism can also be explicit (when people have conscious access to it) or implicit (when it is outside of people's awareness) (Greenwald et al., 2009). Both implicit and explicit ageism can impact behavior, decision-making, and interactions with individuals, often in ways that are seen as unjust or disparaging, including in the work context (e.g., Malinen & Johnston, 2013; Silvestre et al., 2017).

Ageism differs from racism and sexism in two main ways. First, unlike racism and sexism, which involve relatively fixed social categories, ageism is characterized by fluid boundaries that define what constitutes 'old' and 'young' age groups (Bytheway, 2005). Because of a considerable range of individual differences in the aging process (Baltes et. al, 1980), there has been little consensus on how to define "younger" and "older" categories based on chronological age (Ashbaugh & Fay, 1987; Finkelstein et. al, 2012; McCarthy et al., 2014), with different age cut-offs being considered for both age groups. As a consequence, different conceptualizations of age have been proposed, including subjective age (i.e., how old individuals feel depending on their perceptions of their own health, appearance, and energy), as distinct from objective or chronological age. Second, ageism is inherently dynamic. Provided a sufficient life span, a young person will grow old and belong to different age categories over her lifetime. Thus, ageism prescribes dynamism, whereas other prejudices prescribe stasis. These differences have important implications given that some age groups, namely the younger and the middle-aged, have temporary statuses that are likely to change over life (to higher or lower status). In contrast, older people have a permanent, lower status (Martin & North, 2021), which might be an explanation for why so much research has focused on the old and neglected the impact that it can have on the young, given that they will "grow out of" their lower status position.

Nelson (2016) further argues that ageism is much more institutionalized than other forms of prejudice, to the point where people often do not recognize it as prejudice or discrimination when it occurs. As a result, ageism has largely flown under the radar, both among the general public and even within the field of prejudice research.

1.2.2. Main concepts and theoretical frameworks

As part of the larger social categorization process, age categorization is a key concept to understanding ageism. Age, much like gender and ethnicity, is a social category often easily recognized due to its connection with certain physical traits and characteristics. Although aging is a biological process, the meanings associated with being "young" or "old" are not inherent to the biological changes themselves. Instead, these meanings are socially constructed and shaped by the cultural and societal context in which they occur (Berger & Lickmann, 1966). Age categorization refers to the process of classifying individuals into specific age groups, which inherently implies they do not belong to other groups (Swift et al., 2018). When individuals are placed into broad age categories like 'young' or 'old,' it often leads to implicit assumptions about their abilities, skills, and competence (Bytheway, 2005). For instance, people might be

judged or view themselves as "too young" or "too old" to participate in certain activities or assume particular roles (Swift et al., 2018).

Social Identity Theory (SIT; Tajfel & Turner, 1979; Tajfel, 1981) offers an important group-based explanation for prejudice and discrimination. SIT proposes that an individual's self-concept is derived from group membership and can explain intergroup behavior. In addition to their personal identities, individuals possess a variety of social selves, leading to multiple social identities. Some of these identities are defined by given characteristics, such as gender, nationality, or age, while others are self-selected, such as professions, political affiliations, or sports loyalties (Brewer, 1998; Nelson, 2005). Social identity is "that part of the individual's self-concept which derives from their knowledge of their membership of a social group (or groups) together with the value and emotional significance attached to that membership" (Tajfel, 1981, p. 255). Ingroup members are individuals who share a common group membership, while outgroup members are those who possess a different social identity. Individuals are motivated to gain positive distinctiveness for their ingroups by comparing them favorably with other groups. This can result in a tendency to favor members of their own group relative to outgroups (e.g., Hewstone et al., 2002; Yzerbyt & Demoulin, 2010).

Another important framework extending Social Identity Theory (SIT), is Self-Categorization Theory (SCT; Turner, 1987). According to SCT, when a social identity becomes salient an individual's self-perception and their view of other ingroup members become depersonalized. The person adopts ingroup norms and sees themselves through the lens of shared group characteristics. Additionally, social categorization causes individuals to overemphasize the similarities between themselves and other ingroup members while making outgroup members appear uniform and indistinguishable (Oakes & Turner, 1990).

Together, these social psychological processes explain how the need for positive self-regard, self-esteem, and stability, combined with automatic age categorization, lead to age bias and prejudice.

1.2.3. Insights from workplace oldism research

Similar to research on ageism towards older people or oldism[1], research has dedicated a lot of attention to ageism toward older workers or workplace oldism, as reflected in the existing

[1] Although the term "oldism" is not frequently used in the literature, it has been recently introduced (e.g., Francioli & North, 2021) to help distinguish between ageism directed at older people and ageism directed at younger people (referred to as youngism).

literature reviews and meta-analyses that summarize findings about workplace ageism with a clear focus on older workers (e.g., Bae & Choi, 2022; Bal et al., 2011; Cebola et al., 2021; Finkelstein et al., 2015; Ng & Feldman, 2012; Perry & Parlamis, 2006; Posthuma & Campion, 2009; Truxillo et al., 2015).

On the negative side, older workers have been described as possessing the following characteristics: poor performance, lower ability to learn, resistance to change, shorter tenure, and being more costly (Posthuma & Campion, 2009). On the positive side, this group has been depicted as dependable (Posthuma & Campion, 2009), and also more reliable (Bal et al., 2011), and having higher integrity (Rosen & Jerdee, 1976) than their younger counterparts.

Research has shown a negative bias against older workers in HR and personnel decisions. In a simulated hiring scenario, Ahmed et al. (2012) found that a fictional 31-year-old applicant received more than three times the number of responses from employers compared to a fictional 46-year-old applicant. Bal et al.'s (2011) meta-analysis showed that older applicants are provided less access to interviews and higher-paid vacancies than younger applicants and are offered fewer training opportunities. Similarly, Fleischmann and Koster (2018) found in a scenario-based study that employers were less likely to offer training opportunities to older employees, with this effect becoming more pronounced as the employees' age increased.

Perceived age discrimination was also associated with several negative outcomes for older workers. Hassell and Perrewé (1993) demonstrated that older workers' perceptions of age discrimination were linked to lower self-esteem, reduced perceived personal control, and decreased job satisfaction. Similarly, the findings of Marchiondo et al. (2019) indicated that higher levels of perceived age discrimination were associated with increased depressive symptoms among older employees, as well as declines in job satisfaction and overall self-rated health.

1.2.4. The other side of the coin: youngism

Youngism has been referred to as "a missing piece of the ageism puzzle" (Francioli & North, 2021, p.15). Here we present some theorizing in the field that provides insights into how ageism directed toward younger people differs from ageism toward older people, why young-targeted ageism did not emerge as strongly in prior age research, and, finally, some insights from existing research on youngism.

Throughout history, older generations have criticized younger generations as more decadent, disrespectful, superficial, and entitled compared to earlier generations (e.g., Ruggeri,

2017; Seder, 2013). Besides suggesting that the negative attitudes toward young adults are probably not new (Francioli et al., 2024), this criticism of looking "backward" in time has hinted at recent research (Francioli & North, 2021; Protzko & Schooler, 2019) building on the generational, cohort-based (as opposed to life-stage-based) nature of ageism directed at young adults. In other words, people tend to assign negative traits to today's youth that they believe did not apply to previous generations when they were the same age.

Francioli and North (2021), who first coined the term youngism, argue that - unlike ageism directed at older adults (or oldism) which is rooted in fear or discomfort with the later stages of life - ageism targeted at young people does not typically focus on young adulthood itself which is a universally experienced phase of life. Instead, youngism is generation-based, where the criticism is aimed at today's youth, rather than young people in general. The authors suggested that the positive aspect of young adults' image reflects society's admiration and envy for qualities such as beauty and youthful energy, which are often associated with the stage of young adulthood. Conversely, the negative aspect of young adults' image represents a form of generational disparagement, where people view contemporary youth as less worthy or deserving than previous generations at the same age, reflecting a perceived generational decline. Francioli and North (2021) found empirical support for this premise by showing that the resourceful (positive) facet of the stereotype content of young adults predicted attitudes toward young adults, regardless of their generational belonging, whereas the ungrateful (negative) facet of the stereotype content was specifically predictive of contemporary young adults. Francioli and North's (2021) work will be further detailed under section 1.3. Stereotypes.

Protzko and Schooler (2019) had already argued that both life stage and generational affiliation shape target age perception. Their studies examined the tendency of people to disparage the youth of the present - what the authors termed the "kids these days effect", making a parallel with a complaint often associated with older adults, suggesting that past generations were "better" than the current one. The authors hypothesized that people's perception of the differences between themselves and today's youth (as opposed to the youth of the past) in areas where they excel may lead them to believe that today's children are in decline. Empirical results of five studies showed that the more authoritarian someone was, the more they believed that children today no longer respected their elders; more intelligent people, however, believed that children today were becoming less intelligent; and the more well-read people were, the more they believed that children today no longer like to read. Their findings suggest that the tendency to denigrate today's youth is rooted in several distinct cognitive mechanisms, including a bias

toward perceiving others as deficient in areas where one excels, as well as a memory bias that projects one's current traits onto past generations (Protzko & Schooler, 2019).

Adopting a different perspective from the previous authors, Bratt et al. (2020) examined the influence of societal structural factors and social norms on levels of perceived age discrimination by younger (and older) people. The authors argue that modernization with increased prosperity has enabled many aging countries to provide financial and social support to older people. Related to this is the fact that older individuals seem to possess greater social status in more advanced societies compared to less developed ones (North & Fiske, 2015; Vauclair et al., 2015), which may explain the lower levels of age discrimination observed by older respondents in Switzerland and Scandinavian countries (Bratt et al., 2018). According to Bratt et al. (2020), income security and access to high-quality health and care services for older adults consistently benefit this group, but they are also likely to significantly impact the younger population. For example, policies aimed at safeguarding the pensions of older individuals inevitably rely on resources generated by younger generations. Although such support may reduce negative attitudes and age discrimination towards older individuals (once social and economic benefits contribute to increasing their social status), it suggests different effects on the age discrimination experienced among younger people. Modernization also resulted in improved education, which may strengthen social norms against discrimination in general. Despite that, even when individuals advocate for equality or have strong motivations to control prejudice, they tend to apply these principles selectively, favoring certain groups over others (i.e., the older over the younger). In line with that, findings from Bratt et al. (2020) suggest that in countries where older people were better supported, strong anti-ageism norms are associated with higher levels of discrimination experienced by younger people, showing empirically how younger and older adults' experiences of ageism are interrelated as a function of the social context.

Concerning the reason why previous research focused on (older-targeted) ageism, but not youngism, Francioli and North (2021) suggest that it might be related to the fact that, to date, social cognition researchers interested in age have mainly conducted life-stage-based studies, comparing attitudes toward young adults and older adults in general to maximize the generalizability of their findings. While valuable, this approach may have overly emphasized life-stage categorization and downplayed the impact of generational categorization, to which young adults are also subject. In addition, Francioli et al. (2024) and de la Fuente-Núñez et al. (2021) highlight that ageism research has been heavily reliant on samples composed of younger participants, including undergraduates, young professionals, and medical trainees. In a meta-

analysis by Kite et al. (2005) covering 40 years of research about age attitudes and revealing that older adults are perceived less favorably across a wide range of measures, over 60% of the samples fell within these groups. Francioli et al. (2024) consider this a methodological shortcoming of the field, as it can limit the scope of conclusions reached by studies, reinforcing a tendency to focus ageism research on the older age group.

Regarding insights from existing youngism research, de la Fuente-Núñez et al. (2021) made a pioneering contribution in reviewing existing research on ageism targeting people under 50 years old in several institutional settings (i.e., employment, health and social care, power and politics, justice, education, and media). Among the 263 articles included in their review, 86% focused on the manifestation of ageism, 17% on the determinants of ageism, 9% on available interventions to address ageism, and 5% on the effects of ageism. Their review was guided by the following five research questions: (1) What terms are used to refer to ageism towards younger populations?, (2) How prevalent is ageism towards younger populations and how does it manifest?, (3) What are the determinants of ageism towards younger populations?, (4) What are the effects of ageism towards younger populations?, and (5) What strategies exist to tackle ageism towards younger populations?

Regarding the terms used to refer to ageism towards younger populations (1), their results indicate that the articles employed several terms to describe ageism directed at younger populations, including ageism, reverse ageism, age-based bias, childism, and adultism. Concerning the prevalence and manifestations of youngism (2), drawing on studies using the European Social Survey data (Ayalon, 2013; Bratt et al., 2018), de la Fuente-Núñez et al.'s (2021) findings show that across 28 countries, the highest levels of perceived age discrimination were found among younger respondents. It also revealed a U-shaped distribution of age discrimination, with higher levels observed among both older and younger adults. The cited studies covered manifestations of ageism against younger populations in specific institutional settings or sectors, namely employment, health and social care, power and politics, justice, education, and media. Results among the four sectors that received the most attention indicate that: a) in the employment sector, an overall conclusion from studies on ageism in recruitment is that younger populations have greater access to interviews and are more likely to be favored in hiring decisions compared to both middle-aged and older adults (e.g., Avolio, 1987; Levin, 1988). Despite this, the authors suggest that the negative age bias towards the younger becomes more apparent once younger adults enter the workplace. Studies show that younger workers often feel disadvantaged due to their age and report experiencing age discrimination (e.g., Marchiondo et al., 2016; Snape & Redman, 2003); b) in the health and social care sector, studies

have typically focused on the attitudes and discrimination of healthcare workers toward younger clients with various conditions. For instance, one study in the US explored nurses' attitudes toward patients of different ages, finding that young and middle-aged adults were viewed most favorably, while only children and adolescents were regarded as negatively as older adults (Goebel, 1984). Another study revealed that younger individuals with conditions such as blindness, depression, leg amputation, AIDS, and lung cancer faced more stigma and discrimination than older individuals with the same conditions (Menec & Perry, 1995); c) regarding power and politics, qualitative studies have also explored the manifestation of ageism in youth political and advocacy movements, revealing a tendency to doubt, deny, or dismiss the voices of youth and children, regulate their identities, and generally limit their efforts (e.g., Conner, 2015; Conner et al., 2015; Douthirt-Cohen et al., 2019); and d) in studies examining the manifestation of ageism in the justice system, the four articles that explored whether an offender's age influenced judgments found that crimes committed by younger offenders provoked greater anger, were viewed as more serious transgressions, and were rated as deserving of harsher punishment (e.g., Bensimon et al., 2012; Erber et al., 2001).

The main determinants of ageism (3) found in the cited studies were: a) determinants of interpersonal ageism, with cited studies addressing mainly characteristics of the respondent and their context (e.g., rater age, sex, or gender and personality traits), and b) determinants of self-directed ageism, with studies examining health status, future self-views, and respondent's age and sex.

Regarding the effects of ageism (4), the review found that age discrimination alone was not linked to mental disorders in younger individuals. However, when age discrimination was reported alongside factors such as skin color, race, and class, it was associated with a higher prevalence of common mental disorders (Bastos et al., 2014), and exposure to stereotypical information about memory capacity and age negatively impacted memory performance, particularly among individuals with lower levels of education (Andreoletti, 2004).

Concerning strategies to tackle ageism (5), de la Fuente-Núñez et al. (2021) identified that strategies examined in the literature primarily focus on intergenerational activities and generally demonstrate that these activities lead to a reduction in negative attitudes toward younger populations, foster improved feelings between generations, and increase respect, understanding, and comfort in intergenerational interactions (e.g., Alcock et al., 2011; Cunha et al., 2014; Dow et al., 2016).

Among the main conclusions drawn in de la Fuente-Núñez et al.'s (2021) scoping review, is that the studies focusing on manifestations of ageism are largely a-theoretical, emphasizing the empirical rather than the theoretical aspects of research on ageism toward younger populations. The authors emphasize that there is currently no coherent theory specifically addressing ageism as it affects younger people. This may be linked to the fact that research on ageism toward younger individuals has primarily developed as a byproduct of studies on older adults. The authors note that, surprisingly, the effects of ageism against younger people have also been largely understudied. Finally, de la Fuente-Núñez et al. (2021) highlight that more research on the topic is needed, relying on a more nuanced classification of individuals under the age of 50 to better understand ageism towards younger age groups in different contexts and settings.

Signaling the increasing recognition of the importance of youngism research, the Global Report on Ageism (World Health Organization, 2021) included an entire chapter dedicated to reviewing the scale, impact, and determinants of ageism directed at younger people, mainly based on de la Fuente-Núñez et al.'s (2021) scoping review, which was commissioned for this report. The World Health Organization (2021) concludes that future priorities for advancing our understanding of ageism directed at younger people should include monitoring ageism across various institutional settings, such as the workplace, legal systems, and political institutions. Additionally, it is crucial that our enhanced understanding of ageism against younger individuals informs the strategies and policies developed to address this issue.

1.3. Stereotypes

Since ageism is often based on beliefs about specific age groups, stereotypes are important mechanisms that lead to age-based discrimination (e.g., Lamont et al., 2015). Nelson (2009) presents the following definition of stereotypes as being generally agreed upon in the literature: "Stereotypes represent the traits that we view as characteristic of social groups, or of individual members of those groups, and particularly those that differentiate groups from each other. In short, they are the traits that come to mind quickly when we think about the groups". (Nelson, 2009, p. 2). Age stereotypes, specifically, refer to beliefs or assumptions about individuals based on their age. For example, older people might be seen as frail and resistant to change, and younger people as lazy and entitled. Stereotypes evolve over time as individuals observe and interpret their changing environments, encoding this information into memory. Influenced by various cognitive processes, these belief systems are later retrieved to help interpret social cues,

thereby shaping our behavior in social interactions (Nelson, 2002). Since a stereotype is a generalization, it very often does not accurately describe every individual within a specific group (Fiske, 2014). The accuracy of a stereotype depends on whether there are actual differences between groups (on average) concerning a particular characteristic (Truxillo et al., 2015). Stereotypes are also often strongly influenced by in-group bias (e.g., Forte & Hansvick, 1999), and, as with the other components of the tripartite model of attitudes, stereotypes can be positively and negatively valenced.

Three different types of stereotypes have been commonly distinguished in the literature (e.g., Finkelstein et al., 2015, 2020): descriptive stereotypes, metastereotypes, and prescriptive stereotypes. Below we define each, present related theoretical frameworks and concepts, and overview the main findings regarding research on age stereotypes, namely toward younger workers.

1.3.1. Descriptive stereotypes and metastereotypes

Descriptive stereotypes refer to beliefs about the characteristics members of a social group possess (e.g., North & Fiske, 2013b). Research on age stereotypes has primarily concentrated on exploring descriptive stereotypes, often drawing upon the well-established Stereotype Content Model (SCM; Fiske et al., 2002; Cuddy et al., 2011). Although stereotype content may vary over context and time, and depend on the respective social group that is being evaluated, research has also demonstrated that content may cluster systematically into fundamental aspects or dimensions (Cuddy & Fiske, 2002). The SCM proposes that people evaluate individuals and groups based on two dimensions of social judgments: warmth and competence. Warmth reflects the degree to which a group is characterized as friendly and likable, while competence reveals the degree to which a group is characterized as skillful, independent, and confident. A social group's evaluation along the warmth and competence dimensions is influenced by socio-structural variables (e.g., Caprariello et al., 2009). Social groups with high social status are usually evaluated as highly competent (e.g., middle class and white people) while those with low status or seen as posing little threat or competition are evaluated as highly warm (e.g., housewives or disabled people). The blend of positive and negative stereotypes across the competence and warmth dimensions evokes specific emotions and behaviors toward the social groups evaluated. For example, pity and sympathy, if the group is evaluated as not competent, but high in warmth; and envy and jealousy, if the group is evaluated as highly competent but low in warmth. The first combination elicits a paternalistic attitude, which may include

behaviors of overhelping and social exclusion; and the second combination elicits resentment – people feel obligated to associate with these groups but may attack and sabotage them when they can get away with it (Cuddy et al., 2007; Fiske, 2011; Fiske, 2012). It has been suggested that the default descriptive stereotype of older people is that they are warm but incompetent, "doddering but dear" (Cuddy & Fiske, 2002). Older workers have seemingly been rated higher in warmth and lower in competence when compared with younger workers (Krings et al., 2011). On the other hand, research has shown that younger workers are often rated higher in competence but lower in warmth than older workers (Kleissner & Jahn, 2020a; 2020b; Krings et al., 2011; Tresh et al., 2019).

Building on the SCM, Leach et al. (2007) proposed another dimension of social judgment, termed morality. The authors provided empirical evidence suggesting that the broad cluster of interpersonal behaviors under the dimension "warmth" actually comprises two separate and more specific dimensions: morality and sociability. While sociability refers to a target's ability or intention to form social connections with others (e.g., friendliness), morality speaks to the perceived correctness or (contextual) appropriateness of social behavior (e.g., trustworthiness). Morality appears to be a key factor in attributing positive characteristics to a group: people tend to prefer being part of a moral group over one that is competent or sociable. Furthermore, trustworthiness is reflected in the formation of moral or immoral judgments (Leach et al., 2007). Findings from research about activists have shown that those who are younger are seen as warm for being young, and competent for being activists, but are seen as less moral/trustworthy than older people (Farinha & Rosa, 2022).

Among the research focusing on younger people descriptive age stereotypes is Francioli and North's (2021) Model of the Stereotype Content of Young Adults. According to their model, on the one hand, young adults are often lauded for their perceived resourcefulness, characterized by a blend of youthful energy (ambitious), high fluid intelligence (smart), and adaptability to modern times (hip and techie). However, they are also portrayed as ungrateful: an overly sheltered group (coddled), at the bottom of the hierarchy (rookie), who improperly challenge older generations (disrespectful), traditional values, and established authority (radically progressive). The authors named these two facets of descriptive stereotypes towards younger adults as ungrateful and resourceful facets (Francioli & North, 2021). Although their model targeted younger adults in general, when testing it the authors included several descriptors of the target group (i.e., today's young adults, millennials, people in their 20s, college students, and young professionals), suggesting that the stereotypes identified can also apply to younger workers.

Research specifically focusing on younger worker descriptive age stereotypes has found that, on the positive side, younger workers are regarded as goal-oriented, technologically savvy, and innovative (Van Rossem, 2019). On the other hand, negative descriptive stereotypes of younger workers often depict them as inexperienced, in high need of support, seeking the most work-life balance, not etiquette-savvy, and uncommitted to the company (Van Rossem, 2019). Raymer et al. (2017) offered a thematic categorization of stereotypical beliefs about younger professionals: they are seen as 1) being overly casual and lacking basic communication etiquette, 2) feeling entitled with unrealistic expectations, 3) having poor work ethics and failing to take initiative, and 4) being self-centered and disrespectful toward elders.

A second typology of stereotypes often mentioned in research is metastereotypes, which refer to beliefs about how people think they are stereotyped by members of other social groups (Finkelstein et al., 2015). Research regarding age metastereotypes held by younger workers found that positive stereotypes younger workers think that older and middle-aged workers have about them include being tech-savvy, hardworking, energetic/enthusiastic, ambitious, extrovert, and nimble (Finkelstein et al., 2013). Finkelstein et al. (2013) also identified several negative stereotypes that younger workers believe other age groups have about them, including being arrogant, tardy, inexperienced, lazy or unmotivated, ambitious, immature, unreliable, extroverted, irresponsible, naïve, selfish, self-conscious, and uncommitted. Similar findings were reported in studies by Kovacs et al. (2013) and Rožman et al. (2016). Interestingly, younger workers' metastereotypes were found to be on average more negative than those of older workers, suggesting that younger workers in particular may overestimate the extent to which they are stereotyped, such as being seen as lazy and irresponsible (Finkelstein et al., 2013). In the scoping review presented in Chapter 2, we provide a content analysis of studies presenting negative and positive younger worker descriptive stereotypes and metastereotypes held by younger workers, with both qualitative and quantitative findings.

1.3.2. Prescriptive stereotypes and backlash dynamics

The third type of stereotypes that has been referred to in the literature concerns prescriptive stereotypes, which are conceived as the expectations regarding how a group of people should be or behave (North & Fiske, 2013b). They present the characteristics we believe individuals in a group ought to have to be seen as "normal" and to preserve the group's supposedly appropriate role within a culture (Finkelstein et al., 2015). An example of a gender prescriptive stereotype is that women should be communal (sociable, relationship-oriented, helpful,

sensitive, nurturing, affectionate, and sympathetic) (Heilman et al., 2024). Behaving incongruously with prescriptive stereotypes (i.e., violating them) often leads to backlash (Cialdini & Trost, 1998).

The concept of backlash refers to social and economic penalties imposed on individuals for behaving in ways that counteract stereotypes associated with their social group (Rudman, 1998). Stereotypes serve various functions in society, such as organizing information, simplifying decision-making, providing social norms, and legitimizing social hierarchies (e.g., Jackman, 1994; Schimel et al., 1999). Backlash works as a form of social control that discourages individuals from deviating from expected roles or behaviors by punishing those who do, thus playing a crucial role in reinforcing stereotypes as normative social rules and preserving the social status quo (Rudman et al., 2012). These penalties can take many forms including social rejection, exclusion, gossip, or overt negative judgment.

The overlap between stereotypes and social norms is central to understanding backlash. Social norms are the accepted behaviors and expectations within a society, and stereotypes are often intertwined with these norms, helping to define what is considered "appropriate" behavior for different groups. Just as people who violate injunctive norms, which are norms that specify how people should behave, are often penalized (e.g., when someone parks in a handicapped zone without proper authorization, they are not only at risk of receiving a fine but may also face social disapproval), so are people who violate stereotype-based expectancies (Cialdini & Trost, 1998). Research by Brescoll and Uhlmann (2005) found that stay-at-home fathers are often stigmatized more than their female counterparts, who are generally not subjected to the same level of scrutiny for assuming caregiving roles. The social rewards of conformity can be many: confirming to the behaviors and practices of important reference groups render individuals more likable and desirable. Likewise, those who deviate from the group consensus are disliked, rejected, and unwanted (Cialdini & Trost, 1998). Rudman and Fairchild (2004) proposed the Backlash and Stereotype Maintenance Model (BSMM) which provides a framework for understanding how backlash operates as part of a dynamic process where both perceivers (those who observe or judge others) and actors (the targets of backlash) play active roles in perpetuating stereotypes. According to this model, cultural beliefs shape the way perceivers evaluate others and the subsequent backlash that occurs when individuals deviate from social norms. Notably, perceivers only engage in backlash if they feel it is justified (i.e., if they can legitimize hostility). Because actors are also aware of stereotypes, they may fear social rejection (or backlash), and thus hide their atypical talents or behaviors, increasing norm conformity.

Both perceivers and actors engage in these dynamics so that they can benefit psychologically via self-esteem maintenance (Rudman & Fairchild, 2004).

Due to the backlash effect, prescriptive stereotypes can predict prejudice and discrimination even when descriptive stereotypes do not (Gill, 2004). Workplace backlash can significantly harm employees' careers, disrupt team dynamics, foster a toxic work environment, and even lead to higher employee turnover (e.g., Chang & Milkman, 2019; Rudman & Phelan, 2008). Prescriptive stereotypes in the workplace have been researched mainly regarding gender or ethnicity (e.g., Berdahl & Min, 2012; Heilman, 2001; Heilman et al., 2024), with research showing that even when a woman's competence is clearly demonstrated by her success, assumptions about the counter-stereotypical nature of the behaviors that contributed to her success (e.g., being achievement-oriented or agentic) can lead to negative judgments (Heilman, 2001; Heilman et al., 2024). Research regarding ethnicity found that East Asians who exhibited counter-stereotypical dominant behavior at work, thereby violating a prescriptive racial stereotype, experienced more racial harassment than those who did not display dominance (Berdahl & Min, 2012).

The backlash for crossing societal boundaries is especially strong when group outcomes are interconnected, as is the case with younger and older age groups. As a result, prescriptive stereotypes endorsement often creates much larger between-groups differences compared to the endorsement of descriptive stereotypes (North & Fiske, 2013b). Despite that, there is a dearth of ageism research addressing prescriptive age stereotypes, especially in the work context. North and Fiske (2013b) are the only authors to date who have investigated them, but concerning older people in general. Based on the existing potential intergenerational tensions over practical and symbolic societal resources, North and Fiske (2012) theorized prescriptive age expectations regarding older individuals which can be categorized into three distinct types: succession-based, consumption-based, and identity-based prescriptions. Succession stereotypes arise from expectations related to accessing desirable resources and societal roles. Younger people’s opportunities often depend on older individuals stepping aside, particularly in employment, where retirement may open up positions for younger workers. Consumption stereotypes focus on the perceived passive depletion of shared resources, with violations by older people including the overuse of societal resources, such as government-funded services (e.g., healthcare). Lastly, identity stereotypes involve more symbolic resources than succession or consumption, restricting older individuals' participation in activities typically reserved for younger people, such as using social media or dressing in certain ways (North & Fiske, 2013a). North and Fiske (2016) have also extended this work and assessed the consequences of

prescriptive age stereotypes towards older workers. This work will be presented in more detail in the next section, 1.4. Consequences of workplace youngism.

Despite existing work applying prescriptive age stereotypes towards older people to work settings, prescriptive age stereotypes remain an understudied topic, especially in the workplace and concerning younger age groups.

1.4. Consequences of workplace youngism

The effects of ageism on younger populations have been found to be a major blind spot in the ageism literature (de la Fuente-Núñez et al., 2021). Even so, the few existing studies demonstrate that endorsing youngism in the workplace has detrimental consequences for younger workers, particularly in personnel decisions such as hiring. For instance, Luoh and Tsaur (2013) found that middle-aged applicants were favored over younger candidates for a tour guide position despite identical qualifications. Similarly, Richardson et al. (2013) provided evidence for a preference for middle-aged candidates over both younger and older ones in a hypothetical hiring scenario for a job in the IT industry. Riach et al. (2010) examined hiring preferences for the roles of a "new graduate," a waiter, and a retail manager. While younger candidates were preferred for the new graduate and waiter positions, 59.3% of respondents favored older applicants over younger ones for the retail manager role.

Research on prescriptive stereotypes in work-related contexts has shown that violating prescriptive expectations brings negative consequences for stereotype violators. North and Fiske (2016) examined how the three domains of prescriptive expectations towards older people (Succession, Identity, and Consumption - SIC) potentially drive intergenerational exclusion in work-related spheres. Resource salience (scarce versus abundant) and target behavior, i.e. violating versus adhering to the specific SIC stereotype were manipulated. The networking appeal (the degree to which one evokes in other people the willingness for interaction) of the target was tested after the manipulation as a dependent variable (a sample item was “Would you be willing to interact further with Max [the 74-year-old fictional character] after the study is over?” and “Would you recommend other participants in this survey to interact with Max?”). Overall, results indicated that for the scenarios testing all three SIC dimensions the character violating the prescriptive expectation received a lower evaluation regarding networking appeal in the resource scarcity condition compared to the resource abundance condition.

We next present further empirical evidence regarding the negative consequences of violating prescriptive expectations, namely concerning organizational justice and person perception.

1.4.1. Prescriptive stereotypes and organizational justice

Organizational justice is defined as employees' perceptions of fairness in the workplace (Cropanzano & Greenberg, 1997). The three main dimensions of organizational justice that have been identified in the literature are distributive justice, procedural justice, and interactional justice (e.g., Bies & Moag, 1986; Colquitt, 2001; Greenberg, 1982; Greenberg, 1994). Distributive justice (Cropanzano et al., 2001) refers to the fairness perceptions of resource distribution such as pay, rewards, and promotions. Since distributive justice concerns the perceived fairness of outcomes, it can have significant implications within organizations, where the allocation of outcomes is a key component (Cohen-Charash, 2001). Procedural justice focuses on the fairness of the decision-making processes that lead to those outcomes, aiming to understand how and why those decisions were made (Colquitt et al., 2005). Thus, the focus shifts from the outcomes of justice to the processes through which justice is achieved. The opportunity to have input on how a decision will be made on the one hand, and the possibility of actively participating in the decision-making process on the other hand, are two key factors that influence perceptions of procedural justice (Thibaut & Walker, 1975). A third wave of organizational fairness research was concerned with the quality of interpersonal treatment individuals receive from others, particularly from key organizational authorities, and is referred to as interactional justice (Bies & Moag, 1986). Later, interactional justice was proposed to be divided into informational and interpersonal justice. Informational justice refers to employees' perceptions of the quality of the explanations they receive for decisions, particularly in terms of truthfulness, timeliness, adequacy of justification, and level of detail. In contrast, interpersonal justice focuses on the respect, dignity, and consideration with which decisions are communicated, emphasizing the sensitivity of the interpersonal treatment employees experience (Colquitt, 2001).

In addition to specific dimensions of justice, overall justice—a general assessment of fairness that individuals typically form—represents another important concept for evaluating organizational justice. It has been proposed that a broader focus on justice could more accurately reflect the diverse fairness experiences individuals encounter, while also expanding

the range of questions justice researchers explore, helping to address some of the limitations in current studies of justice (Ambrose & Schminke, 2009).

In their work on fairness perceptions and discrimination in organizations, Stone-Romero and Stone (2005) highlight that one factor leading to the biased allocation of outcomes is the desire (on the part of allocators) to maintain their positions of power and prestige in various contexts, namely by ensuring that one's in-group is evaluated more favorably than the out-groups. In a similar vein, the Backlash and Stereotype Maintenance Model (BSMM; Rudman & Fairchild, 2004) proposes that perceivers who engage in backlash feel their reaction is justified or legitimized. Thus, organizational fairness perceptions regarding decisions directed at stereotype violators or adherers are important consequences to be assessed, in the sense that they can be biased and perpetuate discriminatory practices, strongly influencing group dynamics.

Examples of studies examining the relationship between organizational justice and prescriptive stereotypes, namely gender prescriptive stereotypes, were conducted by Caleo (2016, 2018), looking into expectations about how women and men should behave, and different dimensions of fairness in organizations. In her 2018 study, Caleo explored how male and female managers are evaluated when they violate distributive justice norms in a company that rewards either individual achievement or teamwork. Specifically, the study examined two types of violations: equity violations, which occurred when managers applied equality (distributing rewards equally) in a company that emphasized individual achievement, and equality violations which happened when managers applied equity (distributing rewards based on individual contributions) in a company that prioritized teamwork. Caleo's research proposed that a violation of justice norms could interact with a simultaneous violation of prescriptive gender stereotypes. These stereotypes suggest that men are expected to be ambitious, competitive, and task-oriented, while women are expected to be nurturing, sensitive, and focused on others. The study hypothesized that men would be penalized more for violating equity norms (since it conflicts with the stereotype that men should prioritize individual achievement), and women would be penalized more for violating equality norms (since it conflicts with the stereotype that women should be concerned with group harmony). The findings partially supported the hypotheses, with men who violated equity norms being rated less favorably and seen as less agentic (i.e., less assertive or competent) compared to women. Overall, the study demonstrates how distributive justice norms and gender stereotypes can interact, influencing how people react to allocation decisions in the workplace.

In a similar vein, Caleo's (2016) research investigated whether people respond differently to men and women who violate procedural and interactional justice rules in organizational settings. For procedural justice violations, which involve the fairness of decision-making processes, there were no significant differences in the assessment of male versus female violators. This is because procedural justice criteria do not overlap with gender stereotypes, so violations were viewed similarly for both men and women. However, for interactional justice violations, which relate to the fairness of interpersonal treatment, differences in the assessment of male and female violators were predicted. Women who violated interactional justice norms were penalized not only for breaking organizational rules but also for failing to behave in ways traditionally associated with stereotypical female traits, such as warmth, empathy, and politeness. In contrast, men who violated interactional justice norms were expected to be punished solely for the rule violation itself, without any additional penalty related to gender expectations. As expected, results demonstrated that women were rated less favorably than men when they exhibited interactional injustice, but not when they engaged in procedural injustice.

Caleo's research (2016, 2018) highlights that reactions to injustice in organizations can be shaped by societal expectations of how men and women should behave, particularly when the violation of justice norms intersects with the violation of prescriptive gender roles. Although to our knowledge, there is no existing research exploring the consequences of violating prescriptive age stereotypes regarding organizational justice perceptions, the findings presented by research on the violation of gender expectations suggest that negative consequences involving fairness perceptions might also apply to the violation of age expectations. Thus, those studies inform the research presented in Chapter 4 of this dissertation.

1.4.2. Prescriptive stereotypes and person perception

Perceptions of personal characteristics have been shown to have important work-related implications. An example comes from Tresh et al. (2019) study examining the effects of participant age and gender on perceived leadership potential, moderated by the endorsement of gender (agentic vs. communal) and age (competence vs. warmth) stereotypes, with results indicating that for older men the endorsement of warmth stereotypes was associated with lower perceived leadership potential.

Research shows that the violation of prescriptive stereotypes not only relates to organizational justice perceptions but also to perceptions about the violator’s personal characteristics, such as the two dimensions of social judgments: warmth and competence (SCM;

Fiske et al., 2002). North and Fiske (2013a) ran a series of six experiments that manipulated the character's age (older, middle-aged, or younger) and behavior (either violating or adhering to a prescription corresponding with the relevant domain). The domains studied corresponded to the three dimensions of prescriptive age stereotypes of older persons: Succession of enviable resources, Consumption of shared resources, and symbolic Identity resources (North & Fiske, 2013b). Participants rated targets' perceived warmth and competence (SCM; Fiske et al., 2002). Results indicated that, overall, for all three dimensions of prescriptive expectations towards older people, older people violating the stereotypes received lower ratings in both perceived warmth and competence than did other age groups, especially from younger participants.

Hanrahan et al. (2023), building on the work by North and Fiske (2013a), used a mixed adhering-violating condition, investigating the effects of prescriptive stereotype violation on the application of descriptive age stereotypes (i.e., technology surprise, flexibility, costliness, stability, motivation), and examining the role of negative affect (i.e., frustration) as a mediating mechanism in the prescriptive stereotyping process. The authors manipulated the character's age (older or middle-aged) and behavior (violating, adhering, or adhering-violating) to a prescription corresponding with the symbolic Identity resources domain. Perceptions of warmth, competence, and desire for workplace interactions regarding the target were also examined. The results indicated that violators of prescriptive age stereotypes are perceived more negatively in terms of warmth, competence, and desire for workplace interactions. The negative effects of the violation persisted in the mixed adhering-violating condition. However, there was some support for the idea that descriptive age stereotypes are less frequently applied to those who violate prescriptive expectations. Additionally, frustration was found to significantly mediate prescriptive stereotyping effects.

As a concluding note of this chapter, we expect that the overall findings resulting from our three research questions will contribute to extending knowledge on workplace youngism, and younger worker prescriptive age stereotypes and their consequences.

1.5. Thesis overview

This thesis is organized into five chapters. In **Chapter 1**, we introduced the problem and presented the main concepts and theoretical frameworks supporting our research questions. We also overviewed existing research on ageism toward younger individuals and research about prescriptive stereotypes focusing on the work context.

Chapter 2 consists of a scoping review aimed at mapping the extent, range, and characteristics of the workplace youngism literature. For each research question of the review, we provide a summary of the existing knowledge and evidence, highlight areas of disagreement and gaps in the literature, and suggest potential directions for future research.

In **Chapter 3**, using a culturally decentred approach with participants from the US and Portugal, we developed and validated a scale measuring prescriptive age stereotypes towards younger workers across three studies. In the first study, we qualitatively identified prescriptive age stereotypes towards younger workers to generate an item pool; in the second study, we explored the factor structure of the item pool, and, in the third study, we validated the factor structure of the scale, tested for cross-cultural measurement invariance between samples from the two countries, and established the divergent and convergent validity of the scale.

In **Chapter 4**, we experimentally examined the consequences of endorsing prescriptive age stereotypes about younger workers in the context of personnel decisions in two studies. Using two types of prescriptive stereotypes towards younger workers informed from Chapter 3, we tested whether violating (versus adhering to) a prescriptive stereotype about younger workers resulted in a negative bias toward younger workers (as compared to middle-aged or older workers) in personnel decisions, particularly in terms of organizational fairness perceptions and person perceptions.

Finally, **Chapter 5** summarizes our main empirical findings and implications, and discusses their theoretical and applied contributions. We also discuss the general limitations of this work and suggest future directions for research. Figure 1.1 synthesizes the structure of this thesis.

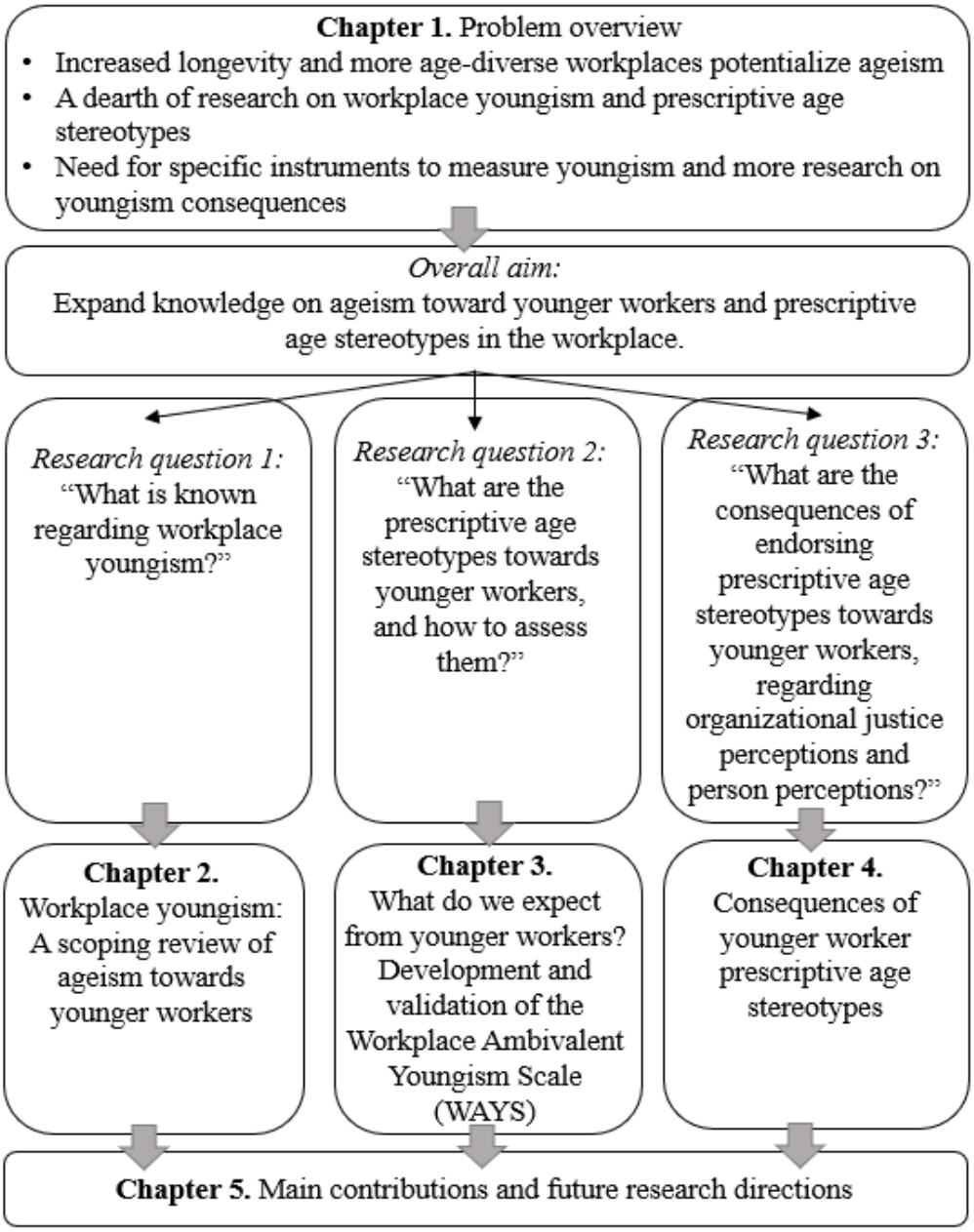


Figure 1.1. Overview of the problem, research questions, and chapters

CHAPTER 2

Workplace youngism: A scoping review of ageism towards younger workers

This chapter was submitted for a special issue in the "2025 Review Issue" in Work, Aging and Retirement, and it is currently under the 4th round of revision.

Paper drafts were presented at the 21st European Congress of Work and Organizational Psychology (2023, May 23-24, Katowice, Poland) and at the XVIII PhD Meeting in Psychology (2023, May 18-19, Lisbon, Portugal).

2.1. Abstract

Workplace ageism research has primarily focused on older workers, even though ageism can also target younger workers. Given the growing body of research on workplace youngism (ageism toward younger workers) and its need for assessment and synthesis, we conducted a scoping review aimed at mapping the range and characteristics of the workplace youngism literature. Unlike previous reviews, we focused exclusively on younger individuals in the workplace. A search of peer-reviewed literature identified 108 articles published between 1976 and 2022, containing 143 empirical studies from 21 countries, including 58,158 participants in total. The review is guided by three broad research questions: 1) How has workplace youngism been assessed?, 2) What are the main theories and conceptual approaches used to investigate workplace youngism?, and 3) What are the main antecedents and consequences of workplace youngism? For each research question, we summarize what is known and well-supported by evidence, identify disagreements and gaps in the literature, and propose directions for future research. This scoping review highlights the need for research on workplace youngism to broaden the range of methodological designs used, develop instruments specifically assessing ageism toward younger workers, and extend research to a wider range of national and cultural contexts. In addition, future research should investigate prescriptive age stereotypes towards younger workers, consider the perspective of middle-aged workers, pay greater attention to consequences of workplace youngism for the enablers, and extend the intersectional identities investigated.

2.2. Introduction

Increased life expectancy and declining fertility rates in many countries are causing rapid shifts in the age composition of the world population. The postponement of retirement in many jurisdictions has increased the likelihood of younger and older workers interacting at work and in many cases competing for scarce material and symbolic resources (North & Fiske, 2012). Up to four generations may coexist in contemporary organizations - commonly identified as Baby Boomers, Generation X, Millennials, and Generation Z (Cvenkel, 2020), which highlights the increasing importance of understanding age-based attitudes in the workplace (ageism; Nelson, 2009; World Health Organization, 2021) and intergenerational relations in organizations (North & Fiske, 2015). Changes in the workforce composition not only impact older workers but also increase pressure on younger workers, who tend to be underpaid (e.g., Wood et al., 2008) and report experiencing age discrimination during different phases of their employment (Snape & Redman, 2003).

When people categorize one another into broad age categories such as ‘younger worker’ or ‘older worker’ they also tend to make implicit inferences about abilities, competencies, and skills (Bytheway, 2005). For example, people may be judged or they may see themselves as ‘too young’ or ‘too old’ to pursue particular job activities or roles (Swift et al., 2018). A consequence of age categorization is that it might lead to and perpetuate ageism. Ageism encompasses stereotypes (how individuals think about age groups), prejudice (how they feel about a particular age group), and discrimination (how they act) toward others or oneself based on age (World Health Organization, 2021). In spite of the fact that most individuals will experience all age categories, from infancy to old age, ageism is the most prevalent and socially accepted form of discrimination, more so than sexism or racism (Abrams et al., 2011; Nelson, 2002). The prevalence of ageism is even more pronounced for the youngest age group (15 to 24 years of age) as shown in the representative data of the European Social Survey: 50 percent reported having experienced either blatant or subtle (e.g., being ignored or patronized) forms of discrimination because of their age (Abrams et al., 2011). Whether explicit or implicit, ageism can influence behavior, decisions, and interactions with targetted groups in ways that can be perceived as unfair and derogatory.

Although the social psychological literature has provided important insights into ageist perceptions, attitudes, and behaviors, the lion’s share has focused on how older people are perceived. In fact, people can also be judged as ‘too young’ in specific life domains and for

specific work tasks, a reality largely neglected in past research (Posthuma & Campion, 2009; Truxillo et al., 2015). Even though Palmore (1999) defined ageism as "prejudice or discrimination against or in favor of an age group" (p. 4) almost 25 years ago, relatively little research has been dedicated to what some now refer to as 'youngism' (e.g., Francioli & North, 2021). This is also reflected in the literature reviews and meta-analyses that summarize findings about workplace ageism (e.g., Bae & Choi, 2022; Bal et al., 2011; Cebola et al., 2021; Finkelstein et al., 2015; Ng & Feldman, 2012; Perry & Parlamis, 2006; Posthuma & Campion, 2009; Truxillo et al., 2015), most of which focus on ageism towards older workers. A notable exception is the scoping review by de la Fuente-Núñez et al. (2021) which summarizes ageism studies targeting individuals under the age of fifty; however, it does not focus on the workplace domain.

Though still at an early stage, the importance of youngism research has been increasingly recognized in recent years. For example, The Global Report on Ageism (World Health Organization, 2021) has dedicated an entire chapter to review the scale, impact, and determinants of ageism against younger people. Studies found that younger people are perceived by older people as using too much slang, having poor communication skills, and being difficult, entitled, and self-focused (e.g., Agrawal, 2017; Deal et al., 2010; Stein, 2013). In the work domain, research has started to show the negative consequences of ageism targeting younger workers, who report not feeling valued, receiving belittling comments, being perceived as less competent, and receiving fewer development opportunities (Raymer et al., 2017). The age discrimination that younger workers feel has been found to be associated with lower job satisfaction and work engagement (Jelenko, 2020), as well as higher work-life interference (Rabl & Kühlmann, 2009).

In spite of recent empirical findings regarding ageism against younger workers, many fundamental aspects have been operationalized in very different ways, or entirely overlooked. For example, because the boundaries that define 'old' and 'young' age groups are fluid (Baltes et al., 1980; Bytheway, 2005), there has been little agreement on how to define "younger" workers based on chronological age (Ashbaugh & Fay, 1987; Finkelstein et al., 2012; McCarthy et al., 2014). This is further complicated by different conceptualizations of age, including the notion of a subjective age (i.e., how old individuals feel). In terms of validated measurement instruments, ageism scales tend to focus on older people (Ayalon et al., 2019), and existing workplace ageism scales focus on older workers (e.g., Furunes & Mykletun, 2010; King & Bryant, 2017; França et al., 2017; Rego et al., 2017) or assess perceived discrimination in general by any age (Marchiondo et al., 2016).

Because ageism is often influenced by beliefs regarding certain age groups, stereotypes are particularly important to understand mechanisms that lead to age discrimination (e.g., Lamont et al., 2015). Stereotypes refer to generalized beliefs about social categories that people belong to and are used to differentiate groups from one another (Nelson, 2009). Stereotypes can be descriptive (e.g., "younger workers *are* less loyal"), prescriptive (e.g., "younger workers *should* show respect for older workers"), or metastereotypes (e.g., "*other age groups believe* that younger workers are more creative"). Age stereotypes can be positively valenced as well as negatively valenced. Because of their important role, also as a basis for the development of interventions aimed at reducing ageism (e.g., Brasseur, 2008; Devine, 1989), it is crucial to ascertain what is known about stereotyping younger workers.

2.2.1. Purpose and objectives of the review

Despite its negative impacts on individuals and organizations, and calls for further research on workplace youngism (de la Fuente-Núñez et al., 2021; Finkelstein et al., 2015; Truxillo et al., 2015), the emerging literature on workplace youngism requires assessment and synthesis. Therefore, we conducted a comprehensive review aimed at mapping the extent, range, and characteristics of the literature on ageism towards younger adults in the workplace domain. Although a scoping review on ageism against younger populations was recently published (de la Fuente-Núñez et al., 2021), it did not focus on the workplace domain, used very broad age categorization (i.e., younger populations were defined as under 50), and was limited in scope by the keywords used. Hence, there is an urgent need for a review focusing on the workplace and on ageism against younger workers, as conventionally defined.

The purpose and objectives of the present review are to systematically summarize, categorize, and assess the existing literature about ageism towards younger workers (workplace youngism), while being guided by three broad research questions: 1) How has workplace youngism been assessed?, 2) What are the main theories and conceptual approaches used to investigate workplace youngism?, and 3) What are the main antecedents and consequences of workplace youngism? For each question, we summarize what is known and well-supported by evidence, identify areas where there is less agreement in the findings, and highlight important areas that have been less addressed or not addressed at all.

2.3. Methods

Scoping reviews are especially helpful for emerging and heterogenous research fields, such as workplace youngism. Scoping reviews are well-suited to mapping and categorizing the findings and range of research in an area, identifying knowledge gaps, and overviewing concepts in existing literature. In addition, scoping reviews may provide more detailed findings in particular areas of study (e.g., Arksey & O'Malley, 2005; Colquhoun et al., 2014). The current review comprised five phases: 1) formulating the research questions, 2) identifying relevant studies, 3) selecting among the studies, 4) charting the data, and 5) collating, summarizing, and reporting the results (Arksey & O'Malley, 2005). Before initiating our literature search, a protocol for the scoping review was registered in Open Science Framework (available at https://osf.io/ytsa5/). Information was summarized and reported in accordance with PRISMA-ScR reporting standards (Tricco et al., 2018) and Peters et al. (2015) guidelines.

2.3.1. Information sources

An initial limited search of EBSCO host was undertaken to identify articles on the topic. The words in the titles and abstracts of relevant articles, and the index terms used to describe the articles were used to develop a full search strategy for electronic resources in Education and Psychology, Social Sciences, and Business and Economics. The following databases were searched: Web of Science, Scopus, and EBSCO host (including Academic Search Complete, Business Source Complete, APA PsycArticles, APA PsycInfo, Psychology and Behavioral Sciences Collection). The databases were selected to be comprehensive and to cover a broad range of disciplines. The search string used was: ageism OR agism OR "age discrimination" OR "age stereotypes" OR "age prejudice" OR "age bias" OR "age attitudes" AND work OR workplace OR "human resources" OR employment OR organi?ation* AND young* OR Millennials OR "Generation Y" OR "Generation Z".

2.3.2. Eligibility criteria

Studies were considered eligible for inclusion if they:

- were published between January 1969, the year in which Butler first coined the term ageism in his seminal article (Butler, 1969), and August 5, 2022;
- focused on the topic of youngism;
- included younger workers as a population of interest in the study (as targets of ageism);

- related to the work or organizational context;
- were written in English;
- were published in peer-reviewed journals and contained empirical data obtained from primary sources. Our objective was to summarize and organize empirical findings, so we excluded opinion pieces, theses, book chapters, theoretical discussions, literature reviews, and articles describing laws and policies.

In order to fully map the state-of-the-art, both quantitative and qualitative research designs were deemed eligible for inclusion.

2.3.3. Screening studies

All identified records were collated and uploaded into the reference management software Mendeley and duplicates were removed. Titles and abstracts were screened by two independent reviewers against the inclusion criteria of the review, using the software Rayyan to manage the process of screening and selecting studies for inclusion. At this stage, key papers were selected and their references were checked to identify additional relevant articles. The same approach used for titles and abstracts screening was followed for the full-text of selected articles. At both stages, disagreements between the reviewers (30% for the titles and abstracts screening stage and 25% for the full-text screening stage) were resolved through discussion with a third independent reviewer.

2.3.4. Data extraction

Data were extracted from papers included in the scoping review using a data extraction template in SPSS. The coding scheme was pilot-tested by two independent reviewers, and modifications were incorporated into the coding scheme.

The extraction variables included general information on each study (e.g., publication year, journal of publication, study country, study design, sample size and other demographic characteristics of the sample) and specific information related to the three broad research questions, such as: 1) age categories and terminology used to define younger workers, age group membership of participants in relation to the targets (ingroup or outgroup), scales used to measure workplace youngism, how studies examined workplace youngism (exclusively or in comparison with older workers); 2) theories and ageism dimensions (behavioral, cognitive and affective) used to investigate workplace youngism; and 3) antecedents and consequences of

workplace youngism, their classification in three level of analysis (intrapersonal, interpersonal, and contextual) and the perspective or role of participants (enablers – i.e., those who generally carry out, support or sustain discriminatory practices - or targets of ageism).

Quantitative and mixed-methods studies were coded for all the extraction variables. Qualitative studies (*n*=21) were coded for all extraction variables, except for the antecedents and consequences of workplace youngism.

2.3.5. Data collation and summarizing

Figure 1 shows the PRISMA flowchart, with the number of records excluded at each stage of the process. In our database search, 699 records were identified. After removing duplicates, 356 records were screened. Of these, 124 full-text articles met the criteria for eligibility and 32 additional records were identified through reference checking. After screening the 156 full-text articles, 48 articles were excluded (the most common reasons being not related to the work context, and not directly focused on ageism) and the remaining 108 articles were subjected to extraction and synthesis.

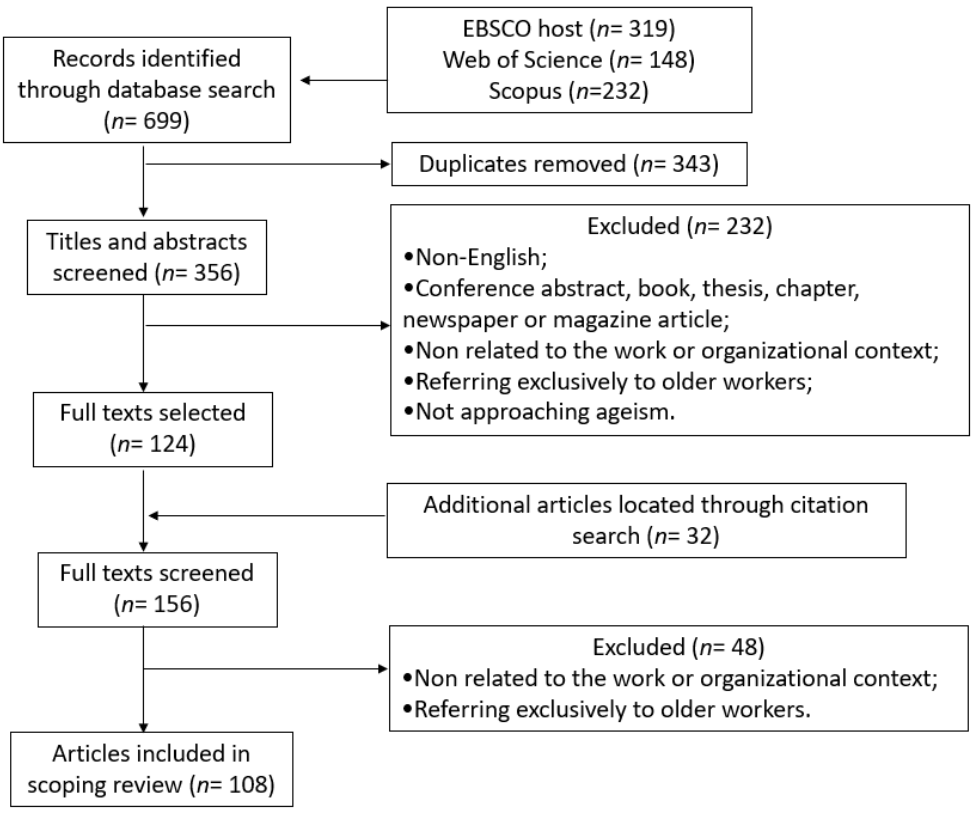


Figure 2.1. PRISMA flowchart of the screening process and included articles

2.4. Results

The selected articles contained a total of 143 studies, published between 1976 and 2022, from 21 countries, with the largest number of studies conducted in the US (42.6 %), UK (11.3%), and Germany (8.5%). In terms of methodological approaches, most of the studies were quantitative (n= 111), followed by qualitative (n = 21) and mixed methods (n = 11). Among the quantitative studies, 70 were experimental, 35 were cross-sectional, four were longitudinal, and two were quasi-experimental.

The selected studies included data from 58,158 participants in total. Participant mean age, specified in 111 studies, was 34.7 years (SD = 10.9; range = 19–70 years), and 52% were female. When specified, samples were mostly composed of workers (55.6%), or university and college students (23.9%). The sector in which participants worked was not specified in 59.9% of studies and the professional group to which they belonged was not mentioned in 74% of studies. Table 2.1 presents the 108 publications and the main characteristics of their studies.

2.4.1. How has workplace youngism been assessed?

In this section, we present findings regarding how younger workers' age and ageism toward younger workers have been measured, how younger workers are referred to as a social group, and the extent to which ageism toward younger workers has been investigated in studies focusing exclusively or primarily on younger workers.

Age categories and terminology defining younger workers and workplace youngism

The age of younger workers as a target of ageism was measured or presented in the selected studies in a variety of ways: age ranges were used in 57 studies and specific ages were used in 49 studies. In 42 studies, the target age was not specified; rather, a target's age was conveyed via photos (Luoh & Tsaur, 2011; Luoh & Tsaur, 2013), video resumes (Perry et al., 1996), or other textual descriptors of younger workers.

Table 2.1. The 108 publications and the main characteristics of their studies.

Author/Year	St/Sa	Study design	Country	*n*	Participant				Target age group	Ageism dimension
					M	Age group	Empl. status	Role		
Abrams et al. (2016)	St1	Experimental	USA	40	37	Y, O	Not specified	En	Y, O	Cgt, Bhv
	St2	Experimental	USA	80	35	Y, O	Not specified	En	Y, O	Cgt, Bhv
	St3	Experimental	USA	150	36	Y, O	Not specified	En	Y, O	Cgt, Bhv
Ahmed et al. (2012)		Experimental	Sweden	--	--	Not specified	Worker	En	Y, O	Bhv
Albert et al. (2011)		Experimental	Spain	--	--	Not specified	Worker	En	Y, O	Bhv
Angouri (2012)		Qualitative	UK	5	--	Not specified	Worker	En,Ta	Y	Aff
Avolio & Barrett (1987)		Experimental	USA	156	23	Y, MA	Student	En	Y, O	Cgt
Bellas (2001)		Cross-sectional	USA	8837	--	Y, O	Multiple	Ta	Y, O	Bhv
Bennington (2001)	St1	Qualitative	Australia	--	--	Not applicable	Not applicable	--	Y, O	Bhv
	St2	Qualitative	Australia	--	--	Y, O	Worker	En	Y, O	Aff, Bhv
	St3	Mixed methods	Australia	180	--	Not specified	Worker	En	Y, O	Cgt,Bhv
	St4	Qualitative	Australia	186	30	Y, O	Multiple	Ta	Y, O	Bhv
Berde & Mágó (2022)		Experimental	Hungary	--	--	Not specified	Worker	En	Y, O	Bhv
Bertolino et al. (2013)		Experimental	Italy	155	45	Y, O	Worker	En	Y, O	Cgt
Boateng & Adams (2016)		Qualitative	Canada	66	38	Y, O	Worker	Ta	Y	Bhv
Brooke & Taylor (2005)		Mixed methods	Several[1]	--	--	Y, O	Worker	En,Ta	Y, O	Cgt, Aff, Bhv
Chambers & Freeman (2020)		Qualitative	USA	7	--	Not specified	Worker	Ta	Y	Aff, Bhv

Chasteen et al. (2021)		Qualitative	Canada	589	--	Y, O	Not specified	Ta	Y, O	Bhv
Collins et al. (2009)		Cross-sectional	USA	319	--	Y, O	Worker	En	Y, O	Cgt
Cox & Beier (2014)		Experimental	USA	203	39	Not specified	Worker	En	Y, O	Cgt, Aff, Bhv
Crew (1984)		Experimental	USA	125	21	Y	Student	En	Y, O	Cgt
De Meulenaere et al. (2022)		Cross-sectional	Several[2]	4764	45	Y, O	Worker	Ta	Y, O	Bhv
Dedrick & Dobbins (1991)		Experimental	USA	124	--	Y	Student	En	Y, O	Cgt,Bhv
Diekman & Hirnisey (2007)	St1	Experimental	USA	41	19	Y	Student	En	Y, O	Cgt,Bhv
	St2	Experimental	USA	209	19	Y	Student	En	Y, O	Cgt,Bhv
	St3	Experimental	USA	108	19	Y	Student	En	Y, O	Cgt,Bhv
Dixon (2012)		Qualitative	USA	60	34	Y, O	Worker	En,Ta	Y, O	Cgt
Drehmer et al. (1992)		Experimental	USA	56	26	Not specified	Worker	En	Not specified	Bhv
Drydakis et al. (2018)		Experimental	UK	--	--	Not specified	Worker	En	Y, O	Bhv
Duncan & Loretto (2004)		Mixed methods	UK	1128	--	Y, O	Worker	Ta	Y, O	Bhv
Earl & Taylor (2016)		Mixed methods	Australia	25	--	Y, O	Worker	En,Ta	Y, O	Ctg, Aff
Erber & Danker (1995)		Experimental	USA	128	34	Y, O	Worker	En	Y, O	Ctg, Bhv
Erber & Long (2006)		Experimental	USA	167	25	Y, MA	Multiple	En	Y, O	Ctg, Aff, Bhv
Finkelstein & Burke (1998)		Experimental	USA	324	41	Y, O	Worker	En	Y, O	Ctg, Aff, Bhv
Finkelstein et al. (2000)		Qualitative	USA	324	41	Y, O	Worker	En	Y, O	Ctg, Aff, Bhv
Finkelstein et al. (2013)		Mixed methods	USA	247	--	Y, MA, O	Multiple	En,Ta	Y, MA, O	Ctg, Bhv
	Sa1		USA	125	21	--	Student	--	Y	--
	Sa2		USA	61	46	--	Worker	--	MA	--
	Sa3		USA	61	58	--	Worker	--	O	--
Finkelstein et al. (2020)		Longitudinal	USA	185	44	Y, O	Worker	Ta	Y, O	Ctg
Forte & Hansvick (1999)		Cross-sectional	USA	98	45	Y, O	Worker	En	Y, O	Ctg
Fraher (2017)		Qualitative	USA	43	--	Y, O	Multiple	En,Ta	Y, O	Aff
Francioli & North (2021)		Cross-sectional	USA	358	44	Y, O	Not specified	En	Y	Ctg, Aff

Gee et al. (2007)		Longitudinal	USA	7225	--	Y, O	Multiple	Ta	Y, O	Bhv
Gibson et al. (1993)		Cross-sectional	Canada	811	--	Y, O	Worker	En	Y, O	Ctg
Gioaba & Krings (2017)		Experimental	Switzerland	515	23	Y	Multiple	En	Y, O	Ctg, Bhv
Granleese & Sayer (2006)		Qualitative	UK	48	--	Y, O	Worker	Ta	Y, O	Ctg
Gringart et al. (2005)		Mixed methods	Australia	128	45	Not specified	Worker	En	Y, O	Ctg
Guillén & Kunze (2019)		Longitudinal	Not specified	305	45	Y, O	Worker	Ta	Y, O	Ctg, Aff, Bhv
Haefner (1977)		Experimental	USA	286	44	Not specified	Worker	En	Y, O	Bhv
Helaß et al. (2022)		Qualitative	Germany	50	47	Y, O	Worker	En,Ta	Y, O	Ctg, Bhv
Henry et al. (2015)		Cross-sectional	Belgium	321	41	Y, O	Worker	En	Y, O	Ctg
Heywood et al. (1999)		Cross-sectional	China	369	--	Not specified	Worker	En	Y, O	Bhv
Jelenko (2020)		Cross-sectional	Slovenia	1505	--	Y, O	Worker	Ta	Y, O	Bhv
	Sa1		Slovenia	755	--	--	--	--	Y	--
	Sa2		Slovenia	750	--	--	--	--	O	--
Kanagasabai (2016)		Qualitative	India	17	--	Y, O	Worker	En,Ta	Y, O	Aff
Kaufmann et al. (2017)	St1	Experimental	USA	383	35	Y, O	Multiple	En	Y, O	Ctg, Bhv
	St2	Experimental	Several[3]	264	43	Y, O	Worker	En	Y, O	Ctg, Bhv
Kelan (2014)		Qualitative	UK	32	--	Y	Worker	Ta	Y	Aff, Bhv
Kessler et al. (2020)		Experimental	Germany	79	23	Y	Not specified	En	Y, O	Bhv
Kleissner & Jahn (2020a)		Cross-sectional	Germany	380	42	Y, O	Worker	En	Y, O	Ctg, Aff
Kleissner & Jahn (2020b)		Experimental	Germany	196	--	O	Not specified	En	Y, O	Ctg, Aff, Bhv
	St1	Experimental	Germany	53	70	Y	Student	En	Y, O	Ctg, Aff, Bhv
	St2	Experimental	Germany	50	23	Y, O	Multiple	En	Y, O	Ctg, Aff, Bhv
	St3	Experimental	Germany	93	39	Y, O	Worker	En	Y, O	Ctg, Aff, Bhv
Kmicinska et al. (2016)		Experimental	Italy	242	38	Y, O	Worker	En	Y, O	Ctg

Krings et al. (2011)	St1	Cross-sectional	Switzerland	109	21	Y, O	Worker	En	Y, O	Ctg, Bhv
	St2	Experimental	Switzerland	101	22	Y	Student	En	Y, O	Ctg
	St3	Experimental	Switzerland	88	38	Y	Student	En	Y, O	Ctg, Bhv
Lahey (2008)		Experimental	USA	--	--	Not specified	Worker	En	Y, O	Bhv
Lamont et al. (2021)	St1	Quasi-experimental	UK	105	51	Y, O	Not specified	Ta	Y, O	Ctg
	St2	Quasi-experimental	UK	177	46	Y	Not specified	Ta	Y, O	Ctg
Lee et al. (2015)		Experimental	USA	121	31	Not specified	Not specified	En	Y, O	Ctg, Bhv
Levin (1988)		Experimental	USA	487	--	Y	Student	En	Y, O	Ctg
Loretto et al. (2000)		Mixed methods	UK	460	--	Y	Student	Ta	Y, O	Aff, Bhv
Lucas & Keegan (2007)		Mixed methods	UK	15	--	Not specified	Worker	En	Y	Cgt, Bhv
Lucas & Keegan (2008)		Mixed methods	UK	15	--	Not specified	Worker	En	Y	Cgt, Bhv
Luoh & Tsaur (2011)		Experimental	Taiwan	406	--	Y, MA	Not specified	En	Y, MA	Ctg
	Sa1		Taiwan	277	28	--	--	--	Y	--
	Sa2		Taiwan	129	47	--	--	--	MA	--
Luoh & Tsaur (2013)		Experimental	Taiwan	447	--	Y, MA	Not specified	En	Y, MA	Ctg
	Sa1		Taiwan	254	29	--	--	--	Y	--
	Sa2		Taiwan	193	48	--	--	--	MA	--
Lyons et al. (2014)		Cross-sectional	USA	129	37	Y, O	Unemployed	Ta	Y, O	Bhv
Malinen & Johnston (2013)	St1	Experimental	New Zealand	77	26	Y, O	Student	En	Y, O	Ctg, Aff
	St2	Experimental	New Zealand	50	22	Y	Student	En	Y, O	Aff
Marchiondo et al. (2016)	St1	Mixed-methods	USA	831		--	--	Ta	O	--
	Sa1		USA	96	56	--	--		O	--
	Sa2		USA	345	58	--	--		O	--
	Sa3		USA	390	55	--	--		O	--

	St2	Mixed-methods	USA	803		--	--	Ta	Y	--
	Sa1		USA	106	29	O	Worker		Y	Bhv
	Sa2		USA	294	25	Y	Worker		Y	Bhv
	Sa3		USA	403	25	MA	Worker		Y	Bhv
	St3	Quantitative	USA	1607		--	--	Ta	MA	--
	Sa1		USA	407	37	--	--	Ta	MA	--
	Sa2		USA	1200	--	Y, O	Worker		MA	Bhv
McCann & Giles (2007)		Cross-sectional	Several[4]	267	22	Y	Student	En	Y, O	Ctg, Bhv
McCann & Keaton (2013)		Cross-sectional	Several[5]	267	22	Y	Student	En	Y, O	Ctg, Bhv
	Sa1		USA	142	21	--	--	--	Y, O	--
	Sa2		Thailand	125	25	--	--	--	Y, O	--
McClellan & Beggan (2017)		Qualitative	USA	26	42	Y, O	Worker	Ta	Y, O	Aff, Bhv
Meinich & Sang (2018)		Qualitative	Norway	20	--	Y, O	Worker	En,Ta	Y, O	Ctg, Bhv
Mooney (2016)		Qualitative	New Zealand	31	--	Y, O	Worker	En,Ta	Y	Aff, Bhv
Mulders (2020)		Cross-sectional	Netherlands	960	52	Not specified	Worker	En	Y, O	Ctg, Bhv
Ograjenšek et al. (2009)		Cross-sectional	Slovenia	200	42	Not specified	Worker	En	Y, O	Ctg
Paleari et al. (2019)	St1	Cross-sectional	Italy	224	--	Y, O	Worker	En	Y, O	Ctg, Aff, Bhv
	St2	Longitudinal	Italy	94	--	Y, O	Worker	En	Y, O	Ctg, Aff, Bhv
Perry & Bourhis (1998)		Experimental	USA	81	--	Y	Student	En	Y, O	Ctg, Aff, Bhv
Perry et al. (2017)	St1	Experimental	USA	225	37	Y, O	Multiple	En	Y, O	Ctg, Aff, Bhv
	St2	Experimental	USA	125	28	Y, O	Student	En	Y, O	Ctg, Aff, Bhv
Perry et al. (1996)		Experimental	USA	131	21	Y	Student	En	Y, O	Ctg, Bhv
Petery et al. (2020)		Cross-sectional	USA	222	36	Y, O	Worker	En	Y, O	Ctg
Petit (2007)		Experimental	France	--	--	Not specified	Worker	En	Y, O	Bhv

Prazeres & Passos (2021)		Cross-sectional	Portugal	369	38	Y, O	Worker	Ta	Y, O	Bhv
Previtali & Spedale (2021)		Qualitative	Italy	13	49	Not specified	Worker	En,Ta	Y, O	Aff
Principi et al. (2015)		Cross-sectional	Italy	516	45	Y, O	Worker	En	Y, O	Ctg
Pullins et al. (2011)		Qualitative	USA	24	24	Y	Worker	Ta	Y	Ctg, Aff
Rabl (2010)		Cross-sectional	Germany	1255	45	Y, O	Worker	Ta	Y, O	Bhv
	Sa1		Germany	631	54	--	--	--	O	--
	Sa2		Germany	624	36	--	--	--	Y	--
Rabl & Kühlmann (2009)		Cross-sectional	Germany	1255	45	Y, O	Worker	Ta	Y, O	Bhv
	Sa1		Germany	631	54	--	--	--	O	--
	Sa2		Germany	624	36	--	--	--	Y	--
Rabl & Triana (2013)		Cross-sectional	Germany	1255	45	Y, O	Worker	Ta	Y, O	Bhv
	Sa1		Germany	631	54	--	--	--	O	--
	Sa2		Germany	624	36	--	--	--	Y	--
Rauschenbach et al. (2012)		Experimental	Germany	4181	42	Y, O	Worker	En	Y, O	Ctg
Raymer et al. (2017)		Mixed methods	USA	282	--	Y, O	Worker	En,Ta	Y	Ctg
Rego et al. (2017)		Cross-sectional	Several[6]	473	39	Not specified	Worker	En	Y, O	Bhv
	Sa1		Brazil	249	39			--	Y, O	
	Sa2		Portugal	224	40			--	Y, O	
Rego et al. (2018)		Cross-sectional	Brazil	201	42	Not specified	Worker	En	Y, O	Bhv
Riach & Rich (2010)	St1	Experimental	UK	--	--	Not specified	Worker	En	Y, O	Bhv
	St2	Experimental	UK	--	--	Not specified	Worker	En	Y, O	Bhv
	St3	Experimental	UK	--	--	Not specified	Worker	En	Y, O	Bhv
Richardson et al. (2013)		Experimental	Australia	154		Y, O	Multiple	En	Y, O	Ctg, Bhv
	Sa1		Australia	102	23	--	Student	--	Y, O	--
	Sa2		Australia	52	40	--	Worker	--	Y, O	--
Rosen & Jerdee (1976)		Experimental	USA	142	--	Y, O	Student	En	Y, O	Ctg, Bhv

Ruggs et al. (2014)		Experimental	USA	320	35	Y, O	Not specified	En	Y, O	Ctg
Rupp et al. (2006)		Experimental	USA	353	23	Y	Student	En	Y, O	
Ryan et al. (2015)		Cross-sectional	USA	281	25	Y	Worker	Ta	Y, O	Ctg
Schloegel et al. (2018a)		Cross-sectional	Not specified	464	38	Y, O	Worker	En	Y, MA, O	Ctg
Schloegel et al. (2018b)		Cross-sectional	Several[7]	457	39	Y, O	Worker	En	Y, MA, O	Ctg
Schwab & Heneman (1978)		Experimental	USA	35	34	Y, O	Worker	En	Y, O	Ctg, Bhv
Silvestre et al. (2017)	St1	Experimental	Belgium	68	21	Y, O	Worker	Ta	Y	Cgt, Aff
	St2	Experimental	Belgium	40	22	Y, O	Worker	Ta	Y	Cgt, Aff
	St3	Experimental	Belgium	132	22	Y, O	Worker	Ta	Y	Cgt, Aff
Singer (1986)		Experimental	New Zealand	170	--	Y	Student	En	Y, O	Cgt
Snape & Redman (2003)		Cross-sectional	UK	613	43	Y, O	Worker	Ta	Y, O	Bhv
Tresh et al. (2019)	St1	Cross-sectional	UK	252	--	Y, O	Worker	En,Ta	Y, O	Cgt
	Sa1		UK	126	56	--	--	--	O	--
	Sa2		UK	126	26	--	--	--	Y	--
	St2	Experimental	UK	189	41	Y, O	Worker	Ta	Y, O	Ctg
	Sa1		UK	96	55	--	--	--	O	--
	Sa2		UK	93	26	--	--	--	Y	--
Truxillo et al. (2012)	St1	Experimental	USA	142	26	Y, O	Multiple	En	Y, O	Ctg
	St2	Experimental	USA	310	24	Y, O	Multiple	En	Y, O	Ctg
Van Der Heijden (2016)		Cross-sectional	Netherlands	606	--	Not specified	Worker	En,Ta	Not specified	Cgt
	Sa1		Netherlands	303	41	Not specified	Worker	Ta	Not specified	--
	Sa2		Netherlands	303	43	Not specified	Worker	En	Not specified	--
Vasconcelos (2016)		Mixed methods	Brazil	8	--	Y, O	Worker	En,Ta	Y, O	Bhv
Weiss & Maurer (2004)		Experimental	USA	204	20	Y	Student	En	Y, O	Ctg, Bhv
Worth (2016)		Qualitative	Canada	33	--	Y	Multiple	Ta	Y	Ctg, Aff, Bhv
Zacher & Bal (2012)		Cross-sectional	Germany	256	--	Y, O	Worker	En,Ta	Y, O	Cgt
	Sa1		Germany	128	32	Y, O	Worker	En	Y, O	--

	Sa2		Germany	128	50	Y, O	Worker	Ta	Y, O	--
Zaniboni et al. (2019)		Experimental	Italy	110	37	Y, O	Not specified	En	Y, O	Ctg, Aff, Bhv

Note. St/Sa: St – study; Sa – sample. M: participant mean age. Empl. status: participant employment status. Participant age group: Y – younger workers; MA – middle-aged workers; O – older workers. Target age group: Y – younger workers; MA – middle-aged workers; O – older workers. Participant role: En – enabler; Ta – target. Ageism dimension: Cgt – cognitive dimension; Bhv – behavioral dimension; Aff – affective dimension.

[1] Australia, UK

[2] Austria, Belgium, France, Germany, Netherlands, UK

[3] Austria, Germany, Switzerland

[4] Thailand, USA

[5] Thailand, USA

[6] Portugal, Brazil

[7] China, Germany, Poland, Bulgaria

Among the 57 studies using age range to categorize younger workers as targets of ageism, the most frequent age ranges used were “35 years or lower” (*n*= 9), “30 to 18” (*n*= 7), “34 to 18” (*n*= 6), and “34 years or lower” (*n*= 5). The most frequent lower age limit was 18 years (*n*= 18), and the most frequent upper age limit was 34 years old (*n*= 15). The lowest age limit was 16 years old, in two studies comparing characteristics of jobs practiced by 16- and 17-year-olds with jobs practiced by workers aged 18 and above in the hospitality sector in North Wales (Lucas & Keegan, 2007; 2008). The highest age limit for younger workers was 49 years old, in two studies (Forte & Hansvick, 1999; Henry & Desmette, 2015) that categorized younger workers as 49 and below and older workers as 50 and above, thus not acknowledging a middle-aged group. Three additional studies followed a similar approach in dividing workers into only two groups (younger and older), albeit with lower upper ranges for younger workers: 40 (Bellas, 2001; Duncan & Loretto, 2004) and 35 (Heywood et al., 1999).

Of the 49 studies indicating specific ages, 45 use experimental methodologies, for example, simulations or scenario studies, to investigate how younger workers are perceived, evaluated, or treated. Among studies defining specific ages for younger workers, the most frequently used age was 28 years, followed by 29 and 30 years. Hypothetical targets of ageism toward younger workers, mostly described using specific ages, were used in 41.2% of the studies (*n* = 59), among which 55 were experimental. Interestingly, in most of these studies (*n* = 31) the target was male, whereas in only seven studies was the target specified as female. In four studies both genders were considered, in 12 studies gender was not specified, and in four studies gender was experimentally manipulated. Table 2.2 presents the main characteristics of the 55 experimental vignette studies on workplace youngism using hypothetical targets.

Table 2.2. Main characteristics of the 55 experimental vignette studies on workplace youngism using hypothetical targets.

Author/Year	Study	Target					
		Age manipulation		Other manipulation	Gender	Status	Job
		Younger	Older				
Abrams et al. (2016)	1	NA	NA	--	Neutral	Applicant	Not specified
	2	NA	NA	--	Neutral	Applicant	Not specified
	3	NA	NA	--	Neutral	Applicant	Not specified
Ahmed et al. (2012)		31	46	--	Male	Applicant	Sales and hospitality
Albert et al. (2011)		26	38	--	Both	Applicant	Multiple
Avolio & Barrett (1987)		32	59	--	Male	Employee	Not specified
Berde & Mágó (2022)		34	60	--	Female	Applicant	Multiple
Cox & Beier (2014)		27	62	--	Male	Employee	Clerk
Crew (1984)		30	60	--	Male	Employee	Not specified
Dedrick & Dobbins (1991)		30	60	--	Male	Employee	Business and finance
Diekman & Hirnisey (2007)	1	28	58	--	Male	Applicant	Not specified
	2	35	65	--	Male	Applicant	Not specified
	3	28	58	--	Male	Applicant	Human resources
Drehmer et al. (1992)		NA	NA	--	Not specified	Employee	Business and finance
Drydakis et al. (2018)		28	50	--	Male	Applicant	Multiple
Erber & Danker (1995)		32	62	Gender	Manipulated	Employee	Not specified
Erber & Long (2006)		29.5	58	Job	Male	Employee	Manipulated

Finkelstein & Burke (1998)		28	59	--	Neutral	Applicant	Clerk
Gioaba & Krings (2017)		29	51	--	Male	Applicant	Sales and hospitality
Haefner (1977)		25	55	Gender	Manipulated	Applicant	Not specified
Kaufmann et al. (2017)	1	30	50	Gender	Manipulated	Applicant	Sales and hospitality
	2	30	50	Gender	Manipulated	Applicant	Sales and hospitality
Kessler et al. (2020)		NA	NA	--	Female	Employee	Health
Krings et al. (2011)	2	29	50	--	Male	Applicant	Sales and hospitality
	3	29	50	--	Male	Applicant	Sales and hospitality
Lahey (2008)		40	57.3	--	Female	Applicant	Not specified
Lee et al. (2015)		25	50	Job	Not specified	Applicant	Manipulated
Levin (1988)		25	73	--	Male	Applicant	Not specified
Luoh & Tsaur (2011)		NA	NA	--	Female	Employee	Sales and hospitality
Luoh & Tsaur (2013)		NA	NA	--	Male	Employee	Sales and hospitality
Perry & Bourhis (1998)		22	58	Job	Not specified	Applicant	Manipulated
Perry et al. (2017)	1	29	60	--	Male	Applicant	Sales and hospitality
	2	29	60	--	Male	Applicant	Sales and hospitality
Perry et al. (1996)		NA	NA	Job	Female	Applicant	Manipulated
Petit (2007)		25	37	--	Both	Applicant	Clerk
Rauschenbach et al. (2012)		24	62	--	Both	Employee	Clerk
Riach & Rich (2010)	1	21	39	--	Female	Applicant	Not specified
	2	27	47	--	Male	Applicant	Sales and hospitality

	3	27	47	--	Female	Applicant	Sales and hospitality
Richardson et al. (2013)		NA	NA	--	Male	Applicant	Technology
Rosen & Jerdee (1976)	1	NA	NA	--	Male	Employee	Clerk
	2	32	61	--	Male	Employee	Other
	3	29	58	--	Male	Applicant	Business and finance
	4	23	52	--	Male	Employee	Clerk
	5	34	62	--	Male	Employee	Not specified
	6	30	60	--	Male	Employee	Technology
Ruggs et al. (2014)		20	60	--	Both	Applicant	Not specified
Rupp et al. (2006)		31	63	--	Neutral	Employee	Other
Schwab & Heneman (1978)		24	61	--	Not specified	Employee	Clerk
Weiss & Maurer (2004)	1	NA	NA	--	Male	Employee	Clerk
	2	32	61	--	Male	Employee	Other
	3	29	58	--	Male	Applicant	Business and finance
	4	23	52	--	Male	Employee	Clerk
	5	34	62	--	Male	Employee	Not specified
	6	30	60	--	Male	Employee	Technology
Zaniboni et al. (2019)		28	53	--	Male	Applicant	Business and finance

Note. NA: Not Applicable.

Younger workers were referred to by a variety of labels. The majority of studies (136) used the terms "young" or "younger". Five studies used generational labels, such as "millennials" (e.g., Earl & Taylor, 2016) or "generation Y" (e.g., Helaß et al., 2022). Only three articles used specific terms to refer to ageism against younger people or younger workers. Francioli & North (2021) referred to ageism towards younger adults in general as *youngism*. In referring specifically to workplace ageism toward younger workers, Rabl and Triana (2013) used *reverse age discrimination* and Raymer et al. (2017) used *reverse ageism* and *adultism*. Because for many years, ageism was exclusively associated with older people, these new terms are important to differentiate "a phenomenon documented by a growing body of research" (Raymer et al., 2017, p.149).

Age group membership of participants

There were also wide variations in the age groups of study participants, in whether study participants were of the same or different age from the actual or hypothetical targets of ageism, and in whether participants from multiple age groups were included in the sample.

Most studies (n = 71) included in their sample younger and older participants. In four studies, participants were younger and middle-aged (Avolio & Barrett, 1987; Erber & Long, 2006; Luoh & Tsaur, 2011; Luoh & Tsaur, 2013), and in a single study the sample included younger, middle-aged, and older workers (Finkelstein et al., 2013). While 39 studies included only younger participants, two studies included only older participants (Kleissner & Jahn, 2020b; Marchiondo et al., 2016), and a single study included only middle-aged participants (Marchiondo et al., 2016). Studies in which the age or age group of participants was not specified included a documental analysis (Bennington, 2001), several field experiments involving fictitious applications (e.g., Albert et al., 2011; Berde & Mágó, 2022; Drydakis et al., 2018) and studies in which only the mean age of participants was reported (e.g., Cox & Beier, 2014; Drehmer et al., 1992).

These findings show that our knowledge regarding ageism against younger workers is disproportionately based on studies using younger worker samples, with fewer studies bringing the perspective of older and, especially, middle-aged participants. Among the few studies involving specific samples of middle-aged workers is Finkelstein et al.´s (2013) study which used a sample of 247 younger, middle-aged, and older workers to compare the content of descriptive stereotypes and metastereotypes toward different age groups, and by different age groups. Marchiondo et al. (2016) used a middle-aged sample in one of three studies (the other

two studies used samples of younger workers and older workers, respectively) when they developed and tested the WADS – Workplace Age Discrimination Scale.

Scales and implicit measures of workplace youngism

In total, four scales were used in the studies which exclusively measured ageism toward younger workers. In two cases (Raymer et al., 2017; Ryan et al., 2015), the scales focused specifically on younger workers. The Generational Stereotypes Index (Raymer et al., 2017) consists of 33 positive and negative items/descriptors of Millennial workers (sample items are "Service-oriented" and "Constantly needs praise"). Although the measure was not factor analyzed, a selection of items was made after workers from several generations indicated their level of agreement with the initial items proposed. Ryan et al. (2015) used an eight-item Metastereotype Consciousness Scale, adapted from Pinel's (1999) Stigma Consciousness Questionnaire, to measure the extent to which younger workers are conscious of being stereotyped on the basis of age. A sample item is "I never worry that my behaviors will be viewed as stereotypical of younger workers". They found that younger workers feel self-conscious about being age-stereotyped, and that this affected how they feel, think, and behave at work.

While the other two scales (Finkelstein et al., 2020; Marchiondo et al., 2016) are either general enough to include older age groups, or specifically include subdimensions for older age groups, they were used in studies with exclusively younger worker samples. The nine-item Workplace Age Discrimination Scale (WADS, Marchiondo et al., 2016) was developed to assess perceived age discrimination for any age. Sample items are: "I have been passed over for a work role/task due to my age" and "Someone has delayed or ignored my requests due to my age". The metastereotypes scale (Finkelstein et al., 2020) was developed to assess positive and negative metastereotypes for both younger and older workers. The scale has four subdimensions, measuring positive and negative metastereotypes for both younger workers and older workers. For younger workers, the positive metastereotype items are energetic/enthusiastic, ambitious, innovative/creative, and tech-savvy, and the negative metastereotype items are inexperienced, lazy/unmotivated, immature, and unreliable. For the older workers, positive age meta-stereotype items are experienced, knowledgeable, mature, and responsible/conscientious, and negative age meta-stereotype items are technophobic, slow, out of touch, and narrow-minded.

Ten studies, reported in four articles (Kleissner & Jahn, 2020b; Malinen & Johnston, 2013; Silvestre et al., 2017; and Zaniboni et al., 2019), used an implicit instrument (i.e., Implicit

Association Test, Greenwald et al., 1998) to assess ageism toward younger workers. Overall, the cited studies report differences between the results obtained with implicit and explicit measures. For example, Silvestre et al.´s (2017) study examined affective states of younger workers subjected to paternalistic stereotypes using explicit and implicit self-reports. While explicit measures revealed mainly positive affect, implicit measures revealed the presence of a negative affective state. Kleissner and Jahn (2020b) examined the assessment of work-related evaluations of younger and older workers using explicit and implicit measures. Whereas explicit measures of general age preferences showed no clear age preference, implicit measures revealed stable preferences - younger workers were rated higher on performance and adaptability and older workers were rated higher on reliability and warmth. Interestingly, they also found that older workers were rated higher on competence than younger workers in their sample when implicit measures were used. Finally, Zaniboni et al. (2019) and Malinen and Johnston (2013) compared reactions to resumés from younger and older workers, and found a negative bias against older workers using implicit measures, but not using explicit measures.

Younger workers as a comparison group for studying ageism

Ageism toward younger workers has tended to be investigated in relation to ageism toward other age groups, with younger workers serving as a comparison group for studying ageism mainly toward the old. Most of the selected studies (n = 124) examined ageism towards younger and other age groups: 119 studies examined ageism towards younger and older workers, two studies examined ageism towards younger and middle-aged workers (Luoh & Tsaur, 2011; Luoh & Tsaur, 2013), and three studies examined ageism towards younger, middle-aged and older workers (Finkelstein et al., 2013; Schloegel et al., 2018a; Schloegel et al., 2018b). Only 15 studies focused exclusively on ageism toward younger workers.

Among the large number of studies examining both older and younger workers, some studies did so by using older worker stereotypes as a reference (e.g., McCann & Keaton, 2013; Rosen & Jerdee, 1976; Weiss & Maurer, 2004). In Rosen and Jerdee's (1976) classic study on age discrimination, replicated by Weiss and Maurer (2004), six scenarios describing incidents which reflected older worker stereotypes (e.g., resistance to change, lack of creativity), were used to compare personnel decisions (e.g., promotion decisions) regarding younger and older targets. McCann and Keaton (2013) developed the Worker Perception of Stereotypes (WPS) survey, informed by Posthuma and Campion´s (2009) review of older worker age stereotypes, to compare age stereotypes and communication perceptions of older and younger workers in the US and Thailand.

Other studies examining older and younger workers, compared perceived work-related attributes (e.g., Gibson et al., 1993; Kleissner & Jahn, 2020; Krings et al., 2011; Principi et al.,2015; Rauschenbach et al., 2012), personality traits (e.g., Bertolino et al., 2013; Truxillo et al., 2012), and performance (e.g., Bertolino et al., 2013; Erber & Long, 2006; Rupp et al.,2006).

2.4.2. What are the main theories and conceptual approaches used to investigate workplace youngism?

Main theories used to investigate workplace youngism

The research on ageism toward younger workers was theoretically grounded (i.e., a specific theory was used to frame the investigation of ageism or the operationalization of study variables) in 87 studies. The most frequently used theoretical frameworks were the social identity approach, the stereotype content model, social role theory/role congruity theory, and dual process theory. Among these, the social identity approach, including social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Turner et al., 1987) was the most frequently used, in 21 studies in total. According to social identity theory, social behavior is partly determined by a person's group memberships, with individuals generally evaluating more positively groups to which they belong. Most studies adopting the social identity approach (Tajfel & Turner, 1979; Turner et al., 1987) tested the ingroup bias effect (i.e., the tendency to evaluate members of one's ingroup more positively than members of outgroups) on perceived attributes of younger and older workers (Bertolino et al., 2013; Finkelstein & Burke, 1998; Forte & Hansvick, 1999; Gibson et al., 1993; Kleissner & Jahn, 2020a; Principi et al., 2015). Studies also investigated the effect of ingroup biases on preferences for hiring older versus younger candidates (Gioaba & Krings, 2017; Krings et al., 2011; Lee et al., 2015; Rego et al., 2018), and on performance expectations for younger, middle-aged and older workers in the agile software development industry (Schloegel et. al, 2018a).

Although the ingroup bias effect was generally supported, several studies found interesting exceptions. Finkelstein and Burke (1998) found that when target age was made highly salient and participants identified highly with their age groups, older individuals rated their own age group lower in terms of economic worth. Lee et al. (2015) found that the tendency to favour one's ingroup in hiring decisions can be overridden by self-interest; for example, in situations where the person being evaluated is expected to pose a competitive threat. Luoh and Tsaur (2011) found that perceived service quality in fine dining restaurants was rated more highly for younger versus middle-aged workers, regardless of respondent age. Forte and Hansvick (1999)

asked participants to rate two age groups (49 and under vs. 50 and over) on a range of positive work attributes, and although the two age groups were each rated positively on different attributes, the ingroup bias was only displayed by older participants. Kleissner and Jahn (2020a) found in a sample of 380 German nurses, that, although ingroup bias was found in the case of both the younger and the older groups, it was far stronger for older nurses than for younger nurses.

The stereotype content model (SCM; Cuddy et al., 2011; Fiske et al., 2002) (*n*=17) was the second most frequently adopted theoretical framework. The SCM proposes that people evaluate individuals and groups based on two dimensions of social judgments: warmth and competence. The model was used in studies comparing younger and older workers or candidates in the assessment of work-related attributes (Kleissner & Jahn, 2020a; 2020b) or in hiring decisions (Krings et al., 2011), and in studies examining the endorsement of age stereotypes by older and younger workers (Tresh et al., 2019) or the content of younger workers' metastereotypes (Ryan et al., 2015). In most studies, younger workers were rated higher in competence but lower in warmth than older workers (Kleissner & Jahn, 2020a; 2020b; Krings et al., 2011; Tresh et al., 2019). Similar results were obtained for younger workers' metastereotypes of competence and warmth, with the former being rated slightly higher than the latter (Ryan et al., 2015).

Tresh et al. (2019) found that endorsing age-based competence and warmth stereotypes (i.e., that older workers are higher in warmth and lower in competence than younger workers) affected the self-rated leadership potential differently for younger workers than for older workers, and also for men versus women. Ryan et al. (2015) found that endorsing positive warmth metastereotypes (i.e., that workers above 30, the outgroup, considered workers aged 18 to 30 to be high in warmth) positively influenced impression management behaviors of younger workers, but not mood or attitudes toward older colleagues. Conversely, Krings et al. (2011) found that younger candidates were rated higher than older workers both in competence and warmth and that these judgments mediated the relationship between candidate age and selection bias in a recruitment situation.

Social role theory and role congruity theory (Eagly, 1987; Eagly & Karau, 2002) (*n*=12) and dual process theory (*n=11)*, including the implicit ageism framework (Levy & Banaji, 2002), were the next most frequently used approaches. Social role theory proposes that people develop stereotypes of social groups, such as younger workers, based on behaviors they observe from members of that group. Role congruity theory points out that these stereotypes may conflict with requirements for success in other social roles. Diekman and Hirnisey (2007) in three studies examined role incongruity as a source of age bias in hiring decisions and found

that the tendency to prefer younger over older workers applies more for a dynamic than a stable company and is mediated by perceptions of adaptability. Ruggs et al. (2014) used social role theory to examine interactive age and gender effects on evaluations of job applicants and found that male (vs. female) applicants were rated as more suitable for technological positions, and that for both males and females, older (vs. younger) applicants were viewed as less suitable for technological positions.

Dual process theories, including the implicit ageism framework, propose that social judgments can come from conscious, explicit processes and from unconscious, implicit processes. Work-related evaluations of younger and older workers (Kleissner & Jahn, 2020b), and reactions to resumés from younger and older workers (Malinen & Johnston, 2013; Zaniboni et al., 2019) differed depending on whether implicit or explicit measures were used.

Main ageism dimensions used to investigate workplace youngism

Articles were analyzed in terms of the dimensions of youngism that were investigated. The tripartite model from social psychology (Levy & Banaji, 2002) proposes three components to attitudes: cognitive, affective, and behavioral. Applied to ageism, these three components manifest as stereotypical beliefs, prejudicial feelings, and discriminatory behavior toward a target individual or age group. In the selected studies, the behavioral (discrimination) and cognitive (stereotypes) dimensions were the most frequently investigated, with 98 studies and 92 studies, respectively. Only 35 studies investigated the affective (prejudice) dimension.

Behavioral dimension.

The behavioral dimension of youngism was examined in 98 studies. Around half of these studies used experimental methodologies (*n*= 52), frequently in the context of personnel decisions (e.g., hiring, promotion, and training decisions), in which behavior was self-reported. The remaining studies mostly assessed perceived age discrimination and used correlational, longitudinal, mixed-methods or qualitative methods.

In the context of personnel decisions, the results are mixed regarding which age groups are discriminated against on the basis of age. A number of studies show preference for younger workers (Abrams et al., 2016; Gioaba & Krings, 2017; Kleissner & Jahn, 2020b; Perry et al.,1996; Perry & Bourhis, 1998; Rosen & Jerdee's, 1976; Zaniboni et al., 2019). In other studies, the decision was equally likely to favor younger and older workers (Kessler et al., 2020; Perry et al., 2017; Riach et al.,2010). In Riach et al. (2010) work, written job applications from a younger and an older candidate were used to test for age discrimination in hiring, for positions

of a “new graduate”, a waiter and a retail manager. While younger applicants were more likely to be selected for the new graduate and the retail manager jobs, older workers were more likely to be selected for the retail manager position. In two vignette studies, Perry et al. (2017) explored the impact of job candidate age and generational membership on hiring-related perceptions and outcomes. They found that younger candidates, whether described as 29 years old or as Gen-Y/Millennial, were considered as suitable for a job and recommended for the same starting salary as candidates described as Baby Boomers. Interestingly, when age instead of generation – 60 years old instead of Baby Boomer – was used to describe older applicants, these candidates fared worse in terms of hiring outcomes. Kessler et al. (2020) also showed that although there was no overall preference for younger versus older psychotherapists, younger psychotherapists were more likely to be selected to resolve ‘young problems’ (cyberbullying, paternalizing parents, lovesickness), and older psychotherapists more likely to resolve more universal problems.

Younger workers have also been shown to be discriminated against in favor of middle-aged workers (Luoh & Tsaur, 2013; Richardson et al., 2013), or in favor of older workers (Erber & Long, 2006). In a study by Richardson et al. (2013), a hypothetical job applicant was evaluated more highly in terms of work-related competencies and more likely to be hired for an IT position if they were middle-aged, versus younger or older. Luoh and Tsaur (2013) showed that even when candidates had the same qualifications, middle-aged applicants were more likely to be selected for a tour guide position than younger applicants. Erber and Long (2006) experimentally tested if younger and older employees who forget to do tasks or accomplish them too slowly are judged similarly. In the case of older targets, forgetting to do a task or accomplishing it too slowly was attributed to poor memory ability and mental difficulty. In the case of younger targets, however, it was attributed to a lack of effort and attention. Finally, there was a tendency for participants to give higher work evaluations to older employees, and to be more likely to recommend older employees for a promotion and raise.

A number of studies reported the existence of perceived age discrimination by younger workers (Bellas, 2001; Bennington, 2002; Jelenko, 2020; Loretto et al., 2000; Rabl, 2010; Rabl & Kühlmann, 2009; Raymer et al., 2017). Raymer et al. (2017) analyzed narratives of workplace age discrimination and found that 28 percent of young employees (Millennials) reported experiencing age discrimination. Five central themes were identified in the situations described by younger workers: (1) lack of training and leadership development opportunities, (2) perceptions of incompetence due to looking and/or sounding young, (3) lack of respect for

their skills and abilities, (4) belittling comments and “advice,” and (5) justifying the existence of reverse age discrimination.

Several additional studies showed a U-shape distribution in regard to the frequency of age discrimination, with both younger and older workers reporting more frequent age discrimination on the basis of age. For example, Marchiondo et al. (2016) examined perceived discrimination in three groups of younger (18-30), middle-aged (31–49) and older workers (50 years or above). Results indicated that younger workers experienced the highest rates of age discrimination, followed by older workers, and then middle-aged workers. According to Snape and Redman (2003), in a survey study using a UK representative sample of 613 participants, respondents below the age of 30 reported higher levels of experienced age discrimination because of their age than did the over-40s and the over-50s. Younger workers reported age discrimination mainly in situations involving job applications and promotions.

The U-shaped distribution was also found in studies focusing on age discrimination experienced by female workers. For example, Gee et al. (2007) longitudinally examined perceived age discrimination among a nationally representative US sample of 7,225 working women. Results indicated that reports of age discrimination are high when women are in their 20s, drop to their lowest levels around age 35, and then steadily rise and peak between ages 35-55. The authors concluded that the primary driver of perceived age discrimination for US women is age – not cohort or historical period. Duncan and Loretto (2004) explored experiences and perceptions of age discrimination across age categories and by gender. Results indicated that younger workers (16-34 years old) and older workers (45 years or above) were most likely to report negative treatment because of their ages, and that across all ages. Moreover, women across all age groups were more likely than men to report experiencing ageist attitudes related to appearance. Additionally, ageist perceptions about older individuals’ sexuality were evident, including stereotypes portraying older workers as asexual or as no longer considering sexuality a relevant aspect of their lives. Interestingly, 70% of the participants who provided details regarding their experiences reported discrimination because of younger age, with common types of negative treatment being "Pay and/or benefits" (21%); "Negative attitudes" (18%); "Too young for promotion" (16%); "Job deployment restricted" (12%); and "Youthful appearance" (4%).

Cognitive dimension.

The cognitive dimension of ageism was investigated in terms of both descriptive stereotypes and metastereotypes. Metastereotypes were investigated in only four studies,

though other cognitive variables (e.g., work-related attributes, communication styles, skills, performance expectations) were focused on in additional studies. There were no studies investigating prescriptive age stereotypes towards younger workers. Descriptive stereotypes were the most widely investigated cognitive dimension. In 76 studies in total, younger and older workers were compared in terms of work-related attributes, personality traits, and performance.

Work-related attributes were investigated in a number of studies focused on the cognitive dimension of ageism (Forte & Hansvick, 1999; Gibson et al., 1993; Kleissner & Jahn, 2020; Krings et al., 2011; Lee et al., 2015; Principi et al., 2015; Rauschenbach et al., 2012). For example, Kleissner and Jahn (2020) found that older nurses were perceived as more competent, less physically strong, and less adaptable, whereas younger nurses were seen as less reliable and less warm. Gibson et al. (1993) found that, among 21 work-related attributes, older workers were better rated on individual initiative, stability, and experience, and younger workers were better rated on potential for development. According to Principi et al. (2015), younger workers were better evaluated by HR managers, in relation to older workers, in terms of what they termed "hard qualities" (willingness to learn, psychical health and stamina, new technology skills, creativity, flexibility), whereas younger workers were evaluated more poorly in terms of what they termed "soft qualities" (loyalty, management skills, social skills, reliability, ability to cope with stress), with the two types of qualities clearly identified using factor analysis. Forte and Hansvick (1999) reported that older workers were rated more favorably on eight work-related attributes (academic skills, attendance, get along with coworkers, willingness to take directions, work ethics, high productivity, salary expectations and supervisory skills), while younger workers were rated more favorably in only four (computer skills, stamina and energy, flexibility, and learn quickly). Lee et al. (2015) found that younger candidates were seen as more creative and older candidates were seen as more stable.

Personality traits were focused on in a number of studies. For example, Truxillo et al. (2012) and Bertolino et al. (2013) both experimentally investigated how older and younger workers are perceived in terms of Big Five personality traits. Older workers were rated more highly than younger workers on conscientiousness and agreeableness. Younger workers were rated more highly than older workers on neuroticism (Bertolino et al., 2013; Truxillo et al., 2012), and in terms of extraversion and openness to experience (Truxillo et al., 2012).

Effects on performance were also investigated in several studies focused on the cognitive dimension of ageism (Bertolino et al., 2013; Erber & Long, 2006; Luoh & Tsaur, 2011; 2013; Rupp et al.,2006; Schloegel et. al, 2018a; 2018b). Bertolino et al. (2013) compared perceptions of older and younger workers in terms of their task and contextual performance. While

differences were non-significant for task performance, older workers were rated higher than younger workers both on OCB-I (organizational citizenship behavior directed toward peers) and OCB-O (organizational citizenship behavior directed toward the organization). Luoh and Tsaur (2011) compared younger and middle-aged workers with regard to perceptions of service quality in dining restaurants and tour leaders' performance (Luoh & Tsaur, 2013). In the former study, middle-aged servers received higher ratings in terms of tangibles and reliability and younger workers servers received higher ratings in responsiveness, assurance, and empathy. In the latter study, middle-aged tour leaders were better evaluated than their young counterparts for all three role components showing significant differences (instrumental, interactional, dealing with emergencies). Schloegel et al. (2018a; 2018b) compared developer performance expectations regarding younger, middle-aged and older workers in the agile software development industry, and found a significant bias in performance expectations favoring middle-aged employees over younger and older employees.

While the above studies looked at younger workers and older workers in terms of the same (older worker) stereotypes, or directly compared younger workers to older workers, 10 studies specifically focused on younger worker stereotypes. Among the ten studies, two studies analyzed metastereotypes only (Finkelstein et al., 2020; Lamont et al., 2021), seven studies analyzed descriptive stereotypes only (Abrams et al., 2016; Bennington, 2001; Brooke & Taylor, 2005; Earl & Taylor, 2016; Helaß et al., 2021; Meinich & Sang, 2018; Raymer et al., 2017) and a single study analyzed both descriptive stereotypes and metastereotypes (Finkelstein et al., 2013). The younger worker stereotypes were identified in these studies by using a variety of methods: review of the literature (e.g., Raymer et al., 2017), interviews and focus groups (e.g., Helaß et al., 2021), online surveys with both qualitative and quantitative questions (e.g., Finkelstein et al., 2013), and factorial analysis (e.g., Finkelstein et al., 2020).

We used the following procedure for coding the content of stereotypes and metastereotypes in studies. We started by identifying the stereotypes mentioned in each study, either presented as single descriptors (e.g., innovative) or as phrases (e.g., unable to delay gratification). We then content-analyzed the descriptors and grouped the ones with equivalent meanings (e.g., unable to delay gratification and impatient). Overall, 107 younger worker descriptors were identified in the eight studies focused on descriptive stereotypes: 65 (61%) positive characteristics, 41 (38%) negative characteristics, and one neutral characteristic. The most frequent positive characteristics related to the following categories: tech savvy (11%), innovative/creative (11%), fast/dynamic (9%), ambitious (9%), energetic/enthusiastic (9%), and seeking learning and development (6%). The most frequent negative characteristics related

to the following categories: self-centered (15%), over-confident (15%), lacks professionalism (12%), impatient (7%), and low cooperation (7%). The only neutral characteristic was "extrovert".

Younger worker metastereotypes were investigated in three studies. Finkelstein et al. (2020) developed and validated a scale with four positive (energetic/enthusiastic, ambitious, innovative/creative and tech-savvy) and four negative (inexperienced, lazy/unmotivated, immature, and unreliable) metastereotypes. These items were based on earlier research (Finkelstein et al., 2013) which examined separately the stereotypes that younger workers believed were held by middle-aged and older people, respectively. They identified 16 categories of stereotypes that younger workers believed to be held by middle-aged people about them (e.g., irresponsible, naïve, unfocused), and 14 categories believed to be held by older people (e.g., selfish, dependent, impolite/unhelpful). Interestingly, of the 30 stereotypes that younger workers believed to be held by middle-aged and older people, only five were positive, indicating that metastereotypes experienced by younger workers were predominantly negative. More recently, Lamont et al. (2021) also found more negative than positive metastereotypes of younger workers, five versus one respectively, which included additional negative ones (antisocial, arrogant) and a single neutral one (unburdened). These results show that younger workers hold predominantly negative age-related metastereotypes, which are considerably more negative than the more balanced and mostly positive descriptive stereotypes actually held about younger workers.

Affective dimension.

The affective dimension of ageism (prejudice) has been less studied, with only 35 studies, less than half the number for both behavioral and cognitive dimensions. Many of the studies focused on the affective dimension investigated intergenerational relations and perceived prejudice by younger workers (Brooke & Taylor, 2005; Fraher, 2017; Loretto et al., 2000; McClellan & Beggan, 2017; Pullins et al., 2011). Work-related attitudes towards younger and older workers (Guillén & Kunze, 2019; Kleissner & Jahn, 2020a; Malinen & Johnston, 2013; Perry et al., 2017), in terms of attitudes towards poorly performing younger and older workers (Cox & Beier, 2014; Erber & Long, 2006), were also investigated.

Five qualitative studies looked into intergenerational relations and perceived prejudice by younger workers. Pullins et al. (2011) examined intergenerational selling relationships and found that younger (Millennial) salespeople reported feeling frustrated with their inability to relate to older generations on an interpersonal level and therefore needing to adapt their selling

strategies to older customers. Fraher (2017) found that after the retirement age for US airline pilots was changed from 60 to 65 years old, an antagonistic environment was created in which employees reported having to compete against other age groups for scarce resources. Junior pilots (the lower-paid employees) reported a toxic environment, in which they perceived senior pilots selling them out or "eating their young". Brooke and Taylor (2005) examined age-group dynamics in case studies of four organizations in Australia and the UK, in which covert assumptions about age groups in terms of their skills and abilities (e.g., younger workers were seen as more productive and more adaptable to new technology) generated tensions between different age groups. Loretto et al. (2000) assessed intergenerational tensions from the perspective of young people. In relation to employment policies, they found that while a small majority agreed that more attention should be paid to youth unemployment, only one-fifth felt that early retirement should be encouraged as a means of improving job prospects for young people. McClellan and Beggan (2017) compared younger and older librarians with regard to how they experienced age-related stigma. Although both younger and older librarians reported feeling stigmatized (i.e., feeling uncomfortable or self-conscious about their age), only younger librarians reported instances of enacted stigma (i.e., where an observer made an explicit comment about a respondent's age).

Among the studies assessing attitudes towards younger and older workers, Perry et al. (2017) found no differences in how much participants liked 60-year-old, Baby Boomer, Gen-Y/Millennial, and 29-year-old job applicants. Similarly, Guillén and Kunze (2019) found no difference in levels of interpersonal liking that supervisors expressed for younger versus older employees. Kleissner and Jahn (2020a) found that when participants were asked to rate how cold or warm they perceived younger and older workers, older workers received higher ratings of warmth than younger workers. In contrast, when Malinen and Johnston (2013) implicitly measured the association between younger versus older workers age and the evaluative dimensions good or bad, they found that stable and negative implicit attitudes towards older workers emerged.

Erber and Long (2006) found that when poor or slow performance was attributed to a lack of effort and attention (in the case of younger workers) versus being attributed to weak memory ability (in the case of older workers), participants demonstrated more anger and less sympathy. In another experimental study, Cox and Beier (2014) found that older participants were more likely than younger participants to attribute the poor performance of older targets to external (e.g., luck) and controllable (e.g., motivation) causes, whereas younger participants were more likely than older participants to attribute the poor performance of older targets to stable (e.g.,

ability) causes. In addition, attributing poor performance to controllable causes was positively associated with willingness to sanction the target. Finally, attributing poor performance to controllable and stable causes was negatively associated with believing the target should receive training and would be interested in and benefit from training.

2.4.3. What are the main antecedents and consequences of workplace youngism?

In this section, we present findings regarding the antecedents and consequences of ageism identified in the cited studies. We exclude from this analysis studies that did not specifically measure antecedents or consequences, including qualitative studies. The articles are classified under three levels of ageism expression: intrapersonal, interpersonal and contextual levels, and also consider the perspective or role of study participants as enablers or targets of ageism. Additionally, we identify studies which have adopted an intersectional approach, assessed the prevalence of ageism toward younger workers in a given population, or addressed ageism toward younger workers through interventions.

Among the cited studies, 61 examined antecedents (i.e., causes, predictors, determinants) and 17 studies examined the consequences (i.e., outcomes) of ageism towards younger workers. In terms of antecedents, 36 studies included intrapersonal antecedents, 28 studies included interpersonal antecedents, and 18 studies included contextual antecedents. Within the 61 studies, 53 studies examined antecedents from the perspective of the enabler of ageism, four studies took the target perspective, and four studies examined ageism from both target and enabler perspectives. Among the studies examining consequences of workplace youngism, six studies included intrapersonal consequences, ten studies included interpersonal consequences, and two studies included contextual consequences. Within the 17 studies, the target perspective was adopted in 14 studies, the enabler perspective in two studies, and a single study took both the enabler and the target perspective. Table 2.3 shows the categorization of studies by antecedents and consequences of workplace youngism, levels of ageism expression, and participant perspective.

Table 2.3. Antecedents and consequences of workplace youngism, levels of ageism expression, and participant perspective

Variable role		Levels of ageism expression			Participant perspective	
	Nr. of studies	Intrapersonal	Interpersonal	Contextual	Enabler	Target
Antecedents	61	36	28	18	53	4
Consequences	17	6	10	2	2	14

Antecedents of workplace youngism

Among the 61 studies examining antecedents of youngism, 41 were experimental and 20 were non-experimental studies (i.e., mixed methods or cross-sectional). Antecedents of ageism against younger workers were most frequently investigated at the intrapersonal (n=36) and interpersonal (n=28) levels and less frequently at the contextual level (n=18).

The most frequently investigated antecedents of ageism at the intrapersonal level were participant chronological age (*n*=18), participant age group (*n*=12), and participant gender or sex (*n*=12). At the interpersonal level, the most frequently investigated antecedents were ageism towards older workers (*n*=7), frequency of contact with older/younger co-workers (*n*=5), and target gender or sex (*n*=4). The most frequently investigated antecedents of ageism at the contextual level were organization size (*n*=4), organization sector (*n*=3), culture/country of origin (*n*=3), and job age type (*n*=3), defined as the extent to which a job is seen as suitable for specific age groups.

At the intrapersonal level, among the few studies looking at antecedents from the target perspective, Tresh et al. (2019) examined effects of participant age and gender on self-rated leadership potential, moderated by the endorsement of gender (agentic vs. communal) and age (competence vs. warmth) stereotypes. Results indicate that for older women the endorsement of competence stereotypes and for older men the endorsement of warmth stereotypes were associated with lower self-rated leadership potential. The endorsement of communal stereotypes was marginally associated with higher self-rated leadership potential for younger men and for older women.

At the interpersonal level, frequency of contact has been investigated as an antecedent in several studies. Schloegel et al. (2018b) found that lower contact frequency with both younger and older workers was related to stereotyping against each of these age groups, in terms of

lower performance expectations. Diekman and Hirnisey (2007) examined role incongruity as a source of age bias in hiring decisions and found that frequency of contact with younger and older workers did not predict hireability.

At the interpersonal level, studies have investigated as an antecedent of ageism status-incongruent supervisory relationships, in which a supervisor is younger than their subordinate, through the assessment of subordinate-supervisor relationship duration, subordinate evaluation of supervisor leadership, and subordinate-supervisor age difference. Collins et al. (2009) examined the effect of subordinate expectations of supervisor leadership effectiveness and performance. They found that older workers expected less from their younger supervisors than did younger workers, and in turn rated the leadership effectiveness and performance of these younger supervisors lower than was the case for younger subordinates of younger supervisors. In addition, older workers expected less from their younger supervisors than did younger or older workers with older supervisors, and rated their younger supervisors' leadership behavior lower than did younger or older workers with older supervisors. In a study examining "anti-stereotypical" Y-O dyads, Van Der Heijden (2016) found that directional age difference (i.e., how much younger the supervisor is than the subordinate) related to lower supervisor ratings of occupational expertise from their subordinates. This negative effect of status incongruence was strengthened by longer duration of the dyadic relationship between employee and supervisor.

At the contextual level, country/national culture and organization sector were investigated as antecedents of ageism. For example, McCann and Keaton (2013) assessed younger worker perceptions of older and same age worker stereotypes and communication in the US and Thailand. Results indicated that younger Thai workers perceived both younger and older Thai workers as exhibiting more avoidant communication than their counterparts from the US. Overall, both negative and positive age stereotypes were more strongly endorsed in the Thai sample. Schloegel et al. (2018b) investigated the impact of culture on age-related performance expectations in two software development companies in China, Germany, Poland and Bulgaria. Results showed that age stereotypes toward older employees were more negative in Eastern Europe and China than in Germany, while stereotypes toward younger employees were more negative in Germany than in China and Eastern Europe.

Regarding organization sector, Mulders (2020) found that organizations in the industrial sector were more likely (than organizations in the public or services sector) to offer younger workers a permanent contract. Principi et al. (2015) investigated human resources managers' perceptions of the characteristics of older and younger workers and found that younger workers

in the public sector (compared to industry and services sectors) are judged more positively in terms of "soft qualities", a term they used to encompass loyalty, management skills, social skills, reliability, and ability to cope with stress. In a set of three experimental studies, Diekman and Hirnisey (2007) examined the effects of age (younger versus older) and company sector (stable versus dynamic) on hiring decisions. They found that, for the dynamic company, the younger candidate was preferred over the older candidate, whereas for the stable company, the older candidate was marginally preferred.

Consequences of workplace youngism

Among the 17 studies examining consequences of youngism, four were experimental and 13 were non-experimental studies. Consequences of ageism against younger workers were most frequently investigated at the interpersonal (*n*=10) and intrapersonal levels (*n*=6) and less frequently at the contextual level (*n*=2).

The most frequently investigated consequences of ageism against younger workers at the intrapersonal level were negative (*n*=5) and positive (*n*=4) emotions. For example, using survey data from 281 workers, Ryan et al. (2015) analyzed the influence of age-related stereotyping processes on younger workers' mood, attitudes, and impression management behaviors at work. They found that when younger workers are more self-conscious about being age stereotyped, they are less likely to be satisfied with older co-workers, which is partly explained by the negative mood associated with feeling self-conscious about being age-stereotyped.

In a daily diary study across one work week, with 185 employees from different organizations in the US, Finkelstein et. al (2020) examined reactions (threat, challenge, or boost) to the activation of both positive and negative age metastereotypes. Two unexpected results were highlighted by the authors: 1) younger respondents experienced more negative age metastereotypes than older respondents, and 2) regardless of the age of the respondent, the experiencing of negative metastereotypes by older workers was related to challenge reactions while the experiencing of negative meta-stereotypes by younger workers was related to threat reactions.

The most frequently investigated consequences of ageism at the interpersonal level were affective commitment to the organization (*n*=2), intergroup contact quality with younger co-workers (*n*=2), job satisfaction (*n*=2), turnover intentions (*n*=2), behaviors toward co-workers (*n*=2), and organizational identification(*n*=2). Overall, higher perceptions of age discrimination among younger workers were associated with lower levels of affective

organizational commitment (Rabl & Triana, 2013; Snape & Redman, 2003) and job satisfaction (Jelenko, 2020; Marchiondo et al., 2016), as well as higher turnover intentions (Marchiondo et al., 2016). Moreover, in one of the few studies investigating consequences of workplace youngism from the enabler (of ageism) perspective, Paleari et al. (2019) found that the more employees endorsed youngism (or oldism), the more they experienced negative interactions with younger workers over time. This negatively affected behaviors toward all co-workers and, albeit less significantly, their vitality at work and organizational identification. Employees who held ageist attitudes also enacted more counterproductive work behaviors, such as complaining.

The most frequently investigated consequence of ageism at the contextual level was work-life/life-work interference (n=2). In a survey of 1255 German employees, Rabl and Kühlmann (2009) found that younger workers face higher work-life interference and lower life-work interference than their older colleagues and that the higher the perceived age discrimination, the higher the work-life and the life-work interference for both younger and older workers.

Table 2.4 presents the antecedents and consequences of experimental studies according to levels of ageism expression.

Table 2.4. Antecedents and consequences of experimental studies according to levels of ageism expression.

Variable role	Antecedent/Consequence and Level			References
	Intrapersonal	Interpersonal	Contextual	
Antecedents	Participant age			Bertolino et al. (2013), Cox & Beier (2014), Finkelstein & Burke (1998), Krings et al. (2011), Lee et al. (2015), Malinen & Johnston (2013), Truxillo et al. (2012), Zaniboni et al. (2019)
	Participant age group			Kleissner & Jahn (2020b), Luoh & Tsaur (2011), Luoh & Tsaur (2013), Rauschenbach et al. (2012), Schwab & Heneman (1978)
	Participant age group identification			Finkelstein & Burke (1998)
	Participant cognitive busyness			Perry et al. (1996)
	Participant conscientiousness			Kmicinska et al. (2016)
	Participant occupation			Kleissner & Jahn (2020b)
	Participant ethnicity			Crew (1984)
	Participant sex/gender			Kleissner & Jahn (2020b), Levin (1988), Malinen & Johnston (2013), Tresh et al. (2019), Zaniboni et al. (2019)
	Participant working experience			Krings et al. (2011), Zaniboni et al. (2019)
		Age salience		Finkelstein & Burke (1998)
		Age stereotype domain		Gioaba & Krings (2017)
		Frequency of contact with older people/workers		Diekman & Hirnisey (2007), Zaniboni et al. (2019)

Antecedents *cont.*		Frequency of contact with younger workers	Zaniboni et al. (2019)
		Impression management level	Gioaba & Krings (2017)
		Job information	Avolio & Barrett (1987), Finkelstein & Burke (1998)
		Low-status role	Abrams et al. (2016)
		Mental imagery intervention	Malinen & Johnston (2013)
		Participant ageism toward older people	Diekman & Hirnisey (2007), Perry et al. (1996), Rupp et al. (2006)
		Salience of appearance for the job	Kaufmann et al. (2017)
		Target capability	Kaufmann et al. (2017)
		Target competence	Haefner (1977)
		Target facial age appearance	Kaufmann et al. (2017)
		Target job experience	Schwab & Heneman (1978)
		Target performance	Dedrick & Dobbins (1991)
		Target professional category	Singer (1986)
		Target ethnicity	Drydakis et al. (2018), Haefner (1977)
		Target sex/gender	Erber & Danker (1995), Haefner (1977), Kaufmann et al. (2017)
	Benefit time frame		Avolio & Barrett (1987)
	Company context		Diekman & Hirnisey (2007)
	Job age-type		Erber & Long (2006), Perry & Bourhis (1998), Perry et al. (1996)
	Job interdependence		Lee et al. (2015)

		Job requirements	Krings et al. (2011), Lee et al. (2015)
		Participant US region	Levin (1988)
		Service quality scenario	Luoh & Tsaur (2011)
		Type of problem	Kessler et al. (2020)
		Work context	Erber & Danker (1995)
Consequences	Positive and negative emotions		Silvestre et al. (2017)
		Job Appeal	Tresh et al. (2019)
		Job Fit	Tresh et al. (2019)

Note. Antecedents and consequences are presented at the citation/publication level.

Intersectionality

Sixteen studies adopted an intersectional approach, with most of those examining intersections between age and sex/gender (n=11), followed by age and ethnicity (n=3). Two studies examined the intersection of age with both sex and ethnicity.

Among the studies looking at age and sex/gender, findings from five qualitative studies indicate that younger women are more prominently targeted with ageism, compared to younger men or older women (Granleese & Sayer, 2006; Kanagasabai, 2016; Kelan, 2014; McClellan & Beggan, 2017; Worth, 2016). Granleese and Sayer (2006) conducted 48 in-depth interviews to explore UK employees' experience of gender and age in higher education, and to explore the role of physical attractiveness (defined as "lookism"). Results indicated that female academics and non-academics in UK higher education experience the triple jeopardy of gender, age, and attractiveness in a different way than men. For female academics, especially young academics, being seen as attractive was reported to be counter-productive in the male-dominated world of academia. Although women of all age groups reported experiencing age discrimination, different age groups reported different types of discrimination, with younger women reporting discrimination on the basis of "age-related lack of experience".

Kanagasabai (2016) analysed how young female journalists working in Indian English-language television newsrooms negotiate feminism in relation to their profession. Participant observation, auto-ethnography and in-depth interviews (namely with 17 women journalists in print and television based in three Indian metropolises) were used for data collection. Findings indicated that most journalists agreed that ageism was more pronounced in the television newsrooms, and some of them felt that ageism did play out in subtler ways in print newsrooms as well. While senior women journalists viewed their younger colleagues as women who were not politically inclined, the younger reporters felt that they had to face greater competition and newer pressures in the absence of a support system. Similar to what Granleese and Sayer (2006) found, respondents reported that the television newsroom places a lot of importance on how women look. While not dressing well will attract comments from senior colleagues about how it can be detrimental to one's professional growth, one can be branded unprofessional if dressed "too well," especially by older women colleagues.

Among the studies examining ethnicity, Drydakis et al. (2018) investigated in two experiments whether older people have worse access to vacancies (i.e., invitations to interviews) in the UK labor market than their younger counterparts, and whether ethnicity can moderate the relationship between age and labor market outcomes. Results showed that older

white and older black applicants had lower chances of receiving an invitation for an interview, with older black applicants being worse off in relation to older white applicants. Haefner (1977) tested whether ethnicity, sex, age and competence would influence the extent to which participants recommended hiring a candidate. Although participants made no distinction between black and white job candidates, they did recommend hiring males over females and younger individuals over older individuals.

Prevalence of ageism toward younger workers

Three studies used representative samples to examine the prevalence of ageism toward younger workers in a given population. Duncan and Loretto (2004) explored experiences and perceptions of age discrimination across age categories and by gender, using a representative sample of Finserv, a major UK financial services enterprise employing 9,000 staff. The sample was composed of 1,128 participants, who closely matched the company's employee profile in terms of gender, employment status, and age. Results indicated that younger workers (16-34 years old) and older workers (45 years or above) were the groups most likely to report negative treatment because of their ages. In order to track patterns of perceived age discrimination as women age, Gee et al. (2007) used US data from the National Longitudinal Surveys of Mature Women (NLSMW) and Young Women (NLSYM). Women who had not worked for the five years previous to the date of admission in the study were dropped from the sample. The final nationally representative sample was divided into five five-year birth cohorts and composed of 7,225 women, which produced 18,210 person-period observations. Participants were surveyed once a year, with 4 observations within each cohort. Results indicated that reports of age discrimination in the workplace are high when women are in their 20s, drop to their lowest levels around age 35, and then steadily rise from age 35 and peak at age 55. The authors also concluded that the primary driver of perceived age discrimination is age – not cohort or historical period.

Bellas (2001) examined the post-graduation labor market experiences of 8,837 recent college graduates for evidence of age-related barriers to employment. The study used data from the Baccalaureate and Beyond Longitudinal Study in the US, which tracked college graduates for twelve years, providing information about employment patterns, graduate education, and family formation. Bellas' (2001) study was cross-sectional, with a nationally representative sample of students, interviewed one year after the graduation date. Results indicate that older graduates (those aged 40 and above) had fewer post-graduation job interviews and fewer job offers than younger graduates (those aged under 40).

2.5. Discussion

This scoping review systematically examined and summarized existing literature about ageism towards younger workers (workplace youngism). The findings were organized under three broad research questions: 1) How has workplace youngism been assessed?, 2) What are the main theories and conceptual approaches used to investigate workplace youngism?, and 3) What are the main antecedents and consequences of workplace youngism? Unlike previous reviews, we included a broader and specifically work-related range of search terms to identify relevant articles and focused exclusively on younger workers. In total, 108 articles published between 1976 and 2022 were selected for inclusion, containing 143 empirical studies. In this section, we summarize some of the main findings and propose directions for future research.

Previous research on ageism showed that the label or category used to refer to the target group influences the results in important ways (Van Rijswijk & Ellemers, 2002). In this review, we found that the terminology used to refer to younger workers and ageism against younger workers was reasonably consistent, and notably more consistent than in the review reported by de la Fuente-Núñez et al. (2021) which focused on ageism towards young people in general. In the vast majority of the selected studies (n=136), younger workers were referred to by their age category (i.e., as "young" and "younger"), rather than by other terminology, with only five studies using generational labels. An interesting exception is Francioli and North (2021), who in testing their scale for descriptive stereotypes toward younger individuals, included all of the following in their description of the target group: today's young adults, millennials, people in their 20s, college students, and young professionals. Although there was a lack of consensus in the age range used to define younger workers, the most frequent upper limits for younger workers were between 30 and 35 years old and the most frequent lower limit was 18 years old. When a specific age was provided for a younger worker, usually as targets of ageism in experimental studies, the most frequently used age boundary was 28 years. In most studies, ageism toward younger workers was not referred to using specific terminology, though a handful of studies did refer to reverse age discrimination (Rabl & Triana, 2013), reverse ageism and adultism (Raymer et al., 2017), and youngism (Francioli & North, 2021).

In terms of the samples used, although the selected studies were conducted in 21 countries, more than sixty percent were conducted in the US (42.6 %), UK (11.3%), or Germany (8.5%). Overall, participants were relatively young across the included studies, with an average age of

34.7 years. Around half of the studies (*n*=71) sampled both younger and older participants, using them as comparison groups – a methodological issue we will further address below. A total of 39 studies included only younger participants and in most of these participants responded to questions regarding themselves as targets of ageism. Very few studies included middle-aged participants or focused exclusively on older participants. When specified, samples were mostly composed of workers (55.6%), or university and college students (23.9%). Only three studies used representative samples to examine the prevalence of ageism toward younger workers. Most studies (*n*=93) focused on the perspective of individuals enabling and endorsing youngism, with only 34 studies taking the perspective of the target of youngism, and 16 studies investigating both perspectives. In the 59 studies that used vignettes with hypothetical targets of ageism, 31 studies presented a male target and 12 studies did not specify target gender.

In terms of methodological approaches, most studies were quantitative (*n*= 111), followed by qualitative (*n* = 21) and mixed methods (*n* = 11). Among the quantitative studies, 70 were experimental, and 35 were cross-sectional surveys. Interestingly, no studies using interventions to address ageism toward younger workers were found among the selected studies. Most studies assessed ageism using explicit measures, with only ten studies using implicit measures. More than three quarters of the studies (*n* = 119) examined ageism towards both younger and older workers, with younger workers frequently serving as a comparison group for older workers and evaluated using scales measuring attitudes and stereotypes toward older workers. Only four scales used in the studies focused exclusively on ageism toward younger workers, with one scale adopting the enabler perspective (Raymer et al., 2017), and three scales adopting the target perspective (Finkelstein et al., 2020; Marchiondo et al., 2016; Ryan et al., 2015). Among the selected studies, sixteen studies adopted an intersectional approach, with the intersection between age and sex/gender being the most frequently investigated.

The research on ageism toward younger workers was theoretically grounded in most of the studies, with the social identity approach, the stereotype content model, the social role theory/role congruity theory, and dual process theory being used most frequently. Most, but not all, studies adopting the social identity approach (Tajfel & Turner, 1979; Turner et al., 1987) confirmed the ingroup bias effect. Almost all of the studies that used the stereotype content model (SCM; Cuddy et al., 2011; Fiske et al., 2002) to compare younger workers/job applicants with older workers/job applicants found that the former were rated higher in competence but lower in warmth than the latter. Studies using social role theory and role congruity theory (Eagly, 1987; Eagly & Karau, 2002) confirmed that different jobs were perceived as more or less suited for workers of different ages; for example, that younger workers were preferred for

technological positions and for organizations that were more dynamic. Studies using dual process theories, including the implicit ageism framework, compared results of implicit and explicit measures of ageism against younger workers and found important differences with implicit measures showing greater biases.

In terms of the main ageism dimensions used to investigate workplace youngism, the behavioral (discrimination) and cognitive (stereotypes) dimensions were the most frequently investigated, with 98 studies and 92 studies, respectively. Only 35 studies investigated the affective (prejudice) dimension. Studies using the behavioral dimension mainly examined personnel decisions, with some studies showing preferences for younger workers, but others favoring middle-aged and older workers. A number of studies also showed a U-shaped distribution, with both younger and older workers reporting more frequent age discrimination on the basis of age. In several studies, younger workers reported higher levels of experienced age discrimination than other age groups.

The cognitive dimension of ageism was investigated in terms of both descriptive stereotypes (*n*=76) and metastereotypes (*n*=4). Most studies examining descriptive stereotypes examined younger and older workers on the same dimensions, or directly compared younger workers to older workers. However, ten studies specifically focused on younger worker stereotypes, with 61 percent of the younger worker descriptors relating to positive characteristics in the eight identified studies, 38 percent relating to negative characteristics, and one percent to neutral characteristics. Although younger worker metastereotypes were only investigated in four studies, Finkelstein et al. (2013) showed that of the 30 stereotypes that younger workers believed to be held by middle-aged and older people, only five were positive, indicating that metastereotypes experienced by younger workers were predominantly negative. There were no studies investigating prescriptive age stereotypes towards younger workers.

Among the selected studies, 61 examined antecedents of ageism toward younger workers and 17 examined consequences. Most of the antecedents examined (*n*= 36) were at the intrapersonal level, with the most frequently investigated being chronological age, participant age group, and participant gender or sex. Most of the consequences of ageism toward younger workers were at the interpersonal level (*n* = 10), with the most frequent consequences including affective commitment to the organization, intergroup contact quality, job satisfaction, turnover intentions, behaviors toward co-workers, and organizational identification. Antecedents and consequences at the contextual level (*n*=18 and *n*=2 respectively) were investigated less frequently. The antecedents investigated included organization size, organization sector, and

country/national culture, and the consequences investigated included work-life/life-work interference.

In regard to the role or perspective of study participants, in studies examining antecedents of ageism toward younger workers 53 studies took the enabler perspective, while only 4 studies took the target perspective. Among studies examining consequences of ageism toward younger workers, 14 studies took the target perspective and only 2 studies took the enabler perspective.

2.5.1. Future directions

The findings of this scoping review clearly show a number of important directions that can be pursued in future research on ageism against younger workers.

First, research on ageism against younger workers should be conducted in additional national contexts. As culture plays a significant role in shaping people´s beliefs, attitudes and behaviors, it can be expected to also affect how people perceive and interact with different age groups. As a result, research findings from studies in one national context may not generalize to other contexts, especially those that vary along cultural dimensions. Given that more than 60 percent of the selected studies were from the US, UK, and Germany, additional national contexts should be investigated. In addition, future research should directly examine effects of cultural characteristics on ageism toward younger workers, to address the dearth of research on cross-cultural similarities and differences in ageism (Kornadt et al., 2022). One useful theoretical framework that could guide research is Marcus and Fritzsche´s (2016) culturally anchored ageism (CAA) model, which proposes that the strength of social norms (tightness-looseness) and cultural values of individualism-collectivism influence work outcomes for older workers. This model can be easily extended to younger workers as well.

In addition, future research might examine the effects of other contextual variables, such as labor market characteristics, whether societies have a more or less ageing population or existing national legislation protecting working individuals from age discrimination. A prominent example of the latter is the Age Discrimination in Employment Act of 1967 (“ADEA” or “Act”) in the US, which is a federal law that prohibits age discrimination against employees 40 years of age or older. Although in this case the legislation only protects older workers, as a consequence of the pressure that ageism also puts on younger workers, issues of “reverse age discrimination” (e.g., Cullen, 2003; Lacy, 2005) have been reported in the US. In these legal actions, younger employees claim that their employer treated older employees better, which brings into question the traditional interpretation of the "ADEA". In contrast, age

discrimination legislation in several Australian states prohibits all discrimination based on age - not just against those 40 years or over (Bennington, 2001). Future research should compare different national legislation on age discrimination (for summaries of workplace age discrimination laws across the globe see http://www.agediscrimination.info/international), including which age groups are protected under them. Although legislation tends to protect against more overt forms of discrimination, it might have limited influence on more covert or subtle forms of discrimination, which is often how ageism takes place (Marchiondo, 2015; Wood et al., 2004). This should also be taken into consideration in future research about the topic.

Second, research on the cognitive dimension of ageism should also investigate prescriptive stereotypes toward younger workers. Descriptive stereotypes toward younger workers have been extensively investigated, and a handful of studies have also examined the metastereotypes of younger individuals. While prescriptive stereotypes have been investigated in the work context in regard to ethnicity and gender (e.g., Berdahl & Min, 2012; Heilman, 2001), none of the selected articles investigated prescriptive age stereotypes toward younger workers. Because prescriptive stereotypes refer to how people "should be", they can create pressure on the target group to act in certain ways, which perpetuates stereotypes and stereotypical behavior (Rudman et al., 2012) and can predict prejudice/discrimination even when descriptive stereotypes do not (Gill, 2004). Although too recent to be included in this review, the Workplace Ambivalent Youngism Scale developed and validated by Schmitz et al. (2023) has identified three dimensions (Humility-Deference, Loyalty-Belonging, and Vitality-Innovation) of prescriptive stereotypes toward younger workers that can be tested and built upon in future research.

Third, future research should specifically address ageism towards younger workers. In more than 80 percent of the studies, ageism towards younger workers was investigated in relation to ageism toward other age groups, and in many of these studies older worker stereotypes were used as a reference to compare younger and older workers. Although studies focused on types of ageism experienced primarily by older workers can provide some insight into age bias toward younger workers, they clearly should be complemented by research focused on specific types of ageism that younger workers encounter. It is also important that research identify and examine effects of specific workplace-related attributes, which might differ from attributes of younger individuals in general.

Fourth, future research should develop and apply additional instruments specifically focused on ageism toward younger workers, both from the perspective of the enabler and the target of ageism, given the lack of validated measures addressing ageism towards younger

workers. Only two validated scales assessing ageism towards younger workers were used in the selected studies, both relating to metastereotypes (Finkelstein et al., 2020; Raymer et al., 2017), and relatively few studies used implicit measures (i.e., Implicit Association Test, Greenwald et al., 1998) to assess workplace youngism. On the one hand, implicit measures are not directly subjected to social desirability and thus can reveal general attitudes and stereotypes even when these are deliberately not reported or inaccessible through explicit measures. On the other hand, there has been criticism regarding such measures in terms of insufficient evidence supporting construct validity (Schimmack, 2021). Fiedler et al. (2006) also pointed out five major problems regarding the IAT: the asymmetry of causal and diagnostic inferences, the viability of the underlying association model, the lack of a testable model underlying IAT-based inferences, the difficulties of interpreting difference scores, and the susceptibility of the IAT to deliberate faking and strategic processing. Nonetheless, given the differences found in levels of workplace youngism in the studies using implicit versus explicit measures, future research should also use implicit measures to assess ageism toward younger workers.

Fifth, research on workplace youngism should pay greater attention to middle-aged workers, an issue characteristic of ageism research more generally (Finkelstein et al., 2013). In the selected studies, middle-aged workers were seldom considered as an age group by itself, neither as potential targets of ageism or as enablers of ageism. The few studies that specifically considered middle-aged workers found interesting results, including preferences for hiring middle-aged workers for specific professional roles (Luoh & Tsaur, 2013; Richardson et al., 2013) and higher performance expectations for middle-aged workers (Schloegel et al., 2018a; 2018b). In addition, stereotypes towards younger workers held by middle-aged workers were found to be more negative and less positive than the stereotypes held by older workers (Finkelstein et al., 2013). Thus, ageism toward younger workers could play out differently when they are compared with and assessed by middle-aged workers, rather than by older workers.

Sixth, future research should pay greater attention to consequences of ageism toward younger workers. Among the selected articles, only 17 examined consequences of ageism toward younger workers, compared to 61 articles that examined antecedents. Of these 17 studies, only two examined consequences to enablers of youngism. Similar to what has been found for enablers of racism (e.g., Bowser & Hunt, 1981; Richeson & Shelton, 2003; Spanierman & Heppner, 2004), negative consequences may also exist for enablers of age discrimination. Indeed, Paleari et al. (2019) found that employees who held ageist attitudes toward younger workers reported lower levels of vitality at work and organizational identification, and higher levels of counterproductive work behaviors directed at all age groups

(Paleari et al., 2019). Future research should address consequences of ageism against younger workers, especially from the perspective of ageism enablers.

Seventh, future research should investigate antecedents of ageism for targets of ageism. Although antecedents of workplace youngism have received significant research attention in our selected studies (*n*=61), only four of these studies take the perspective of targets of ageism. For example, Tresh et al. (2019) examined effects of participant age and gender on self-rated leadership potential, moderated by the endorsement of gender (agentic vs. communal) and age (competence vs. warmth) stereotypes. The endorsement of communal stereotypes was marginally associated with higher self-rated leadership potential for younger men and for older women. Future research should investigate additional antecedents of workplace youngism from the target perspective, including individual differences and additional age stereotypes.

Eighth, further research should be conducted using an intersectional approach (Marcus, 2022), whereby the effect of overlapping social identities is considered. Inadequate attention to intersectionality has been a concern of ageism scholars, as the effect of overlapping social identities can powerfully shape targets experiences of discrimination (e.g., Marchiondo, 2015). Although sixteen studies in this review adopted an intersectional approach, only the intersections between age and sex/gender and between age and ethnicity were investigated. For example, Granleese and Sayer (2006) found that younger women are more prominently targeted with ageism, in relation to younger men or older women. Drydakis et al. (2018) found that older white and older black applicants had lower chances of receiving an invitation for an interview, with older black applicants even less likely than older white applicants. Other demographic factors that may intersect with age and lead to greater ageism toward younger workers should be examined, including education, social and economic status, and disability.

Ninth, although most of the selected studies addressed age-based categorizations using chronological age or age range, several studies used a generational approach. Generational approaches assign labels to specific cohorts (generally, people born in a given period) and associate these with behaviors, attitudes and values, including at work. For example, a new generational label (Generation C) is on the rise, which asserts that those who experienced the Covid-19 pandemic during formative years will tend to be insecure and socially inept at work (Patel, 2020, cited in Rudolph et al., 2021). It is important to note that in spite of its popular appeal, the generational approach is increasingly controversial from a scientific perspective, with numerous studies showing that intra-generational differences are greater than differences between generations. For example, a consensus report from the National Academies of Sciences, Engineering, and Medicine (NASEM, 2020) proposed that categorizations such as

“Baby Boomers” or “Millennials” lack scientific robustness and should not be used, either in scientific research or in management practices. Another example is provided by Schröder (2024), empirically demonstrating that after accounting for age (as people grow old) and period effects (changes with historical time), generational effects on work motivation were absent.

As much as group categorizations can serve as convenient and powerful heuristics, they accentuate and perpetuate biases that can promote negative attitudes towards workers based on the generational label (e.g., Baby Boomers struggling with technology or Generation Z being entitled). Future research might investigate generational approaches more as a social construction and investigate their effects on age discrimination. A lifespan perspective which takes into consideration the person in context and their development paths at any age (Rudolph et al., 2021; Rudolph & Zacher, 2017) might also be considered. In terms of methodology, truly longitudinal and other sophisticated designs and analytic methods, such as multilevel models, should be used to disentangle generations from age and period effects (Schröder, 2024).

Finally, future research should use a broader range of methodologies to investigate ageism against younger workers. Among the 111 studies that use quantitative approaches, 70 were experimental and 35 were cross-sectional surveys. Only four were longitudinal studies, and only Gee et al. (2007) followed individuals over the lifespan, in that case using US data to track patterns of perceived age discrimination as women age. Only three studies used representative samples, of which one matched sample characteristics to the workforce of an organization. Interestingly, none of the selected studies investigated effects of interventions designed to reduce ageism against younger workers. This is especially notable given the substantial research that has investigated workplace interventions to promote positive attitudes and reduce workplace discrimination toward older workers. In their recent review article, Sinclair et al. (2023) found that such interventions had positive effects, especially with regard to attitudes toward older workers measured explicitly and directly following the intervention. They identified four categories of interventions (de-biasing interventions, brief attitudinal interventions, age diversity workshop interventions, and structural or contextual interventions), which could be adapted and investigated in the context of ageism toward younger workers.

Table 2.5 presents a summary of recommendations for future research on workplace youngism.

Table 2.5. Summary of recommendations for future research on workplace youngism.

Main issues to address	Observations	Recommendations
1. Focus directly on younger workers	(1) in more than 80 percent of the studies, ageism towards younger workers was investigated in relation to ageism toward other age groups (2) only four scales used in the studies focused exclusively on ageism toward younger workers	(1) investigate the specific types of ageism that younger workers encounter (2) develop and apply additional implicit and explicit measures specifically focused on workplace youngism
2. Increase methodological range	(1) among the 111 quantitative studies, 70 were experimental, 35 were cross-sectional surveys and only four were longitudinal studies (2) only three studies used representative samples to examine the prevalence of workplace youngism (3) no studies using interventions to address ageism toward younger workers were found	(1) use a broader range of research methods and analytical approaches to investigate ageism against younger workers (e.g., longitudinal, diary, intervention, and prevalence studies)
3. Consider youngism from different perspectives and approaches	(1) 93 studies focused on the perspective of endorsers, with only 34 studies taking the perspective of the target, and 16 studies investigating both perspectives (2) only 16 studies adopted an intersectional approach, investigating the intersection between age and sex/gender or ethnicity (3) 59 studies used vignettes with hypothetical targets of ageism. In 31 studies the target was male, whereas in only seven studies the target was as female (4) there were no studies investigating prescriptive age stereotypes toward younger workers (5) very few studies considered middle-aged workers as an age group by itself, either as potential targets or as enablers of ageism	(1) investigate the perspective of the targets of workplace youngism (2) conduct research using an intersectional approach, and going beyond sex/gender or ethnicity (3) investigate prescriptive age stereotypes towards younger workers (4) use a lifespan perspective in ageism research and consider middle-aged workers as a specific age group when researching workplace youngism
4. Explore antecedents and consequences more systematically	(1) 61 studies examined antecedents of ageism toward younger workers and 17 examined consequences (2) among studies examining antecedents, 53 took the enabler perspective, while only four studies target perspective (3) among studies examining consequences, 14 took the target perspective and only 2 took the enabler perspective	(1) investigate consequences of workplace youngism, especially from the perspective of enablers (2) investigate additional antecedents of workplace youngism from the target perspective

5. Acknowledge context	(1) more than sixty percent of the studies were conducted in the USA, UK, or Germany (2) the contextual level of ageism expression was the least frequently investigated among the cited studies for antecedents and consequences of workplace youngism	(1) consider additional national contexts, beyond WEIRD (Henrich et al., 2010) countries in research, including cross-country/cultural comparisons (2) investigate contextual level variables (e.g., industry, organization size) relating to workplace youngism

2.5.2. Limitations

A limitation of this review lies in only selecting articles that were published in English. This may explain in part why the vast majority of studies selected were conducted in the US and in Western European countries. Future research should review articles written in languages other than English. A further limitation is that we only considered articles for inclusion that contained empirical data from primary sources. Thus, a range of articles that could provide insight into ageism toward younger workers were not considered and analyzed, including theoretical articles, literature reviews, and legal and policy commentary. As only peer-reviewed articles were considered for inclusion, we may have overlooked studies contained in doctoral theses and other non-peer-reviewed publications.

An additional limitation of this review relates to the fact that the social psychological literature has acknowledged that workplace discrimination has evolved from more overt forms of discrimination to more subtle and covert behaviors, also referred to as modern discrimination (Marchiondo et al., 2018). The youngism literature has predominantly focused on blatant forms of discrimination. In contrast, research on racism and sexism has evolved to include the so-called modern forms of discrimination. These include *microaggressions*, defined as brief and commonplace daily verbal, behavioral, or environmental indignities that communicate hostility toward a social group and insults based on group membership (Sue et al., 2007). A related construct is *selective incivility*, defined as subtle, nonphysical manifestations of interpersonal mistreatment encompassing low-intensity conduct that violates social norms, and which are targeted at devalued social groups or employees, such as women and racial minorities (Cortina, 2008). Subtle forms of workplace mistreatment are not limited to gender or ethnicity and can be based on other social dimensions (Cortina, 2008). The microaggressions framework has been used to explore ageism targeting older adults (Lewis et al., 2023), but its potential for revealing biases against younger individuals remains largely untapped. In a similar vein, in the work context Marchiondo et al. (2016) analyzed over two hundred stories of age discrimination and found that age discrimination is often subtle, elusive, and understated, both for younger and older workers. Thus, future research on workplace youngism should go beyond blatant discrimination and examine more subtle forms of discrimination.

A further limitation lies in the fact that although we identified and categorized a range of antecedents and consequences of workplace youngism, we did not differentiate among the roles they played in different studies. Future research should undertake a more fine-grained analysis

regarding antecedents and consequences of ageism toward younger workers, in terms of their roles as independent variables, dependent variables, moderators, and mediators. We also did not include qualitative studies in our analysis of antecedents and consequences; future research should seek to do so.

2.5.3. Conclusion

With multiple age cohorts coexisting in many contemporary organizations, it becomes more important than ever to understand age-based attitudes in the workplace. Despite evidence showing that younger workers are discriminated and stereotyped against, research has tended to focus on ageism toward older workers. In summarizing and synthesizing findings from the nascent literature on workplace youngism - 108 articles and 143 empirical studies - we have highlighted areas of relative strength in the research and areas where much more work remains to be done. We hope that our overview of the literature and the specific research recommendations that we provide will inspire and guide future efforts to better understand and address ageism toward younger workers.

CHAPTER 3

What do we expect from younger workers? Development and validation of the Workplace Ambivalent Youngism Scale (WAYS)

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Paper drafts were presented at the 15th European Academy of Occupational Health Psychology Conference (2022, July 6 - 8, Bordeaux, France), at the Society for Industrial and Organizational Psychology Annual Conference (2023, April 19-22, Boston, MA, United States, virtual presentation), and at the 83rd Annual Meeting of the Academy of Management (2023, August 4-8, Boston, MA, United States), where it was nominated to the Dorothy Harlow/McGraw Hill Best Paper Award.

3.1. Abstract

A measure of prescriptive age stereotypes towards younger workers was developed and validated by using a culturally decentred approach, with 1,526 participants from the US and Portugal across three studies. In Study 1, participant responses to open-ended questions regarding age-based expectations were thematically analyzed to identify prescriptive age stereotypes towards younger workers and to generate an item pool. Study 2 explored the factor structure of the item pool in a sample with participants from the US and Portugal. In Study 3, confirmatory factor analysis was used to validate the factor structure from the previous exploratory study, to test for cross-cultural measurement invariance between samples from the US and Portugal, and to establish the divergent and convergent validity of the scale. The results confirm a second-order factor structure with eight first-order factors and the following three second-order factors: Humility-Deference, Loyalty-Belonging, and Vitality-Innovation. These factors reflect ambivalent expectations of younger workers, who, on the one hand, are expected to accept their lower social status, and, on the other hand, are required to demonstrate a high level of competence similar to that of higher-status groups. The scale was therefore labelled the Workplace Ambivalent Youngism Scale (WAYS).

3.2. Introduction

The ageing of the world's population, with the consequent postponement of retirement in many jurisdictions, has increased the number of younger and older workers interacting at work. The potential for conflict and perceived competition among different groups in an increasingly diverse workforce highlights the importance of understanding ageism (age-based negative attitudes) (Nelson, 2009; World Health Organization, 2021) and intergenerational relations in organizations (North & Fiske, 2013a). Age diversity in organizations is a "double-edged sword", increasing potential for both creativity and conflict (e.g., Horwitz & Horwitz, 2007; Milliken & Martins, 1996). Kunze et al. (2011) found that age diversity was associated with higher levels of perceived age discrimination climate in companies, which in turn negatively impacted overall firm performance.

Even though Palmore (1999) defined ageism broadly almost 25 years ago, as "prejudice or discrimination against or in favor of an age group" (p. 4), the lion's share of workplace ageism research has focused on older workers (Perry & Parlamis, 2005; Posthuma & Campion, 2009). In fact, people can also be judged as 'too young' in specific life domains and for specific work tasks (referred to as youngism, Francioli & North, 2021), a reality largely neglected in past research (de la Fuente-Núñez et al., 2021; Truxillo et al., 2015). Importantly, recent research suggests that age bias against younger people may be especially prevalent in the workplace (de la Fuente-Núñez et al., 2021) and has negative consequences for both targets and enablers of ageism (Schmitz et al., 2024).

Because age discrimination is mostly rooted in what people believe about certain age groups, stereotypes are particularly important to understand mechanisms that lead to age discrimination. Stereotypes are generalized beliefs about a social category a person belongs to, which might be true but quite often are not. Existing work on workplace youngism has mostly focused on descriptive age stereotypes, which are beliefs about the characteristics of younger workers (e.g., North & Fiske, 2013b). More recently, researchers have also started to investigate younger workers' metastereotypes, defined as beliefs about how younger people think they are stereotyped by other age categories (Finkelstein et al., 2015). Yet, prescriptive stereotypes - expectations regarding how a group of people *should* be or behave (North & Fiske, 2013a) – have not been investigated in relation to younger workers.

Because prescriptive stereotypes involve one group exerting social control over another (North & Fiske, 2013b), they often result in discrimination and disparate treatment (Heilman,

2001). Research on prescriptive stereotypes in the work context has focused mainly on race or gender (e.g., Berdahl & Min, 2012; Heilman, 2001). North and Fiske (2013a) developed a measure of prescriptive age stereotypes, but only in relation to older people, and without a specific focus on the workplace. Hence, there is a dearth of reseach on prescriptive age stereotypes towards workers (e.g., Finkelstein et al., 2015; Truxillo et al., 2015), and in particular with regard to younger workers (Schmitz et al., 2024).

In the present research, we developed and tested a scale assessing prescriptive age stereotypes towards younger workers. We used a culturally decentred approach, in order to avoid privileging a single culture in the scale development process. Three studies were conducted with 1,526 participants from the US and Portugal, in order to generate an item pool, to explore and confirm the factor structure of the scale as well as its measurement invariance across samples from the US and Portugal, and to establish convergent and divergent validity with other relevant constructs.

3.2.1. Workplace youngism

Finkelstein et al. (2018) emphasized the utility of the social psychological tripartite model of attitudes (Levy & Banaji, 2002) to better understand ageism in the workplace. According to this model, ageism, like other "-isms", can be defined by three components or dimensions of biases: cognitive, affective, and behavioral. The World Health Organization (2021) also emphasized this tripartite model by stating that "ageism refers to the stereotypes (how we think), prejudice (how we feel) and discrimination (how we act) directed towards others or oneself based on age" (World Health Organization, 2021, p.2).

Although less investigated than ageism towards older people, research shows that younger people also experience discrimination on the basis of age. On average across the 28 countries participating in the European Social Survey, a higher percentage of younger adults than older adults reported experiencing lack of respect or bad treatment because of their age (Abrams et al., 2011). In line with that, Francioli et al.'s (2024) research with a representative national sample, found that US adults reported less favourable sentiments towards young adults than toward other age groups.

In the work context, younger workers tend to be relatively underpaid (e.g., Wood et al., 2008) and report not feeling valued, receiving belittling comments, being generally perceived as incompetent because they look young, and receiving fewer development opportunities

(Raymer et al., 2017). More than a quarter (28%) of young employees reported experiencing age discrimination (Raymer et al., 2017), even for seemingly positive behaviors such as showing 'too much ambition' (Morgan, 2020). Workers aged 30 and below reported age discrimination during all phases of their employment, from recruitment to promotion and lay-off (Snape & Redman, 2003).

Younger workers' perceived age discrimination was found to negatively affect job satisfaction and employee work engagement (Jelenko, 2020), and to increase work-life interference (Rabl & Kühlmann, 2009), thereby reducing work-life balance. Negative consequences of age discrimination against younger workers were not only found for targets, but also for endorsers: Paleari et al. (2019) showed that the more employees endorsed youngism (or oldism, i.e., ageism against older people/employees), the more they experienced increasingly negative interactions with that age group over time, which negatively affected behaviors toward all co-workers and, marginally, their vitality at work and organizational identification. Employees holding ageist attitudes also enacted more counterproductive behaviors, such as insulting colleagues. Thus, evidence shows that youngist views in the workplace are not only detrimental to those who are targeted but also to those who hold them, their interactions with others, and, ultimately, the overall organization. The importance of addressing ageism toward younger workers is also increasingly recognized in the legal field, with issues of "reverse age discrimination" (e.g., Cullen, 2003; Lacy, 2005) becoming increasingly popular in the USA. In these legal actions, younger employees claim that their employer treated older employees better, bringing into question the traditional interpretation of the *Age Discrimination in Employment Act* ("ADEA") which has generally only protected older workers.

In a recent scoping review, Schmitz et al. (2024) found that in more than 80 percent of studies investigating ageism towards younger workers, youngism was examined in relation to ageism toward other age groups. In a number of studies, older workers' stereotypes were used as the reference to compare younger and older workers. While studies on ageism primarily affecting older workers may offer some insights into the age bias younger workers are facing, these are likely to be incomplete. Hence, they should be complemented by research focusing specifically on the type of ageism that younger workers encounter, including the specific stereotypes they are targeted with.

3.2.2. Prescriptive stereotypes towards younger workers

Although often less visible than negative feelings (prejudice) and biased behaviors (discrimination), stereotypes are important because they can lead to both prejudice and discrimination. Nonetheless, stereotypes about age groups are often taken for granted and go unchallenged. Stereotypes are broad assumptions about social groups that people use to distinguish between different social categories (Nelson, 2009). Stereotypes can be descriptive, such as "younger workers are less loyal," prescriptive, such as "younger workers should respect older workers," or metastereotypes, for instance, "younger workers think other age groups see them as more creative." Although stereotypes are often associated with negative traits, they can include both positive and negative characteristics (Operario & Fiske, 2003). For example, younger workers might be seen as energetic but less loyal. Stereotypes are also often strongly influenced by in-group bias, as demonstrated in research by Forte and Hansvick (1999), showing that employers aged 50 and over rated their cohorts as more desirable than younger workers on eleven out of twelve attributes. It is crucial to note that stereotypes are typically inaccurate. While there is limited data on the accuracy - or lack thereof - of stereotypes about younger workers, a review of 418 studies by Ng and Feldman (2012) found that common stereotypes about older workers are generally not supported by evidence.

The cognitive aspect of ageism has primarily been studied through descriptive stereotypes, with some attention also given to metastereotypes (Schmitz et al., 2024). Research on descriptive stereotypes indicates that younger workers are regarded as goal-oriented, technologically savvy, innovative but not experienced, in high need of support, seeking the most work–life balance, not etiquette-savvy, and uncommitted to the company (Van Rossem, 2019). Younger workers have also been deemed as too casual and lacking basic communication etiquette, entitled and with unrealistic expectations, showing poor work ethic and failing to take initiative, and self-centered and disrespectful of their elders (Raymer et al., 2017). Regarding metastereotypes, Finkelstein et al. (2013) identified the following stereotypes younger workers believe older workers hold about them: tech-savvy, arrogant, hardworking, nimble, and tardy/not punctual. Finkelstein et al. (2020) validated a metastereotypes scale assessing positive and negative metastereotypes for both younger and older workers. For younger workers, the positive metastereotype items are energetic/enthusiastic, ambitious, innovative/creative, and tech-savvy, and the negative metastereotype items are inexperienced, lazy/unmotivated, immature, and unreliable. It is important to note that the metastereotypes scale is the only existing validated scale developed to specifically assess ageism toward younger workers (Schmitz et al., 2024).

Prescriptive stereotypes, especially with regard to younger individuals, represent a blind spot in age stereotyping research. They describe the characteristics we think people in a group ought to have, presumably to be considered "normal" and to maintain that group's proper place within a culture (Finkelstein et al., 2015). An example of a prescriptive age stereotype is the expectation that older workers should step aside to make way for the younger generations in the workplace (North & Fiske, 2013a). In contrast to mere norms or expectations—typically shared by everyone in a given society—violating prescriptive stereotypes may result in backlash, or penalties for the stereotype violator (e.g., by not being hired) (Rudman et al., 2012). Thus, prescriptive stereotypes can predict prejudice/discrimination even when descriptive stereotypes do not (Gill, 2004). Prescriptive stereotypes also create pressure on the target group to act in certain ways (to avoid violating stereotypes and to conceal non-conforming behavior), which perpetuates stereotypes and stereotypical behavior (Rudman et al., 2012). Interestingly, prescriptive stereotypes have been found to yield far greater between-group differences in endorsement than do descriptive stereotypes (North & Fiske, 2013a; Rudman et al., 2012).

Prescriptive stereotypes have been extensively studied in relation to gender and ethnicity (e.g., Burges & Borgida, 1999; Gill, 2004; Rudman & Glick, 2002). However, research on age-related prescriptive stereotypes, or on the intersection of age and gender (Koenig, 2018), has only gained attention more recently and often lacks a specific focus on the workplace. Studies on prescriptive stereotypes in the work context for other social categories, such as gender or race (e.g., Berdahl & Min, 2012; Heilman, 2001), have highlighted their significant role in understanding discrimination and intergroup dynamics. For instance, East Asians who exhibited dominant behavior at work, thereby defying a prescriptive racial stereotype, faced more racial harassment compared to other dominant employees and non-dominant East Asians (Berdahl & Min, 2012). In terms of gender, even when women are recognized for their competence and achievement-oriented traits, violating gender prescriptive stereotypes (i.e., by being agentic) can negatively impact their evaluations and career advancement (Heilman, 2001).

Even though ageism shares with sexism and racism similar intergroup processes, the highly continuous nature of age renders it very subjective and dependent on social construction processes when it comes to age categorizations and beliefs. This makes it especially important to explore the content of prescriptive age stereotypes toward different age groups, including in the workplace. Measures are required that are reliable, valid, and ideally applicable in various cultural contexts to avoid the established cultural bias in psychological research (Henrich et al., 2010). Hence, there is a pressing need to develop and validate scales specifically focused on

the type of ageism that is directed toward younger workers, including less-explored prescriptive stereotypes.

3.2.3. Cultural decentering of instruments

Given the importance of prescriptive stereotypes for intergroup relations and the lack of scales assessing prescriptive stereotyping about younger workers, the purpose of this paper was to develop and validate such a scale. When scales are developed, one culture – usually from a WEIRD context (Henrich et al., 2010), is often privileged in the scale development process. Yet, it has been argued that research should develop concepts and theories pertinent to multiple cultures (Rivenburgh & Manusov, 2010). Hence, a cultural decentering technique was adopted here.

Cultural decentring has been previously applied in scale development studies (Leung et al., 2012). According to this technique, inputs from culturally diverse individuals allow for the scale to be applicable in different cultural contexts by maximizing the appropriateness of item content for the cultural groups involved (Van de Vijver & Leung, 2021). The results are not necessarily universally applicable across many different cultures but because they originated in culturally diverse groups, they have a perspective that is more culturally balanced (Rivenburgh & Manusov, 2010).

Portugal and the US were considered in our studies. Even though both Portugal and the US might be characterized as WEIRD, they also present relevant differences. Portugal is characterized by cultural values that emphasize high power distance, collectivism, high uncertainty avoidance (Hofstede, 2001) and tightness (Gelfand et al., 2011). The US tends to be the exact opposite in terms of being characterized by low power distance, individualism, low uncertainty avoidance (Hofstede, 2001) and looseness (Gelfand et al., 2011).

3.2.4. Overview of studies

Our overall goal was to develop and validate a measure of workplace youngism, specifically of prescriptive age stereotypes towards younger workers. Six samples from the US and Portugal, totaling 1,526 participants, were used across three studies. In Study 1, participant responses to open-ended questions regarding age-based expectations were thematically analyzed to identify prescriptive age stereotypes towards younger workers. Items generated from Study 1 were finetuned following feedback from an expert panel. Study 2 explored the factor structure of the

item pool in US and Portuguese samples. Study 3 had a threefold goal: to confirm the structure that emerged from the previous exploratory study, to test for measurement invariance between the US and Portuguese samples, and to establish divergent and convergent validity of the scale with related constructs.

3.3. Study 1: Identification of prescriptive age stereotypes towards younger workers

In Study 1, prescriptive age stereotypes toward younger workers were identified in order to generate preliminary scale items. Responses from two culturally diverse samples (Portugal and the US) were thematically analyzed, thereby maximizing item appropriateness across different cultural contexts.

3.3.1. Method

Participants

The sample (*N* = 154; 50.7 % women; mean age = 42 years, *SD* = 12.95, range 19-71 years) included participants from the US and Portugal, recruited from Amazon Mechanical Turk (MTurk) and the Online Research Panel (https://www.clsbe.lisboa.ucp.pt/CEA/PEO), respectively. All participants had previous working experience and were living in the US and in Portugal at the time data were collected. US participants (*N* = 69; 39.1% women; mean age = 39.9 years, *SD* = 10.3, range 25-71 years) were primarily White/European American (87%); 4.3% or less were Black/African American, Latino/Hispanic American or "other"/mixed (participants were asked how they would define themselves and could select more than one category). Participants were each paid 1.50 US dollars. Among the Portuguese participants (*N* = 85; 62.4% women; mean age = 43.7 years, *SD* = 14.5, range 19-69 years), 89.4% were born in Portugal, and the other 10.6% in Brazil, Mozambique, France or Switzerland. In terms of nationality, 95.3% were Portuguese. Participants were each paid 2.50 euros.

Measures and Procedure

Participants answered two open-ended questions regarding age-based expectations relating to younger workers: "Please take a moment to bring to mind what you think are common age-based expectations that exist in the workplace about younger workers. In general, what are

younger workers supposed to do? How are they supposed to behave?" The survey was developed in English and then translated into Portuguese using the Committee approach (Harkness, 2003).

Data from the US sample were subjected to thematic analysis (TA) following an inductive approach based on a six-phase analytic process (Terry et al., 2017) and using the qualitative research software Taguette (https://www.taguette.org/). In total, 276 text segments were coded independently by two coders, with a level of agreement of 90%. Disagreements were resolved by discussion with a third coder.

3.3.2. Results

The following nine themes were identified: 1. Respect older workers; 2. Accept and follow organizational hierarchy; 3. Acknowledge inexperience and accept menial tasks; 4. Prove belonging in organization; 5. Demonstrate loyalty towards the organization; 6. Demonstrate technological competence; 7. Bring a dynamic work attitude; 8. Show creativity; and, 9. Take an active role.

The analysis of data from the Portuguese sample was performed using mainly a deductive approach, based on the themes identified in the US data. The final phase of the process resulted in the coding of 376 text segments, with 87% of agreement among coders, and disagreements resolved through discussion. All nine themes identified in the US data were also identified in the Portuguese dataset.

Building upon the identified themes, we distinguished three broad types of prescriptive age stereotypes toward younger workers: expectations regarding 1) not challenging the natural social order in the workplace and focused on mandatory expectations, which was labeled Humility-Deference, 2) proving to be trustworthy, making efforts to be socialized into the organization and showing long-term commitment to its goals, which was named Loyalty-Belonging, and 3) having a dynamic work-attitude, being creative, and competent with new technologies, which was referred to as Vitality-Innovation. These three types of prescriptive stereotypes tap into the ambivalent expectations that people have about younger workers: on the one hand, younger workers are supposed to accept their lower social status, on the other hand, younger workers are also expected to show attributes usually associated with higher status groups (e.g., certain competencies and agency).

Item generation

The research team generated 48 potential items, which were submitted to an international panel[2] of four experts in areas relating to diversity and inclusion, stereotyping and discrimination. Feedback was provided regarding the clarity and appropriateness of the survey instructions, preambles, and specific items. The feedback received was incorporated into the final version of the scale, resulting in the addition of 12 items and, therefore, a final pool of 60 items.

3.4. Study 2: Exploratory Factor Analysis (EFA)

Study 2 explored the factor structure of the 60-item pool in the US and Portuguese samples.

3.4.1. Method

Participants

The study sample (*N* = 788; 45 % women; mean age = 35.62 years, *SD* = 11.95, range 19-77 years) included participants from the US and Portugal, recruited from Amazon Mechanical Turk (MTurk) and Prolific (https://prolific.co/), respectively. All participants had previous working experience and were living in the US or Portugal at the time data were collected. US participants (*N* = 403; 43.9% women; mean age = 42.1 years, *SD* = 11.3, range 21-77 years) were primarily White/European American (85.6%), 8.2% Black/African American, 3.7% or less were Latino/Hispanic American or "other"/mixed (participants were asked how would they define themselves and could select more than one category). Participants were each paid 2.00 US dollars. Among Portuguese participants (*N* = 385; 45.8% women; mean age = 28.69 years, *SD* = 8.10, range 19-71 years), 96% were born in Portugal, and 1.3% or less in France, Angola, Switzerland or in another country. Thirteen participants, who answered an attention check question wrongly, were dropped from the analysis. Portuguese participants were each paid 1.88 pounds sterling.

Measures and Procedure

Participants were asked to complete an online survey assessing prescriptive stereotypes about younger workers, using the 60 items generated in Study 1. The survey was developed in English and then translated into Portuguese using the Committee approach (Harkness, 2003).

[2] The international panel had representatives from Portugal, the UK, Belgium and France. According to van de Vijver and Leung (2021), the involvement of researchers from diverse cultural backgrounds increases the likelihood of arriving at culturally equivalent constructs and items.

Participants were asked to indicate to what extent they agreed with the statements presented to them (e.g., “Younger workers, especially,...should ask questions instead of assuming they know everything”), using a 6-point Likert scale that ranged from 1 (Strongly disagree) to 6 (Strongly agree).

3.4.2. Results

Principal Component Analysis (PCA) with varimax rotation, chosen for its ability to simplify the factor structure and aid interpretability (Abdi, 2003), was used to examine the factor structure among the 60 items. Ten factors had eigenvalues of 1 or above; however, 18 items showed substantial cross-loadings (>.40) or relatively weak loadings (<.60) and were discarded. A PCA with varimax rotation was subsequently used to examine the 42 remaining items. The Kaiser-Meyer-Olkin measure verified the sampling adequacy for the analysis, KMO = .95, which exceeds the recommended threshold of .60, and Bartlett's test of sphericity was significant (χ2 [861] = 25123. 157, p < .00). Eight interpretable factors which together explained 71.98% of the variance were retained. The 42 items (α = .95) showed substantial subscale reliabilities. Overall, the eight factors corresponded directly to the nine identified themes from Study 1. The only exception happened for the items tapping into the themes Respect older workers and Accept and follow organization hierarchy. These loaded on the same factor, which was named Accept and respect the hierarchy. We further excluded 16 items because of content redundancy, lack of clarity or relatively weak loading (<.60). The final measure, presented in Table 3.1, consisted of 26 items and eight factors (α = .91).

Table 3.1. Results from Principal Component Analysis (PCA)

Ageism Against Younger Workers item	Factor loading							
	1	2	3	4	5	6	7	8
Factor 1: Take an active role								
Should actively look for ways to improve	.73							
Should find ways to overcome obstacles	.73							
Should show and take initiative	.72							
Should seek and ask for training	.69							
Factor 2: Demonstrate technological competence								
Should know how to use new technologies		.82						
Should be good with the latest technologies		.80						
Should learn new technologies quickly and easily		.79						

Factor 3: Accept and respect the hierarchy						
Should not question the organizational status quo	.86					
Should not challenge the organization's hierarchical order	.85					
Should not question directions from superiors	.84					
Should not question older colleagues	.71					
Factor 4: Demonstrate loyalty towards the organization						
Should be loyal to the organization		.82				
Should not see their job as just a stepping-stone to other opportunities		.76				
Should show long-term support for their organization		.73				
Factor 5: Prove belonging in organization						
Should make efforts to be socialized into the organization			.79			
Should strive to fit in the organization			.77			
Should prove they can be trusted to follow formal and informal rules			.65			
Factor 6: Show creativity						
Should be creative and bring new perspectives				.78		
Should be inventive				.72		
Should be open to new things and ideas				.65		
Factor 7: Acknowledge inexperience and accept menial tasks						
Should not assume that they know everything about how to do their job					.81	
Should ask questions instead of assuming they know everything					.76	
Should not think that they are too good to do menial tasks					.76	
Factor 8: Bring a dynamic work attitude						
Should recover quickly from periods of intense work						.80
Should have stamina and not tire easily						.71
Should be able to execute tasks more quickly						.70

Note. N = 788. The extraction method was a PCA with a Varimax rotation with Kaiser Normalization. Final 26 items retained are shown.

3.5. Study 3: Confirmatory Factor Analysis (CFA)

Confirmatory Factor Analysis (CFA) was conducted to validate the structure that emerged from the EFA study, test for measurement invariance between the two different cultural samples and

establish divergent and convergent validity of the scale. When testing for divergent validity, we expected that the three second-order facets of WAYS would correlate moderately to weakly with other types of prejudice (i.e., oldism, colorblindness – or racism, and sexism). When testing for convergent validity, it was expected that the Vitality-Innovation and the Loyalty-Belonging dimension would correlate moderately to highly with Y managerial attitudes, obligation work norms, and with the resourceful facet of descriptive youngism stereotypes. The Humility-Deference dimension was expected to correlate moderately to highly with social dominance orientation and with the ungrateful facet of descriptive youngism stereotypes.

3.5.1. Method

Participants

Participants with previous working experience were recruited from the US and Portugal, from Amazon Mechanical Turk (MTurk) and Prolific (https://prolific.co/), respectively. The final sample was composed of 584 participants (38.7 % women; mean age = 34.11 years, *SD* = 12.49, range 19-79 years). US participants (*N* = 299; 39.1% women; mean age = 41.23 years, *SD* = 12.14, range 20-79 years) were primarily White/European American (81.6%), 8% Latino/Hispanic American, 7.4% Black/African American, 5.7% or less were East Asian/ East Asian American or "other"/mixed (participants were asked how would they define themselves and could select more than one category). US participants were each paid 2.50 US dollars. Among the Portuguese participants (*N* = 285; 38.2% women; mean age = 26.63 years, *SD* = 7.50, range 19-60 years), 98% were born in Portugal, and 0.7% or less in France, Angola, Spain or in another country. Portuguese participants were each paid 2.50 pounds sterling.

Measures and Procedure

For the Portuguese sample, measures were translated to Portuguese using the Committee approach (Harkness, 2003). All measures were responded to on a 6-point Likert scale that ranged from 1 (Strongly disagree) to 6 (Strongly agree), except where noted. Participants were asked to complete an online survey with the measures presented below:

Prescriptive stereotypes towards younger workers. Stereotypes were measured using the 26-item solution that emerged from the previous (EFA) study.

Youngism. We measured youngism with the 20-item scale from Francioli and North (2021) which assesses two facets of descriptive age stereoptypes towards younger people: the resourceful (e.g., eager) and ungrateful (e.g., entitled) facets. Participants were asked to indicate

to what extent they agreed that "today's younger adults are…" followed by a series of adjectives. The Cronbach's alpha for the resourceful facet was .87 and for the ungrateful facet was .91.

Oldism. We measured ageism against older people (i.e., oldism) with the 20-item scale from North and Fiske (2013b). A sample item is "Older people are often too much of a burden on families" (α = .88).

Obligation work norms. We measured work norms with 12 items from Sagie and Weisberg (1996). The items correspond to the "obligations" dimension of work norms towards the employer and the co-workers. Participants were asked to indicate to what extent they agreed that "employees, in general, should demonstrate the following…", for example, "loyalty to the employer" (α = .90).

Y managerial attitudes. We measured Y managerial attitudes, referring to positive attitudes held by managers about employee work abilities and motivations, with four items from Kopelman et al. (2010). A sample item is "Employees possess imagination and creativity" (α = .77).

Sexism. We measured sexism with the 12-item shortened version of the Ambivalent Sexism Inventory (Glick & Fiske, 1996; Rollero et al., 2014) that includes hostile and benevolent sexism. A sample item of hostile sexism is "Women seek to gain power by getting control over men" (α = .92), and a sample item of benevolent sexism is "Many women have a quality of purity that few men possess" (α = .80). The Cronbach's alpha for the full scale was .88.

Colorblindness. We measured colorblindness, also referred to as color-evasiveness, with the five-item scale from Rosenthal and Levy (2012). A sample item is "Ethnic and cultural group categories are not very important for understanding or making decisions about people" (α = .91).

Social Dominance Orientation (SDO). We measured SDO with eight items from Ho et al. (2015). A sample item is "An ideal society requires some groups to be on top and others to be on the bottom" (α = .90). Participants responded to a 6-point Likert-type scale that ranged from 1 (Strongly oppose) to 6 (Strongly favor).

3.5.2. Results

Model fit

A CFA was performed using MPlus (Muthén & Muthén, 2017) to validate the solution that emerged from the previous (EFA) study. Because one of the items had a non-normal

distribution (skewness of -2.192), and as recommended by Brown (2015), we used Maximum Likelihood with robust standard errors and χ2 (MLM). The proposed 26-item and 8-factor model exhibited an acceptable fit regarding all fit indices according to the standard guidelines (Bentler, 1990; Hu & Bentler, 1995; Schumacker & Lomax, 2010), except for the chi-square, which is common for large sample sizes (χ2 [271] = 848.542, p < .001; RMSEA = 0.060; CFI = 0.92; TLI = 0.91; SRMR = 0.058). Following the recommendations of Brown (2015), we evaluated model fit also by investigating potential areas of strain in the model. Specifically, modification indices suggested a high correlation between the errors of two items. For that reason, and after a qualitative analysis of the respective items indicated content overlap, we decided to drop the item with the lowest loading of the two ("Younger workers especially, should not question older colleagues"). The new 25-item 8-factor model (Model 1) exhibited a better fit (χ^2 [247] = 726.491, p < .001; RMSEA = 0.058; CFI = 0.93; TLI = 0.92; SRMR = 0.057). All the items loaded significantly and positively on the proposed factors (standardized coefficients ranged from .63 to .93) and the eight factors revealed very good reliability, with a minimum Cronbach's alpha of .79. The full scale also revealed very good reliability (α = .90). Given that the qualitative analysis in Study 1 suggested that prescriptive stereotypes towards younger workers might be represented within three overarching dimensions, we evaluated the fit of two higher-order models: one with three second-order factors and eight first-order factors (Model 2), and one with two second-order factors and eight first-order factors (Model 3). Table 3.2 displays the results.

Table 3.2. Fit indices for alternative models

Model	χ2	*df*	RMSEA	CFI	TLI	SRMR	CAIC
Model 1	726.491	247	0.060	0.921	0.905	0.058	36101.401
Model 2	853.415	264	0.062	0.915	0.904	0.072	36220.359
Model 3	862.879	266	0.062	0.914	0.903	0.073	36226.554

Note. N = 584. Models: 1= 8 first-order factors; 2= 3 second-order factors; 3= 2 second-order factors. All χ2 statistics are significant at p < 0.01. RMSEA – root mean square error of approximation; CFI = comparative fit index; TLI=Tucker–Lewis index; SRMS = standardized root mean square residual; CAIC= consistent Akaike information criterion.

When comparing fit statistics of Model 2 (χ^2 [264] = 853.415, p < .001; RMSEA = 0.062; CFI = 0.91; TLI = 0.90; SRMR = 0.072, $\Delta\chi^2$ with Satorra-Bentler correction [17] = 133.971, p < .001) and Model 3 (χ^2 [266] = 862.879, p < .001; RMSEA = 0.062; CFI = 0.91; TLI = 0.90;

SRMR = 0.073, $\Delta\chi^2$ with Satorra-Bentler correction [19] = 144.741, $p < .001$), the comparatively lower CAIC value of Model 2 (Garson, 2003; Marsh & Hocevar, 1985) and the significant $\Delta\chi^2$ showed that Model 2 had a better fit. Additionally, Chen (2007), and Cheung and Rensvold (2002) suggested that if the sample size is large (>300), a comparative fit index (CFI) difference not larger than 0.01 across models implies that the model fit does not deteriorate considerably. The eight first-order factors all loaded significantly and positively on the proposed second-order factor (standardized coefficients ranged from .51 to .94). The three second-order factors revealed good reliability: Cronbach's alpha was .78 for Humility-Deference, .85 for Loyalty-Belonging and .90 for Vitality-Innovation.

According to Hair et al. (2018), first-order models should fit better in absolute terms when compared to higher-order models, because they use more paths to capture the same amount of covariance. Considering that the logic of comparisons between models is not necessarily to choose the best-fitting model, but to select the most parsimonious one which is still well-fitting (Brown, 2015), and "the ultimate criterion in deciding to form a second-order measurement model is theory" (Hair et al., 2018, p. 735), we retained Model 2, with three second-order factors and eight first-order factors, as our final model. From here on, we also refer to the three second-order factors as dimensions of the WAYS, and to the 8 first-order factors as subdimentions of the WAYS. Annex A presents the three dimensions, eight subdimensions and 25 final items of the WAYS.

Measurement invariance

To assess measurement invariance in our two samples, we ran several additional models using multiple group confirmatory factor analysis (MGCFA), with MPlus (Muthén & Muthén, 2017). First, the configural invariance of the first-order factors was tested to assess if the same concept was measured across groups. If configural invariance is met, the general factor structure is the same across groups, including the number of factors and the general pattern of factor loadings. Second, first-order and second-order metric invariance were tested, to assess if the constructs are measured by the same measurement units across groups. If measurement invariance is met, the factor loadings are the same across groups. Finally, first-order and second-order scalar invariance were tested by constraining the indicator intercepts to be equal across groups, to assess if the latent variables are measured with the same units and have the same zero point for all the groups included in the analysis (Rudnev et al., 2018).

Table 3.3 displays the fit measures of the five models tested. Model 1, which included no cross-groups constraints, displayed a very good fit, providing support for configural invariance

of the model. Model 2, which tested for metric invariance of the first-order factors, also demonstrated a good fit. The χ^2 difference test suggested that there is no significant deterioration in the model fit compared to Model 1. Additionally, the difference in CFI did not exceed 0.01. In a similar fashion, Model 3, testing for metric invariance of the second-order factor, demonstrated a good fit. No significant deterioration in the χ^2 value or in the CFI value, compared to Model 2, was revealed. Therefore, metric invariance for both first and second order factors was supported. Models 4 and 5 tested for full scalar invariance of the first- and second-order factors in the model. Model 4 results indicated a substantial deterioration in model fit, both in terms of the χ^2 and the CFI, showing that there is no first-order scalar invariance across countries and, consequently, no second-order scalar invariance. However, we also fitted a model testing for scalar invariance of the second-order factor in Model 5.

Therefore, the best model in this sequence was Model 3, which demonstrated both first- and second-order metric invariance. Supporting these conclusions, the SABIC displayed the smallest value in this model as well.

Table 3.3. Results of invariance tests

	$\chi 2(df)$	Scaled $\chi 2$ difference	CFI	CFI difference	RMSEA	SRMR	SABIC
1) Configural invariance	1243.951*(528)		0.901		0.068[a]	0.084	36128.46
2) Metric invariance of the first-order factors	1266.844*(545)	23.3667	0.900	0.001	0.067[a]	0.084	36102.98
3) Metric invariance of the first and second-order factors	1273.324*(550)	5.6703	0.900	0.000	0.067[a]	0.086	36092.96
4) Scalar invariance of the first-order factors	1365.362*(567)	101.2422*	0.889	0.011	0.069[a]	0.089	36141.77
5) Scalar invariance of the first and second-order factors	1462.108*(572)	227.2140*	0.876	0.013	0.073[a]	0.098	36239.44

Note. df – degrees of freedom; scaled $\chi 2$ difference is a difference between -2log-likelihood corrected with a scaling factor applied with maximum likelihood with robust standard errors, with Satorra-Bentler correction; CFI – comparative fit index; delta CFI – difference in CFI from the previous model in the sequence; RMSEA – root mean square error of approximation, SABIC – sample-adjusted Bayesian information criterion, SRMR – standardized root mean square residual.
* significant at $p < 0.01$.
a – RMSEA is equal or lower than 0.05 at $p < 0.05$ level of significance.

Divergent and convergent validity

Results for divergent and convergent validity are presented in Table 3.4. Regarding divergent validity, overall and as expected, the Vitality-Innovation dimension correlated significantly and weakly with sexism (r = .19, p < .01) and oldism (r = -.10, p < .01). This dimension did not correlate significantly with colorblindness (r = .02, p = .62). The Loyalty-Belonging dimension correlated moderately to weakly with sexism (r = .28, p < .01), oldism (r = -.19, p < .01), and colorblindness (r = .12, p < .01). The Humility-Deference dimension correlated moderately to weakly with sexism (r = .25, p < .01) and colorblindness (r = .10, p <.05). This dimension did not correlate significantly with oldism (r = -.04, p = .37).

Regarding convergent validity, overall the correlations among the three dimensions of WAYS and other related variables were as expected: the Vitality-Innovation dimension correlated moderately with Y managerial attitudes (r = .26, p < .01), obligation work norms (r = .47, p < .01), and the resourceful facet of youngism (r = .34, p < .01). The Loyalty-Belonging dimension correlated weakly with Y managerial attitudes and the resourceful facet of youngism (r = .12, p < .01 and r = .16, p < .01), while it correlated highly with work norms (r = .63, p < .01). The Humility-Deference dimension, correlated moderately with social dominance orientation (r = .20, p < .001), and the ungrateful facet of youngism (r = .37, p < .001).

Thus, the WAYS measure demonstrated overall support for divergent validity: while prescriptive age stereotypes toward younger workers are related to other forms of prejudice, the relationships are generally weak, confirming that these are distinct constructs. It also demonstrated support for convergent validity by showing sizable correlations with conceptually similar constructs.

Table 3.4. Descriptive statistics and correlations for WAYS dimensions and related measures

Variable	*n*	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11
1. Humility-Deference	584	4.06	0.88	—	.41**	.30**	-.04	.10*	.25**	-.04	.33**	.20**	-.08*	.37**
2. Loyalty-Belonging	584	4.39	0.91	.41**	—	.50**	-.19**	.12**	.28**	.12**	.63**	.10*	.16**	.26**
3. Vitality-Innovation	584	4.61	0.69	.30**	.50**	—	-.10*	.02	.19**	.26**	.473**	-.05	.34**	.29**
4. Ageism Towards Older People	584	2.58	0.77	-.04	-.19**	-.10*	—	.04	.22**	-.16**	-.22**	.17**	-.02	.02
5. Colorblindness	584	3.11	1.38	.10*	.12**	.02	.04	—	.20**	-.01	.03	.16**	-.16**	.14**
6. Ambivalent Sexism	584	2.68	1.02	.25**	.28**	.19**	.22**	.21**	—	-.03	.11**	.43**	-.09*	.47**
7. Y managerial attitudes	584	4.30	0.82	-.04	.12**	.26**	-.16**	-.01	-.03	—	.31**	-.21**	.49**	-.13**
8. Obligation work norms	584	4.96	0.69	.33**	.63**	.47**	-.22**	.03	.11**	.31**	—	-.07	.27**	.10*
9. Social Dominance Orientation	584	2.65	1.08	.20**	.10*	-.05	.17**	.16**	.43**	-.21**	-.07	—	-.31**	.29**
10. Resourceful Facet	584	4.52	0.70	-.08*	.16**	.34**	-.02	-.16**	-.09*	.49**	.27**	-.31**	—	-.28**
11. Ungrateful Facet	584	3.62	1.04	.37**	.26**	.29**	.02	.14**	.47**	-.13**	.10*	.29**	-.28**	—

Note. $^{*}p < .05$ $^{**}p < .01$

3.6. Discussion

Our research moves beyond traditional views of diversity, by tapping into its complexity (Roberson, 2019) and investigating a group largely overlooked by research: younger workers. In order to bridge an important gap in the literature regarding age-related prescriptive stereotypes in general and toward younger workers in particular, we developed and tested the Workplace Ambivalent Youngism Scale (WAYS). Three types of expectations regarding younger workers were identified, that they should: a) accept hierarchy and their lower status (Humility-Deference), b) show loyalty and be socialized into their organizations (Loyalty-Belonging), and c) bring energy, innovation, and tech-savviness (Vitality-Innovation). Metric invariance was supported for the first- and second-order factors of the scale in the Portuguese and US samples. In addition, divergent and convergent validity were established in relation to related constructs. It is important to note that the WAYS dimensions are clearly distinct from both the resourceful and ungrateful facets of descriptive youngism stereotypes.

The WAYS dimensions show the ambivalence of stereotypes targeting younger workers. On the one hand, younger workers are expected to accept lower status and submit to hierarchy by complying with Humility-Deference stereotypes. On the other hand, they are expected to stand out, leverage their strengths, and challenge the status quo by complying with Vitality-Inovattion stereotypes. Ambivalence regarding biases towards younger workers has already been identified in previous research by Finkelstein et al. (2020). Their metastereotypes' scale is composed of four positive and four negative metastereotypes held by younger workers. Our research found this ambivalence reflected again in the form of prescriptive stereotypes which can impose conflicting expectations on younger workers.

3.6.1. Implications for research and practice

Workplace ageism research has mostly focused on older workers, despite younger workers also reporting, and often at higher levels, perceived age discrimination. This research contributes to calls to recognize the bidirectional nature of ageism, whereby discrimination on the basis of age is not only experienced by older workers, but also by those at the opposite end of the age spectrum. Our research contributes to this literature by advancing the understanding of prescriptive age stereotypes against younger workers. Most research regarding the cognitive dimension of workplace youngism has focused on descriptive stereotypes and metastereotypes.

To our knowledge, no prior research has specifically and rigorously investigated prescriptive age stereoytpes towards younger workers. While much of the previous research regarding younger worker stereotypes has compared them to older workers, having older workers as the reference group for age-based comparisons can overshadow specific forms of prejudice and discrimination that apply mostly to younger workers. This can lead to underestimating the extent to which they are stereotyped, because they are being evaluated on the basis of older worker stereotypes. WAYS was specifically developed to capture prescriptive expectations regarding younger workers.

In developing the WAYS scale, efforts were made to develop a measure applicable in different cultural contexts, through the use of a culturally decentering approach. The metric invariance of both first-order and second-order factors was confirmed for the culturally distinct samples from the US and Portugal. This suggests that future studies can confidently compare correlations or regression coefficients across these groups—for instance, to examine whether WAYS predicts outcomes with similar strength or varying effects across cultures. Attaining this relatively high level of equivalence, despite the cultural differences between Portugal and the US suggests that WAYS may be well-suited for application across diverse cultural contexts. Nonetheless, the scale should be empirically tested in additional cultures to verify the factor structure of WAYS, allowing for broader generalization across diverse cultural contexts. This would also address the ongoing call for research on cross-cultural similarities and differences in ageism (Kornadt et al., 2022). It would be interesting to investigate, for example, whether in organizations and societies with lower power distance, i.e., status and power differences (Hofstede, 2001), younger workers would also be targeted with the Humility-Deference prescriptive stereotype.

In terms of practical implications, WAYS can be used to assess the extent of prescriptive stereotypes against younger workers in organizations and other contexts, for example, a specific industry. If high levels are found of a WAYS dimension (i.e., Humility-Deference) that predicts workplace age discrimination and negative employee outcomes, steps can be taken to make sure that policies are in place to prevent workplace age discrimination that it is likely to lead to. Because of the important role of addressing stereotypes as a basis for training aimed at reducing ageism (e.g., Brasseur, 2008; Burmeister et al., 2021; Devine, 1989), it is crucial to ascertain what is known about younger worker stereotypes. Our scale can be an important contribution to inform such interventions. Thus, organizations can, for example, launch internal training programs based on WAYS, using the scale to first make an initial assessment of the presence of stereotyping in different dimensions (i.e., Humility-Deference, Loyalty-Belonging, Vitality-

Innovation) and then use the results and situations reported by the employees to promote discussion, learning, and change (for a review of age-diversity training designs and methods see Burmeister et al., 2021). Moreover, age stereotype reduction has been associated with the development of a positive intergenerational climate (King & Bryant, 2017), which is, in turn, associated with higher job satisfaction and lower intentions to leave the organization (Iweins et al., 2013; King & Bryant, 2017). Kunze et al. (2013) also argue that losses in organizational performance could be prevented if managers held more positive age stereotypes and promoted age diversity-friendly HR policies. This underscores the importance of implementing age diversity-friendly HR policies that promote inclusivity and leverage the strengths of a diverse workforce.

3.6.2. Limitations and future research

In terms of limitations, because data were collected using online platforms our participants' level of education was relatively high, with most having undergraduate or graduate training. The WAYS scale should therefore be validated for groups with lower levels of formal education. It is also possible that in some sectors (for example, the tech sector vs more traditional sectors) differences in expectations regarding younger workers may emerge. The applicability of WAYS in different sectors and industries should therefore be explored in future research and its factor structure confirmed.

Future research should also investigate the effect of WAYS on attitudes and behaviors towards younger workers. First, this could be done experimentally. Patient et al. (2024) experimentally investigated the effect of endorsing Humility-Deference stereotypes on reactions to younger workers violating those stereotypes in work-related personnel decisions. They found that stereotype endorsement was associated with more negative reactions to a younger worker, as compared to a middle-aged and an older worker, including greater support for punishing them in a stereotype violation scenario. Similar studies should be conducted to explore the effects of other WAYS dimensions. Second, additional field research should be undertaken to understand how endorsing the WAYS dimensions relates to important workplace outcomes, such as evaluations of, actions toward, and willingness to work with younger workers. Such research should be longitudinal, in order to avoid common method bias, and also seek to show the predictive power of WAYS over and above descriptive stereotypes and other related measures.

The effect of endorsing WAYS can also be investigated for managers and HR professionals, whose expectations regarding how younger workers should and should not behave are likely to be especially consequential. It would also be interesting for research to explore how prescriptive age stereotypes towards younger workers affect dyadic relationships in age-inverse supervisory relationships (such as older workers who report to younger supervisors). These are increasingly common and have been shown to negatively affect organizations, both in terms of the feelings that are shared among the workforce as well as in terms of the performance that the company achieves (Kunze & Menges, 2017).

Research should also investigate the effects that generational approaches may have on age stereotyping and discrimination. Generational approaches label specific cohorts (typically people whose formative years took place during a certain time) and link these labels to particular behaviors, attitudes, and values, including in the workplace. Despite its widespread popularity, this approach is becoming increasingly controversial scientifically. Numerous studies have shown that differences within a generation are often greater than those between generations, and so-called generational differences are often explained by age and period effects instead (e.g., NASEM, 2020; Schröder, 2024). While group categorizations can be useful and powerful shortcuts, they can also highlight and reinforce biases, potentially fostering negative attitudes towards workers based on their generational label (e.g., Baby Boomers being seen as technologically inept or Generation Z as entitled). Future research should explore how generational approaches impact prescriptive age stereotyping, especially toward younger workers.

Finally, although the effect of overlapping social identities can powerfully shape targets' experiences of discrimination, inadequate attention has been paid to intersectionality by ageism scholars (e.g., Marchiondo, 2015; Marcus, 2022). Further research regarding younger worker prescriptive age stereotypes should also take into consideration other demographic factors that may intersect with age, including not only gender and ethnicity, but also education, socioeconomic status, and disability.

3.6.3.Conclusion

This research and the WAYS scale developed and tested advance the understudied literature of prescriptive age stereotypes by providing a measure for workplace youngism. This tool is an important asset to help workers and organizations deal with the increasing pressure that workplace age diversity, as a result of "greying" populations and extended retirement age in

many countries, can also bring to younger workers. We hope that the development and testing of the WAYS measure will advance research on the cognitive dimension of workplace youngism, given its important effects on prejudice and discrimination, by better understanding the prescriptive stereotypes held – positive and negative – regarding younger workers and addressing the experiences of workplace age discrimination that can result.

CHAPTER 4

Consequences of younger worker prescriptive age stereotypes

4.1. Introduction

Following the development and validation of the WAYS (Workplace Ambivalent Youngism Scale; Schmitz et al., 2023), which assesses younger worker prescriptive age stereotypes, presented in Chapter 3, the studies reported in the present chapter represent the initial steps towards understanding the consequences of endorsing prescriptive age stereotypes toward younger workers. Schmitz et al. (2024) review on workplace youngism, presented in Chapter 2, identified a larger number of studies focusing on antecedents of workplace youngism, compared with a reduced number of studies focusing on consequences of workplace youngism. Among the few studies examining the consequences of youngism, the consequences for enablers of youngism were even less studied in comparison to the targets. By adopting the enabler's perspective and focusing on the consequences that prescriptive age stereotypes have on enabler's assessment of the target personal characteristics (i.e., warmth, morality, and competence), fairness perceptions, and decision-acceptance in the work context, the present studies intend to address this research gap.

According to Gill (2004), prescriptive stereotypes (beliefs about how people should behave because of their group membership) can predict discrimination even in cases where descriptive stereotypes (what people think members of a group are like) do not. When individuals violate (i.e., behave incongruously with) prescriptive stereotypes or expectations, they often face backlash or negative consequences. Backlash serves as a mechanism of social control, deterring individuals from stepping outside socially expected roles or behaviors by imposing consequences on those who do. This process helps to solidify stereotypes as societal norms and maintain the existing social order (Rudman et al., 2012), thus legitimizing existing biases towards members of a certain social group.

Most studies on prescriptive stereotypes in the work context have focused on gender or ethnicity (e.g., Berdahl & Min, 2012; Caleo, 2016; Heilman, 2001; Manzi et al., 2024). For example, in Heilman's study (2001) on prescriptive gender stereotypes, it was found that even when women are acknowledged for their competence and achievement-oriented qualities, violating gender prescriptive stereotypes (i.e., by displaying assertiveness) can adversely affect

women's evaluations and career progression. The few existing studies on prescriptive age stereotypes have primarily concentrated on older individuals, without a specific emphasis on the workplace (e.g., North and Fiske, 2013a). Notable exceptions are North and Fiske´s (2016) and Hanrahan et al.´s (2023) studies which have examined the consequences of prescriptive age stereotypes towards older people, applied to the work context. In their 2016 study, North and Fiske explored how the three domains of prescriptive expectations about older individuals—Succession of enviable resources, Consumption of shared resources, and symbolic Identity resources (SIC, North & Fiske, 2013b)—might contribute to intergenerational exclusion in work-related settings. Resource salience (scarcity and abundance) and target behavior (violation or adherence to the stereotype) were manipulated. After the manipulation, participants assessed the target's networking appeal (i.e., the extent to which older workers attract other workers to establish connections and network with them), with findings revealing that in the scarcity condition the target who violated prescriptive expectations was rated lower in networking appeal across all three SIC domains.

Building on previous work by North and Fiske (2013a) by applying it to a work setting, Hanrahan et al. (2023) investigated the effects of older people's prescriptive age stereotype violation on the application of descriptive age stereotypes (i.e., technology surprise, flexibility, costliness, stability, motivation). The role of negative affect (i.e., participant's frustration) as a mediating mechanism in the prescriptive stereotyping process was also examined. The authors manipulated the character's age (older or middle-aged) and behavior (violating, adhering, or adhering-violating) to a prescription corresponding with the symbolic Identity resources domain. Perceptions of warmth, competence, and desire for workplace interactions with/regarding the target were also examined. The main results indicated that violators of prescriptive age stereotypes are perceived more negatively in terms of warmth, competence, and desire for workplace interactions. However, there was some support for the idea that descriptive age stereotypes are less frequently applied to those who violate prescriptive expectations. Participant's frustration was found to significantly mediate prescriptive stereotyping effects. Both North and Fiske (2016) and Hanrahan et al. (2023) studies were conducted with US participants. Despite the cited studies, the consequences of prescriptive age stereotypes in the workplace remain understudied, especially regarding younger workers, and in non-Anglo-Saxon contexts (Schmitz et al., 2024).

Experimental studies allow cause-and-effect relations among variables to be established, while also ensuring high internal validity for the study results (Hommelhoff & Scheibe, 2022; Shadish et al., 2002). Considering that cause and effect relations have not yet been addressed

in this thesis, an experimental design was adopted for developing the present studies which examine whether younger worker prescriptive age stereotypes cause people to be biased towards younger workers in the context of personnel decisions.

4.1.1.Consequences of prescriptive stereotypes: fairness perceptions

Because prescriptive stereotypes and the backlash or negative consequences received by an individual when overstepping social and societal boundaries of his/her ingroup can lead to the legitimization of existing biases towards members of a certain social group (Rudman et al., 2012), fairness perceptions are an important outcome of prescriptive stereotypes.

People's perception of fairness in organizations has been conceptualized as organizational justice (Colquitt, 2001). The three main forms of organizational justice are 1) distributive justice, which is related to the fairness of resource distribution (outcomes), such as pay, rewards, and promotions; 2) procedural justice, dealing with the fairness of the decision-making procedures that lead to those outcomes, attempting to understand how and why they came about; and 3) interactional justice, which is concerned with the nature of the interpersonal treatment received from others, especially key organizational authorities (Colquitt, 2001; Colquitt et al., 2005). Interactional justice was further divided into two different dimensions: informational and interpersonal justice (Colquitt, 2001). In addition to these specific facets of justice, overall justice—an overarching evaluation of fairness that individuals typically develop—is another relevant concept for assessing organizational justice (Ambrose & Schminke, 2009).

Studies examining the relationship between organizational justice and prescriptive stereotypes, namely gender prescriptive stereotypes, were conducted by Caleo (2016; 2018). In her 2018 study, Caleo explored how male and female managers are evaluated when they violate distributive justice norms in a company that rewards either individual achievement or teamwork. The author proposed that a violation of justice norms could interact with a simultaneous violation of prescriptive gender stereotypes, hypothesizing that men would be penalized more for violating equity norms (since it conflicts with the stereotype that men should prioritize individual achievement), and women would be penalized more for violating equality norms (since it conflicts with the stereotype that women should be concerned with group harmony). The findings partially supported the hypotheses: men who violated equity norms were rated less favorably and seen as less agentic (i.e., less assertive or competent) compared to women. In a similar vein, Caleo (2016) investigated whether people respond differently to

men and women who violate interactional justice rules in organizational settings. Women who violated interactional justice norms were expected to be penalized not only for breaking organizational rules but also for failing to behave in ways traditionally associated with stereotypical female traits, such as warmth, empathy, and politeness. As expected, results demonstrated that women were rated less favorably than men when they exhibited interactional injustice.

Caleo's studies (2016, 2018) emphasize that responses to perceived injustice in organizational settings can be influenced by societal norms regarding the expected behaviors of men and women, particularly when the violation of justice norms intersects with the violation of prescriptive gender roles. While to the best of our knowledge, no research has explored the consequences of violating prescriptive age stereotypes on organizational justice perceptions, findings from studies on the violation of gender expectations suggest that negative effects on fairness perceptions may also occur when age expectations are violated.

Violating prescriptive expectations has been shown to have consequences not only regarding organizational justice perceptions but also person perceptions (i.e., perceived personal characteristics), with important related workplace implications.

4.1.2. Consequences of prescriptive stereotypes: person perceptions

Warmth and competence are two fundamental dimensions or characteristics of social judgments by which people evaluate individuals and groups (SCM - Stereotype Content Model; Fiske et al., 2002). Competence refers to the degree to which a group is characterized as intelligent and capable. Warmth refers to the degree to which a group is regarded as friendly and likable. Adding to the two original dimensions of the SCM, a third stereotypical dimension was proposed focusing on morality (Leach et al., 2007), and referring to individuals' or groups' evaluations of honesty and trustworthiness. These dimensions of social judgments can influence various organizational and personnel decisions. For instance, individuals from groups stereotyped as warm but incompetent (e.g., women) may be more likely to be hired for roles such as cashiers, where sociability is valued, but the tasks are considered straightforward. In contrast, individuals from groups stereotyped as competent but cold (e.g., Asians) may be favored for technical positions that emphasize expertise but not social skills (Cuddy et al., 2011).

Presented earlier in this chapter, Hanrahan et al.'s (2023) study applying prescriptive age stereotypes towards older people (namely the symbolic Identity resources dimension; North &

Fiske, 2013b) to the work setting, showed that violators of prescriptive age stereotypes are perceived more negatively in terms of warmth and competence than adherers to stereotypes. Although not specifically focused on the workplace, North and Fiske (2013a) found that for all three dimensions of prescriptive expectations toward older people (i.e., Succession of enviable resources, Consumption of shared resources, and symbolic Identity resources), older people violating the stereotypes received lower ratings in both perceived warmth and competence, especially from younger participants.

4.1.3. Research overview

The goal of the set of scenario studies presented below is to experimentally examine the consequences of endorsing younger worker prescriptive age stereotypes, in the context of personnel decisions. We are interested in testing whether violating (vs. adhering to) a younger worker prescriptive age stereotype leads to negative consequences in the form of a negative bias toward younger (vs. middle-aged or older) workers in the context of personnel decisions, specifically regarding fairness perceptions (i.e., overall and distributive justice perceptions) and decision support, and person perceptions (i.e., perceptions of warmth, morality, and competence).

In Study 1, we focus on the Vitality-Innovation dimension of prescriptive age stereotypes toward younger workers (WAYS—Workplace Ambivalent Youngism Scale; Schmitz et al., 2023). This refers to the prescriptive expectation that younger workers, in particular, should be good with the latest technologies and learn new technologies quickly and easily. Study 1 relied on a convenience sample of Portuguese participants.

It has been proposed that a broader focus on justice could more accurately reflect the diverse fairness experiences individuals encounter (Ambrose & Schminke, 2009), and since distributive justice concerns the perceived fairness of outcomes, it can also have significant implications within organizations, where the allocation of outcomes is a key component (Cohen-Charash, 2001). Thus, we decided to test these two dimensions of fairness perceptions – overall justice and distributive justice - in our studies.

In line with previous research (Caleo, 2016, 2018), we expected that, when a younger worker is penalized for violating prescriptive age stereotypes, the punishment is seen as justifiable or legitimate, and therefore, perceived as more fair than if they were punished after adhering to the prescriptive age stereotype, and also more fair than if an older or middle-aged

person was punished after violating the stereotype. Hence, we propose Hypotheses 1a-c and 2a-c, shown in Figure 4.1.

H1a-c: There is an interaction effect between behavior (adherence vs. violation of the Vitality-Innovation stereotype) and target age group (young, middle-aged, old) on justice perceptions and decision support. Specifically, the punishment of a worker who violates the Vitality-Innovation stereotype will lead to higher levels of (a) perceived overall justice, (b) perceived distributive justice, and (c) decision support compared to a worker who adheres to the stereotype. This effect is expected to be more pronounced for younger workers than for middle-aged or older workers.

H2a-c: The interaction effect described in H1a-c will be moderated by the level of endorsement of the Vitality-Innovation stereotype. Specifically, the punishment of a younger worker (compared to a middle-aged or older worker) violating the stereotype will lead to higher levels of (a) perceived overall justice, (b) perceived distributive justice, and (c) decision support and this effect will be stronger for individuals who more strongly endorse the Vitality-Innovation stereotype.

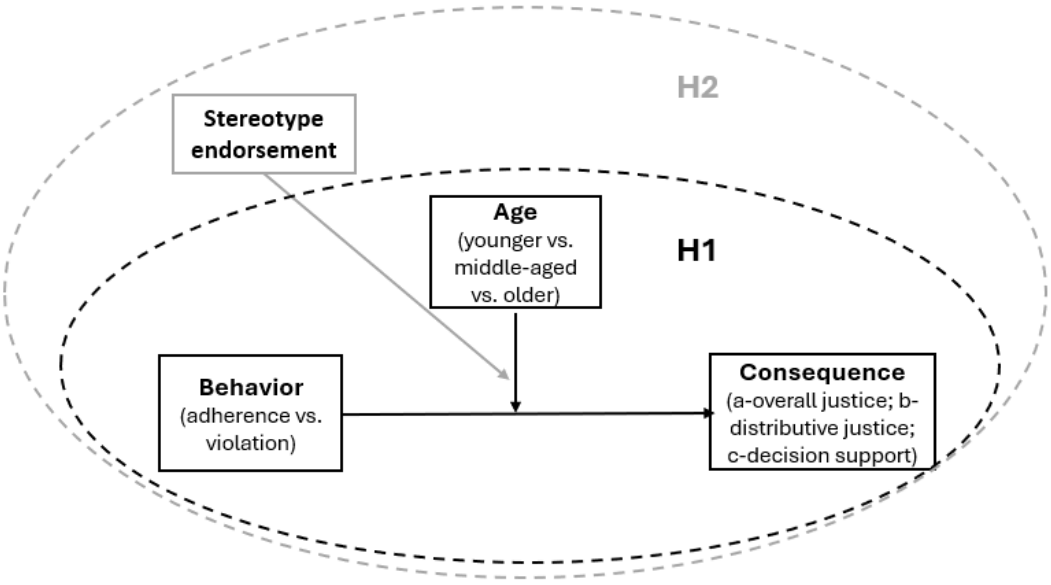


Figure 4.1. Hypotheses 1 and 2

In line with previous studies (Hanrahan et al., 2023; North & Fiske, 2013a), we propose that younger workers who violate (vs. adhere to) a prescriptive age stereotype should receive lower evaluations on the dimensions of warmth, morality, and competence. As such, Hypotheses 3a-c and 4a-c are as follows (see Figure 4.2):

H3a-c: There will be an interaction effect between behavior (adherence vs. violation of the Vitality-Innovation stereotype) and target age group (young, middle-aged, old) on perceived worker characteristics. Specifically, a worker who violates the Vitality-Innovation stereotype will be perceived as less (a) warm, (b) moral, and (c) competent than a worker who adheres to the stereotype. This effect is expected to be more pronounced for younger workers than for middle-aged or older workers.

H4a-c: The interaction effect described in H3a-c will be moderated by the level of endorsement of the Vitality-Innovation stereotype. Specifically, a younger worker (compared to a middle-aged or older worker) violating the stereotype will be perceived as less (a) warm, (b) moral, and (c) competent, and this effect will be stronger for individuals who more strongly endorse the Vitality-Innovation stereotype.

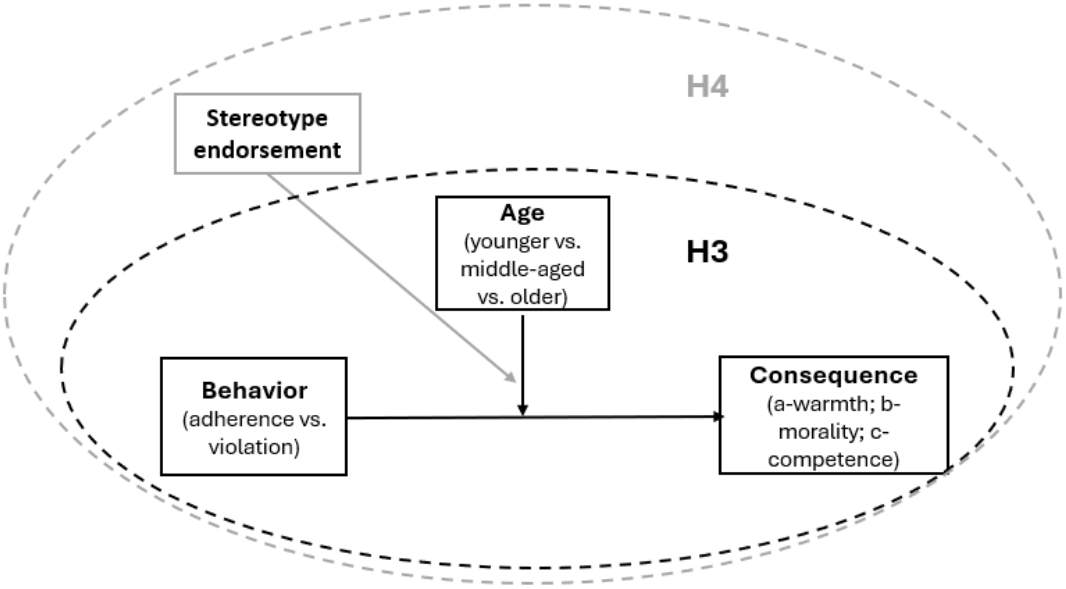


Figure 4.2. Hypotheses 3 and 4

In Study 2, we replicated Study 1 by focusing on manipulating another dimension of the WAYS, namely the Humility-Deference dimension of prescriptive stereotypes towards younger workers, according to which younger workers, in particular, should accept their lower status and not challenge the organizational hierarchy. Study 2 relied on a US sample recruited through Amazon Mechanical Turk (MTurk), and the Hypotheses were the same as in Study 1, except for the WAYS dimension being tested.

4.2. Study 1: Vitality-Innovation

Our goal in Study 1 was to experimentally examine the consequences of endorsing the Vitality-Innovation stereotype toward younger workers on 1) perceptions of fairness (overall justice and distributive justice) and decision support regarding the negative outcome (i.e., not being assigned to a new position) received by the target worker when he either violated or adhered to the stereotype, and on 2) person perceptions (i.e., perceptions of warmth, morality, and competence) regarding the target worker when he either violated or adhered to the stereotype.

4.2.1. Methods

Participants

The study sample (*N* = 179; 55.3% women; mean age = 36.35 years, *SD* = 14.42, range 20-69 years) consisted of participants from Portugal, through a convenience sample recruited by students of the Master in Organizational and Social Psychology (Iscte-IUL), enrolled in the course MAIP - Métodos Avançados de Investigação em Psicologia. All participants had previous working experience and were living in Portugal at the time data were collected. All participants were Portuguese[3]. Regarding the level of education, 13.7 % had a Master's or a PhD degree, 51.6% of participants had a graduate or undergraduate degree, 31.1% had high school or less than a Bachelor's degree, and 3.7% had less than high school. The 173 participants who failed the attention check and the 161 participants who did not answer the full survey were excluded from the initial sample of 513 participants.

Design and Procedure

The study had a 3 (target age) x 2 (target behavior) between-subjects design using the Experimental Vignette Methodology (EVM; Aguinis & Bradley, 2014). Participants were randomly assigned to one of six experimental conditions: younger/middle-aged/older workers crossed with younger worker stereotype adherence/violation. The scenario manipulated adherence by targets with the Vitality-Innovation dimension of prescriptive age stereotypes towards younger workers (Schmitz et al., 2023), namely the expectation that younger workers,

[3] Portuguese legislation does not allow for openly inquiring about ethnicity without a specific permit. That is why in this study we reported participants' nationality, and in Study 2, using a US sample, we reported participants' ethnicity.

in particular, should be good with the latest technologies and learn new technologies quickly and easily.

Participants read a scenario in which João, a 26/41/53-year-old employee, works in a technology-intensive industry and his company is introducing a new technology. Instead of hiring new people, the company offered a higher position to those who would take part in the training program about the new technology and who would acquire the required competencies for the new position. João participated in the training and in the adherence condition showed ease and speed in learning and acquired all the technological skills needed for the new role. In the violation condition, João acquired the minimum technological skills for the new role. However, it was difficult and took longer than expected. Irrespective of João's behavior (adhering to or violating the stereotype), the outcome was negative: at the end of the training period, the manager decided not to assign João to the new position. Age manipulation was reinforced with a photograph of a younger, middle-aged, and older male in each condition. The face shown in the photo was the same for the three conditions, artificially aged for the middle and older-age conditions using the process of facial morphing, namely the Basel Face Model (Gerig et al., 2018). Photos were retrieved from https://faces.dmi.unibas.ch/bfm/bfm2019.html. The six vignettes are presented in Annex E.

After reading the scenario, participants assessed João (regarding warmth, morality, and competence) and the negative outcome he received (regarding overall justice and distributive justice perceptions, and decision support). Then participants stated their level of agreement with prescriptive age stereotypes toward younger workers. An attention check question was also presented in the survey. Participants responded to a 5-point scale ranging from 1 (Never) to 5 (At least twice per day), to answer the following question: "Brushing your teeth is a very important behavior. When answering the question below, please select Never. Brushing your teeth every day helps promote hygiene and oral health".

Measures

All measures were responded to on a 6-point Likert scale that ranged from 1 (Strongly disagree) to 6 (Strongly agree). Participants were asked to complete an online survey with the measures below:

Overall Justice. Overall justice perceptions were measured with the 3-item scale from Ambrose and Schminke (2009). A sample item is "In this situation, João has been treated fairly by his organization" (α = .87).

Distributive Justice. Distributive justice perceptions were measured with the 4-item scale from Colquitt (2001). A sample item is "João's outcome was appropriate for the work he has completed" (α = .87).

Decision support. Support for the decision to punish João was measured with the 3-item scale from Greenberg (1994). Sample items are "I support the decision" and "I find the decision that was communicated acceptable" (α = .93).

Warmth. Warmth, a dimension of the SCM – Stereotype Content Model (Fiske et al., 2002) was measured with a 4-item scale adapted to assess perceptions of age groups by Francioli and North (2021). Participants were asked "Bearing in mind João's age, to what extent do you think João is…warm?" (α = .87).

Morality. Morality was measured with a 4-item scale by Ellemers et al. (2013) adapted to the purpose of this study. Participants were asked, "Bearing in mind João's age, to what extent do you think João is… trustworthy?" (α = .93).

Competence. Competence, a dimension of the SCM – Stereotype Content Model (Fiske et al., 2002) was measured with a 4-item scale adapted to assess perceptions of age groups by Francioli and North (2021). Participants were asked "Bearing in mind João's age, to what extent do you think João is… competent?" (α = .91).

Younger workers prescriptive age stereotypes. Prescriptive stereotypes towards younger workers were measured using the 13-item Vitality-Innovation scale of the WAYS – Workplace Ambivalent Youngism Scale (Schmitz et al., 2023). A sample item is "Younger workers, especially… should learn new technologies quickly and easily" (α = .92).

Manipulation checks

Manipulation checks regarding target age and target behavior were presented in the study. Participants were asked what João's age in the scenario was and whether João showed ease and speed in learning and acquiring all the technological skills needed for the new role (adherence), or acquired the minimum technological skills for the new role but showed difficulty and took longer than expected (violation).

Finally, participants provided sociodemographic information (e.g., gender, year of birth, nationality, level of education).

4.2.2. Results

To test the manipulation checks we ran two-way ANOVAs. For the age manipulation, we used target behavior (0=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older) predicting João's age as recalled by participants assessed on a bipolar scale ranging from 1= younger worker, 4=middle-aged worker, to 7=older worker, expecting to find only a main effect of age. Age manipulation was successful (F (2, 155) = 208.24, $p < .001$, $\eta 2p = .73$), with participants indicating higher values for older workers ($M = 5.07$, $SD = 1.08$), intermediate values for middle-aged workers ($M = 3.84$, $SD = .65$), and lower values for younger workers ($M = 1.82$, $SD = .59$). All Post-hoc tests were significant ($p's < .001$). As expected, there were no other significant effects.

We ran a similar analysis to test behavior manipulation using target behavior (1=adherence, 2=violation) and target age (1=younger, 2= middle-aged, 3=older) predicting João's behavior as recalled by participants assessed on a bipolar scale ranging from 1= acquired the minimum technological skills for the new role but showed difficulty and took longer than expected to 6= showed ease and speed in learning and acquired all the technological skills needed for the new role. Behavior manipulation was successful (F (1, 142) = 279. 02, $p < .001$, $\eta 2p = .66$), with participants indicating higher values for the adherence condition ($M = 5.46$, $SD = 1.12$) when compared to the violation condition ($M = 1.84$, $SD = 1.51$). There were no other significant effects, as expected.

Impact of stereotype violation on fairness perceptions and decision support

To test hypotheses H1a-c we ran two-way ANOVAs using target behavior (1=adherence, 2=violation) and target age (1=younger, 2= middle-aged, 3=older) predicting (a) perceived overall justice, (b) perceived distributive justice, and (c) decision support.

For perceived overall justice (H1a), the punishment of a worker who violates the prescriptive stereotype ($M = 3.20$, $SD = 1.31$) was considered more fair than that of a worker who adheres to the stereotype ($M = 2.17$, $SD = 1.04$; F (1, 173) = 32.48, $p < .001$, $\eta 2p = .16$). However, no significant effect for target age was found (F (2, 173) =.11, $p = .892$), neither was the relation between target age and target behavior more pronounced for younger workers, as no interaction between target behavior and target age was found (F (2, 173) =.38, $p = .700$).

Regarding perceived distributive justice (H1b), the decision (punishment) was also considered more fair for targets violating the prescriptive stereotype ($M = 3.03$, $SD = 1.08$), as opposed to those in the adherence condition ($M = 2.31$, $SD = 1.25$; F (1, 173) = 17.84, $p < .001$, $\eta 2p = .09$). Nonetheless, target age effect was not significant (F (2, 173) =1.46, $p = .235$), and

no significant interaction between target behavior and target age was found (F (2, 173) =.655, p= .521).

For decision support (H1c), the punishment of workers violating the prescriptive stereotype had more support (M = 3.59, SD =1.39), than the punishment of workers adhering to the stereotype (M = 2.31, SD =1.10; F (1, 173) = 44.50, p < .001, $\eta 2p$ = .20). However, as with H1a and H1b, no main effect of age was found (F (2, 173) =.42, p= .660), and there was no significant interaction between age and behavior (F (2, 173) =.05, p= .945).

These results provide no support for Hypotheses 1a-c.

To test hypotheses H2a-c we ran moderated moderations with PROCESS 4.2 (Model 3) using target behavior (-1=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older; imputed as multicategorical variables, using Helmert contrast) predicting (a) overall justice, (b) distributive justice and (c) decision support, and moderated by stereotype endorsement.

For overall justice (H2a), the model explains 17.8% of the variance in overall justice perceptions (R^2 = .17) and is significant (F (11, 167) = 3.28, p < .001), but no significant three-way interaction was found for stereotype endorsement moderating the interaction of target age and target behavior predicting overall justice perceptions.

Similar results were obtained for distributive justice (H2b) and decision support (H2c). For distributive justice, the model is significant (F (11, 167) = 2.60, p < .001) and explains 14.6 % of the variance in distributive justice perceptions (R^2 = .14). For decision support, the model is also significant (F (11, 167) = 4.22, p < .001) and explains 21.8 % of the variance in distributive justice perceptions, yet no significant three-way interactions were found for stereotype endorsement moderating the interaction of target age and target behavior predicting distributive justice or decision support.

Therefore, Hypotheses H2a-c were not supported.

Impact of stereotype violation on person perceptions

To test hypotheses H3a-c we ran two-way ANOVAs using target behavior (1=adherence, 2=violation) and target age (1=younger, 2= middle-aged, 3=older) predicting (a) warmth, (b) morality, and (c) competence.

Regarding warmth perceptions (H3a), marginally significant effects for violating (M = 3.47, SD =.88) or adhering to the stereotype (M = 3.72, SD =.85; F (1, 173) = 3.85, p = .051, $\eta 2p$ = .02) were found (João being marginally warmer when adhering to the stereotype). Neither

the target age effect (F (2, 173) = 1.23, p = .294) nor the two-way interaction between age and behavior was significant (F (2, 173) = .58, p= .557).

For morality perceptions (H3b), although no significant effect for target behavior was found (F (1, 173) = .79, p = .373), a marginally significant effect for age was found (F (2, 173) = 2.70, p = .070, $\eta 2p$ = .03). Pairwise comparisons using Bonferroni correction showed marginally significant effects between the younger and the middle-aged targets (p =.067), with a younger worker being regarded as less moral (M = 3.86, SD =.82) than a middle-aged worker (M = 4.25, SD =.89). No interaction for age and behavior (F (2, 173) =1.23, p= .293) was found.

Regarding competence (H3c), targets violating the stereotype were perceived as less competent (M = 3.63, SD =1.01) in comparison with those who adhered to the stereotype (M = 4.33, SD =.87; F (1, 173) = 26.67, p < .001, $\eta 2p$ = .13). A significant main effect for target age was found (F (2, 173) = 3.31, p = .039, $\eta 2p$ = .04). Pairwise comparisons using Bonferroni correction showed marginally significant effects between the younger and the middle-aged targets (p = .076), with younger targets (M = 3.72, SD =.94) being perceived as less competent than middle-aged targets (M = 4.12, SD =.95). No two-way interaction between target age and target behavior was found (F (2, 173) = .21, p = .807, $\eta 2p$ = .00).

These results do not support Hypotheses 3a-c.

To test hypotheses H4a-c we ran moderated moderations using PROCESS 4.2 (Model 3), with target behavior (-1=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older; imputed as multicategorical variables, using Helmert contrast) predicting (a) warmth (b) morality and (c) competence perceptions, and moderated by stereotype endorsement.

For perceptions of warmth (H4a), the model explains 17.8 % of the variance and is significant (F (11, 167) = 3.29, p < .001). No significant three-way interaction was found for stereotype endorsement moderating the interaction of target age and target behavior predicting warmth perceptions. Similar results were found for morality (H4b) and competence perceptions (H4c). For morality, the model explained 26.2% of the variance and was significant (F (11, 167) = 5.38, p < .001). For competence, the model explained 28.9% of the variance and was also significant (F (11, 167) = 6.17, p < .001). Nonetheless, no significant three-way interactions were found for stereotype endorsement moderating the interaction between target age and target behavior predicting either morality or competence perceptions.

Thus, Hypotheses 4a-c were not supported.

The relatively high percentage (34%) of participants failing the attention check in this study might indicate that the quality of the data might have been compromised in this sample, which was a convenience sample recruited by university students. Also, some characteristics (e.g., company sector, position) of the scenario used to manipulate this specific prescriptive expectation might have led participants to take the stereotype for a required competency. This issue will be further addressed in the Discussion. We thus decided to run Study 2, using a sample with different characteristics (i.e., nationality and recruitment source), and testing a different dimension of prescriptive stereotypes towards younger workers.

4.3. Study 2: Humility-Deference

Our goal in this study was to examine the consequences of endorsing the Humility-Deference stereotype toward younger workers on 1) perceptions of fairness (overall justice and distributive justice) and decision support regarding the negative outcome (i.e., a poor evaluation from the supervisor) received by the target worker when he either violated or adhered to the stereotype, and on 2) person perceptions (i.e., perceptions of warmth, morality, and competence) regarding the target worker when he either violated or adhered to the stereotype.

4.3.1. Methods

Participants

The study sample (N = 213; 40 % women; mean age = 39.28 years, SD = 10.01, range 23-72 years) consisted of participants from the US, recruited from Amazon Mechanical Turk (MTurk). The initial sample consisted of 232 participants, and the 19 participants who failed the attention check were excluded from the final sample. All participants had previous working experience and were living in the US at the time data were collected. Participants were primarily White/European American (73.9%), with 13.9% Black/African American, 4.8% Latino/Hispanic American, 4.8% East Asian/East Asian American, 0.9% South Asian/South Asian American, and 1.7% “other”/mixed (participants were asked how they would define themselves and could select more than one category). Regarding the level of education, 71.8% of participants had a graduate or undergraduate degree, and 28.2% had high school or less than an undergraduate degree. Participants were each paid 2.00 US dollars.

Design and Procedure

The study had a 3 (target age) x 2 (target behavior) between-subjects design using the Experimental Vignette Methodology (EVM; Aguinis & Bradley, 2014). Participants were randomly assigned to one of six experimental conditions: younger/middle-aged/older workers crossed with younger worker stereotype adherence/violation. The scenario manipulated the Humility-Deference dimension of prescriptive expectations towards younger workers (Schmitz et al., 2023), according to which younger workers, in particular, should accept their lower status and not challenge the organizational hierarchy.

Participants read a scenario in which John, a 24/42/62-year-old worker, was assigned a new task and received instructions about how to perform the task from his supervisor. John proposed another way to perform the task, which he believed would be better, and the supervisor disagreed. After that, John either proceeded as instructed by his supervisor, thereby adhering to what is expected from younger workers or ended up deciding to try his own way of performing the task, thus violating the prescriptive stereotype. Irrespective of John's behavior (adhering to or violating the stereotype) John learned a few weeks later that he received a poor evaluation from his supervisor. Age manipulation was reinforced with a photograph of a younger, middle-aged, and older male in each condition. The face shown in the photo was the same for the three conditions, artificially aged for the middle and older-age conditions using the process of facial morphing, namely the Basel Face Model (Gerig et al., 2018). Photos were retrieved from https://faces.dmi.unibas.ch/bfm/bfm2019.html. The six vignettes are presented in Annex E.

After reading the scenario, participants assessed John (regarding warmth, morality, and competence) and the negative outcome he received (regarding overall justice and distributive justice perceptions, and decision support). Finally, participants stated their level of agreement with prescriptive age stereotypes toward younger workers. Manipulation and attention check questions were also presented in the survey. In the attention check, participants responded to a 5-point scale ranging from 1 (Never) to 5 (At least twice per day), to answer the following question: "Brushing your teeth is a very important behavior. When answering the question below, please select Never. Brushing your teeth every day helps promote hygiene and oral health".

Measures

All measures were responded to on a 6-point Likert scale that ranged from 1 (Strongly disagree) to 6 (Strongly agree). Participants were asked to complete an online survey with the measures presented below:

Overall Justice. Overall justice perceptions were measured with the 3-item scale from Ambrose and Schminke (2009). A sample item is "In this situation, John has been treated fairly by his organization" (α = .97).

Distributive Justice. Distributive justice perceptions were measured with the 4-item scale from Colquitt (2001). A sample item is "John's outcome was appropriate for the work he has completed" (α = .96).

Decision support. Support for the decision to punish John was measured with the 3-item scale from Greenberg (1994). Sample items are "I support the decision" and "I find the decision that was communicated acceptable" (α = .97).

Warmth. Warmth, a dimension of the SCM – Stereotype Content Model (Fiske et al., 2002) was measured with a 4-item scale adapted to assess perceptions of age groups by Francioli and North (2021). Participants were asked, "Bearing in mind John's age, to what extent do you think John is…warm?" (α = .95).

Morality. Morality was measured with a 4-item scale by Ellemers et al. (2013) adapted to the purpose of this study. Participants were asked, "Bearing in mind John's age, to what extent do you think John is… trustworthy?" (α = .93).

Competence. Competence, a dimension of the SCM – Stereotype Content Model (Fiske et al., 2002) was measured with a 4-item scale adapted to assess perceptions of age groups by Francioli and North (2021). Participants were asked, "Bearing in mind John's age, to what extent do you think John is… competent?" (α = .78).

Younger workers prescriptive age stereotypes. Prescriptive stereotypes towards younger workers were measured using the 6-item Humility-Deference scale of the WAYS – Workplace Ambivalent Youngism Scale (Schmitz et al., 2023). A sample item is "Younger workers, especially…should not question directions from superiors" (α = .80).

Manipulation checks

Manipulation checks regarding target age and target behavior were presented in the study. Participants were asked what John's age in the scenario was presented to them, and whether John followed the suggestions from his supervisor and respected the usual hierarchy in the organization or questioned this supervisor and challenged the usual hierarchy in the organization.

Finally, participants answered questions regarding sociodemographic information (e.g., gender, year of birth, nationality, level of education).

4.3.2. Results

To test the manipulation checks we ran two-way ANOVAs. For the age manipulation, we used target behavior (0=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older) predicting John's age as recalled by participants assessed on a bipolar scale ranging from 1= younger worker, 4=middle-aged worker, to 7=older worker. The age manipulation was successful (F (2, 207) = 510.08, $p < .001$, $\eta 2p = .83$), with participants indicating higher values for older workers ($M = 6.59$, $SD = .58$), intermediate values for middle-aged workers ($M = 4.35$, $SD = .84$), and lower values for younger workers ($M = 1.82$, $SD = 1.15$). All Post-hoc tests were significant ($p's < .001$). As expected, there were no other significant effects.

We ran a similar analysis to test the behavior manipulation using target behavior (0=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older) predicting John's behavior as recalled by participants assessed on a bipolar scale ranging from 1= challenged the usual hierarchy to 6=respected the usual hierarchy. The behavior manipulation was successful (F (1, 207) = 718.69, $p < .001$, $\eta 2p = .77$), with participants indicating higher values for the adherence condition ($M = 5.42$, $SD = .95$) when compared to the violation condition ($M = 1.41$, $SD = 1.08$). There were no other significant effects.

Impact of stereotype violation on fairness perceptions and decision support

To test hypotheses H1a-c we ran two-way ANOVAs using target behavior (0=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older) predicting (a) overall justice, (b) distributive justice, and (c) decision support.

For overall justice (H1a), the punishment of a worker who violated the prescriptive stereotype ($M = 4.50$, $SD = 1.29$) was considered more fair than that of a worker who adhered to the stereotype ($M = 2.39$, $SD = 1.38$; F (1, 207) = 137.36, $p < .001$, $\eta 2p = .40$). A marginally significant effect for target age was found (F (2, 207) = 2.53, $p = .082$, $\eta 2p = .02$), although pairwise comparisons using Bonferroni correction for age showed no significant effects ($p \geq .148$). No interaction between behavior and age was found (F (2, 207) = 1.70, $p = .184$).

Regarding distributive justice (H1b), the decision was also considered more fair for targets violating the prescriptive stereotype ($M = 4.16$, $SD = 1.38$), in comparison with those in the

adherence condition (M = 2.56, SD =1.44; F (1, 207) = 69.95, p < .001, $\eta 2p$ = .25) (H3b). No significant effect for target age was found (F (2, 207) = 1.50, p = .226).

As shown in Figure 4.3, the two-way interaction between target behavior and target age was marginally significant (F (2, 207) = 2.80, p = .063, $\eta 2p$ = .03). Simple main effects of behavior within each level of age, based on pairwise comparisons among the estimated marginal means showed significant differences between adhering to or violating the stereotype in all age groups (ps < .002). However, simple main effects of age within each level of behavior showed that there were no age differences when the target adhered to the stereotype (p = .33), but a significant difference between ages when the target violated the stereotype, F (2, 207) = 3.18, p = .044. Pairwise comparisons in the violation condition, with Bonferroni adjustment, showed a marginal difference between the middle-aged and older targets (p = .081), but not between younger and middle-aged targets, or younger and older targets (ps > .10).

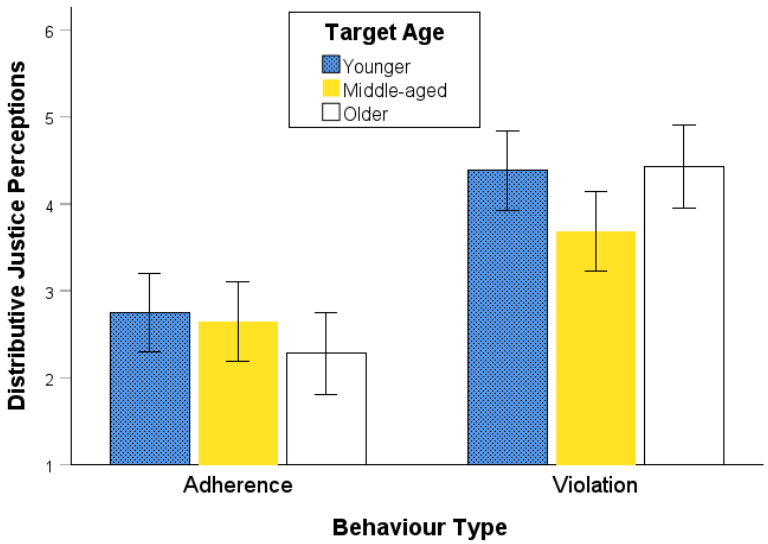


Figure 4.3. Interaction between target age and target behavior predicting distributive justice perceptions

Regarding decision support (H1c), the punishment of workers violating the prescriptive stereotype had more support (M = 4.71, SD =1.30), than the punishment of workers adhering to the stereotype (M = 2.46, SD =1.53; F (1, 207) = 138.03, p < .001, $\eta 2p$ = .40) (H3c). The target age also significantly predicted decision support (F (2, 207) = 4.62, p =. 011, $\eta 2p$ = .04), with pairwise comparisons using Bonferroni correction showing significant effects between the younger and the middle-aged (p =.018) and between the younger and the older targets (p =.044).

The punishment decision was more highly supported for the younger (*M* = 3.97, *SD* =1.66) and older targets (*M* = 3.39, *SD* =1.87), followed by the middle-aged targets (*M* = 3.33, *SD* =1.84). However, there was no significant interaction between age and behavior (*F* (2, 207) =.93, *p*= .397).

These results provide partial support for Hypothesis 1b, but not for Hypotheses 1a and c.

To test Hypotheses 2a-c we ran moderated moderations using PROCESS 4.2 (Model 3) using target behavior (-1=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older; imputed as multicategorical variables, using Helmert contrast) predicting (a) overall justice, (b) distributive justice, and (c) decision support.

For overall justice (H2a), the model explains 50.5 % of the variance in overall justice perceptions and is significant (*F* (11, 201) = 18.62, *p* < .001). As shown in Figure 4.4, when contrasting the younger workers with the middle-aged and older workers, the three-way interaction was significant (B = 0.414, *t* = 2.08, *p* = .039).

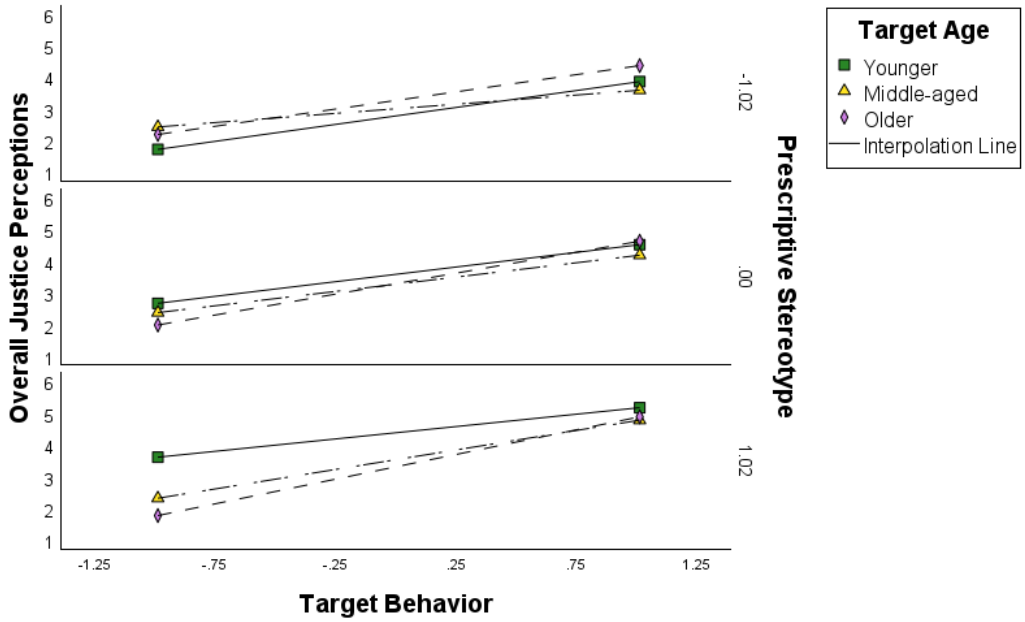


Figure 4.4. Overall justice perceptions predicted by the interaction between target behavior, target age, and stereotype endorsement

The simple slope analysis (Aiken & West, 1991) shows that, when the level of endorsement of the Humility-Deference stereotype is high, younger workers (vs. middle-aged and older) had the highest level of overall justice perceptions regarding the punishment for violating (vs. adhering to) the prescriptive age stereotype.

For distributive justice (H2b), although the model explains 37.0 % of the variance in distributive justice perceptions and is significant (F (11, 201) = 10.79, p < .001), no significant three-way interaction was found.

Concerning decision support (H2c), the model is significant (F (11, 201) = 19.47, p < .001) and explains 51.6% of the variance. As shown in Figure 4.5, when contrasting the younger workers with the middle-aged and older workers, results for the three-way interaction were marginally significant (B = 0.393, t = 1.88, p = .062).

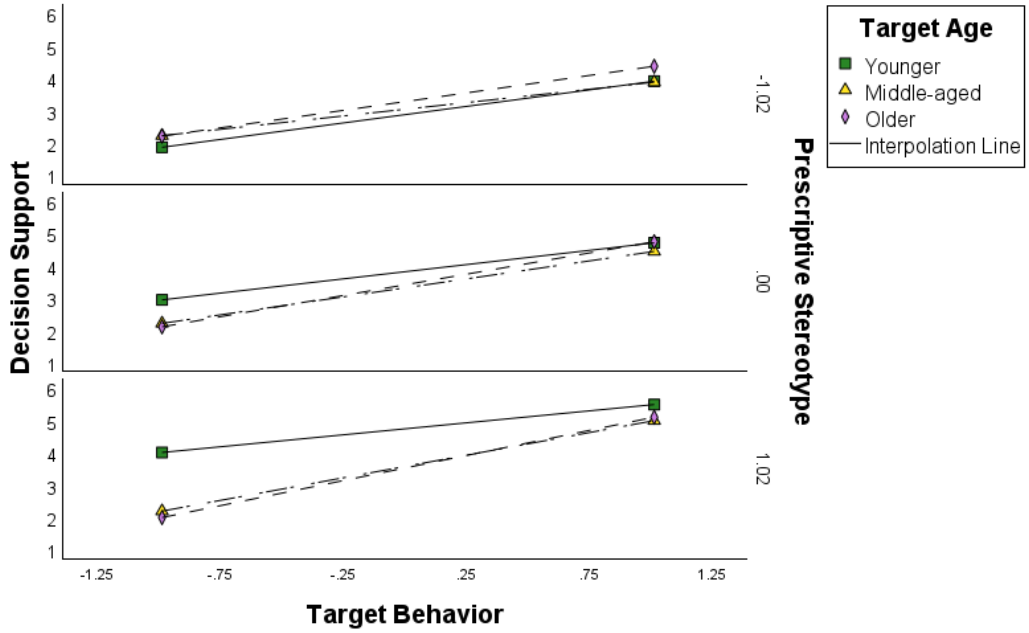


Figure 4.5. Decision support predicted by the interaction between target behavior, target age, and stereotype endorsement

The simple slope analysis (Aiken & West, 1991) shows that when the level of endorsement of the Humility-Deference stereotype is high, younger workers (vs. middle-aged and older) had the highest level of decision support (i.e., participants supporting the negative outcome received by John) regarding the punishment for violating (vs. adhering to) the prescriptive age stereotype.

These results indicate that H2a was supported, H2c was marginally supported and H2b was not supported.

Impact of stereotype violation on person perceptions

To test hypotheses H3a-c we ran two-way ANOVAs using target behavior (0=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older) predicting (a) warmth, (b) morality, and (c) competence.

Regarding warmth perceptions (H3a), workers who violated the prescriptive age stereotype were perceived as less warm (M = 3.00, SD =1.14) than workers adhering to the stereotype (M = 4.37, SD =.78; F (1, 207) = 98.05, p < .001, $\eta 2p$ = .32). A marginally significant effect for age was found (F (2, 207) = 2.81, p = .062, $\eta 2p$ = .02), and post-hoc analysis for age showed marginally significant effects for differences between younger and older workers (p =.062), with younger targets (M = 3.54, SD =1.18) being perceived as less warm than older targets (M = 3.94, SD =1.21). However, this relationship was not more pronounced for younger workers (F (2, 207) = 2.04, p= .132), as no interaction between target age and target behavior was found.

For morality perceptions (H3b), workers violating the Humility-Deference stereotype were considered less moral (M = 3.50, SD =1.19) than those adhering to the stereotype (M = 4.73, SD =.86; F (1, 207) = 76.12, p < .001, $\eta 2p$ = .26). Target age also significantly predicted morality perceptions (F (2, 207) = 5.48, p = .005, $\eta 2p$ = .05). Pairwise comparisons for age using Bonferroni correction showed significant effects between the younger and the older targets (p =.003), with younger targets rated as less moral (M = 3.84, SD =1.21) compared to older targets (M = 4.42, SD =1.25). No significant interaction between age and behavior was found (F (2, 207) =.12, p= .880) (H4.1b).

Unexpectedly, regarding competence (H3c), targets violating the Humility-Deference stereotype were perceived as more competent (M = 4.62, SD =.80) as opposed to those who adhered to the stereotype (M = 4.22, SD =.98; F (1, 207) = 10.89, p < .001, $\eta 2p$ = .05). No significant main effect for age was found (F (2, 207) = .02, p = .976). Yet, as shown in Figure 4.6, a significant two-way interaction between target age and target behavior was found (F (2, 207) = 4.21, p = .016, $\eta 2p$ = .04), predicting higher competence perceptions for stereotype violators. Thus, although the two-way interaction was significant, it was in a different direction than the one hypothesized.

Simple main effects of behavior within each level of age, based on pairwise comparisons among the estimated marginal means) showed significant differences between adhering to or violating the stereotype for middle-aged workers (p >.001) and marginal differences for older workers (p = .051). For younger workers, the differences between adhering to or violating the stereotype were not significant (p = .863). Simple main effects of age within each level of behavior showed that there were no age differences when the target violated the stereotype (p = .169), but a marginally significant difference between ages when the target adhered to the

stereotype, F (2, 207) = 2.44 p =.089. Pairwise comparisons in the adhrence condition, with Bonferroni adjustment, showed a marginal difference between younger and middle-aged targets (p = .085), but not between younger and older targets and between older and middle-aged (*ps* > .771).

Thus, Hypotheses 3a-c were not supported.



Figure 4.6. Interaction between target age and target behavior predicting competence perceptions

To test Hypotheses 4a-c we ran moderated moderations using PROCESS 4.2 (Model 3), using target behavior (-1=adherence, 1=violation) and target age (1=younger, 2= middle-aged, 3=older, imputed as multicategorical variables, using Helmert contrast) predicting (a) warmth, (b) morality, and (c) competence perceptions.

For perceptions of warmth (H4a), the model explains 43.7 % of the variance and is significant (F (11, 201) = 14.16, p < .001). Significant three-way interactions were found (Figure 4.7) when contrasting the younger workers with the middle-aged and the older workers (B = .415, t = 2.70, p = .007), and between the younger, middle-aged, and older workers, albeit only marginally significant (B=.377, t = 2.28, p = .052).

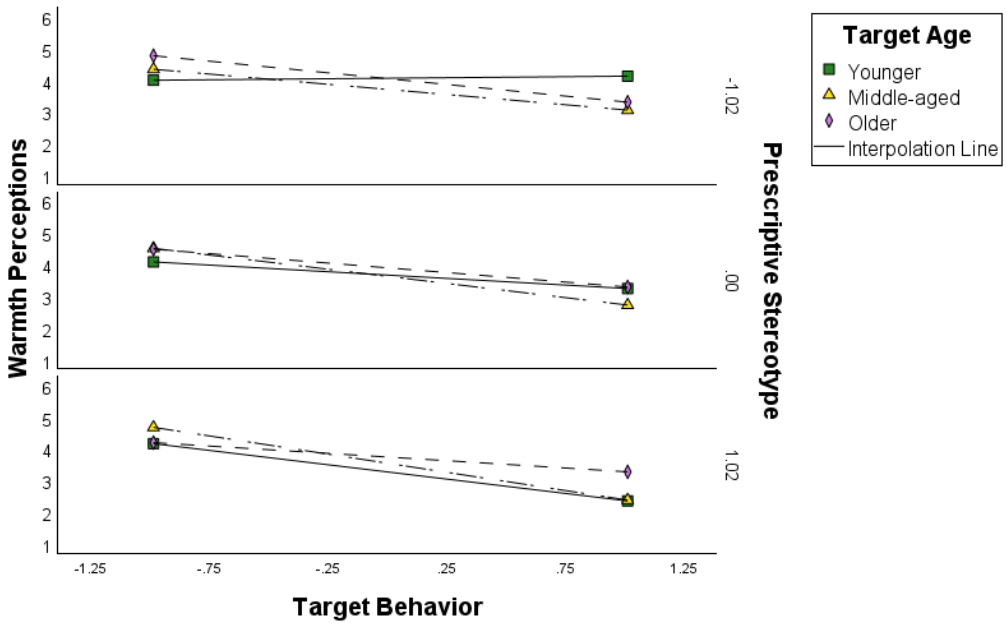


Figure 4.7.Warmth perceptions predicted by the interaction between target behavior, target age, and stereotype endorsement

The simple slope analysis (Aiken & West, 1991) shows that when the level of endorsement of the Humility-Deference stereotype is high, the difference in warmth perceptions about younger workers who violate the stereotype is significant (β = -.901, t = - 5.745, p < .001). On the other hand, when the endorsement of the Humility-Deference stereotype is low, the difference in warmth perceptions about younger workers who violate the stereotype is not significant (β = .065, t = .336, p = .737).

Regarding morality perceptions (H4b), the model explains 41.5 % of the variance and is significant (F (11, 201) = 12.96, p < .001). Significant three-way interactions were found (Figure 4.8) both when contrasting the younger workers with the middle-aged and the older workers, (B = .354, t = 2.30, p = .022), and between the younger, middle-aged, and older workers (B = 0.370, t = 2.24, p = .026).

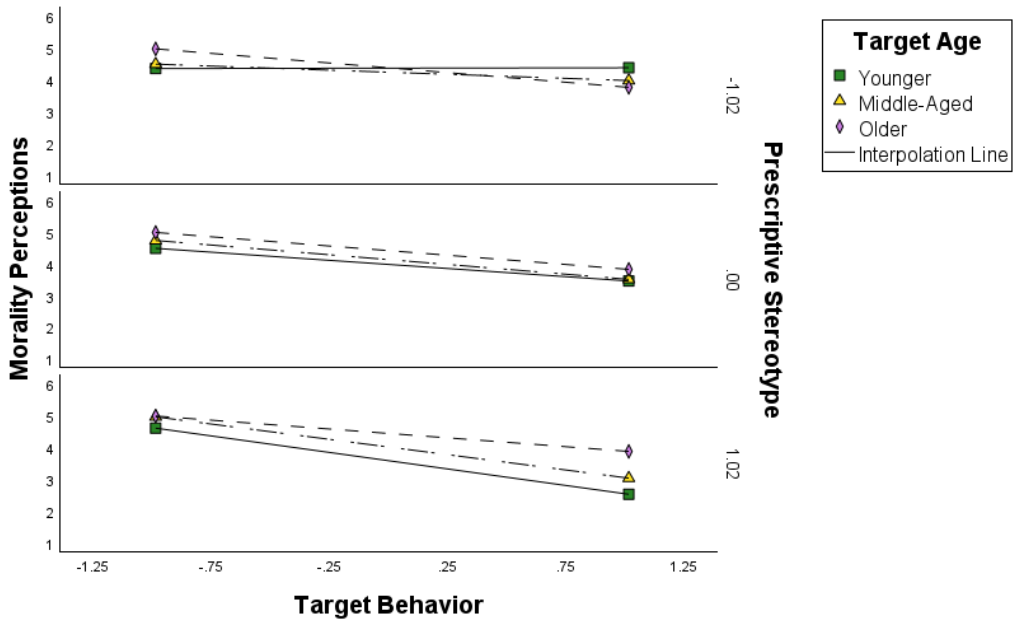


Figure 4.8. Morality perceptions predicted by the interaction between target behavior, target age, and stereotype endorsement

The simple slope analysis (Aiken & West, 1991) shows that, similarly to the tendency found for warmth perceptions, when the endorsement of the Humility-Deference stereotype is high, the difference in morality perceptions about younger workers who violate the stereotype is significant (B = -1.042, t = - 6.64, p < .001). Conversely, when the endorsement of the Humility-Deference stereotype is low, the difference in morality perceptions about younger workers who violate the stereotype is not significant (B = 0.012, t = .061, p = .952).

Regarding competence perceptions (H4c), although the model explains 11.5% of the variance and is significant (F (11, 201) = 2.37, p = .009), no significant three-way interactions were found.

These results indicate that H4a and b were supported, and H4c was not supported.

4.4. Discussion

The scenario studies experimentally investigated the consequences of prescriptive age stereotypes about younger workers, particularly in the context of personnel decision-making. Specifically, we examined whether workers violating (as opposed to adhering to) a younger worker prescriptive stereotype results in a negative bias against them—compared to middle-aged or older workers—when it comes to fairness perceptions and the evaluation of person perceptions (i.e., perceptions of warmth, morality, and competence).

Study 1 focused on the Vitality-Innovation dimension of prescriptive age stereotypes towards younger workers, relating to the prescriptive expectation that younger workers, in particular, should be good with the latest technologies and learn new technologies quickly and easily. The study had a 3 (target age) x 2 (target behavior) between-subjects design. In Study 2, we replicated and extended Study 1 by testing a different stereotype dimension: Humility-Deference dimension of WAYS whereby younger workers, in particular, should accept their lower status and not challenge the organizational hierarchy. Except for the stereotype examined, Study 2 had the same design as Study 1.

The hypotheses for Studies 1 and 2 were identical. In Hypotheses 1a-c we expected that the punishment of a worker who violated the Vitality-Innovation/Humility-Deference stereotype would lead to higher levels of (a) perceived overall justice, (b) perceived distributive justice, and (c) decision support compared to a worker who adhered to the stereotype. This effect was expected to be more pronounced for younger workers than for middle-aged or older workers. In Hypotheses H2a-c we expected that the interaction effect described in H1a-c would be moderated by the level of endorsement of the Vitality-Innovation/Humility-Deference stereotype. In Hypotheses H3a-c and H4a-c, in turn, we looked into the impact of violating (vs. adhering to) the stereotype on the perceived target's characteristics. In H3a-c we expected that a worker who violated the Vitality-Innovation/Humility-Deference stereotype would have lower levels of perceived (a) warmth, (b) morality, and (c) competence than a worker who adhered to the stereotype. This effect was expected to be more pronounced for younger workers than for middle-aged or older workers. In H4a-c, the interaction effect described in H3a-c was expected to be moderated by the level of endorsement of the Vitality-Innovation/Humility-Deference stereotype.

In Study 1, focused on the Vitality-Innovation stereotype, for both groups of hypotheses – the first concerning the dependent variables fairness perceptions and decision support (H1a-c and H2a-c), and the second, relating to perceptions of warmth, morality, and competence (H3a-c and H4a-c) – results showed no support for the main hypotheses tested. This might be because the scenario considered in this study was placed in the context of the high-tech industry and described a situation in which the participant was being promoted to a position requiring knowledge of a new technology. In this situation, the prescriptive expectation of being good with new technologies might have been seen by participants as a competence required for working in that sector or for that position, regardless of age. Thus, results indicated a significant main effect of target behavior overall in Study 1. That is, the punishment for targets violating the prescriptive stereotype (i.e., acquiring the minimum technological skills for the new role

but showing difficulty and taking longer than expected) was regarded as more fair in terms of overall and distributive justice and gathered more decision support. The violators of the prescriptive stereotype were also deemed as less warm and less competent by participants. These results are similar to findings by Hanrahan et al. (2023) according to which both middle-aged and older targets who violated the Identity prescriptive stereotype (North and Fiske, 2013a) were rated as having less warmth and competence than their adhering counterparts, with no significant interactions between target age and target behavior, or main effects of target age predicting warmth and competence perceptions being found. Such findings highlight the normative aspect of prescriptions given that backlash functions as a form of social control, discouraging individuals from deviating from socially expected roles.

In Study 2, which focused on the Humility-Deference stereotype, no support was found for H1a and H1c, predicting that target age and target behavior would interact, so that the negative outcome received for violating (vs. adhering to) the Humility-Deference stereotype would lead to higher levels of (H1a) perceived overall justice and (H1c) decision support, and that this effect would be more pronounced for younger workers. On the other hand, H1b, predicting the same relation for the dependent variable distributive justice, was partially supported: the interaction effect between target age and target behavior was significant, although the interaction was not exacerbated for younger targets. Hypotheses 1 results might have been partially supported specifically for the dependent variable distributive justice, as opposed to overall justice or decision support, because the negative outcome described in the Study 2 scenario (receiving a poor evaluation from his supervisor) taps more closely into the distributive dimension of organizational justice, referring to the fairness in the allocation of resources (outcomes), such as compensation, rewards, and promotions.

For Hypotheses 2a-c, which predicted that the level of endorsement of the Humility-Deference stereotype would moderate the relation among the target age, the target behavior, and the outcome variables, H2a and H2c predicting overall justice and decision support were supported, and H2b, predicting distributive justice, was not supported. Results of H2a and H2c indicated that when the level of endorsement of the Humility-Deference stereotype was high, younger workers (vs. middle-aged and older) gathered the highest level of overall justice perceptions and decision support regarding the punishment for violating (vs. adhering to) the prescriptive age stereotype. These findings highlight the significant impact that endorsing the Humility-Deference stereotype has on the support of decisions and fairness evaluations regarding a punishment received when a prescriptive expectation is violated.

Hypotheses 3a-c, predicting that target age and target behavior would interact, so that the target violating the Humility-Deference stereotype would be rated as less warm, less moral and less competent, found no support in Study 2. Regarding H3a and H3b, predicting warmth and morality, although no support was found for the main hypotheses, a main effect of age was found in both cases, indicating that younger targets are regarded as less warm and less moral than middle-aged and older targets. These results are in line with what was found by the Schmitz et al. (2024) review on workplace youngism, that in most studies assessing warmth perceptions younger workers are rated as lower in warmth than their older counterparts. Concerning H3c, although there was an interaction effect between target age and target behavior predicting perceived competence, contrary to what was expected, targets violating the stereotype were perceived as more (rather than less) competent. Those results might have been influenced by the situation depicted in the scenario, in which the violation behavior involved proposing a different way (supposedly better) of doing a certain activity. Interestingly, though, post-hoc analyses showed that this effect was driven by middle-aged and older targets, suggesting that this type of "violation" is accepted (and positively regarded) for these age groups, but not for the younger age group. Thus, H3c results, despite not corroborating what was hypothesized, do provide some interesting insight and are in line with the prescriptive expectation that younger workers should not question the organizational hierarchy.

For Hypotheses 4a-c, which predicted that the interaction effect described in H3a-c would be moderated by the level of endorsement of the Humility-Deference stereotype, our results provided support for H4a and b, predicting warmth and morality perceptions, and no support for H4c, predicting competence. Our findings show that, when the level of endorsement of the Humility-Deference stereotype is high, the difference both in warmth (H4a) and morality (H4b) perceptions about younger workers who violate the stereotype is significant. Conversely, when the endorsement of the Humility-Deference stereotype is low, the difference in warmth and morality perceptions about younger workers who violate the stereotype is not significant. These results show that the endorsement of the Humility-Deference stereotype has an important impact on warmth and morality perceptions about younger workers who violate (or adhere to) the prescriptive stereotype.

4.4.1. Limitations and future research

One limitation of our studies relates to the role of target gender. We opted to keep the target (male) constant in studies 1 and 2, following prior studies on prescriptive age stereotypes (e.g.,

Hanrahan et al., 2023; North & Fiske, 2013a; North & Fiske, 2016). Notwithstanding, existing studies about gender prescriptive stereotypes in the workplace show that gender plays an important role (e.g., Heilman, 2001; Caleo, 2016, 2018). Therefore, future research should take an intersectional approach and consider gender when examining the effect of prescriptive age stereotypes in the workplace.

A limitation of Study 1 is the considerable number of participants failing the attention check, and thus reducing the sample considerably. An additional limitation of the studies might have been related to the fact that, although we tried to disentangle some of the age confounds in the age and work research (in Study 1 scenario, for example, we indicated in the scenario the target tenure in the high-tech sector - four years), in the Study 2 scenario we provided different information about the level of career experience for the younger, middle-aged and older targets. Thus, future studies should carefully distinguish issues of age, generation/cohort, tenure, and experience/skillset (North, 2019).

Regarding the investigation of consequences of prescriptive age stereotypes toward younger workers, future research should experimentally test the consequences of endorsing the Loyalty-Belonging dimension of prescriptive stereotypes, which is the third dimension of younger worker prescriptive stereotypes developed by Schmitz et al. (2023). This would provide valuable insight into the ambivalent expectations faced by younger workers. Also, future research should test the Vitality-Innovation stereotype in a different context than the technological sector.

Finally, the consequences of prescriptive age stereotypes should also be researched in the real-world context (e.g., through correlational studies with participants from a real organization) so that the results obtained can have higher external validity.

4.4.2. Conclusion

The set of studies presented in this chapter was the first to examine the consequences of endorsing prescriptive age stereotypes toward younger workers. The results obtained shed some light on the importance of prescriptive age stereotypes as moderators of the relation between target age and target behavior predicting important work-related outcomes, such as worker's perceived warmth and morality, and fairness perceptions and decision support regarding situations in which a worker violates or adheres to the stereotype. When younger worker prescriptive age stereotypes are highly endorsed by participants, younger workers are the most disadvantaged regarding the outcomes measured. Another interesting finding is that, even when

targets are perceived as more competent for violating a stereotype, the punishment of those targets is considered more fair, in comparison to those adhering to the stereotype. That is an example of how stereotypes are powerful in legitimizing existing biases towards members of a certain social group, thus contributing to the maintenance of the existing social order.

Our work contributes to workplace youngism research by expanding on the consequences of youngism, specifically through the lens of the enablers' perspectives. Additionally, we broaden the research on prescriptive age stereotypes in the workplace by considering an understudied group – younger workers - and by including a sample from a non-Anglo-Saxon country in one of our studies. We hope that this initial step towards a deeper understanding of the consequences of prescriptive stereotypes will also contribute to better understanding the experiences of workplace age discrimination that can arise as a result.

CHAPTER 5
Conclusion

This thesis addressed two underexplored research areas: ageism towards younger workers (workplace youngism), and prescriptive age stereotypes in the workplace. Despite evidence showing that younger workers perceive being discriminated against (e.g., Eurofound, 2017; Marchiondo et al., 2016; Patient et al., 2024) and also that they are targeted with discrimination in the context of personnel decisions (Erber & Long, 2006; Luoh & Tsaur, 2013; Richardson et al., 2013), research on ageism in the workplace remains mostly focused on older workers. A better understanding of stereotypes is of utmost importance because they frequently lead to discrimination, and being aware of stereotypes helps people recognize and challenge biased assumptions that can influence their behavior and decisions. Among the different types of stereotypes that have been referred to in research (i.e., descriptive stereotypes, metastereotypes, and prescriptive stereotypes), prescriptive stereotypes ("should-do" expectations regarding what individuals of a certain social group are to do, North & Fiske, 2013b) have received considerably less attention in research, and have been examined mostly concerning ethnicity and gender in the work context. Yet, they are especially powerful because they involve one group exercising influence over another, and violating a prescriptive expectation often leads to backlash (Rudman et al., 2012). Hence, prescriptive stereotypes play an important role in discrimination processes and need to be further addressed especially regarding young age and the work context (Finkelstein et al., 2015; North & Fiske, 2015).

In the present work, we focused on three key questions: 1) *"What is known regarding workplace youngism?"*; 2) *"What are the prescriptive age stereotypes towards younger workers, and how to assess them?"*; and 3) *"What are the consequences of endorsing prescriptive age stereotypes towards younger workers, regarding organizational justice and person perceptions?"* To address these research questions, we mapped the state-of-the-art on ageism against younger workers (Chapter 2) and conducted five studies using eight different samples with participants from both Portugal and the US (Chapters 3 and 4). The overall results indicate that the main goals of this thesis were accomplished by extending evidence and knowledge regarding workplace youngism, and prescriptive age stereotypes toward younger workers and their consequences.

In this final chapter, we will begin by summarizing the key findings from our studies for each of our three main research questions. Next, we will discuss the major theoretical and practical contributions of our studies. Finally, we will address the overall limitations of this work and suggest potential avenues for future research.

5.1. Summary of main findings

5.1.1. What is known regarding workplace youngism?

To answer our first research question, in Chapter 2, we have undertaken a scoping review to map the breadth and scope of the workplace youngism literature. A search of peer-reviewed literature uncovered 108 articles encompassing 143 empirical studies. We next summarize the main findings obtained under the three broad research questions that guided our review.

Regarding question 1) *How has workplace youngism been assessed?*, in terms of methodological approaches, the majority of the studies were quantitative (*n*=111), followed by qualitative (*n*=21) and mixed methods (*n*=11). Among the quantitative studies, 70 were experimental, and 35 were cross-sectional. None of the selected studies employed interventions addressing workplace youngism. In terms of the samples used, although the selected studies were conducted across 21 countries, over sixty percent were carried out in the US, the UK, or Germany. Participants in the studies were generally young, with an average age of 34.7 years. A total of 39 studies included exclusively younger participants, most of which explored self-directed ageism. The majority of studies (*n*=93) examined the perspective of individuals enabling youngism, while only 34 studies focused on the perspective of youngism targets, and 16 studies considered both perspectives. Among the 59 studies that used vignettes with hypothetical targets of ageism, 31 presented a male target, and 12 did not specify the target's gender. In the majority of the selected studies (*n*=136), younger workers were identified by their age category (i.e., "young" or "younger"), with only five studies using generational labels. While there was no consensus on the exact age range defining younger workers, the most common upper age limit ranged between 30 and 35 years, while the lower limit was typically 18 years. Only four scales used in the studies focused specifically on ageism towards younger workers: one scale adopting the enabler perspective (Raymer et al., 2017), and three scales the target perspective (Finkelstein et al., 2020; Marchiondo et al., 2016; Ryan et al., 2015). Among the selected studies, only sixteen took an intersectional approach. More than three-quarters of

the studies examined ageism towards both younger and older workers, with younger workers often serving as a comparison group for older workers.

Concerning the second question guiding our review 2) *What are the main theories and conceptual approaches used to investigate workplace youngism?*, research was found to be theoretically grounded in most of the studies (*n*=87), with the social identity approach (*n*=21) (Tajfel & Turner, 1979; Turner et al., 1987) and the stereotype content model (*n*=17) (SCM; Fiske et al., 2002; Cuddy et al., 2011) being among the most frequent theories used. Most studies adopting the social identity approach corroborated the ingroup bias phenomenon, and the majority of studies that used the SCM to compare younger workers/job applicants with older workers/job applicants found that the former were rated higher in competence but lower in warmth than the latter. Regarding the ageism dimensions used to investigate workplace youngism, the behavioral (discrimination) and cognitive (stereotypes) dimensions were the most frequently used (*n*=98 and *n*=92, respectively). Only 35 studies investigated the affective (prejudice) dimension. Studies using the behavioral dimension mainly examined personnel decisions, with some studies showing preferences for younger workers, but others favoring middle-aged (Luoh & Tsaur, 2013; Richardson et al., 2013) and older workers (Erber & Long, 2006). Another group of studies examined perceived age discrimination, with a key finding being a U-shaped distribution (Gee et al., 2007; Marchiondo et al., 2016), with both younger and older workers reporting more frequent age-based discrimination. In other studies, younger workers reported higher levels of experienced age discrimination than other age groups (e.g., Duncan & Loretto, 2004; Snape & Redman, 2003). The cognitive dimension of ageism was explored in terms of both descriptive stereotypes (*n*=76) and metastereotypes (*n*=4). Most studies on descriptive stereotypes examined both younger and older workers on the same dimensions or directly compared those two groups. However, ten studies specifically focused on stereotypes of younger workers. In these studies, 61% of the descriptors related to positive characteristics, 38% to negative characteristics, and 1% to neutral characteristics. Although only four studies investigated younger workers' metastereotypes, Finkelstein et al. (2013) found that of the 30 stereotypes younger workers believed were held about them, only five were positive, suggesting that younger workers predominantly experienced negative metastereotypes. No studies specifically examined prescriptive age stereotypes toward younger workers.

Regarding question 3) *What are the main antecedents and consequences of workplace youngism?*, within the selected studies, 61 examined antecedents and 17 consequences of workplace youngism. Most of the antecedents examined were at the intrapersonal level (*n*=36)

(i.e., chronological age, participant age group, and participant gender or sex), and most of the consequences at the interpersonal level (*n*=10) (i.e., affective commitment to the organization, intergroup contact quality, job satisfaction, turnover intentions, behaviors toward co-workers, and organizational identification). Antecedents and consequences at the contextual level were investigated less frequently (*n*=18 and *n*=2, respectively). The former included organization size, organization sector, and country/national culture, and the latter included work-life/life-work interference. Regarding the perspective of study participants, in studies examining antecedents of workplace youngism 53 studies took the enabler (i.e., those who generally carry out, support, or sustain discriminatory practices) perspective, while only four studies took the target perspective. Among studies examining the consequences of workplace youngism, 14 studies took the target perspective and two studies took the enabler perspective.

The findings of our scoping review indicated that there was no research on younger worker prescriptive age stereotypes and that there was a dearth of scales specifically measuring ageism towards younger workers. Hence, we advanced with answering our second research question.

5.1.2. What are the prescriptive age stereotypes towards younger workers, and how to assess them?

To answer the second research question of this dissertation, in Chapter 3, we developed and validated a scale measuring prescriptive age stereotypes towards younger workers by using a culturally decentered approach, with participants from the US and Portugal across three studies.

In Study 1, open-ended questions were used to identify age-based expectations relating to younger workers. Following a thematic analysis of data from both samples, nine common themes of prescriptive stereotypes towards younger workers were identified 1. Respect older workers; 2. Accept and follow organizational hierarchy; 3. Acknowledge inexperience and accept menial tasks; 4. Prove belonging in organization; 5. Demonstrate loyalty towards the organization; 6. Demonstrate technological competence; 7. Bring a dynamic work attitude; 8. Show creativity; and, 9. Take an active role.

Building on these nine themes, we identified three broad categories of prescriptive age stereotypes toward younger workers: 1) expectations of not challenging the natural social order in the workplace and focusing on mandatory duties, which we termed Humility-Deference; 2) demonstrating trustworthiness, making an effort to integrate into the organization, and showing long-term commitment to its goals, labeled Loyalty-Belonging; and 3) exhibiting a dynamic work attitude, creativity, and proficiency with new technologies, referred to as Vitality-

Innovation. These three types of prescriptive stereotypes highlighted the ambivalence in expectations toward younger workers. Finally, a pool of 60 items of prescriptive stereotypes toward younger workers was identified from the qualitative data.

In Studies 2 and 3, we advanced with our aim to develop a measure that assessed prescriptive age stereotypes toward younger workers in a culturally decentered way. The pool of items identified in the previous study was subjected to an Exploratory Factorial Analysis (EFA) (Study 2, N = 788) and a subsequent Confirmatory Factorial Analysis (CFA) (Study 3, N = 584). The final scale is composed of 25 items, organized into eight first-order factors or subdimensions, and three second-order factors or dimensions, labeled as in Study 1, i.e. Humility-Deference, Loyalty-Belonging, and Vitality-Innovation. Metric invariance of both the first-order and second-order factors was confirmed for samples from the US and Portugal. This suggests that WAYS may be suitable for application in cultural contexts that vary in terms of cultural values, such as individualism and collectivism (Hofstede, 2001) and tightness-looseness (Gelfand et al., 2011).

Divergent and convergent validity of the scale were also established. While prescriptive age stereotypes toward younger workers are related to other forms of prejudice (i.e., sexism, oldism, colorblindness), the relationships are generally weak, confirming that these are distinct constructs and supporting divergent validity. It also demonstrated support for convergent validity by showing sizable correlations with conceptually similar constructs (i.e., Y managerial attitudes, obligation work norms, social dominance orientation, and the resourceful and ungrateful facets of youngism). Due to its ambivalent expectations – low-status expectations on the one hand (e.g., Humility-Deference), but also competence expectations on the other hand, which is usually associated with high-status groups - we named the scale Workplace Ambivalent Youngism Scale (WAYS).

With the completion of the development and validation of the WAYS, and considering the dearth of studies examining consequences of workplace youngism, especially from the perspective of enablers, as identified in Chapter 2, we advanced to the examination of the third research question of the thesis.

5.1.3. What are the consequences of endorsing prescriptive age stereotypes towards younger workers?

The examination of the final research question was presented in Chapter 4. To do so, we conducted two experimental studies testing whether younger worker prescriptive age

stereotypes cause people to be biased toward younger workers in the context of personnel decisions.

Study 1 (N = 179), using a convenience sample of Portuguese participants, focused on the Vitality-Innovation dimension of prescriptive age stereotypes towards younger workers. The study had a 3 (target age) x 2 (target behavior) between-subjects design. In Study 2 (N = 213), we replicated and extended Study 1 by testing a different stereotype dimension using an online, US sample: the Humility-Deference dimension. Except for the stereotype examined, Study 2 had the same design as Study 1. Namely, we tested whether workers violating (as opposed to adhering to) a younger worker prescriptive stereotype resulted in a negative bias against them—compared to middle-aged or older workers—when it comes to organizational justice perceptions (i.e., overall and distributive justice) and decision support, and person perceptions (i.e., perceived targets' characteristics in terms of competence, warmth, and morality). We additionally examined if participant endorsement of the prescriptive age stereotype (Vitality-Innovation in Study 1 and Humility-Deference in Study 2) would moderate the interactive effect of target age and target behavior on our outcomes of interest.

Results of Study 1, focused on the Vitality-Innovation stereotype, showed no support for the main hypotheses tested. Despite that, results indicated a significant main effect of target behavior overall. That is, the punishment for targets violating the prescriptive stereotype (i.e., acquiring the minimum technological skills for the new role but showing difficulty and taking longer than expected) was regarded as more fair in terms of overall and distributive justice and gathered more decision support. The violators of the prescriptive stereotype were also deemed as less warm and less competent by participants. These results are similar to findings by Hanrahan et al. (2023), according to which both middle-aged and older targets violating the Identity prescriptive age stereotype (North & Fiske, 2013a) were rated as less warm and less competent. Those findings highlight the normative aspect of prescriptions given that backlash functions as a form of social control.

Study 2 findings show that it is regarded as more fair when targets who violate Humility-Deference expectations receive a negative outcome, and also that, when the level of endorsement of the Humility-Deference stereotype is high, justice perceptions and decision support for the punishment for violating (vs. adhering to) the prescriptive age stereotype are higher for younger workers (vs. middle-aged and older). Regarding person perceptions, targets who violated Humility-Deference expectations were seen as more competent, especially middle-aged and older targets. In addition, when the level of endorsement of the Humility-Deference stereotype is high, younger workers who violate the stereotype are seen as less warm

and moral than when other age groups violate the stereotype. On the other hand, when the endorsement of the Humility-Deference stereotype is low, the difference in warmth and morality perceptions for younger workers (versus middle-aged and older) who violate the stereotype is not significant.

Our results highlight the significance of prescriptive age stereotypes endorsement in moderating the relationship between target age, target behavior, and key work-related outcomes, such as perceptions of a worker's warmth and morality, and fairness perceptions and decision support in situations where a worker either violates or adheres to the stereotype. When participants strongly endorse prescriptive age stereotypes toward younger workers, these workers are the most disadvantaged in terms of the measured outcomes.

5.2. Theoretical contributions and practical implications

Overall, the studies presented in this dissertation make a significant theoretical contribution to the literature by advancing existing knowledge on the understudied field of workplace youngism.

First and foremost, research on workplace ageism has mostly focused on older workers and the existing literature reviews in the field have focused on examining the literature on workplace oldism (e.g., Bae & Choi, 2022; Bal et al., 2011; Cebola et al., 2021; Finkelstein et al., 2015; Ng & Feldman, 2012; Perry & Parlamis, 2006; Posthuma & Campion, 2009; Truxillo et al., 2015), with no specific attention being paid to the phenomenon of ageism targeting younger workers. By drawing on the scoping review presented in Chapter 2, we built on previous work by exclusively focusing on the work and organizational domain and mapping and summarizing evidence from the emerging literature on workplace youngism. Our findings offer meaningful insights into the field, given that scoping reviews can help identify major research gaps that require further exploration and which can guide further research. This has been the case in the empirical studies developed in this dissertation, for which we highlight some common theoretical contributions as follows.

The first contribution of the empirical studies presented in Chapters 3 and 4 regards the fact that these studies exclusively focused on younger workers – as opposed to what often happens both in overall youngism research (de la Fuente-Núñez et al., 2021) and workplace youngism research (Schmitz et al., 2024), in which the younger age group is used as a comparison group for studying ageism towards their older counterparts. Directly focusing on younger workers

allows for clearer identification of specific forms of ageism that younger workers may face and also avoids underestimating the extent to which younger workers are stereotyped, which may be the case when they are being compared with older workers – often through the lenses of older workers stereotypes. Second, by considering participants from a non-Anglo-Saxon country (i.e., Portugal) in our studies, we also bridge an important research gap by considering cultures beyond the ones more commonly considered in this research field (Schmitz et al., 2024). Third, our studies rely on samples with participants with a balanced age distribution, as opposed to what is commonly found in ageism research, which has been heavily reliant on samples composed of younger participants (de la Fuente-Núñez et al., 2021; Francioli et al., 2024). Finally, our studies also contributed to the understanding of workplace youngism from multiple methodological perspectives by including qualitative, survey/correlational, and experimental methods in the studies developed.

Here we overview the main theoretical and practical implications of the studies presented in Chapters 3 and 4. We consider the three studies presented in Chapter 3 to make several theoretical contributions. To start with, they fill in an important research gap regarding age stereotypes in the work context. As identified in our scoping review, most research on the cognitive dimension of workplace youngism has concentrated on descriptive stereotypes and metastereotypes. To our knowledge, no prior studies have specifically examined prescriptive age stereotypes directed at younger workers (Schmitz et al., 2024). Thus, we contribute to research by qualitatively identifying prescriptive stereotypes towards younger workers organized under three broad types of prescriptive expectations (i.e., Humility-Deference, Loyalty-Belonging, and Vitality-Innovation). The ambivalence underlying these types of stereotypes is also an important theoretical insight, due to the particular implications it can have for younger workers. For example, younger workers are expected, on the one hand, to be innovative and, on the other hand, to not question the organizational status quo. Managing these conflicting expectations is likely to take a toll on younger workers and require them to develop specific strategies to navigate this tension.

In addition, developing and validating a scale measuring prescriptive stereotypes toward younger workers bridged a major literature gap concerning the few existing measures specifically developed for assessing youngism toward younger workers (Schmitz et al., 2024). Another important theoretical contribution is that WAYS was developed using a culturally decentering approach, with participants from both the US and Portugal across the three studies presented in Chapter 3. Thus this research addresses calls not to prioritize a single culture, typically from a WEIRD (Western, Educated, Industrialized, Rich, and Democratic; Henrich et

al., 2010) context, in the scale development process. The metric invariance of both first-order and second-order factors was confirmed across the culturally distinct samples from the US and Portugal, i.e., while Portugal is characterized by cultural values that emphasize high power distance, collectivism, high uncertainty avoidance (Hofstede, 2001) and tightness (Gelfand et al., 2011), the US tends to be the exact opposite in terms of being characterized by low power distance, individualism, low uncertainty avoidance (Hofstede, 2001) and looseness (Gelfand et al., 2011). This indicates that future studies can reliably compare correlations or regression coefficients between these groups, and examine whether WAYS predicts outcomes with similar strength or exhibits varying effects across cultures. Attaining this relatively high level of equivalence despite the cultural differences between Portugal and the US suggests that the WAYS may be appropriate for application across diverse cultural contexts, thus potentially further contributing to cross-cultural research on workplace as ageism, which has been deemed a necessary investment for the development of the field (Marcus & Fritzsche, 2016).

Concerning practical implications, WAYS can be a valuable tool for organizations. Due to the important role of addressing stereotypes as a basis for training aimed at reducing ageism (e.g., Brasseur, 2008; Burmeister et al., 2021; Devine, 1989), the scale could be used to assess the extent and content of prescriptive stereotypes held by employees, as a step prior to implementing training programs aimed at stereotypes reduction or the promotion of an age-diversity climate. WAYS and the ambivalent content of prescriptive expectations toward younger workers can also be used when onboarding younger newcomers to the organization, as a way to prepare younger workers for some of the challenges they may face and which strategies they can use in the face of those.

The two experimental studies presented in Chapter 4, although not supporting the core hypotheses, also make noteworthy contributions to the research on ageism towards younger workers. The findings of our scoping review indicated that among the studies included in the review, 61 studies examined antecedents, and 17 examined consequences of ageism toward younger workers. Within the latter, only two studies focused on the enablers' perspective. Thus, the first major contribution of the set of experimental studies is addressing this research gap in the workplace youngism literature by examining whether younger workers violating (as opposed to adhering to) a younger worker prescriptive stereotype results in a negative bias against them—compared to middle-aged or older workers—when it comes to fairness perceptions and person perceptions (i.e., perceptions of warmth, morality, and competence).

A second important implication is that our results show that prescriptive age stereotypes play a significant role in shaping work-related outcomes. These stereotypes act as moderators, influencing how target age and target behavior are linked to important outcomes, such as perceptions of warmth, morality, fairness, and decision support in situations where workers either conform to or violate the stereotype. Specifically, when prescriptive stereotypes for younger workers are strongly endorsed by participants, younger workers face the most negative outcomes. This includes lower perceived warmth and morality, as well as greater fairness perceptions and decision support regarding a negative outcome being meted out to young workers when they violate prescriptive expectations.

Additionally, findings presented in Chapter 4 highlight a critical and somewhat paradoxical aspect of how stereotypes influence perceptions of fairness and punishment. Even when targets are perceived as more competent for violating a stereotype, they are still seen as deserving of more punishment than those who conform to the stereotype. This resonates with findings from Heilman's (2001) study on prescriptive gender stereotypes. Her research revealed that even when women are recognized for their competence and achievement-oriented qualities, violating gender-based prescriptive stereotypes can negatively impact their evaluations and hinder their career progression. These are powerful examples of how stereotypes function as a mechanism for legitimizing existing biases: when a worker defies a stereotype but performs well, they are still penalized more harshly for challenging the established norms.

Chapter 4 findings can have significant practical implications for both individuals and organizations. Warmth and competence stereotypes are known to significantly influence organizational and personnel decisions. For example, individuals from groups stereotyped as warm but incompetent—such as women—may be more likely to be hired for roles that prioritize sociability over technical skills, like cashiers (Cuddy et al., 2011). Thus, the finding that the violation of a prescriptive age stereotype influences how younger workers are perceived in terms of personal characteristics such as warmth and morality might bring important implications for their careers. For example, being perceived as less moral and trustworthy might lead co-workers and even managers to not consider younger workers for certain tasks or positions. Also, according to the Backlash and Stereotype Maintenance Model (BSMM) (Rudman & Fairchild, 2004) people who fear backlash will attempt to avoid it by engaging in prevention and recovery strategies, such as hiding or lying about their atypical talents or behaviors, which is likely to negatively impact people's performance and satisfaction in the workplace.

Finally, in practical terms, by providing further evidence that younger workers are also targeted by ageism and that there are negative consequences associated with that, we believe this dissertation can contribute to increasing the public visibility of the topic beyond the academic sphere. Workplace youngism seems to have been recently gaining public prominence in the Portuguese media (e.g., Fieschi, 2024; Petrow, 2024; Rocha, 2024) and some of this communication tends to be grounded in scientific research which might contribute to greater social awareness about ageism toward younger workers.

5.3. Limitations and suggestions for future research

Regarding the scoping review presented in Chapter 2, among the main limitations is the fact that only articles published in English were considered, which may to some extent explain why most of the selected studies were conducted in the US and Western European countries. Also, only peer-reviewed articles containing empirical data from primary sources were included, which may have limited the insights into workplace youngism provided. Additional limitations include the fact that in this research we did not differentiate among the roles that antecedents and consequences of workplace youngism (e.g., as independent variables, dependent variables, moderators, and mediators) played in different studies.

Our findings from the scoping review revealed main research gaps and future research directions, which can be summarized into five main areas, as follows:

1) Focus directly on younger workers: in more than 80 percent of the studies, ageism toward younger workers was investigated in studies focused on ageism toward other age groups, and only four scales used in the studies focused exclusively on ageism toward younger workers. Thus, future research should continue examining the specific forms of ageism faced by younger workers and develop and apply additional implicit and explicit measures specifically focused on workplace youngism.
2) Increase methodological range: among the quantitative studies, the majority were experimental studies, with fewer cross-sectional surveys and longitudinal studies. In addition, only three studies used representative samples to examine the prevalence of workplace youngism, and no studies used interventions to address ageism toward younger workers. Therefore, future research should use a broader range of research methods and analytical approaches to investigate ageism against younger workers (e.g., longitudinal, diary, intervention, and prevalence studies).

3) Consider youngism from different perspectives and approaches: most studies focused on the perspective of enablers, as opposed to taking the perspective of the target or both perspectives. Thus, future research should investigate the perspective of the targets of workplace youngism. Also, very few included studies adopted an intersectional approach, and the target was a male in the majority of studies using vignettes with hypothetical targets of ageism. Future research should use an intersectional approach and also go beyond intersections with sex/gender or ethnicity, and also consider education, socioeconomic status, and disability. As there were no studies investigating prescriptive age stereotypes toward younger workers and very few studies considered middle-aged workers as an age group by itself, either as potential targets or as enablers of ageism, future studies should investigate prescriptive age stereotypes towards younger workers. A lifespan perspective should be used in ageism research to consider middle-aged workers as a specific age group when researching workplace youngism (e.g., a better understanding of how middle-aged workers are stereotyped, and also considering them as a comparison group for younger workers could provide interesting insights for youngism research, being them a higher-status group).
4) Explore antecedents and consequences more systematically: a larger number of studies examined antecedents of ageism toward younger workers when compared to studies examining consequences of workplace youngism. Among studies examining antecedents, the great majority of studies took the enabler perspective, and, among studies investigating consequences, most took the target perspective. Therefore, future research should, on the one hand, investigate consequences of workplace youngism, especially from the perspective of enablers, and on the other hand, investigate additional antecedents of workplace youngism from the target perspective.
5) Acknowledge context: more than sixty percent of the studies were conducted in the USA, UK, or Germany. Future research should consider additional national contexts and include cross-country/cultural comparisons. In addition, as the contextual level of ageism expression was the least frequently investigated among the cited studies on antecedents and consequences of workplace youngism, future studies should look into contextual level variables (e.g., industry, organization size) relating to workplace youngism.

A final recommendation derived from our scoping review regards the need for future research on workplace youngism to examine the so-called modern forms of discrimination (e.g., Marchiondo et al., 2018), which refer to more subtle and covert behaviors and cover concepts such as microaggressions (Sue et al., 2007) and selective incivility (Cortina, 2008).

Regarding the studies detailed in Chapter 3 to develop and validate WAYS, the core limitations concern the fact that the data were collected via online platforms, which resulted in a sample with a relatively high level of education, with most participants holding undergraduate or graduate degrees. Additionally, differences in expectations for younger workers may vary across sectors (e.g., the tech industry versus more traditional sectors). Thus, future research should consider validating WAYS for populations with lower levels of formal education, and also explore the applicability of WAYS and its factor structure across different industries.

Another important area for future research with WAYS lies in its validation and application in different cultural contexts. Given the cultural differences between Portugal and the US, our results show that WAYS may be applicable across diverse cultural contexts. However, the scale should be empirically tested in additional cultures to validate its factor structure and to enable a broader generalization across various cultural contexts. In this regard, we already had requests to validate WAYS in ten different countries (i.e., Bulgaria, China, Czech Republic, Germany, Greece, Italy, Netherlands, Romania, Slovakia, and Spain)[4]. We consider this interest to be a sign of the novelty and scientific relevance of WAYS, and its potential for addressing ongoing calls for research on cross-cultural similarities and differences in ageism (Kornadt et al., 2022). Among the myriad of topics that could be researched, it would be interesting to explore whether in organizations and societies with lower power distance – where status and power differences are less pronounced (Hofstede, 2001) – younger workers are also subjected to the Humility-Deference prescriptive stereotype. Differences regarding other cultural values, such as tightness/looseness (Gelfand et al., 2011), could also be investigated.

An additional broad avenue for future research with WAYS concerns the consequences of prescriptive age stereotypes toward younger workers, with initial steps being taken in that direction in the studies presented in Chapter 4. The main limitations identified in the set of experimental studies conducted in Chapter 4 relate, firstly, to the target gender (male). Although previous experimental studies on prescriptive age stereotypes towards older workers (e.g., Hanrahan et al., 2023; North & Fiske, 2016), and most experimental studies using hypothetical targets to study workplace youngism (Schmitz et al., 2024) also used male targets in their

[4] Most of these countries are members of the COST Action CA22120 LeverAge.

scenarios, research shows that gender plays an important role in age stereotypes at work (e.g., Caleo, 2016, 2018). Another potential limitation of the studies is the fact that although we attempted to address some of the age-related confounds in the age and work research (for instance, in the Study 1 scenario, where we specified the target's tenure in the high-tech sector as four years across the different scenarios), we may not have been as careful in the Study 2 scenario, where we provided different information about the career experience levels of the younger, middle-aged, and older targets. Therefore, future research should take an intersectional approach and consider gender when examining the effect of prescriptive age stereotypes in the workplace and also carefully disentangle issues of age, generation/cohort, tenure, and experience/skillset (North, 2019).

Another important future research direction regarding consequences of prescriptive age stereotypes toward younger workers includes experimentally testing the consequences of endorsing the Loyalty-Belonging dimension of prescriptive stereotypes, which due to time constraints has not been examined in the studies developed in this dissertation. The impact of endorsing WAYS could also be explored among managers and HR professionals, as their expectations about how younger workers should and should not behave are likely to be particularly influential. Research could also explore how prescriptive age stereotypes towards younger workers influence dyadic relationships in age-inverse supervisory dynamics (e.g., older workers reporting to younger supervisors), which are becoming more common in contemporary companies and can bring additional challenges to younger workers (e.g., Van Der Heijden, 2016). Moreover, the intergroup perspective (the older perception of the younger, or the middle-aged perception of the younger) in the study of younger worker prescriptive stereotypes consequences should also be considered in future research. The consequences of prescriptive age stereotypes should also be researched in the real-world context so that the experimental results obtained can be better generalized.

WAYS could also be adapted to assess ageism from the targets' perspective and used to measure the extent to which younger workers perceive to be stereotyped against, and the resulting consequences; for example, in terms of organizational-based self-esteem, burnout, job satisfaction, and job performance. Studies could also experimentally test how younger workers react to being targeted by different dimensions of prescriptive age stereotypes (e.g., stereotype threat versus stereotype boost, Lamont et al., 2015), and observe, for example, whether the ambivalence of the stereotypes would lead to different reactions.

5.4. Closing remarks

Overall, this dissertation makes an important contribution to research on ageism in the workplace by advancing knowledge in the understudied field of ageism toward younger workers. By reviewing the existing literature on workplace youngism, we systematize and summarize important research gaps and future research directions, thus providing important guidance for the further development of the field. The development and validation of the WAYS measure to assess younger worker prescriptive stereotypes address two major research gaps: research on prescriptive age stereotypes in the work context and research on and using scales specifically measuring workplace youngism. The culturally decentered approach considered in this process positions WAYS as an instrument suitable for application in various cultural contexts, thereby contributing to advancing cross-cultural research on ageism in the workplace. We have also taken preliminary steps in understanding the consequences of endorsing younger worker prescriptive age stereotypes, with results indicating that these stereotypes moderate the interactive effects between target age and target behavior in predicting important work-related outcomes, such as worker's perceived warmth and morality, and fairness perceptions and decision support regarding situations in which a worker violates or adheres to the stereotype. These results highlight the need for organizations to address these biases and consider how they might be unfairly disadvantaging younger workers. Further research on workplace youngism is needed so this phenomenon can be better understood and addressed, helping increasingly age-diverse workplaces to thrive.

References

Abdi, H. (2003). Factor rotations. In M. Lewis-Beck, A. Bryman, & T. Futing (Eds.), *Encyclopedia for research methods for the social sciences* (pp. 978–982). Sage.

Abrams, D., Russell, P. S., Vauclair, C.-M., & Swift, H. (2011). *Ageism in Europe: Findings from the European social survey*. Age UK.

Abrams, D., Swift, H. J., & Drury, L. (2016). Old and unemployable? How age-based stereotypes affect willingness to hire job candidates. *Journal of Social Issues, 72*(1), 105-121. https://doi.org/10.1111/josi.12158

Agrawal, A. (2017, May 4). Millennials are struggling with face to face communication: Here's why. Forbes. https://www.forbes.com/sites/ajagrawal/2017/05/ 04/millennials-are-struggling-with-face-to-face-communication-heres-why

Aguinis, H., & Bradley, K. J. (2014). Best practice recommendations for designing and implementing experimental vignette methodology studies. *Organizational Research Methods, 17*(4), 351–371. https://doi.org/10.1177/1094428114547952

Ahmed, A. M., Andersson, L., & Hammarstedt, M. (2012). Does age matter for employability? A field experiment on ageism in the Swedish labour market. *Applied Economics Letters, 19*(4), 403-406. https://doi.org/10.1080/13504851.2011.581199

Aiken, L. S., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Sage.

Albert, R., Escot, L., & Fernández-Cornejo, J. A. (2011). A field experiment to study sex and age discrimination in the Madrid labour market. *The International Journal of Human Resource Management, 22*(2), 351-375. https://doi.org/10.1080/09585192.2011.540160

Alcock, C. L., Camic, P. M., Barker, C., Haridi, C., & Raven, R. (2011). Intergenerational practice in the community: A focused ethnographic evaluation. *Journal of Community & Applied Social Psychology*, *21*(5), 419–432. https://doi.org/10.1002/casp.1084

Ambrose, M. L., & Schminke, M. (2009). The role of overall justice judgments in organizational justice research: A test of mediation. *Journal of Applied Psychology, 94*(2), 491-500. https://doi.org/10.1037/a0013203

Andreoletti, C., & Lachman, M. E. (2004). Susceptibility and resilience to memory aging stereotypes: Education matters more than age. *Experimental Aging Research, 30*(2), 129–148. https://doi.org/10.1080/03610730490274167

Angouri, J. (2012). "The older I get the less I trust people" Constructing age identities in the workplace. *Pragmatics, 22*(2), 255-277. https://doi.org/10.1075/prag.22.2.04ang

Arksey, H., & O'Malley, L. (2005). Scoping studies: towards a methodological framework. *International journal of social research methodology, 8*(1), 19-32. https://doi.org/10.1080/1364557032000119616

Ashbaugh, D. L., & Fay, C. H. (1987). The threshold for aging in the workplace. *Research on Aging, 9*, 417–427.

Avolio, B. J., & Barrett, G. V. (1987). Effects of age stereotyping in a simulated interview. *Psychology and Aging, 2*(1), 56–63. https://doi.org/10.1037/0882-7974.2.1.56

Ayalon, L. (2013). Feelings towards older vs. younger adults: Results from the European Social Survey. *Educational Gerontology, 39*(12), 888–901. https://doi.org/10.1080/03601277.2013.767620

Ayalon, L., Dolberg, P., Mikulionienė, S., Perek-Białas, J., Rapolienė, G., Stypinska, J., ... & de la Fuente-Núñez, V. (2019). A systematic review of existing ageism scales. *Ageing research reviews*, *54*(100919). https://doi.org/10.1016/j.arr.2019.100919

Bae, S., & Choi, M. (2023). Age and workplace ageism: A systematic review and meta-analysis. *Journal of Gerontological Social Work*, *66*(6), 724–738. https://doi.org/10.1080/01634372.2022.2161685

Bal, A. C., Reiss, A. E. B., Rudolph, C. W., & Baltes, B. B. (2011). Examining positive and negative perceptions of older workers: a meta-analysis. *The Journals of Gerontology. Series B, Psychological Sciences and Social Sciences*, *66*(6), 687–698. https://doi.org/10.1093/geronb/gbr056

Baltes, P. B., Reese, H. W., & Lipsitt, L. P. (1980). Life-span developmental psychology. *Annual review of psychology*, *31*(1), 65-110.

Bastos, J. L., Barros, A. J. D., Celeste, R. K., Paradies, Y., & Faerstein, E. (2014). Age, class, and race discrimination: Their interactions and associations with mental health among Brazilian university students. *Cadernos de Saúde Pública, 30*(1), 175–186. https://doi.org/10.1590/0102-311x00163812

Bellas, M. L. (2001). Investment in higher education: Do labor market opportunities differ by age of recent college graduates? *Research in Higher Education, 42*(1), 1-25. https://doi.org/10.1023/A:1018786610185

Bennington, L. (2001). Age discrimination: Converging evidence from four Australian studies. *Employee Responsibilities and Rights Journal*, *13*, 125-134. https://doi.org/10.1023/A:1014911816746

Bensimon, M., & Bodner, E. (2012). Does the age of offenders and victims in crime scenarios affect perceptions of crime seriousness and punitiveness among students? *Violence and Victims, 27*(3), 344–359. https://doi.org/10.1891/0886-6708.27.3.344

Bentler, P. M. (1990). Comparative fit indices in structural models. *Psychological Bulletin, 107*(2), 238–246. https://doi.org/10.1037/0033-2909.107.2.238

Berdahl, J. L., & Min, J.-A. (2012). Prescriptive stereotypes and workplace consequences for East Asians in North America. *Cultural Diversity & Ethnic Minority Psychology*, *18*(2), 141–152. https://doi:10.1037/a0027692

Berde, É. & Mágó, M.L. (2022), Are older applicants less likely to be invited to a job interview? – an experimental study on ageism. *Employee Relations, 44* (6),1259-1272. https://doi.org/10.1108/ER-11-2020-0515

Berger, P.L., & T. Luckmann (1966). *The Social Construction of Reality: A Treatise in the Sociology of Knowledge.* Anchor Books.

Berkman, L. F., Börsch-Supan, A., & Avendano, M. (2015). Labor-force participation, policies & practices in an aging America: Adaptation essential for a healthy & resilient population. *Daedalus*, *144*(2), 41-54. https://doi.org/10.1162/DAED_a_00329

Bertolino, M., Truxillo, D. M., & Fraccaroli, F. (2013). Age effects on perceived personality and job performance. *Journal of Managerial Psychology, 28*(7-8), 867-885. https://doi.org/10.1108/JMP-07-2013-0222

Bies, R. J., & Moag, J. S. (1986). Interactional justice: Communication criteria of fairness. In R. J. Lewicki, B. H. Sheppard, & M. H. Bazerman (Eds.), *Research on negotiation in organizations* (pp. 43–55). JAI Press.

Boateng, G. O., & Adams, T. L. (2016). Drop dead … I need your job: An exploratory study of intra-professional conflict amongst nurses in two Ontario cities. *Social Science & Medicine, 155*, 35-42. https://doi.org/10.1016/j.socscimed.2016.02.045

Bohlmann, C., Rudolph, C. W., & Zacher, H. (2018). Methodological recommendations to move research on work and aging forward. *Work, Aging and Retirement, 4*(3), 225–237. https://doi.org/10.1093/workar/wax023

Brasseur, M. (2008). Le rôle des stéréotypes dans le management de la diversité culturelle: Le cas de l'Afrique. *La Revue des Sciences de Gestion, 230*(2), 61–67. https://doi.org/10.3917/rsg.230.0061

Bratt, C., Abrams, D., & Swift, H. J. (2020). Supporting the old but neglecting the young? The two faces of ageism. *Developmental Psychology, 56*(5), 1029–1039. https://doi.org/10.1037/dev0000903

Bratt, C., Abrams, D., Swift, H. J., Vauclair, C.-M., & Marques, S. (2018). Perceived age discrimination across age in Europe: From an ageing society to a society for all ages. *Developmental Psychology, 54*(1), 167–180. https://doi.org/10.1037/dev0000398

Brescoll, V. L., & Uhlmann, E. L. (2005). Attitudes toward traditional and nontraditional parents. *Psychology of Women Quarterly, 29*, 436–445. https://doi.org/10.1111/j.1471-6402.2005.00237.x

Brewer, M. (1988). A dual process model of impression formation. In T. K. Srull (Ed.), *Advances in social cognition* (pp. 65–76). Erlbaum.

Brooke, L., & Taylor, P. (2005). Older workers and employment: Managing age relations. *Ageing and Society, 25*(3), 415-429. https://doi.org/10.1017/S0144686X05003466

Brown, T. A. (2015.) *Confirmatory factor analysis for applied research* (2nd ed.). Guilford.

Burgess, D., & Borgida, E. (1999). Who women are, who women should be: Descriptive and prescriptive gender stereotyping in sex discrimination. *Psychology, Public Policy, and Law, 5*(3), 665–692. https://doi.org/10.1037/1076-8971.5.3.665

Burmeister, A., Gerpott, F. H., Hirschi, A., Scheibe, S., Pak, K., & Kooij, D. (2021). Reaching the heart or the mind? Test of two theory-based training programs to improve interactions between age-diverse coworkers. *Academy of Management Learning & Education*, *20*(2), 203-232. https://doi.org/10.5465/amle.2019.0348

Butler, R. N. (1969). Age-ism: Another form of bigotry. *The Gerontologist*, *9*(4 Part 1), 243–246. https://doi.org/10.1093/geront/9.4_part_1.243

Bytheway, B. (2005). Ageism and age categorization. Journal of Social Issues, 61(2), 361–374. https://doi.org/10.1111/j.1540-4560.2005.00410.x

Caleo, S. (2016). Are organizational justice rules gendered? Reactions to men's and women's justice violations. *Journal of Applied Psychology, 101*(10), 1422–1435. https://doi.org/10.1037/apl0000131

Caleo, S. (2018). When distributive justice and gender stereotypes coincide: Reactions to equity and equality violations. *Journal of Applied Social Psychology, 48*(5), 257–268. https://doi.org/10.1111/jasp.12510

Caprariello, P. a., Cuddy, A. J. C., & Fiske, S. T. (2009). Social structure shapes cultural stereotypes and emotions: A causal test of the stereotype content model. *Group Processes & Intergroup Relations, 12*(2), 147–155. https://doi.org/10.1177/1368430208101053

Cebola, M. M. J., dos Santos, N. R., & Dionísio, A. (2023). Worker-related ageism: A systematic review of empirical research. *Ageing & Society*, *43*(8), 1882-1914. https://doi.org/10.1017/s0144686x21001380

Chambers, C. R., & Freeman, S., Jr. (2020). To be young, gifted, and Black: The relationship between age and race in earning full professorships. *The Review of Higher Education, 43*(3), 811-836. https://doi.org/10.1353/rhe.2020.0008

Chang, E. H., & Milkman, K. L. (2020). Improving decisions that affect gender equality in the workplace. *Organizational Dynamics, 49*(1), 100709. https://doi.org/10.1016/j.orgdyn.2019.03.002

Chasteen, A. L., Horhota, M., & Crumley-Branyon, J. J. (2021). Overlooked and underestimated: experiences of ageism in young, middle-aged, and older adults. *The Journals of Gerontology: Series B, 76*(7), 1323-1328. https://doi.org/10.1093/geronb/gbaa043

Chen, F. F. (2007). Sensitivity of goodness of fit indexes to lack of measurement invariance. *Structural Equation Modeling, 14*(3), 464–504. https://doi.org/10.1080/10705510701301834

Cheung, G. W., & Rensvold, R. B. (2002). Evaluating goodness-of-fit indexes for testing measurement invariance. *Structural Equation Modeling, 9*(2), 233–255. https://doi.org/10.1207/S15328007SEM0902_5

Cialdini, R. B., & Trost, M. R. (1998). Social influence: Social norms, conformity and compliance. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (Vol. 2, pp. 151–192). McGraw-Hill.

Cleveland, J. N., & Shore, L. M. (1992). Self- and supervisory perspectives on age and work attitudes and performance. *Journal of Applied Psychology*, *77*(4), 469–484. https://doi:10.1037//0021-9010.77.4.469

Cohen-Charash, Y., & Spector, P. E. (2001). The role of justice in organizations: A meta-analysis. *Organizational Behavior and Human Decision Processes, 86*(2), 278–321. https://doi.org/10.1006/obhd.2001.2958

Collins, M. H., Hair, J. F., Jr., & Rocco, T. S. (2009). The older-worker-younger-supervisor dyad: A test of the Reverse Pygmalion effect. *Human Resource Development Quarterly, 20*(1), 21-41. https://doi.org/10.1002/hrdq.20006

Collins, T. A., Dumas, T. L., & Moyer, L. P. (2017). Intersecting disadvantages: Race, gender, and age discrimination among attorneys. *Social Science Quarterly*, *98*(5), 1642–1658. https://doi:10.1111/ssqu.12376

Colquhoun, H. L., Levac, D., O'Brien, K. K., Straus, S., Tricco, A. C., Perrier, L., Kastner, M. & Moher, D. (2014). Scoping reviews: time for clarity in definition, methods, and reporting. *Journal of Clinical Epidemiology, 67*(12), 1291-1294. https://doi.org/10.1016/j.jclinepi.2014.03.013

Colquitt, J. A. (2001). On the dimensionality of organizational justice: A construct validation of a measure. *Journal of Applied Psychology, 86*(3), 386–400. https://doi.org/10.1037/0021-9010.86.3.386

Colquitt, J. A., Greenberg, J., & Zapata-Phelan, C. P. (2005). What is organizational justice? A historical overview. In J. Greenberg & J. A. Colquitt (Eds.), *Handbook of Organizational Justice*, (p. 439-467). Oxford: Taylor & Francis Group.

Conner, J. O. (2015). Pawns or power players: The grounds on which adults dismiss or defend youth organizers in the USA. *Journal of Youth Studies, 19*(3), 403–420. https://doi.org/10.1080/13676261.2015.1083958

Conner, J. O., Ober, C. N., & Brown, A. S. (2016). The politics of paternalism: Adult and youth perspectives on youth voice in public policy. *Teachers College Record*, *118*, 1–48. https://doi.org/10.1177/016146811611800805

Corrado, L., & Johnson, M. (2022). Women at work: Pathways from gender stereotypes to gender bias and discrimination. *Annual Review of Organizational Psychology and Organizational Behavior, 9*, 155–178. https://doi.org/10.1146/annurev-orgpsych-110721-034105

Cortina, L. M. (2008). Unseen injustice: Incivility as modern discrimination in organizations. *Academy of Management Review*, *33*(1), 55-75. https://doi.org/10.5465/amr.2008.27745097

Cox, C. B., & Beier, M. E. (2014). Too old to train or reprimand: The role of intergroup attribution bias in evaluating older workers. *Journal of Business and Psychology, 29*(1), 61-70. https://doi.org/10.1007/s10869-013-9297-6

Crew, J. C. (1984). Age stereotypes as a function of race. *Academy of Management Journal, 27*(2), 431-435. https://doi.org/10.2307/255934

Cropanzano, R., & Greenberg, J. (1997). Progress in organizational justice: Tunneling through the maze. In C. L. Cooper & I. T. Robertson (Eds.), *International review of industrial and organizational psychology* (pp. 317-372). Wiley. https://doi.org/10.1023/A:1007726012218

Cropanzano, R., Rupp, D. E., Mohler, C. J., & Schminke, M. (2001). Three roads to organizational justice. In G. R. Ferris (Ed.), *Research in personnel and human resources management* (Vol. 20, pp. 1–123). Elsevier. https://doi.org/10.1016/S0742-7301(01)20001-2

Cuddy, A. J., & Fiske, S. T. (2002). Doddering but dear: Process, content, and function in stereotyping of older persons. In T. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 3-26). MIT Press.

Cuddy, A. J., Glick, P., & Beninger, A. (2011). The dynamics of warmth and competence judgments, and their outcomes in organizations. *Research in Organizational Behavior, 31*, 73-98. https://doi.org/10.1016/j.riob.2011.10.004

Cullen, T. A. (2003). Reverse age discrimination suits and the Age Discrimination in Employment Act. *Journal of Civil Rights and Economic Development, 18*, 271–309.

Cunha, F., Marques, S., & Rodrigues, R. B. (2014). GerAções Lx: Pilot project to decrease ageism and promote a positive self-concept in youngsters and seniors. *Journal of Intergenerational Relationships, 12*(2), 184–191. https://doi.org/10.1080/15350770.2014.901018

Cvenkel, N. (2020). Multigenerational workforce and well-being in the twenty-first-century workplace. In *Well-being in the workplace: Governance and sustainability insights to promote workplace health* (pp. 191-224). Approaches to Global Sustainability, Markets, and Governance. Springer. https://doi.org/10.1007/978-981-15-3619-9_9

de la Fuente-Núñez, V., Cohn-Schwartz, E., Roy, S., & Ayalon, L. (2021). Scoping review on ageism against younger populations. *International Journal of Environmental Research and Public Health*, *18*(8), 3988. https://doi.org/10.3390/ijerph18083988

De Meulenaere, K., Allen, D. G., & Kunze, F. (2022). Age separation and voluntary turnover: Asymmetric effects for collective turnover rates and individual turnover intentions depending on age. *Personnel Psychology, 75*(4), 865–894. https://doi.org/10.1111/peps.12505

Deal, J. J., Altman, D. G., & Rogelberg, S. G. (2010). Millennials at work: What we know and what we need to do (if anything). *Journal of Business and Psychology*, *25*(2), 191–199. https://doi:10.1007/s10869-010-9177-2

Dedrick, E. J., & Dobbins, G. H. (1991). The influence of subordinate age on managerial actions: An attributional analysis. *Journal of Organizational Behavior, 12*(5), 367-377. https://doi.org/10.1002/job.4030120502

Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*(1), 5–18. https://doi.org/10.1037/0022-3514.56.1.5

Devine, P. G. (1989). Stereotypes and prejudice: Their automatic and controlled components. *Journal of Personality and Social Psychology, 56*(1), 5–18. https://doi.org/10.1037/0022-3514.56.1.5

Diekman, A. B., & Hirnisey, L. (2007). The effect of context on the silver ceiling: A role congruity perspective on prejudiced responses. *Personality and Social Psychology Bulletin, 33*(10), 1353-1366. https://doi.org/10.1177/0146167207303019

Dixon, J. (2012). Communicating (st)ageism: Exploring stereotypes of age and sexuality in the workplace. *Research on Aging, 34*(6), 654-669. https://doi.org/10.1177/0164027512450036

Douthirt-Cohen, B., & Tokunaga, T. (2019). 'Is he allowed to have a crush on you?' Interrupting adultism in fieldwork with youth. *Ethnography and Education, 15*(2), 207–221. https://doi.org/10.1080/17457823.2019.1568273

Dow, B., Joosten, M., Biggs, S., & Kimberley, H. (2016). Age encounters: Exploring age and intergenerational perceptions. *Journal of Intergenerational Relationships, 14*(2), 104–118. https://doi.org/10.1080/15350770.2016.1160731

Drehmer, D. E., Carlucci, C. A., Bordieri, J. E., & Pincus, L. B. (1992). Effects of age on ranking for reduction in work force. *Psychological Reports, 70*(3_suppl), 1203-1209. https://doi.org/10.2466/pr0.1992.70.3c.1203

Drydakis, N., MacDonald, P., Chiotis, V., & Somers, L. (2018). Age discrimination in the UK labour market: Does race moderate ageism? An experimental investigation. *Applied Economics Letters, 25*(1), 1-4. https://doi.org/10.1080/13504851.2017.1290763

Duncan, C., & Loretto, W. (2004). Never the right age? Gender and age-based discrimination in employment. *Gender, Work & Organization, 11*(1), 95-115. https://doi.org/10.1111/j.1468-0432.2004.00222.x

Earl, C., & Taylor, P. (2016). Discriminatory practices of older workers in an ageing residential care workforce. *International Journal of Work Innovation, 1*(4), 391-412. https://doi.org/10.1504/IJWI.2016.078643

Ellemers, N., Pagliaro, S., & Barreto, M. (2013). Morality and behavioral regulation in groups: A social identity approach. *European Review of Social Psychology, 24*(1), 160–193. https://doi.org/10.1080/10463283.2013.841490

Erber, J. T., & Danker, D. C. (1995). Forgetting in the workplace: Attributions and recommendations for young and older employees. *Psychology and Aging, 10*(4), 565-569. https://doi.org/10.1037/0882-7974.10.4.565

Erber, J. T., & Long, B. A. (2006). Perceptions of forgetful and slow employees: Does age matter? *The Journals of Gerontology: Series B, 61*(6), P333-P339. https://doi.org/10.1093/geronb/61.6.P333

Erber, J. T., Szuchman, L. T., & Prager, I. G. (2001). Ain't misbehavin': The effects of age and intentionality on judgments about misconduct. *Psychology and Aging, 16*(1), 85–95. https://doi.org/10.1037/0882-7974.16.1.85

Eurofound (2017). *Working conditions of workers of different ages: European Working Conditions Survey 2015*. Publications Office of the European Union. https://www.eurofound.europa.eu/publications/report/2017/working-conditions-of-workers-of-different-ages

Farinha, C., & Rosa, M. (2022). Just Chill! An experimental approach to stereotypical attributions regarding young activists. *Social Sciences*, *11*(10), 427. http://dx.doi.org/10.3390/socsci11100427

FFMS (2020). *Indicadores de fecundidade: Índice sintético de fecundidade e taxa bruta de reprodução*. PORDATA. Retrieved from https://www.pordata.pt

Fiedler, K., Messner, C., & Bluemke, M. (2006). Unresolved problems with the "I", the "A", and the "T": A logical and psychometric critique of the Implicit Association Test (IAT). *European Review of Social Psychology*, *17*(1), 74-147. https://doi.org/10.1080/10463280600681248

Fieschi, M. (2024, November 26). Em Portugal, em duas avaliações seguidas, foi-me dito que não era promovido porque 'era demasiado novo'. Isso fez-me confusão. *SIC*. https://sicnoticias.pt/podcasts/o-ceo-e-o-limite/2024-11-26-em-portugal-em-duas-avaliacoes-seguidas-foi-me-dito-que-nao-era-promovido-porque-era-demasiado-novo.-isso-fez-me-confusao-390bc5a6

Finkelstein, L. M., & Burke, M. J. (1998). Age stereotyping at work: The role of rater and contextual factors on evaluations of job applicants. *The Journal of General Psychology, 125*(4), 317-345. https://doi.org/10.1080/00221309809595341

Finkelstein, L. M., Burke, M. J., & Raju, M. S. (1995). Age discrimination in simulated contexts: An integrative analysis. *Journal of Applied Psychology, 80*(6), 652–663. https://doi.org/10.1037/0021-9010.80.6.652

Finkelstein, L. M., Hanrahan, E. A., & Thomas, C. L. (2018). An expanded view of age bias in the workplace. In K. Shultz & G. Adams (Eds.), *Aging and work in the 21st century* (pp.59-101). Routledge.

Finkelstein, L. M., Higgins, K. D., & Clancy, M. (2000). Justifications for ratings of old and young job applicants: An exploratory content analysis. *Experimental Aging Research, 26*(3), 263-283. https://doi.org/10.1080/036107300404895

Finkelstein, L. M., King, E. B., & Voyles, E. C. (2015). Age metastereotyping and cross-age workplace interactions: A meta view of age stereotypes at work. *Work, Aging and Retirement*, *1*(1), 26-40. https://doi.org/10.1093/workar/wau002

Finkelstein, L. M., Ryan, K. M., & King, E. B. (2013). What do the young (old) people think of me? Content and accuracy of age-based metastereotypes. *European Journal of Work and Organizational Psychology, 22*(6), 633-657. https://doi.org/10.1080/1359432X.2012.673279

Finkelstein, L. M., Voyles, E. C., Thomas, C. L., & Zacher, H. (2020). A daily diary study of responses to age meta-stereotypes. *Work, Aging and Retirement, 6*(1), 28-45. https://doi.org/10.1093/workar/waz005

Fiske, S. T. (2012). Managing ambivalent prejudices: Smart-but-cold and warm-but-dumb stereotypes. *The Annals of the American Academy of Political and Social Science, 639*(1), 33–48. https://doi.org/10.1177/0002716211418444

Fiske, S. T. (2014). *Stereotyping, prejudice, and discrimination: The science of intergroup relations*. Psychology Press.

Fiske, S. T., Cuddy, A. J. C., Glick, P. & Xu, J. (2002). A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition. *Journal of Personality and Social Psychology, 82*, 878–902.

Forte, C. S., & Hansvick, C. L. (1999). Applicant age as a subjective employability factor: A study of workers over and under age fifty. *Journal of Employment Counselling, 36*(1), 24-34. https://doi.org/10.1002/j.2161-1920.1999.tb01006.x

Fraher, A. L. (2017). Intergenerational conflict at US airlines: An unresolved Oedipal Complex? *Journal of Managerial Psychology, 32*(1), 75-88. https://doi.org/10.1108/JMP-06-2015-0238

França, L. H., Siqueira-Brito, A. D., Valentini, F., Vasques-Menezes, I., & Torres, C. V. (2017). Ageism in the organizational context-the perception of Brazilian workers. *Revista Brasileira de Geriatria e Gerontologia, 20*(6), 762–772. http://dx.doi.org/10.1590/1981-22562017020.170052

Francioli, S. P., & North, M. S. (2021). Youngism: The content, causes, and consequences of prejudices toward younger adults. *Journal of Experimental Psychology: General, 150*(12), 2591-2612. https://doi.org/10.1037/xge0001064

Francioli, S. P., Shakeri, A., & North, M. S. (2024). Americans harbor much less favorable explicit sentiments toward young adults than toward older adults. *Proceedings of the National Academy of Sciences*, *121*(26), e2311009121. https://doi.org/10.1073/pnas.2311009121

Furnham, A. (2015). Unemployment in the digital age. In R. J. Burke, C. Cooper, & A-S. G. Antoniou (Eds.), *The multi-generational and aging workforce* (pp. 39-57). Edward Elgar Publishing.

Furunes, T., & Mykletun, R. J. (2010). Age discrimination in the workplace: Validation of the Nordic Age Discrimination Scale (NADS). *Scandinavian Journal of Psychology, 51*(1), 23-30. https://doi.org/10.1080/1359432x.2012.673279

Gee, G. C., Pavalko, E. K., & Long, J. S. (2007). Age, cohort and perceived age discrimination: Using the life course to assess self-reported age discrimination. *Social Forces, 86*(1), 265-290. https://doi.org/10.1353/sof.2007.0098

Gelfand, M. J., Raver, J. L., Nishii, L., Leslie, L. M., Lun, J., Lim, B. C., ... & Yamaguchi, S. (2011). Differences between tight and loose cultures: A 33-nation study. *Science*, *332*(6033), 1100-1104. https://doi.org/10.1126/science.1197754

Gerig, T., Morel-Forster, A., Blumer, C., Egger, B., Luthi, M., Schoenborn, S., & Vetter, T. (2018, May). Morphable face models: An open framework. *2018 13th IEEE International Conference on Automatic Face & Gesture Recognition (FG 2018)*. IEEE. https://doi.org/10.1109/fg.2018.00021

Gibson, K. J., Zerbe, W. J., & Franken, R. E. (1993). The influence of rater and ratee age on judgments of work-related attributes. *The Journal of Psychology, 127*(3), 271-280. https://doi.org/10.1080/00223980.1993.9915561

Gill, M. J. (2004). When information does not deter stereotyping: Prescriptive stereotyping can foster bias under conditions that deter descriptive stereotyping. *Journal of Experimental Social Psychology*, *40*(5), 619-632. https://doi.org/10.1016/j.jesp.2003.12.001

Gioaba, I., & Krings, F. (2017). Impression management in the job interview: An effective way of mitigating discrimination against older applicants? *Frontiers in Psychology, 8*, 770. https://doi.org/10.3389/fpsyg.2017.00770

Glick, P., & Fiske, S. T. (1996). The Ambivalent Sexism Inventory: Differentiating hostile and benevolent sexism. *Journal of Personality and Social Psychology, 70*(3), 491–512. https://doi.org/10.1037/0022-3514.70.3.491

Goebel, B. L. (1984). Age stereotypes held by student nurses. *Journal of Psychology, 116*(2), 249–254. https://doi.org/10.1080/00223980.1984.9923644

Granleese, J., & Sayer, G. (2006). Gendered ageism and "lookism": A triple jeopardy for female academics. *Women in Management Review, 21*(6), 500-517. https://doi.org/10.1108/09649420610683480

Greenberg, J. (1982). Approaching equity and avoiding inequity in groups and organizations. In J. D. Greenberg & R. L. Cohen (Eds.), *Equity and justice in social behavior* (pp. 389–435). Academic Press.

Greenberg, J. (1994). Using socially fair treatment to promote acceptance of a work site smoking ban. *Journal of Applied Psychology, 79*(2), 288–297. https://doi.org/10.1037/0021-9010.79.2.288

Greenwald A. G., Poehlman T. A., Uhlmann E. L., & Banaji M. R (2009). Understanding and using the Implicit Association Test: III. Meta-analysis of predictive validity. *Journal of Personality and Social Psychology, 97*(1), 17–41. https://doi.org/10.1037/a0015575

Gringart, E., Helmes, E., & Speelman, C. P. (2005). Exploring attitudes toward older workers among Australian employers: An empirical study. *Journal of Aging & Social Policy, 17*(3), 85-103. https://doi.org/10.1300/J031v17n03_05

Guillén, L., & Kunze, F. (2019). When age does not harm innovative behavior and perceptions of competence: Testing interdepartmental collaboration as a social buffer. *Human Resource Management, 58*(3), 301-316. https://doi.org/10.1002/hrm.21953

Haefner, J. E. (1977). Race, age, sex, and competence as factors in employer selection of the disadvantaged. *Journal of Applied Psychology, 62*(2), 199-202. https://doi.org/10.1037/0021-9010.62.2.199

Hair, J.F., Black, W.C, Babin, B. J., & Anderson, R. E. (2018). *Multivariate Data Analysis* (8th ed). Cengage Learning EMEA.

Hanrahan, E. A., Thomas, C. L., & Finkelstein, L. M. (2023). You're too old for that! Ageism and prescriptive stereotypes in the workplace. *Work, Aging and Retirement, 9*(1), 87–102. https://doi.org/10.1093/workar/waab037

Harkness, J. (2003). Questionnaire translation. In J. A. Harkness, F. J. R. van de Vijver, & P. P. Mohler (Eds.), *Cross-cultural Survey Methods* (pp. 35-56). Wiley.

Hassell, B. L., & Perrewé, P. L. (1993). An examination of the relationship between older workers' perceptions of age discrimination and employee psychological states. *Journal of Managerial Issues, 9*(2), 109-120. https://doi.org/10.1037/pspi0000262

Heilman, M. E. (2001). Description and prescription: How gender stereotypes prevent women's ascent up the organizational ladder. *The Journal of Social Issues*, *57*(4), 657–674. https://doi:10.1111/0022-4537.00234

Heilman, M. E., Caleo, S., & Manzi, F. (2024). Women at work: Pathways from gender stereotypes to gender bias and discrimination. *Annual Review of Organizational Psychology and Organizational Behavior, 11*(1), 165-192. https://doi.org/10.1146/annurev-orgpsych-110721-034105

Helaß, M., Greinacher, A., Götz, S., Müller, A., Gündel, H., Junne, F., Nikendei, C., & Maatouk, I. (2022). Age stereotypes towards younger and older colleagues in registered nurses and supervisors in a university hospital: A generic qualitative study. *Journal of Advanced Nursing, 78*(2), 471-485. https://doi.org/10.1111/jan.15021

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). The weirdest people in the world? *Behavioral and Brain Sciences*, *33*(2-3), 61-83. https://doi.org /10.1017/S0140525X0999152X

Henry, H., Zacher, H., & Desmette, D. (2015). Reducing age bias and turnover intentions by enhancing intergenerational contact quality in the workplace: The role of opportunities for generativity and development. *Work, Aging and Retirement, 1*(3), 243-253. https://doi.org/10.1093/workar/wav005

Hewstone, M., Rubin, M., & Willis, H. (2002). Intergroup bias. *Annual Review of Psychology*, *53*(1), 575–604. https://doi:10.1146/annurev.psych.53.100901.135109

Heywood, J. S., Ho, L.-S., & Wei, X. (1999). The determinants of hiring older workers: Evidence from Hong Kong. *ILR Review, 52*(3), 444-459. https://doi.org/10.1177/001979399905200305

Ho, A. K., Sidanius, J., Kteily, N., Sheehy-Skeffington, J., Pratto, F., Henkel, K. E., Foels, R., & Stewart, A. L. (2015). The nature of social dominance orientation: Theorizing and measuring preferences for intergroup inequality using the new SDO scale. *Journal of Personality and Social Psychology, 109*(6), 1003–1028. https://doi.org/10.1037/pspi0000033

Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions and organizations across nations*. Sage.

Hommelhoff, S., & Scheibe, S. (2022). Conducting experiments and intervention studies to understand age and work. In H. Zacher & C. W. Rudolph (Eds.), *Age and work: Advances in theory, methods, and practice* (pp. 186–201). Routledge. https://doi.org/10.4324/9781003089674-14

Horwitz, S. K., & Horwitz, I. B. (2007). The effects of team diversity on team outcomes: A meta-analytic review of team demography. *Journal of Management*, *33*(6), 987-1015. https://doi.org/10.1177/0149206307308587 https://doi.org/10.1037/0022- 3514.82.6.878

Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues, and applications* (pp. 76–99). Sage.

Iversen, T. N., Larsen, L., & Solem, P. E. (2009). A conceptual analysis of ageism. *Nordic Psychology*, *61*(3), 4-22.http://dx.doi.org/10.1027/1901-2276.61.3.4

Iweins, C., Desmette, D., Yzerbyt, V., & Stinglhamber, F. (2013). Ageism at work: The impact of intergenerational contact and organizational multi-age perspective. *European Journal of Work and Organizational Psychology*, *22*(3), 331-346. doi:10.1080/1359432x.2012.748656

Jackman, M. R. (1994). *The velvet glove: Paternalism and conflict in gender, class, and race relations*. University of California Press.

Jelenko, J. (2020). The role of intergenerational differentiation in perception of employee engagement and job satisfaction among older and younger employees in Slovenia. *Changing Societies & Personalities, 4*(1), 68-90. https://doi.org/10.15826/csp.2020.4.1.090

Kanagasabai, N. (2016). In the silences of a newsroom: Age, generation, and sexism in the Indian television newsroom. *Feminist Media Studies, 16*(4), 663-677. https://doi.org/10.1080/14680777.2016.1193296

Kaufmann, M. C., Krings, F., Zebrowitz, L. A., & Sczesny, S. (2017). Age bias in selection decisions: The role of facial appearance and fitness impressions. *Frontiers in Psychology, 8*, 2065. https://doi.org/10.3389/fpsyg.2017.02065

Kelan, E. K. (2014). From biological clocks to unspeakable inequalities: The intersectional positioning of young professionals. *British Journal of Management, 25*(4), 790-804. https://doi.org/10.1111/1467-8551.12062

Kessler, E.-M., Rahn, S., & Klapproth, F. (2020). Do young people prefer older psychotherapists? *European Journal of Ageing, 17*(1), 119-124. https://doi.org/10.1007/s10433-019-00519-9

King, S. P., & Bryant, F. B. (2017). The Workplace Intergenerational Climate Scale (WICS): A self-report instrument measuring ageism in the workplace. *Journal of Organizational Behavior*, *38*(1), 124-151. https://doi.org/10.1002/job.2118

Kite, M. E., & Wagner, L. S. (2002). Attitudes toward older adults. In T. D. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 129–161). Massachusetts: MIT Press.

Kite, M. E., Stockdale, G. D., Whitley Jr., B. E., & Johnson, B. T. (2005). Attitudes toward younger and older adults: An updated meta-analytic review. *Journal of Social Issues, 61*(2), 241–266. https://doi.org/10.1111/j.1540-4560.2005.00404.x

Kleissner, V., & Jahn, G. (2020a). Dimensions of work-related age stereotypes and in-group favoritism. *Research on Aging, 42*(3-4), 126-136. https://doi.org/10.1177/0164027519896189

Kleissner, V., & Jahn, G. (2020b). Implicit and explicit measurement of work-related age attitudes and age stereotypes. *Frontiers in Psychology, 11*, 579155. https://doi.org/10.3389/fpsyg.2020.579155

Kmicinska, M., Zaniboni, S., Truxillo, D. M., Fraccaroli, F., & Wang, M. (2016). Effects of rater conscientiousness on evaluations of task and contextual performance of older and younger co-workers. *European Journal of Work and Organizational Psychology, 25*(5), 707-721. https://doi.org/10.1080/1359432X.2016.1147428

Koenig, A. M. (2018). Comparing prescriptive and descriptive gender stereotypes about children, adults, and the elderly. *Frontiers in Psychology, 9,*1086. https://doi.org/10.3389/fpsyg.2018.01086

Kopelman, R. E., Prottas, D. J., & Falk, D. W. (2010). Construct validation of a Theory X/Y behavior scale. *Leadership & Organization Development Journal, 31*(2), 120-135. https://doi.org/10.1108/01437731011024385

Kornadt, A. E., de Paula Couto, C., & Rothermund, K. (2022). Views on Aging – Current Trends and Future Directions for Cross-Cultural Research. *Online Readings in Psychology and Culture*, 6(2). https://doi.org/10.9707/2307-0919.1176

Kovacs, K., Albrecht, J., Jadia, N., Voyles, E., & Finkelstein, L. (2013, December). The power of negative metastereotypes at work: Confirmation vs. reactance. *Northern Illinois University Psychology Undergraduate Research Conference*, DeKalb, IL.

Krings, F., Sczesny, S., & Kluge, A. (2011). Stereotypical inferences as mediators of age discrimination: The role of competence and warmth. *British Journal of Management, 22*(2), 187-201. https://doi.org/10.1111/j.1467-8551.2010.00721.x

Kunze, F., & Menges, J. I. (2017). Younger supervisors, older subordinates: An organizational-level study of age differences, emotions, and performance. *Journal of Organizational Behavior, 38*(4), 461-486. https://doi.org/10.1002/job.2129

Kunze, F., Boehm, S. A., & Bruch, H. (2011). Age diversity, age discrimination climate and performance consequences-a cross organizational study. *Journal of Organizational Behavior,* 32(2), 264–290. https://doi.org/10.1002/job.698

Kunze, F., Boehm, S., & Bruch, H. (2013). Organizational performance consequences of age diversity: Inspecting the role of diversity-friendly HR policies and top managers' negative age stereotypes. *The Journal of Management Studies, 50*(3), 413–442. https://doi.org/10.1111/joms.12016

Lacy, D. A. (2005). You are not quite as old as you think: Making the case for reverse age discrimination under the ADEA. *Berkeley Journal of Employment and Labor Law, 26*, 363.

Lahey, J. N. (2008). Age, women, and hiring: An experimental study. *Journal of Human Resources, 43*(1), 30-56. https://doi.org/10.1353/jhr.2008.0026

Lamont, R. A., Swift, H. J., & Abrams, D. (2015). A review and meta-analysis of age-based stereotype threat: Negative stereotypes, not facts, do the damage. *Psychology and Aging, 30*(1), 180–193. https://doi.org/10.1037/a0038586

Lamont, R. A., Swift, H. J., & Drury, L. (2021). Understanding perceived age-based judgement as a precursor to age-based stereotype threat in everyday settings. *Frontiers in Psychology, 12*, 640567. https://doi.org/10.3389/fpsyg.2021.640567

Leach, C. W., Ellemers, N., & Barreto, M. (2007). Group virtue: The importance of morality (vs. competence and sociability) in the positive evaluation of in-groups. *Journal of Personality and Social Psychology, 93*, 234-249. https://doi.org/10.1037/0022-3514.93.2.234

Lee, S. Y., Pitesa, M., Thau, S., & Pillutla, M. M. (2015). Discrimination in selection decisions: Integrating stereotype fit and interdependence theories. *Academy of Management Journal, 58*(3), 789-812. https://doi.org/10.5465/amj.2013.0571

Leung, K., Lam, B. C., Bond, M. H., Conway III, L. G., Gornick, L. J., Amponsah, B., … & Zhou, F. (2012). Developing and evaluating the social axioms survey in eleven countries: Its relationship with the five-factor model of personality. *Journal of Cross-Cultural Psychology, 43*(5), 833-857. https://doi.org/10.1177/0022022111416361

Levin, W. C. (1988). Age stereotyping: College student evaluations. *Research on Aging, 10*(2), 134–148. https://doi.org/10.1177/0164027588101007

Levy, B. R., & Banaji, M. R. (2002). Implicit ageism. In T. D. Nelson (Ed.), *Ageism: Stereotyping and prejudice against older persons* (pp. 49–76). MIT Press.

Lewis, H. M., Gietzen, L. J., Patt, S. H., & Buchanan, J. A. (2023). Age-related microaggressions: Their frequency, emotional impact, and relationship to negative affect. *International Journal of Aging and Human Development*, *91*, 4150231219011. https://doi.org/10.1177/00914150231219011

Loretto, W., Duncan, C., & White, P. J. (2000). Ageism and employment: controversies, ambiguities and younger people's perceptions. *Ageing and Society, 20*(3), 279-302. https://doi.org/10.1017/S0144686X00007741

Lucas, R. E., & Keegan, S. N. (2007). Young workers and the National Minimum Wage. *Equal Opportunities International, 26*(6), 573-589. https://doi.org/10.1108/02610150710777051
Lucas, R., & Keegan, S. (2008). Probing the basis for differential pay practices of younger workers in low paying hospitality firms. *Human Resource Management Journal, 18*(4), 386-404. https://doi.org/10.1111/j.1748-8583.2008.00078.x
Luoh, H.-F., & Tsaur, S.-H. (2011). Customers' perceptions of service quality: Do servers' age stereotypes matter? *International Journal of Hospitality Management, 30*(2), 283-289. https://doi.org/10.1016/j.ijhm.2010.09.002
Luoh, H.-F., & Tsaur, S.-H. (2013). The effects of age stereotypes on tour leader roles. *Journal of Travel Research, 53*(1), 111-123. https://doi.org/10.1177/0047287513482774
Lyons, B. J., Wessel, J. L., Tai, Y. C., & Ryan, A. M. (2014). Strategies of job seekers related to age-related stereotypes. *Journal of Managerial Psychology, 29*(8), 1009-1027. https://doi.org/10.1108/JMP-03-2013-0078
Macdonald, J. L., & Levy, S. R. (2016). Ageism in the workplace: The role of psychosocial factors in predicting job satisfaction, commitment, and engagement. *Journal of Social Issues, 72*(1), 169-190. https://doi.org/10.1111/josi.12185
Malinen, S., & Johnston, L. (2013). Workplace ageism: Discovering hidden bias. *Experimental Aging Research, 39*(4), 445-465. https://doi.org/10.1080/0361073X.2013.808111
Manzi, F., Caleo, S., & Heilman, M. E. (2024). Unfit or disliked: How descriptive and prescriptive gender stereotypes lead to discrimination against women. *Current Opinion in Psychology, 101928*. https://doi.org/10.1016/j.copsyc.2024.101928
Marchiondo L. A., Ran S., Cortina L. M. (2018). Modern discrimination. In A. J. Colella & E. B. King (Eds.), *The Oxford handbook of workplace discrimination* (pp. 217–236). Oxford University Press.
Marchiondo, L. A. (2015). Age stereotypes and discrimination. In R. J. Burke, C. Cooper, & A.S.G. Antoniou (Eds.), *The multi-generational and aging workforce: Challenges and opportunities* (pp. 234–249). Edward Elgar Publishing. https://doi.org/10.4337/9781783476589.00020
Marchiondo, L. A., Gonzales, E., & Ran, S. (2016). Development and validation of the workplace age discrimination scale. *Journal of Business and Psychology, 31*(4), 493-513. https://doi.org/10.1007/s10869-015-9425-6
Marchiondo, L. A., Gonzales, E., & Williams, L. J. (2019). Trajectories of perceived workplace age discrimination and long-term associations with mental, self-rated, and occupational health. *The Journals of Gerontology: Series B, 74*(4), 655-663. https://doi.org/10.1093/geronb/gbx095
Marcus, J. (2022). The essential role of intersectionality in the science of work and aging. *Work, Aging and Retirement*, *8*(4), 358-360. https://doi.org/10.1093/workar/waab036
Marcus, J., & Fritzsche, B. A. (2015). One size doesn't fit all: Toward a theory on the intersectional salience of ageism at work. *Organizational Psychology Review, 5*(2), 168–188. https://doi.org/10.1177%2F2041386614556015
Marcus, J., & Fritzsche, B. A. (2016). The cultural anchors of age discrimination in the workplace: A multilevel framework. *Work, Aging and Retirement*, *2*(2), 217–229. https://doi:10.1093/workar/waw007
Marques, S. (2016). *Discriminação da terceira idade*. Fundação Francisco Manuel dos Santos.
Marques, S., Mariano, J., Mendonça, J., De Tavernier, W., Hess, M., Naegele, L., ... & Martins, D. (2020). Determinants of ageism against older adults: A systematic review.

International Journal of Environmental Research and Public Health, 17(7), 2560. https://doi.org/10.3390/ijerph17072560
Martin, A. E., & North, M. S. (2022). Equality for (almost) all: Egalitarian advocacy predicts lower endorsement of sexism and racism, but not ageism. *Journal of Personality and Social Psychology*, *123*(2), 373–399. http://dx.doi.org/10.1037/pspi0000262
McCann, R. M., & Giles, H. (2007). Age-differentiated communication in organizations: Perspectives from Thailand and the United States. *Communication Research Reports, 24*(1), 1-12. https://doi.org/10.1080/08824090601120841
McCann, R. M., & Keaton, S. A. (2013). A cross cultural investigation of age stereotypes and communication perceptions of older and younger workers in the USA and Thailand. *Educational Gerontology, 39*(5), 326-341. https://doi.org/10.1080/03601277.2012.700822
McCarthy, J., Heraty, N., Cross, C., & Cleveland, J. N. (2014). Who is considered an "older worker"? Extending our conceptualisation of "older" from an organisational decision maker perspective. *Human Resource Management Journal, 24*(4), 374–393. https://doi.org/10.1111/1748-8583.12041
McClellan, S., & Beggan, J. K. (2017). The stigma of being young on the experience of rate-busting as positive deviance. *Deviant Behavior, 38*(9), 1059-1073. https://doi.org/10.1080/01639625.2016.1237836
Meinich, J., & Sang, K. (2018). "It does not help to look young and dumb…": Ageism and intergenerational contact in the Norwegian technical industry. *Equality, Diversity and Inclusion, 37*(3), 202-218. https://doi.org/10.1108/EDI-04-2017-0089
Menec, V. H., & Perry, R. P. (1995). Reactions to stigmas: The effect of targets' age and controllability of stigmas. *Journal of Aging and Health, 7*(3), 365–383. https://doi.org/10.1177/089826439500700302
Milliken, F. J., & Martins, L. L. (1996). Searching for common threads: Understanding the multiple effects of diversity in organizational groups. *Academy of Management Review, 21*, 402-433.
Mooney, S. (2016). Wasted youth in the hospitality industry: Older workers' perceptions and misperceptions about younger workers. *Hospitality & Society, 6*(1), 9-30. https://doi.org/10.1386/hosp.6.1.9_1
Morgan, K. (2021, August 5). The 'acute' ageism problem hurting young workers. *BBC*. https://www.bbc.com/worklife/article/20210730-the-acute-ageism-problem-hurting-young-workers
Mulders, J. O. (2020). Employers' age-related norms, stereotypes and ageist preferences in employment. *International Journal of Manpower, 41*(5), 523-534. https://doi.org/10.1108/IJM-10-2018-0358
Muthén, L. K., & Muthén, B. O. (2017). *Mplus User's Guide* (8th ed.). Muthén & Muthén.
National Academies of Sciences, Engineering, and Medicine (2020). *Are generational categories meaningful distinctions for workforce management?* National Academies Press. https://doi.org/10.17226/25796
Nelson, T. D. (2005). Ageism: Prejudice against our feared future self. *Journal of Social Issues, 61*(2), 207–222. https://doi.org/10.1111/j.1540-4560.2005.00402.x
Nelson, T. D. (2009). Ageism. In T. D. Nelson (Ed.), *Handbook of prejudice, stereotyping and discrimination* (pp. 431–440). Psychology Press.
Nelson, T. D. (2016). The age of ageism. *Journal of Social Issues, 72*(1), 191–198. https://doi.org/10.1111/josi.12162
Nelson, T. D. (Ed.). (2002). *Ageism: Stereotyping and prejudice against older persons*. MIT press.

Ng, T. W. H., & Feldman, D. C. (2012). Evaluating six common stereotypes about older workers with meta-analytical data. *Personnel Psychology, 65*(4), 821–858. https://doi.org/10.1111/peps.12003
Nickson, D., & Warhurst, C. (2007). Opening Pandora's Box: Aesthetic labour and hospitality. In *Hospitality: A social lens* (pp. 155-172). Routledge.
North, M. S. (2019). A GATE to understanding "older" workers: Generation, age, tenure, experience. *ANNALS of the Academy of Management, 13*, 414–443. https://doi.org/10.5465/annals.2017.0125
North, M. S., & Fiske, S. T. (2012). An inconvenienced youth? Ageism and its potential intergenerational roots. *Psychological Bulletin, 138*(5), 982–997. https://doi.org/10.1037/a0027843
North, M. S., & Fiske, S. T. (2013a). Act your (old) age: Prescriptive, ageist biases over succession, consumption, and identity. *Personality and Social Psychology Bulletin, 39*(6), 720-734. https://doi.org/10.1177/0146167213480043
North, M. S., & Fiske, S. T. (2013b). A prescriptive intergenerational-tension ageism scale: Succession, identity, and consumption (SIC). *Psychological Assessment, 25*(3), 706–713. https://doi.org/10.1037/a0032367
North, M. S., & Fiske, S. T. (2015). Intergenerational resource tensions in the workplace and beyond: Individual, interpersonal, institutional, international. *Research in Organizational Behavior*, *35*, 159-179. https://doi.org/10.1016/j.riob.2015.10.003
North, M. S., & Fiske, S. T. (2016). Resource scarcity and prescriptive attitudes generate subtle, intergenerational older-worker exclusion. *Journal of Social Issues, 72*(1), 122–145. https://doi.org/10.1111/josi.12159
Oakes, P. J., & Turner, J. C. (1990). Is limited information processing capacity the cause of social stereotyping? *European Review of Social Psychology, 1*, 111–135. https://doi.org/10.1080/14792779108401859
Ograjenšek, I., Redek, T., & Domadenik, P. (2009). Slovenian employers and the challenge of the longer working life. *Revija za socijalnu politiku, 16(*2), 141-158. https://doi.org/10.3935/rsp.v16i2.835
Operario, D. and Fiske, S.T. (2003). Stereotypes: Content, Structures, Processes, and Context. In R. Brown & S.L. Gaertner (Eds.), *Blackwell Handbook of Social Psychology: Intergroup Processes* (pp. 22–44). Blackwell Publishers Ltd. https://doi.org/10.1002/9780470693421.ch2
Paleari, F. G., Brambilla, M., & Fincham, F. D. (2019). When prejudice against you hurts others and me: The case of ageism at work. *Journal of Applied Social Psychology, 49*(11), 704-720. https://doi.org/10.1111/jasp.12628
Palmore, E. B. (1999). *Ageism: Negative and Positive.* New York: Springer Publishing Company.
Patient, D., Esteves, C., Vauclair, C-M., Schmitz, S., & Rosa, M. (2024). *Understanding Ageism Toward Younger and Older Workers.* Fundação Francisco Manuel dos Santos.
Perry, E. L., & Bourhis, A. C. (1998). A closer look at the role of applicant age in selection decisions. *Journal of Applied Social Psychology, 28*(18), 1670-1697. https://doi.org/10.1111/j.1559-1816.1998.tb01340.x
Perry, E. L., & Parlamis, J. D. (2005). Age and ageism in organizations: A review and consideration of national culture. In A. M. Konrad, P. Prasad, & J. K. Pringle (Eds.), *Handbook of Workplace Diversity* (pp. 345-370). Sage. https://doi.org/10.4135/9781848608092.n15
Perry, E. L., Golom, F. D., Catenacci, L., Ingraham, M. E., Covais, E. M., & Molina, J. J. (2017). Talkin' 'bout your generation: The impact of applicant age and generation on

hiring-related perceptions and outcomes. *Work, Aging and Retirement, 3*(2), 186-199. https://doi.org/10.1093/workar/waw029
Perry, E. L., Kulik, C. T., & Bourhis, A. C. (1996). Moderating effects of personal and contextual factors in age discrimination. *Journal of Applied Psychology, 81*(6), 628-647. https://doi.org/10.1037/0021-9010.81.6.628
Peters, M. D. J., Godfrey, C. M., Khalil, H., McInerney, P., Parker, D., & Soares, C. B. (2015). Guidance for conducting systematic scoping reviews. *International Journal of Evidence-Based Healthcare*, *13*(3), 141–146. https://doi:10.1097/XEB.0000000000000050
Petery, G. A., Wee, S., Dunlop, P. D., & Parker, S. K. (2020). Older workers and poor performance: Examining the association of age stereotypes with expected work performance quality. International *Journal of Selection and Assessment, 28*(4), 510-521. https://doi.org/10.1111/ijsa.12309
Petit, P. (2007). The effects of age and family constraints on gender hiring discrimination: A field experiment in the French financial sector. *Labour Economics, 14*(3), 371-391. https://doi.org/10.1016/j.labeco.2006.01.006
Petrow, S. (2024, December 8). O idadismo não acontece só quando se envelhece – os jovens também o sentem. *Público.* https://www.publico.pt/2024/12/08/p3/noticia/idadismo-nao-acontece-so-envelhece-jovens-tambem-sentem-2114838
Posthuma, R. A., & Campion, M. A. (2009). Age stereotypes in the workplace: Common stereotypes, moderators, and future research directions. *Journal of Management, 35*(1), 158-188. https://doi.org/10.1177/0149206308318617
Prazeres, F., & Passos, L. (2021). Age discrimination at work against health-related professionals in Portugal. *Work, 70*(3), 929-935. https://doi.org/10.3233/WOR-213612
Previtali, F., & Spedale, S. (2021). Doing age in the workplace: Exploring age categorisation in performance appraisal. *Journal of Aging Studies, 59*, 100981. https://doi.org/10.1016/j.jaging.2021.100981
Principi, A., Fabbietti, P., & Lamura, G. (2015). Perceived qualities of older workers and age management in companies. *Personnel Review, 44*(5), 801-820. https://doi.org/10.1108/PR-09-2013-0158
Protzko, J., & Schooler, J. W. (2019). *Kids these days: Why the youth of today seem lacking*. *Psychological Science, 30*(1), 3-16. https://doi.org/10.1126/sciadv.aav5916
Pullins, E. B., Mallin, M. L., Buehrer, R. E., & Jones, D. E. (2011). How salespeople deal with intergenerational relationship selling. *Journal of Business and Industrial Marketing, 26*(6), 443-455. https://doi.org/10.1108/08858621111156430
Rabl, T. (2010). Age, discrimination, and achievement motives: A study of German employees. *Personnel Review, 39*(4), 448-467. https://doi.org/10.1108/00483481011045416
Rabl, T., & Kühlmann, T. M. (2009). Work-life balance and demographic change: Relationships with age and age discrimination. *Zeitschrift für Personalpsychologie, 8*(2), 88-99. https://doi.org/10.1026/1617-6391.8.2.88
Rabl, T., & Triana, M. C. (2013). How German employees of different ages conserve resources: Perceived age discrimination and affective organizational commitment. *The International Journal of Human Resource Management, 24*(19), 3599-3612. https://doi.org/10.1080/09585192.2013.777936
Rauschenbach, C., Göritz, A. S., & Hertel, G. (2012). Age stereotypes about emotional resilience at work. *Educational Gerontology, 38*(8), 511-519. https://doi.org/10.1080/03601277.2011.567187
Raymer, M., Reed, M., Spiegel, M., & Purvanova, R. K. (2017). An examination of generational stereotypes as a path towards reverse ageism. *The Psychologist-Manager Journal, 20*(3), 148-175. https://doi.org/10.1037/mgr0000057

Rego, A., Vitória, A., Cunha, M. P. e., Tupinambá, A., & Leal, S. (2017). Developing and validating an instrument for measuring managers' attitudes toward older workers. *The International Journal of Human Resource Management, 28*(13), 1866-1899. https://doi.org/10.1080/09585192.2015.1128462

Rego, A., Vitória, A., Tupinambá, A., Júnior, D. R., Reis, D., Cunha, M. P. e., & Lourenço-Gil, R. (2018). Brazilian managers' ageism: A multiplex perspective. *International Journal of Manpower, 39*(3), 414-433. https://doi.org/10.1108/IJM-09-2016-0167

Riach, P. A., & Rich, J. (2010). An experimental investigation of age discrimination in the English labor market. *Annals of Economics and Statistics (99/100)*, 169-185. https://doi.org/10.2307/41219164

Richardson, B., Webb, J., Webber, L., & Smith, K. (2013). Age discrimination in the evaluation of job applicants. *Journal of Applied Social Psychology, 43*(1), 35-44. https://doi.org/10.1111/j.1559-1816.2012.00979.x

Rivenburgh, N. K., & Manusov, V. (2010). Decentering as a research design strategy for international and intercultural research. *Journal of International Communication, 16*(1), 23-40. https://doi.org/10.1080/13216597.2010.9674761

Roberson, Q. M. (2019). Diversity in the workplace: A review, synthesis, and future research agenda. *Annual Review of Organizational Psychology and Organizational Behavior*, *6*(1), 69-88. https://doi.org/10.1146/annurev-orgpsych- 012218-015243

Rocha, S. M. (2024, August 12). Idadismo: mais de 40% de jovens já sentiram discriminação no trabalho devido à idade. *ONU News.* https://news.un.org/pt/story/2024/08/1835921

Rollero, C., Glick, P., & Tartaglia, S. (2014). Psychometric properties of short versions of the Ambivalent Sexism Inventory and Ambivalence Toward Men Inventory. *TPM-Testing, Psychometrics, Methodology in Applied Psychology, 21*(2), 149-159. https://doi.org/10.4473/TPM21.2.3

Rosen, B., & Jerdee, T. H. (1976). The influence of age stereotypes on managerial decisions. *Journal of Applied Psychology, 61*(4), 428-432. https://doi.org/10.1037/0021-9010.61.4.428

Rosenthal, L., & Levy, S. R. (2012). The relation between polyculturalism and intergroup attitudes among racially and ethnically diverse adults. *Cultural Diversity and Ethnic Minority Psychology, 18*(1), 1-16. https://doi.org/10.1037/a0026490

Rožman, M., Černe, M., & Savić, J. (2016). Stereotypes of older employees compared to younger employees in Slovenian companies. *Journal of Contemporary Management Issues, 21*(2), 37-54. https://hrcak.srce.hr/171240

Rudman, L. A. (1998). Self-promotion as a risk factor for women: The costs and benefits of counterstereotypical impression management. *Journal of Personality and Social Psychology, 74*, 629–645. https://doi.org/10.1037/0022-3514.74.3.629

Rudman, L. A., & Fairchild, K. (2004). Reactions to counterstereotypic behavior: The role of backlash in cultural stereotype maintenance. *Journal of Personality and Social Psychology, 87*, 157–176. https://doi.org/10.1037/0022-3514.87.2.157

Rudman, L. A., & Glick, P. (2002). Prescriptive gender stereotypes and backlash toward agentic women. *Journal of Social Issues, 57*(4), 743-762. https://doi.org/10.1111/0022-4537.00239

Rudman, L. A., & Phelan, J. E. (2008). Backlash effects for disconfirming gender stereotypes in organizations. In A. P. Brief & B. M. Staw (Eds.), *Research in organizational behavior* (Vol. 28, pp. 61–79). Elsevier.

Rudman, L. A., Moss-Racusin, C. A., Glick, P., & Phelan, J. E. (2012). Reactions to vanguards: Advances in backlash theory. In P. G. Devine & E. A. Plant (Eds.), *Advances in Experimental Social Psychology* (Vol. 45, pp. 167–227). Elsevier. http://dx.doi.org/10.1016/ B978-0-12-394286-9.00004-4

Rudnev, M., Lytkina, E., Davidov, E., Schmidt, P., & Zick, A. (2018). Testing Measurement Invariance for a Second- Order Factor: A Cross-National Test of the Alienation Scale. *Methods, Data, Analyses: A Journal for Quantitative Methods and Survey Methodology(MDA), 12*(1), 47-76. https://doi.org/10.12758/mda.2017.11

Rudolph, C. W., & Zacher, H. (2017). Considering generations from a lifespan developmental perspective. *Work, Aging and Retirement*, *3*(2), 113-129. https://doi.org/10.1093/workar/waw019

Rudolph, C. W., Rauvola, R. S., Costanza, D. P., & Zacher, H. (2021). Generations and generational differences: Debunking myths in organizational science and practice and paving new paths forward. *Journal of Business and Psychology*, *36*, 945-967. https://doi.org/10.1007/s10869-020-09715-2

Ruggeri, A. (2017, October 3). People have always whinged about young adults. Here's proof. *BBC Capital*. http://www.bbc.com/capital/story/20171003-proof-that-people-have-always-complained-about-young-adults

Ruggs, E. N., Hebl, M. R., Walker, S. S., & Fa-Kaji, N. (2014). Selection biases that emerge when age meets gender. *Journal of Managerial Psychology, 29*(8), 1028-1043. https://doi.org/10.1108/JMP-07-2012-0204

Rupp, D. E., Vodanovich, S. J., & Credé, M. (2006). Age bias in the workplace: The impact of ageism and causal attributions. *Journal of Applied Social Psychology, 36*(6), 1337-1364. https://doi.org/10.1111/j.0021-9029.2006.00062.x

Ryan, K. M., King, E. B., & Finkelstein, L. M. (2015). Younger workers' metastereotypes, workplace mood, attitudes, and behaviors. *Journal of Managerial Psychology, 30(*1), 54-70. https://doi.org/10.1108/JMP-07-2014-0215 (check this)

Sagie, A., & Weisberg, J. (1996). A structural analysis of behavior in work situations shared by group members. *The Journal of Psychology, 130*(4), 371-381. https://doi.org/10.1080/00223980.1996.9915025

Schimel, J., Simon, L., Greenberg, J., Pyszczynski, T., Solomon, S., Waxmonsky, J., et al. (1999). Stereotypes and terror management: Evidence that mortality salience enhances stereotypic thinking and preferences. *Journal of Personality and Social Psychology, 77*(5), 905–926. https://doi.org/10.1037/0022-3514.77.5.905

Schimmack, U. (2021). The Implicit Association Test: A method in search of a construct. *Perspectives on Psychological Science*, *16*(2), 396-414. https://doi.org/10.1177/1745691619863798

Schloegel, U., Stegmann, S., Maedche, A., & van Dick, R. (2016). Reducing age stereotypes in software development: The effects of awareness- and cooperation-based diversity interventions. *Journal of Systems and Software, 12*1, 1–15. https://doi.org/10.1016/j.jss.2016.07.041

Schloegel, U., Stegmann, S., Maedche, A., & van Dick, R. (2018a). Age stereotypes in agile software development – An empirical study of performance expectations. *Information Technology & People, 31*(1), 41-62. https://doi.org/10.1108/ITP-07-2015-0186

Schloegel, U., Stegmann, S., van Dick, R., & Maedche, A. (2018b). Age stereotypes in distributed software development: The impact of culture on age-related performance expectations. *Information and Software Technology, 97*, 146-162. https://doi.org/10.1016/j.infsof.2018.01.009

Schmitz, S., Rosa, M. H., Patient, D., Vauclair, C.-M., & Mariano, J. (2024). *Workplace youngism: A scoping review of ageism towards younger workers*. [Manuscript submitted for publication].

Schmitz, S., Vauclair, C-M., Esteves, C., Patient, D., & Rosa, M. (2023). Assessing Younger Worker Prescriptive Stereotypes: The Workplace Ambivalent Youngism Scale (WAYS). In S. Taneja (Ed.), *Proceedings of the Eighty-third Annual Meeting of the Academy of*

Management, USA.
Schmitz, S., Vauclair, C-M., Esteves, C., Patient, D., & Rosa, M. (2024). *What do we expect from younger workers? Development and validation of the Workplace Ambivalent Youngism Scale (WAYS).* [Manuscript under preparation].
Schröder, M. (2024). Work motivation is not generational but depends on age and period. Journal of Business and Psychology. 39(4), 897–908. https://doi.org/10.1007/s10869-023-09921-8
Schumacker, R. E., & Lomax, R. G. (2010). *A beginner's guide to structural equation modeling*. Routledge. https://doi.org/10.4324/9780203851319
Schwab, D. P., & Heneman, H. G. (1978). Age stereotyping in performance appraisal. *Journal of Applied Psychology, 63*(5), 573-578. https://doi.org/10.1037/0021-9010.63.5.573
Seder, J. (2013, August 15). 15 historical complaints about young people. *HuffPost*. https://www.huffpost.com/entry/15-historical-complaints-about-young-people_b_3701456
Shadish, W. R., Cook, T. D., & Campbell, D. T. (2002). *Experimental and quasi-experimental designs for generalized causal inference*. Houghton Mifflin Company.
Silvestre, A., Huart, J., & Dardenne, B. (2017). Implicit belittlements call for implicit measures: Emotional reactions to youth paternalistic stereotypes. *Psychologica Belgica, 57*(2), 133. https://doi.org/10.5334/pb.351
Sinclair, C., Joffe, T., Ginnivan, N., Parker, S. K., & Anstey, K. J. (2023). A scoping review of workplace interventions to promote positive attitudes toward older workers and reduce age-based discrimination. *Work, Aging and Retirement*, *10*(2), 61–76. https://doi:10.1093/workar/waad013
Singer, M. S. (1986). Age stereotypes as a function of profession. *The Journal of Social Psychology, 126*(5), 691-692. https://doi.org/10.1080/00224545.1986.9713647
Snape, E., & Redman, T. (2003). Too old or too young? The impact of perceived age discrimination. *Human Resource Management Journal, 13*(1), 78–89. https://doi.org/10.1111/j.1748-8583.2003.tb00085.x
Stein, J. (2013, May). Millennials: The me me me generation. Time. http://0146167213480043time.com/247/millennials-the-me-me-me-generation/
Stone-Romero, E. F., & Stone, D. L. (2005). How do organizational justice concepts relate to discrimination and prejudice? In J. Greenberg & J. A. Colquitt (Eds.), *Handbook of organizational justice* (pp. 437-465). Lawrence Erlbaum Associates/Taylor & Francis.
Sue, D. W., Capodilupo, C. M., Torino, G. C., Bucceri, J. M., Holder, A. M. B., Nadal, K. L., & Esquilin, M. (2007). Racial microaggressions in everyday life: Implications for clinical practice. *American Psychologist, 62*(4), 271–286. https://doi.org/10.1037/0003-066X.62.4.271
Swift, H. J., Abrams, D., Marques, S., Vauclair, C.-M., Bratt, C., & Lima, M.-L. (2018). Ageism in the European region: Findings from the European social survey. In L. Ayalon, & C. Tesch-Römer (Eds.), *Contemporary Perspectives on Ageism* (pp. 441–459). Springer. https://doi:10.1007/978-3-319-73820-8_27
Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin, & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33-37). Brooks/Cole.
Terry, G., Hayfield, N., Clarke, V., & Braun, V. (2017). Thematic analysis. In C. Willig & W. S. Rogers (Eds.), *The SAGE Handbook of Qualitative Research in Psychology* (pp. 17-36). Sage.
Thibaut, J. W., & Walker, L. (1975). *Procedural justice: A psychological analysis*. Lawrence Erlbaum Associates.

Tresh, F., Steeden, B., Randsley de Moura, G., Leite, A. C., Swift, H. J., & Player, A. (2019). Endorsing and reinforcing gender and age stereotypes: The negative effect on self-rated leadership potential for women and older workers. *Frontiers in Psychology, 10*, 688. https://doi.org/10.3389/fpsyg.2019.00688

Tricco, A. C., Lillie, E., Zarin, W., O'Brien, K. K., Colquhoun, H., Levac, D., Moher, D., Peters, M. D., Horsley, T., Weeks, L. and Hempel, S., (2018). PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Annals of internal medicine, 169*(7), 467-473. https://doi.org/10.7326/M18-0850

Truxillo, D. M., & Fraccaroli, F. (2013). Research themes on age and work: Introduction to the special issue. *European Journal of Work and Organizational Psychology, 22*(3), 249–252. https://doi.org/10.1080/1359432x.2013.786604

Truxillo, D. M., Cadiz, D. M., & Hammer, L. B. (2015). Supporting the aging workforce: A review and recommendations for workplace intervention research. *Annual Review of Organizational Psychology and Organizational Behavior, 2*, 351–381. https://doi.org/10.1146/annurev-orgpsych-032414-111435

Truxillo, D. M., Finkelstein, L. M., Pytlovany, A. C., & Jenkins, J. S. (2015). Age discrimination at work: A review of the research and recommendations for the future. In A. J. Colella & E. B. King (Eds.), *The Oxford Handbook of Workplace Discrimination* (pp. 129-142). Oxford University Press. https://doi.org/10.1093/oxfordhb/9780199363643.013.10

Truxillo, D. M., McCune, E. A., Bertolino, M., & Fraccaroli, F. (2012). Perceptions of older versus younger workers in terms of big five facets, proactive personality, cognitive ability, and job performance. *Journal of Applied Social Psychology, 42*(11), 2607-2639. https://doi.org/10.1111/j.1559-1816.2012.00954.x

Turner, J.C., Hogg, M.A., Oakes, P.J., Reicher, S.D. & Wetherell, M.S. (1987). *Rediscovering the Social Group: A Self-categorization Theory.* Blackwell.

Uotinen, V., Suutama, T., & Ruoppila, I. (2003). Age identification in the framework of successful ageing. A study of older Finnish people. *International Journal of Ageing and Human Development, 56*, 173–195. https://doi.org/10.2190/6939-6W88-P2XX-GUQW

Van de Vijver, F. J., & Leung, K. (2021). *Method and data analysis for cross-cultural research* (2nd ed.). Cambridge University Press. https://doi.org/10.1017/9781107415188

Van Der Heijden, B. I. J. M. (2016). Interpersonal work context as a possible buffer against age-related stereotyping. *Ageing and Society, 38*(1), 129-165. https://doi.org/10.1017/S0144686X16001148

Van Rijswijk, W., & Ellemers, N. (2002). Context effects on the application of stereotype content to multiple categorizable targets. *Personality and Social Psychology Bulletin*, *28*(1), 90-101. https://doi.org/10.1177/0146167202281008

Van Rossem, A. H. (2019). Generations as social categories: An exploratory cognitive study of generational identity and generational stereotypes in a multigenerational workforce. *Journal of Organizational Behavior, 40*(4), 434-455. https://doi.org/10.1002/job.2341

Vasconcelos, A. F. (2016). Organizations workforce demographic age preferences: Multiple case-studies from Brazil. *Journal of Management Development, 35*(3), 406-427. https://doi.org/10.1108/JMD-08-2015-0111

Vauclair, C.-M., Marques, S., Lima, M. L., Bratt, C., Swift, H. J., & Abrams, D. (2015). Subjective social status of older people across countries: The role of modernization and employment. *The Journals of Gerontology, Series B: Psychological Sciences and Social Sciences, 70*(5), 650–660. https://doi.org/10.1093/geronb/gbu074

Weiss, E. M., & Maurer, T. J. (2004). Age discrimination in personnel decisions: A reexamination. *Journal of Applied Social Psychology, 34*(8), 1551-1562. https://doi.org/10.1111/j.1559-1816.2004.tb02786.x

Westerhof, G. J., Barrett, A. E., & Steverink, N. (2003). Forever young? *Mental Floss*. http://mentalfloss.com/article/52209/

Wood, G., Harcourt, M., & Harcourt, S. (2004). The effects of age discrimination legislation on workplace practice: a New Zealand case study. *Industrial Relations Journal*, *35*(4), 359-371. https://doi.org/10.1111/j.1468-2338.2004.00319.x

Wood, G., Wilkinson, A., & Harcourt, M. (2008). Age discrimination and working life: Perspectives and contestations - a review of the contemporary literature. *International Journal of Management Reviews*, *10*(4), 425–442. https://doi.org/10.1111/j.1468-2370.2008.00236.x

World Health Organization (2021). *Global report on ageism*. World Health Organization. https://www.who.int/publications/i/item/9789240016866

Worth, N. (2016). Who we are at work: millennial women, everyday inequalities and insecure work. *Gender, Place & Culture, 23*(9), 1302-1314. https://doi.org/10.1080/0966369X.2016.1160037

Yzerbyt, V.Y. & Demoulin, S. (2010). Intergroup relations. In: D.T. Gilbert, S.T. Fiske & G. Lindzey (Eds). *The Handbook of Social Psychology* (5th ed.) (pp.1024–1083). Hoboken, NJ: Wiley.

Zacher, H., & Bal, P. M. (2012). Professor age and research assistant ratings of passive-avoidant and proactive leadership: The role of age-related work concerns and age stereotypes. *Studies in Higher Education, 37*(7), 875-896. https://doi.org/10.1080/03075079.2011.557829

Zaniboni, S., Kmicinska, M., Truxillo, D. M., Kahn, K., Paladino, M. P., & Fraccaroli, F. (2019). Will you still hire me when I am over 50? The effects of implicit and explicit age stereotyping on resume evaluations. *European Journal of Work and Organizational Psychology, 28*(4), 453-467. https://doi.org/10.1080/1359432X.2019.1600506

Annexes

Annex A: Confirmatory Factor Analysis survey (Chapter 3)

Consent

Welcome! This is a university-sponsored research study.

PLEASE READ THE FOLLOWING CONSENT FORM AND CLICK "I CONSENT" AT THE BOTTOM.

NATURE OF RESEARCH STUDY: The study is part of a larger project about perceptions of different age groups in the workplace.

PROCEDURES: The study consists of reading several statements about your beliefs, and about how people behave in general and in the workplace in particular. You will be asked to state how much you (dis)agree with such statements. This will take about 20 minutes.

RISKS/DISCOMFORTS: The risks associated with participation in this study are no greater than those encountered in daily life. If you feel any discomfort answering the survey questions you may contact the research team by sending an email to susanaschmitz@ucp.pt.

POTENTIAL BENEFITS:

The results of this study will contribute to the advancement of knowledge in the fields of psychology and management.

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW: Your participation in this study is entirely voluntary: you choose whether to participate. If you want to withdraw from the study, please close your browser.

CONFIDENTIALITY: No study records will identify you. All answers are confidential. All study materials will refer to you by number, not by name or other identifying information. Data will be stored on a password-protected computer and will only be available to the faculty members and research staff working on the study.

WHAT YOUR CONSENT MEANS: By clicking, "I consent" below, you indicate that you understand the information in this consent form and that you agree to participate in the study. By providing your consent, you have not waived any legal rights you otherwise would have as a participant in a research study. If you do not consent, please close your browser to exit the study. This study has been approved by the Católica-Lisbon Ethics Committee on Human Persons Participation in Behavioral Sciences Research.

Do you have work experience outside Mturk?

○ Yes

○ No

Introduction

Please read all the information and answer the questions carefully. There are no right or wrong answers. Please, simply provide your honest opinion.

Data quality will be controlled: random, careless, or deceiving answers will not be taken into account and will not be paid.

Thank you very much for your participation in this important research project!

Task 1

We would like to start by asking your opinions about younger workers, young people in general, and the workplace in general.

People have expectations regarding appropriate attitudes and behaviors in the workplace. Some of these expectations depend on whether individuals are perceived as "younger" workers or "older" workers. Below are statements regarding what younger workers, in comparison to older workers, should do or should not do in the workplace. Please indicate the extent that you agree with each of the statements below, using 1=strongly disagree to 6=strongly agree.

Younger workers, especially, ….

	Strongly disagree 1	2	3	4	5	Strongly agree 6
... should not question older colleagues.	○	○	○	○	○	○
... should not question directions from superiors.	○	○	○	○	○	○

... should not challenge the organization's hierarchical order.	○	○	○	○	○	○
... should not question the organizational status quo.	○	○	○	○	○	○
... should not assume that they know everything about how to do their job.	○	○	○	○	○	○
... should ask questions instead of assuming they know everything.	○	○	○	○	○	○
... should not think that they are too good to do menial tasks.	○	○	○	○	○	○
... should prove they can be trusted to follow formal and informal rules.	○	○	○	○	○	○
... should strive to fit in the organization.	○	○	○	○	○	○
... should make efforts to be socialized into the organization.	○	○	○	○	○	○
... should show long-	○	○	○	○	○	○

term support for their organization.						
... should not see their job as just a stepping-stone to other opportunities.	○	○	○	○	○	○
... should be loyal to the organization.	○	○	○	○	○	○
... should be good with the latest technologies.	○	○	○	○	○	○
... should learn new technologies quickly and easily.	○	○	○	○	○	○
... should know how to use new technologies.	○	○	○	○	○	○
... should have stamina and not tire easily.	○	○	○	○	○	○
... should recover quickly from periods of intense work.	○	○	○	○	○	○
... should be able to execute tasks more quickly.	○	○	○	○	○	○
... should be inventive.	○	○	○	○	○	○
... should be creative and bring new perspectives.	○	○	○	○	○	○

... should be open to new things and ideas.	○	○	○	○	○	○
... should seek and ask for training.	○	○	○	○	○	○
... should actively look for ways to improve.	○	○	○	○	○	○
... should show and take initiative.	○	○	○	○	○	○
... should find ways to overcome obstacles.	○	○	○	○	○	○

Task 2

In the following we are interested in better understanding how younger people can be generally described.

To what extent do you agree or disagree with the below statements about young adults?

Today's young adults are. . .

	Strongly disagree 1	2	3	4	5	Strongly agree 6
... eager.	○	○	○	○	○	○
... motivated.	○	○	○	○	○	○
... driven.	○	○	○	○	○	○
... bright.	○	○	○	○	○	○

... intelligent.	○	○	○	○	○	○
... sharp.	○	○	○	○	○	○
... stylish.	○	○	○	○	○	○
... fashionable.	○	○	○	○	○	○
... internet-savvy.	○	○	○	○	○	○
... tech-savvy.	○	○	○	○	○	○
... entitled.	○	○	○	○	○	○
... spoiled.	○	○	○	○	○	○
... pampered.	○	○	○	○	○	○
... condescending.	○	○	○	○	○	○
... argumentative.	○	○	○	○	○	○
... snobbish.	○	○	○	○	○	○
... inexperienced.	○	○	○	○	○	○
... unseasoned.	○	○	○	○	○	○
... leftists.	○	○	○	○	○	○
... socialists.	○	○	○	○	○	○

Task 3

We are now interested in your opinion about **older people**.

To what extent do you agree or disagree with the below statements?

	Strongly disagree 1	2	3	4	5	Strongly agree 6
Doctors spend too much time treating sickly older people.	○	○	○	○	○	○
Older people are too big a burden on the healthcare system.	○	○	○	○	○	○
Older people are often too much of a burden on families.	○	○	○	○	○	○
At a certain point, older people's maximum benefit to society is passing along their resources.	○	○	○	○	○	○
Older people shouldn't be so miserly with their money if younger relatives need it.	○	○	○	○	○	○

Older people don't really need to get the best seats on buses and trains.	○	○	○	○	○	○
AARP (American Association of Retired Persons) wastes charity money.	○	○	○	○	○	○
If it weren't for older people opposed to changing the way things are, we could probably progress much more rapidly as a society.	○	○	○	○	○	○
The older generation has an unfair amount of political power compared to younger people.	○	○	○	○	○	○
Most older people don't know when to make way for younger people.	○	○	○	○	○	○
Most older workers	○	○	○	○	○	○

don’t know when it’s time to make way for the younger generation.						
Older people are often too stubborn to realize they don’t function like they used to.	○	○	○	○	○	○
Younger people are usually more productive than older people at their jobs.	○	○	○	○	○	○
Job promotions shouldn’t be based on older workers’ experience rather than their productivity.	○	○	○	○	○	○
It is unfair that older people get to vote on issues that will impact younger people much more.	○	○	○	○	○	○
Older people typically shouldn’t go	○	○	○	○	○	○

to places where younger people hang out.						
In general, older people shouldn't hang out at places for younger people.	○	○	○	○	○	○
Generally older people shouldn't go clubbing.	○	○	○	○	○	○
Older people probably shouldn't use Facebook.	○	○	○	○	○	○
Older people shouldn't even try to act cool.	○	○	○	○	○	○

Task 4

Please indicate the extent to which you agree or disagree that **employees, in general**, should demonstrate the following ...

	Strongly disagree 1	2	3	4	5	Strongly agree 6
Loyalty to the employer.	○	○	○	○	○	○
Identification with the organization.	○	○	○	○	○	○

Awareness of the goals of the institution.	○	○	○	○	○	○
Awareness of the work procedures.	○	○	○	○	○	○
Making an effort at work.	○	○	○	○	○	○
Becoming more effective at work.	○	○	○	○	○	○
Solidarity with the colleagues.	○	○	○	○	○	○
Belonging to the work team.	○	○	○	○	○	○
Acceptance of the team rules.	○	○	○	○	○	○
Awarenees of co-workers' needs.	○	○	○	○	○	○
Work cooperation with colleagues.	○	○	○	○	○	○
Helping a needy co-worker.	○	○	○	○	○	○

Task 5

Please indicate your agreement or disagreement with each of the below statements about **employees in general**.

	Strongly disagree 1	2	3	4	5	Strongly agree 6

Employees possess imagination and creativity.	○	○	○	○	○	○
Employees' ideas often result in the development of useful suggestions.	○	○	○	○	○	○
Employees have considerable ambition.	○	○	○	○	○	○
Most people are imaginative and creative, but they may not show it because of limitations imposed by supervision and the job.	○	○	○	○	○	○

Task 6

Please answer the following question:

Brushing your teeth is a very important behavior. When answering the question below, please select Never. Brushing your teeth every day helps promote hygiene and oral health.

○ Never

○ Once every few days

○ Every other day

○ Every day

○ At least twice per day

Task 7

Now, we would like to know your opinions about other topics, about the way society works, and what you personally value.

Please indicate to what extent do you agree or disagree with each of the below statements.

	Strongly disagree 1	2	3	4	5	Strongly agree 6
Many women have a quality of purity that few men possess.	○	○	○	○	○	○
Women should be cherished and protected by men.	○	○	○	○	○	○
Women seek to gain power by getting control over men.	○	○	○	○	○	○
Every man ought to have a woman whom he adores.	○	○	○	○	○	○
Men are incomplete without women.	○	○	○	○	○	○
Women exaggerate problems they have at work.	○	○	○	○	○	○

Once a woman gets a man to commit to her, she usually tries to put him on a tight leash.	○	○	○	○	○	○
When women lose to men in a fair competition, they typically complain about being discriminated against.	○	○	○	○	○	○
Many women get a kick out of teasing men by seeming sexually available and then refusing male advances.	○	○	○	○	○	○
Women, compared to men, tend to have a superior moral sensibility.	○	○	○	○	○	○
Men should be willing to sacrifice their own well being in order to provide financially for the women in their lives.	○	○	○	○	○	○

Feminists are making unreasonable demands of men.	○	○	○	○	○	○

Task 8

Please indicate to what extent do you agree or disagree with each of the below statements.

	Stronly disagree 1	2	3	4	5	Strongly agree 6
Ethnic and cultural group categories are not very important for understanding or making decisions about people.	○	○	○	○	○	○
It is really not necessary to pay attention to people's racial, ethnic, or cultural backgrounds because it doesn't tell you much about who they are.	○	○	○	○	○	○
At our core, all human beings are really all the same, so racial and ethnic categories do not matter.	○	○	○	○	○	○
Racial and ethnic group	○	○	○	○	○	○

memberships do not matter very much to who we are.						
All human beings are individuals, and therefore race and ethnicity are not important.	○	○	○	○	○	○

Task 9

Show how much you favor or oppose each idea below by selecting a number from 1 to 6 on the scale below.

	Strongly oppose 1	2	3	4	5	Strongly favor 6
An ideal society requires some groups to be on top and others to be on the bottom.	○	○	○	○	○	○
Some groups of people are simply inferior to other groups.	○	○	○	○	○	○
No one group should dominate in society.	○	○	○	○	○	○
Groups at the bottom	○	○	○	○	○	○

are just as deserving as groups at the top.						
Group equality should not be our primary goal.	○	○	○	○	○	○
It is unjust to try to make groups equal.	○	○	○	○	○	○
We should do what we can to equalize conditions for different groups.	○	○	○	○	○	○
We should work to give all groups an equal chance to succeed.	○	○	○	○	○	○

Demographic questions

How do you see yourself?

As an younger, middle-aged or older worker?

Younger worker 1

○ 2

○ 3

○ Middle-aged worker 4

○ 5

○ 6

○ Older worker 7

Gender

○ Male

○ Female

○ Other

Year of birth

_____

Do you live in the USA?

○ Yes

○ No (please, indicate the country where you live):

Ethnicity

How would you define yourself in terms of ethnicity? You can check one or more response boxes.

☐ American Indian or Alaska Native

☐ Black/African American

☐ East Asian/East Asian American

- [ ] Latino/Hispanic American
- [ ] Native Hawaiian or Other Pacific Islander
- [ ] South Asian/South Asian American
- [ ] White/European American
- [ ] Other (please, indicate which):

What is your nationality?

- ○ USA
- ○ Other (please, indicate which):
- ○ Double nationality (please, indicate which):

Highest Education Degree

- ○ Less than high school
- ○ High school (or less than a Bachelor)
- ○ Undergraduate degree
- ○ Graduate degree

How many years or months of work experience do you have overall (approximately)?

- ○ Years
- ○ Months

Which of the following descriptions apply to what you have been doing for the last month? Select all that apply.

- [ ] In paid work (or away temporarily) (employee, self-employed, working for your family business)
- [ ] In education, (not paid for by employer) even if on vacation
- [ ] Unemployed and actively looking for a job
- [ ] Unemployed, wanting a job but not actively looking for a job
- [ ] Permanently sick or disabled
- [ ] Retired
- [ ] In community or military service
- [ ] Doing housework, looking after children or other persons
- [ ] Other

Which of these types of organisation do you currently work for?

- [ ] Central or local government
- [ ] Other public sector (such as education and health)
- [ ] A state-owned enterprise
- [ ] A private firm
- [ ] Other

In your main job, do you have any responsibility for supervising the work of other employees?

○ Yes

○ No

Again, thank you so much for your participation!

As mentioned, this study is part of a larger project about ageism (i.e., age-based discrimination) in the workplace, and we are particularly interested in learning more about attitudes towards younger workers as this is a topic understudied.

In this project, we want to better understand what is expected for younger and older workers and why. We also want to understand whether there are different expectations for workers, based on their age.

The results of this research can benefit organizations and employees of all ages, by reducing negative interactions at work and improving workplace fairness, and employee health, satisfaction, and career growth opportunities.

Annex B: The three dimensions, eight subdimensions, and 25 final items of the WAYS (Chapter 3)

Survey preamble:

People have expectations regarding appropriate attitudes and behaviors in the workplace. Some of these expectations depend on whether people are perceived as "younger" workers or"older" workers. Below are statements regarding what younger workers, in comparison to older workers, should do and should not do in the workplace. Please indicate the extent that you agree with each of the statements below, using 1=Strongly disagree to 6=Strongly agree. Younger workers, especially, …

Dimensions	Subdimensions	Items
Humility-Deference	Accept and respect the hierarchy	…should not question directions from superiors …should not challenge the organisation's hierarchical order …should not question the organizational status quo
	Acknowledge inexperience and accept menial tasks	…should not assume that they know everything about how to do their job …should ask questions instead of assuming they know everything …should not think that they are too good to do menial tasks
Loyalty-Belonging	Prove belonging in organization	…should prove they can be trusted to follow formal and informal rules …should strive to fit in the organization …should make efforts to be socialized into the organization
	Demonstrate loyalty towards the organization	…should show long-term support for their organization …should not see their job as just a stepping-stone to other opportunities …should be loyal to the organization
Vitality-Innovation	Demonstrate technological competence	…should be good with the latest technologies …should learn new technologies quickly and easily …should know how to use new technologies
	Bring a dynamic work attitude	…should have stamina and not tire easily …should recover quickly from periods of intense work …should be able to execute tasks more quickly
	Show creativity	…should be inventive …should be creative and bring new perspectives …should be open to new things and ideas
	Take an active role	…should seek and ask for training …should actively look for ways to improve …should show and take initiative …should find ways to overcome obstacles

Annex C: MPlus codes for measurement invariance (Chapter 3)

1. Configural invariance model

```
DATA:
        FILE IS CFA complete dataset N584 for Mplus.dat;

VARIABLE:
        NAMES ARE SD_Res_4 SD_Hie_1 SD_Hie_2 SD_Hie_6 SD_Ine_8 SD_Ine_6 SD_Ine_9
SD_Bel_2 SD_Bel_3 SD_Bel_4 SD_Loy_1 SD_Loy_2 SD_Loy_3 PE_Tec_1 PE_Tec_2 PE_Tec_3
PE_Dy_21 PE_Dy_4 PE_Dy_5 PE_Cre_1 PE_Cre_2 PE_Cre_3 PE_Act_1 PE_Act_2 PE_Act_3
PE_Act_8 GROUP;
        USEVARIABLES ARE SD_Hie_1 SD_Hie_2 SD_Hie_6 SD_Ine_8 SD_Ine_6 SD_Ine_9
SD_Bel_2 SD_Bel_3 SD_Bel_4 SD_Loy_1 SD_Loy_2 SD_Loy_3 PE_Tec_1 PE_Tec_2 PE_Tec_3
PE_Dy_21 PE_Dy_4 PE_Dy_5 PE_Cre_1 PE_Cre_2 PE_Cre_3 PE_Act_1 PE_Act_2 PE_Act_3
PE_Act_8;
        GROUPING IS GROUP (0=US 1=PT);

ANALYSIS:
        ESTIMATOR=MLM;

MODEL:
        SD_HIE BY SD_Hie_1 SD_Hie_2 SD_Hie_6;
        SD_INE BY SD_Ine_8 SD_Ine_6 SD_Ine_9;
        SD_BEL BY SD_Bel_2 SD_Bel_3 SD_Bel_4;
        SD_LOY BY SD_Loy_1 SD_Loy_2 SD_Loy_3;
        PE_TEC BY PE_Tec_1 PE_Tec_2 PE_Tec_3;
        PE_DYN BY PE_Dy_21 PE_Dy_4 PE_Dy_5;
        PE_CRE BY PE_Cre_1 PE_Cre_2 PE_Cre_3;
        PE_ACT BY PE_Act_1 PE_Act_2 PE_Act_3 PE_Act_8;

        SD1 BY SD_HIE SD_INE;
        SD2 BY SD_BEL SD_LOY;
        PE BY PE_TEC PE_DYN PE_CRE PE_ACT;

 MODEL PT:
        SD_HIE BY SD_Hie_2 SD_Hie_6;
        SD_INE BY SD_Ine_6 SD_Ine_9;
        SD_BEL BY SD_Bel_3 SD_Bel_4;
        SD_LOY BY SD_Loy_2 SD_Loy_3;
        PE_TEC BY PE_Tec_2 PE_Tec_3;
        PE_DYN BY PE_Dy_4 PE_Dy_5;
        PE_CRE BY PE_Cre_2 PE_Cre_3;
        PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8;

        [SD_Hie_1@0 SD_Hie_2 SD_Hie_6
        SD_Ine_8@0 SD_Ine_6 SD_Ine_9
        SD_Bel_2@0 SD_Bel_3 SD_Bel_4
        SD_Loy_1@0 SD_Loy_2 SD_Loy_3
        PE_Tec_1@0 PE_Tec_2 PE_Tec_3
        PE_Dy_21@0 PE_Dy_4 PE_Dy_5
        PE_Cre_1@0 PE_Cre_2 PE_Cre_3
```

```
        PE_Act_1@0 PE_Act_2 PE_Act_3 PE_Act_8];

        SD1 BY SD_INE;
        [SD_HIE SD_INE];
        [SD1@0];

        SD2 BY SD_LOY;
        [SD_BEL SD_LOY];
        [SD2@0];

        PE BY PE_DYN PE_CRE PE_ACT;
        [PE_TEC PE_DYN PE_CRE PE_ACT];
        [PE@0];

MODEL US:
        SD_HIE BY SD_Hie_2 SD_Hie_6;
        SD_INE BY SD_Ine_6 SD_Ine_9;
        SD_BEL BY SD_Bel_3 SD_Bel_4;
        SD_LOY BY SD_Loy_2 SD_Loy_3;
        PE_TEC BY PE_Tec_2 PE_Tec_3;
        PE_DYN BY PE_Dy_4 PE_Dy_5;
        PE_CRE BY PE_Cre_2 PE_Cre_3;
        PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8;

        [SD_Hie_1@0 SD_Hie_2 SD_Hie_6
        SD_Ine_8@0 SD_Ine_6 SD_Ine_9
        SD_Bel_2@0 SD_Bel_3 SD_Bel_4
        SD_Loy_1@0 SD_Loy_2 SD_Loy_3
        PE_Tec_1@0 PE_Tec_2 PE_Tec_3
        PE_Dy_21@0 PE_Dy_4 PE_Dy_5
        PE_Cre_1@0 PE_Cre_2 PE_Cre_3
        PE_Act_1@0 PE_Act_2 PE_Act_3 PE_Act_8];

        SD1 BY SD_INE;
        [SD_HIE SD_INE];
        [SD1@0];

        SD2 BY SD_LOY;
        [SD_BEL SD_LOY];
        [SD2@0];

        PE BY PE_DYN PE_CRE PE_ACT;
        [PE_TEC PE_DYN PE_CRE PE_ACT];
        [PE@0];
```

2. Metric invariance of the first-order factors

Data, variable, analysis blocks and model are the same as in the configural model.

```
MODEL PT:
        SD_HIE BY SD_Hie_2 SD_Hie_6 (load1 load2);
        SD_INE BY SD_Ine_6 SD_Ine_9 (load3 load4);
        SD_BEL BY SD_Bel_3 SD_Bel_4 (load5 load6);
        SD_LOY BY SD_Loy_2 SD_Loy_3 (load7 load8);
```

```
        PE_TEC BY PE_Tec_2 PE_Tec_3 (load9 load10);
        PE_DYN BY PE_Dy_4 PE_Dy_5 (load11 load12);
        PE_CRE BY PE_Cre_2 PE_Cre_3 (load13 load14);
        PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8 (load15 load16 load17);

        [SD_Hie_1@0 SD_Hie_2 SD_Hie_6
        SD_Ine_8@0 SD_Ine_6 SD_Ine_9
        SD_Bel_2@0 SD_Bel_3 SD_Bel_4
        SD_Loy_1@0 SD_Loy_2 SD_Loy_3
        PE_Tec_1@0 PE_Tec_2 PE_Tec_3
        PE_Dy_21@0 PE_Dy_4 PE_Dy_5
        PE_Cre_1@0 PE_Cre_2 PE_Cre_3
        PE_Act_1@0 PE_Act_2 PE_Act_3 PE_Act_8];

        SD1 BY SD_INE;
        [SD_HIE SD_INE];
        [SD1@0];

        SD2 BY SD_LOY;
        [SD_BEL SD_LOY];
        [SD2@0];

        PE BY PE_DYN PE_CRE PE_ACT;
        [PE_TEC PE_DYN PE_CRE PE_ACT];
        [PE@0];

MODEL US:
        SD_HIE BY SD_Hie_2 SD_Hie_6 (load1 load2);
        SD_INE BY SD_Ine_6 SD_Ine_9 (load3 load4);
        SD_BEL BY SD_Bel_3 SD_Bel_4 (load5 load6);
        SD_LOY BY SD_Loy_2 SD_Loy_3 (load7 load8);
        PE_TEC BY PE_Tec_2 PE_Tec_3 (load9 load10);
        PE_DYN BY PE_Dy_4 PE_Dy_5 (load11 load12);
        PE_CRE BY PE_Cre_2 PE_Cre_3 (load13 load14);
        PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8 (load15 load16 load17);

        [SD_Hie_1@0 SD_Hie_2 SD_Hie_6
        SD_Ine_8@0 SD_Ine_6 SD_Ine_9
        SD_Bel_2@0 SD_Bel_3 SD_Bel_4
        SD_Loy_1@0 SD_Loy_2 SD_Loy_3
        PE_Tec_1@0 PE_Tec_2 PE_Tec_3
        PE_Dy_21@0 PE_Dy_4 PE_Dy_5
        PE_Cre_1@0 PE_Cre_2 PE_Cre_3
        PE_Act_1@0 PE_Act_2 PE_Act_3 PE_Act_8];

        SD1 BY SD_INE;
        [SD_HIE SD_INE];
        [SD1@0];

        SD2 BY SD_LOY;
        [SD_BEL SD_LOY];
        [SD2@0];

        PE BY PE_DYN PE_CRE PE_ACT;
        [PE_TEC PE_DYN PE_CRE PE_ACT];
```

```
[PE@0];
```

3. Metric invariance of the first- and second-order factors

Data, variable, analysis blocks and model are the same as in the configural model.

```
MODEL PT:
    SD_HIE BY SD_Hie_2 SD_Hie_6 (load1 load2);
    SD_INE BY SD_Ine_6 SD_Ine_9 (load3 load4);
    SD_BEL BY SD_Bel_3 SD_Bel_4 (load5 load6);
    SD_LOY BY SD_Loy_2 SD_Loy_3 (load7 load8);
    PE_TEC BY PE_Tec_2 PE_Tec_3 (load9 load10);
    PE_DYN BY PE_Dy_4 PE_Dy_5 (load11 load12);
    PE_CRE BY PE_Cre_2 PE_Cre_3 (load13 load14);
    PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8 (load15 load16 load17);

    [SD_Hie_1@0 SD_Hie_2 SD_Hie_6
    SD_Ine_8@0 SD_Ine_6 SD_Ine_9
    SD_Bel_2@0 SD_Bel_3 SD_Bel_4
    SD_Loy_1@0 SD_Loy_2 SD_Loy_3
    PE_Tec_1@0 PE_Tec_2 PE_Tec_3
    PE_Dy_21@0 PE_Dy_4 PE_Dy_5
    PE_Cre_1@0 PE_Cre_2 PE_Cre_3
    PE_Act_1@0 PE_Act_2 PE_Act_3 PE_Act_8];

    SD1 BY SD_INE (load18);
    [SD_HIE SD_INE];
    [SD1@0];

    SD2 BY SD_LOY (load19);
    [SD_BEL SD_LOY];
    [SD2@0];

    PE BY PE_DYN PE_CRE PE_ACT (load20 load21 load22);
    [PE_TEC PE_DYN PE_CRE PE_ACT];
    [PE@0];

MODEL US:
    SD_HIE BY SD_Hie_2 SD_Hie_6 (load1 load2);
    SD_INE BY SD_Ine_6 SD_Ine_9 (load3 load4);
    SD_BEL BY SD_Bel_3 SD_Bel_4 (load5 load6);
    SD_LOY BY SD_Loy_2 SD_Loy_3 (load7 load8);
    PE_TEC BY PE_Tec_2 PE_Tec_3 (load9 load10);
    PE_DYN BY PE_Dy_4 PE_Dy_5 (load11 load12);
    PE_CRE BY PE_Cre_2 PE_Cre_3 (load13 load14);
    PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8 (load15 load16 load17);

    [SD_Hie_1@0 SD_Hie_2 SD_Hie_6
    SD_Ine_8@0 SD_Ine_6 SD_Ine_9
    SD_Bel_2@0 SD_Bel_3 SD_Bel_4
    SD_Loy_1@0 SD_Loy_2 SD_Loy_3
    PE_Tec_1@0 PE_Tec_2 PE_Tec_3
    PE_Dy_21@0 PE_Dy_4 PE_Dy_5
    PE_Cre_1@0 PE_Cre_2 PE_Cre_3
    PE_Act_1@0 PE_Act_2 PE_Act_3 PE_Act_8];
```

```
SD1 BY SD_INE (load18);
[SD_HIE SD_INE];
[SD1@0];

SD2 BY SD_LOY (load19);
[SD_BEL SD_LOY];
[SD2@0];

PE BY PE_DYN PE_CRE PE_ACT (load20 load21 load22);
[PE_TEC PE_DYN PE_CRE PE_ACT];
[PE@0];
```

4. Scalar invariance of the first-order factors

Data, variable, analysis blocks and model are the same as in the configural model.

```
MODEL PT:
    SD_HIE BY SD_Hie_2 SD_Hie_6 (load1 load2);
    SD_INE BY SD_Ine_6 SD_Ine_9 (load3 load4);
    SD_BEL BY SD_Bel_3 SD_Bel_4 (load5 load6);
    SD_LOY BY SD_Loy_2 SD_Loy_3 (load7 load8);
    PE_TEC BY PE_Tec_2 PE_Tec_3 (load9 load10);
    PE_DYN BY PE_Dy_4 PE_Dy_5 (load11 load12);
    PE_CRE BY PE_Cre_2 PE_Cre_3 (load13 load14);
    PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8 (load15 load16 load17);

    [SD_Hie_1@0];
    [SD_Hie_2](intcpt1);
    [SD_Hie_6](intcpt2);
    [SD_Ine_8@0];
    [SD_Ine_6](intcpt3);
    [SD_Ine_9](intcpt4);
    [SD_Bel_2@0];
    [SD_Bel_3](intcpt5);
    [SD_Bel_4](intcpt6);
    [SD_Loy_1@0];
    [SD_Loy_2](intcpt7);
    [SD_Loy_3](intcpt8);
    [PE_Tec_1@0];
    [PE_Tec_2](intcpt9);
    [PE_Tec_3](intcpt10);
    [PE_Dy_21@0];
    [PE_Dy_4](intcpt11);
    [PE_Dy_5](intcpt12);
    [PE_Cre_1@0];
    [PE_Cre_2](intcpt13);
    [PE_Cre_3](intcpt14);
    [PE_Act_1@0];
    [PE_Act_2](intcpt15);
    [PE_Act_3](intcpt16);
    [PE_Act_8](intcpt17);

    SD1 BY SD_INE (load18);
    [SD_HIE SD_INE];
```

```
        [SD1@0];

        SD2 BY SD_LOY (load19);
        [SD_BEL SD_LOY];
        [SD2@0];

        PE BY PE_DYN PE_CRE PE_ACT (load20 load21 load22);
        [PE_TEC PE_DYN PE_CRE PE_ACT];
        [PE@0];

MODEL US:
        SD_HIE BY SD_Hie_2 SD_Hie_6 (load1 load2);
        SD_INE BY SD_Ine_6 SD_Ine_9 (load3 load4);
        SD_BEL BY SD_Bel_3 SD_Bel_4 (load5 load6);
        SD_LOY BY SD_Loy_2 SD_Loy_3 (load7 load8);
        PE_TEC BY PE_Tec_2 PE_Tec_3 (load9 load10);
        PE_DYN BY PE_Dy_4 PE_Dy_5 (load11 load12);
        PE_CRE BY PE_Cre_2 PE_Cre_3 (load13 load14);
        PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8 (load15 load16 load17);

        [SD_Hie_1@0];
        [SD_Hie_2](intcpt1);
        [SD_Hie_6](intcpt2);
        [SD_Ine_8@0];
        [SD_Ine_6](intcpt3);
        [SD_Ine_9](intcpt4);
        [SD_Bel_2@0];
        [SD_Bel_3](intcpt5);
        [SD_Bel_4](intcpt6);
        [SD_Loy_1@0];
        [SD_Loy_2](intcpt7);
        [SD_Loy_3](intcpt8);
        [PE_Tec_1@0];
        [PE_Tec_2](intcpt9);
        [PE_Tec_3](intcpt10);
        [PE_Dy_21@0];
        [PE_Dy_4](intcpt11);
        [PE_Dy_5](intcpt12);
        [PE_Cre_1@0];
        [PE_Cre_2](intcpt13);
        [PE_Cre_3](intcpt14);
        [PE_Act_1@0];
        [PE_Act_2](intcpt15);
        [PE_Act_3](intcpt16);
        [PE_Act_8](intcpt17);

        SD1 BY SD_INE (load18);
        [SD_HIE SD_INE];
        [SD1@0];

        SD2 BY SD_LOY (load19);
        [SD_BEL SD_LOY];
        [SD2@0];

        PE BY PE_DYN PE_CRE PE_ACT (load20 load21 load22);
```

```
[PE_TEC PE_DYN PE_CRE PE_ACT];
[PE@0];
```

5. Scalar invariance of the first- and second-order factors

Data, variable, analysis blocks and model are the same as in the configural model.

```
MODEL PT:
    SD_HIE BY SD_Hie_2 SD_Hie_6 (load1 load2);
    SD_INE BY SD_Ine_6 SD_Ine_9 (load3 load4);
    SD_BEL BY SD_Bel_3 SD_Bel_4 (load5 load6);
    SD_LOY BY SD_Loy_2 SD_Loy_3 (load7 load8);
    PE_TEC BY PE_Tec_2 PE_Tec_3 (load9 load10);
    PE_DYN BY PE_Dy_4 PE_Dy_5 (load11 load12);
    PE_CRE BY PE_Cre_2 PE_Cre_3 (load13 load14);
    PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8 (load15 load16 load17);

    [SD_Hie_1@0];
    [SD_Hie_2](intcpt1);
    [SD_Hie_6](intcpt2);
    [SD_Ine_8@0];
    [SD_Ine_6](intcpt3);
    [SD_Ine_9](intcpt4);
    [SD_Bel_2@0];
    SD_Bel_3](intcpt5);
    [SD_Bel_4](intcpt6);
    SD_Loy_1@0];
    [SD_Loy_2](intcpt7);
    [SD_Loy_3](intcpt8);
    [PE_Tec_1@0];
    [PE_Tec_2](intcpt9);
    [PE_Tec_3](intcpt10);
    [PE_Dy_21@0];
    [PE_Dy_4](intcpt11);
    [PE_Dy_5](intcpt12);
    [PE_Cre_1@0];
    [PE_Cre_2](intcpt13);
    [PE_Cre_3](intcpt14);
    [PE_Act_1@0];
    [PE_Act_2](intcpt15);
    [PE_Act_3](intcpt16);
    [PE_Act_8](intcpt17);

    SD1 BY SD_INE (load18);
    [SD_HIE SD_INE](intcpt26-intcpt27);
    [SD1@0];

    SD2 BY SD_LOY (load19);
    [SD_BEL SD_LOY](intcpt28-intcpt29);
    [SD2@0];

    PE BY PE_DYN PE_CRE PE_ACT (load20 load21 load22);
    [PE_TEC PE_DYN PE_CRE PE_ACT](intcpt30-intcpt33);
    [PE@0];
```

```
MODEL US:
        SD_HIE BY SD_Hie_2 SD_Hie_6 (load1 load2);
        SD_INE BY SD_Ine_6 SD_Ine_9 (load3 load4);
        SD_BEL BY SD_Bel_3 SD_Bel_4 (load5 load6);
        SD_LOY BY SD_Loy_2 SD_Loy_3 (load7 load8);
        PE_TEC BY PE_Tec_2 PE_Tec_3 (load9 load10);
        PE_DYN BY PE_Dy_4 PE_Dy_5 (load11 load12);
        PE_CRE BY PE_Cre_2 PE_Cre_3 (load13 load14);
        PE_ACT BY PE_Act_2 PE_Act_3 PE_Act_8 (load15 load16 load17);

        [SD_Hie_1@0];
        [SD_Hie_2](intcpt1);
        [SD_Hie_6](intcpt2);
        [SD_Ine_8@0];
        [SD_Ine_6](intcpt3);
        [SD_Ine_9](intcpt4);
        [SD_Bel_2@0];
        [SD_Bel_3](intcpt5);
        [SD_Bel_4](intcpt6);
        [SD_Loy_1@0];
        [SD_Loy_2](intcpt7);
        [SD_Loy_3](intcpt8);
        [PE_Tec_1@0];
        [PE_Tec_2](intcpt9);
        [PE_Tec_3](intcpt10);
        [PE_Dy_21@0];
        [PE_Dy_4](intcpt11);
        [PE_Dy_5](intcpt12);
        [PE_Cre_1@0];
        [PE_Cre_2](intcpt13);
        [PE_Cre_3](intcpt14);
        [PE_Act_1@0];
        [PE_Act_2](intcpt15);
        [PE_Act_3](intcpt16);
        [PE_Act_8](intcpt17);

        SD1 BY SD_INE (load18);
        [SD_HIE SD_INE](intcpt26-intcpt27);
        [SD1*];

        SD2 BY SD_LOY (load19);
        [SD_BEL SD_LOY](intcpt28-intcpt29);
        [SD2*];

        PE BY PE_DYN PE_CRE PE_ACT (load20 load21 load22);
        [PE_TEC PE_DYN PE_CRE PE_ACT](intcpt30-intcpt33);
        [PE*];
```

Annex D: Experimental study survey: Humility-Deference (Chapter 4)

Consent

Welcome! This is a research study sponsored by Católica Lisbon School of Business and Economics. PLEASE READ THE FOLLOWING CONSENT FORM AND CLICK "I CONSENT" AT THE BOTTOM.

NATURE OF RESEARCH STUDY: The study is part of project about perceptions towards different age groups in the workplace.

PROCEDURE: The study consists of reading a situation and answering several questions about that situation. You will be asked to state how much you (dis)agree with several statements. This will take about 10 minutes.

RISKS/DISCOMFORTS: The risks associated with participation in this study are no greater than those encountered in daily life. If you feel any discomfort answering the survey questions you may contact the research team by sending an email to Susana Schmitz (susanaschmitz@ucp.pt).

POTENTIAL BENEFITS: The results of this study will contribute to the advancement of knowledge in the field of management and psychology.

VOLUNTARY PARTICIPATION AND RIGHT TO WITHDRAW: Your participation in this study is entirely voluntary: you choose whether to participate. If you want to withdraw from the study, please close your browser.

CONFIDENTIALITY: No study records will identify you. All answers are confidential. All study materials will refer to you by number, not by name or other identifying information. Data will be stored on a password-protected computer and will only be available to the faculty members and research staff working on the study.

WHAT YOUR CONSENT MEANS: By clicking, "I consent" below, you indicate that you understand the information in this consent form and that you agree to participate in the study. By providing your consent, you have not waived any legal rights you otherwise would have as a participant in a research study. If you do not consent, please close your browser to exit the study.

Do you have paid work experience outside Mturk?

○ Yes

○ No

Instructions

Please read all the information and answer the questions carefully. There are no right or wrong answers. Please, simply provide your honest opinion.

Data quality will be controlled: random, careless, or deceiving answers will not be taken into account and will not be paid.

Thank you very much for your participation in this important research project!

Please read the following situation carefully. Then, answer the questions that are presented below. Remember there are no right or wrong answers. Please, simply provide your honest opinion.

Sample vignette

John is 24 years old and works in a large company.

Recently, John was called to a meeting with his supervisor. John's supervisor has been working in the company for 16 years and has been in his current role for 6 years.

In this meeting, the supervisor assigned a new task to John, and explained in detail how he would like the task to be performed.

John listened carefully to his supervisor's instructions. Then John proposed another way to perform the task, which he believed would be better. When the supervisor disagreed, John, with his limited career experience, did not question him again. Following the meeting, John proceeded as instructed by his supervisor.

This has been the usual behavior of 24-year-old John: he might question the usual way of doing things but ends up following the orders from people above him in the hierarchy.

A few weeks after this interaction, John received a poor evaluation from his supervisor, who said that he had not acted professionally and performed at a high level in recent weeks.

How old is John in the scenario presented?

- ○ 20 years old
- ○ 24 years old
- ○ 35 years old
- ○ 42 years old

○ 55 years old

○ 62 years old

Please answer the following questions:

	Not at all 1	2	3	4	5	Very much 6
How surprising was John's behavior at work, considering his age?	○	○	○	○	○	○
How typical was John's behavior at work, considering his age?	○	○	○	○	○	○
How appropriate was John's behavior at work, considering his age?	○	○	○	○	○	○
How expected was John's behavior at	○	○	○	○	○	○

work, considering his age?

Bearing in mind John's age, when it comes to **John receiving a poor evaluation**, indicate how much you agree with each of the following statements:

	Strongly disagree 1	2	3	4	5	Strongly agree 6
In this situation, John has been treated fairly by his organization.	○	○	○	○	○	○
In this situation, John could count on his organization to be fair.	○	○	○	○	○	○
In this situation, the treatment John received was fair.	○	○	○	○	○	○

Bearing in mind John's age, when it comes to **John's outcome – i.e., receiving a poor evaluation**, indicate how much you agree with each of the following statements:

	Strongly disagree 1	2	3	4	5	Strongly agree 6

The outcome John received reflected the effort he put into his work.	○	○	○	○	○	○
John's outcome was appropriate for the work he has completed.	○	○	○	○	○	○
John's outcome reflected what he has contributed to the organization.	○	○	○	○	○	○
John's outcome was justified, given his performance.	○	○	○	○	○	○

Bearing in mind John's age, to what extent do you think John is…

	Strongly disagree 1	2	3	4	5	Strongly agree 6
trustworthy?	○	○	○	○	○	○
principled?	○	○	○	○	○	○
fair?	○	○	○	○	○	○

honest?	○	○	○	○	○	○
competent?	○	○	○	○	○	○
confident?	○	○	○	○	○	○
ambitious?	○	○	○	○	○	○
assertive?	○	○	○	○	○	○
warm?	○	○	○	○	○	○
friendly?	○	○	○	○	○	○
selfless?	○	○	○	○	○	○
empathetic?	○	○	○	○	○	○

Bearing in mind John's age, and the fact that **John receiveid a poor evaluation**, indicate how much you agree with each of the following statements:

	Strongly disagree 1	2	3	4	5	Strongly agree 6
I find the decision that was communicated acceptable.	○	○	○	○	○	○
I support the decision.	○	○	○	○	○	○
I accept the decision.	○	○	○	○	○	○

If you were the one deciding, how would you **evaluate John's performance, bearing in mind his age**?

○ Very negative 1

○ 2

○ 3

○ 4

○ 5

○ Very positive 6

Bear in mind the situation you read, John's age and the fact that John received a poor evaluation. **Now imagine that you are John's coworker**. To what extent do you agree or disagree with the following sentences?

	Strongly disagree 1	2	3	4	5	Strongly agree 6
I would warn John's co-workers that this supervisor is unfair.	○	○	○	○	○	○
John's supervisor should be reprimanded for the way he treated John.	○	○	○	○	○	○
I would be willing to sign a letter stating that John's supervisor	○	○	○	○	○	○

did the wrong thing and should be more careful in the future.						
I would be likely to write a letter to lodge a complaint about John's treatment.	○	○	○	○	○	○

In the scenario presented, how old was John?

_____

Would you consider John a:

- ○ Younger worker 1
- ○ 2
- ○ 3
- ○ Middle-aged worker 4
- ○ 5
- ○ 6
- ○ Older worker 7

In the scenario presented, John:

	1	2	3	4	5	6	
Questioned and did not follow the suggestions from his supervisor and challenged the usual hierarchy in the organization.	○	○	○	○	○	○	Followed the suggestions from his supervisor and respected the usual hierarchy in the organization.

Please answer the following question:

Brushing your teeth is a very important behavior. When answering the question below, please select Never. Brushing your teeth every day helps promote hygiene and oral health.

○ Never

○ Once every few days

○ Every other day

○ Every day

○ At least twice per day

Instructions

The following questions are related to your opinion in general, and NOT to the situation you previously read.

Once again, there are no right or wrong answers. Please, simply provide your honest opinion.

Moderator

People have expectations regarding appropriate attitudes and behaviors in the workplace. Some of these expectations depend on whether people are perceived as "younger" workers or "older" workers.

Below are statements regarding what younger workers, in comparison to older workers, should do and should not do in the workplace.

Please indicate the extent that you agree with each of the statements below, using 1=Strongly disagree to 6=Strongly agree.

Younger workers, especially, …

	Strongly disagree 1	2	3	4	5	Strongly agree 6
... should not question directions from superiors.	○	○	○	○	○	○
... should not challenge the organization's hierarchical order.	○	○	○	○	○	○
... should not question the organizational status quo.	○	○	○	○	○	○
... should not assume that they know everything about how to do their job.	○	○	○	○	○	○

... should ask questions instead of assuming they know everything.	○	○	○	○	○	○
... should not think that they are too good to do menial tasks.	○	○	○	○	○	○
... should prove they can be trusted to follow formal and informal rules.	○	○	○	○	○	○
... should strive to fit in the organization.	○	○	○	○	○	○
... should make efforts to be socialized into the organization.	○	○	○	○	○	○
... should show long-term support for their organization.	○	○	○	○	○	○

... should not see their job as just a stepping-stone to other opportunities.	○	○	○	○	○	○
... should be loyal to the organization.	○	○	○	○	○	○
... should be good with the latest technologies.	○	○	○	○	○	○
... should learn new technologies quickly and easily.	○	○	○	○	○	○
... should know how to use new technologies.	○	○	○	○	○	○
... should have stamina and not tire easily.	○	○	○	○	○	○
... should recover quickly from periods of intense work.	○	○	○	○	○	○

... should be able to execute tasks more quickly.	○	○	○	○	○	○
... should be inventive.	○	○	○	○	○	○
... should be creative and bring new perspectives.	○	○	○	○	○	○
... should be open to new things and ideas.	○	○	○	○	○	○
... should seek and ask for training.	○	○	○	○	○	○
... should actively look for ways to improve.	○	○	○	○	○	○
... should show and take initiative.	○	○	○	○	○	○
... should find ways to overcome obstacles.	○	○	○	○	○	○

Demographic questions

How do you see yourself?

As an younger, middle-aged or older worker?

Younger worker 1

○ 2

○ 3

○ Middle-aged worker 4

○ 5

○ 6

○ Older worker 7

Gender

○ Male

○ Female

○ Other

Year of birth

_____

Do you live in the USA?

○ Yes

○ No (please, indicate the country where you live):

Ethnicity

How would you define yourself in terms of ethnicity? You can check one or more response boxes.

☐ American Indian or Alaska Native

☐ Black/African American

- [ ] East Asian/East Asian American
- [ ] Latino/Hispanic American
- [ ] Native Hawaiian or Other Pacific Islander
- [ ] South Asian/South Asian American
- [ ] White/European American
- [ ] Other (please, indicate which):

What is your nationality?

- ○ USA
- ○ Other (please, indicate which):
- ○ Double nationality (please, indicate which):

Highest Education Degree

- ○ Less than high school
- ○ High school (or less than a Bachelor)
- ○ Undergraduate degree
- ○ Graduate degree

How many years or months of work experience do you have overall (approximately)?

- ○ Years
- ○ Months

Which of the following descriptions apply to what you have been doing for the last month? Select all that apply.

☐ In paid work (or away temporarily) (employee, self-employed, working for your family business)

☐ In education, (not paid for by employer) even if on vacation

☐ Unemployed and actively looking for a job

☐ Unemployed, wanting a job but not actively looking for a job

☐ Permanently sick or disabled

☐ Retired

☐ In community or military service

☐ Doing housework, looking after children or other persons

☐ Other

Which of these types of organisation do you currently work for?

☐ Central or local government

☐ Other public sector (such as education and health)

☐ A state-owned enterprise

☐ A private firm

☐ Other

In your main job, do you have any responsibility for supervising the work of other employees?

○ Yes

○ No

Again, thank you so much for your participation!

As mentioned, this study is part of a project about perceptions towards different age groups in the workplace. In this project, we want to better understand what is expected for younger and older workers and why. We also want to understand whether there are different expectations for workers, based on their age. The results of this research can benefit organizations and employees of all ages, by reducing negative interactions at work and improving workplace fairness, and employee health, satisfaction, and career growth opportunities.
It is important to clarify that there were 6 different situations and you were randonmly alocated to one of them. Among the possible versions, John behaved in a way that did not question the supervisor and followed the hierarchy (consistent with what is expected of a young worker) OR questioned the supervisor and did things differently than he had been instructed (inconsistent with what is expected of a young worker). John was also presented as being 24, 42 or 62 years old, in the sense of representing a younger, middle-aged or older worker.
Everything else was exactly the same for all participants. We are going to compare the groups of people who received the different versions of the situation to see if there are differences in the way each situation is perceived (e.g., the extent to which John's treatment is fair).

Annex E: Vignettes studies 1 and 2 (Chapter 4)

Vitality-Innovation Vignettes (Study 1)

Adherence, 26



O João tem 26 anos de idade, e trabalha há 4 anos na indústria de alta intensidade tecnológica.
A empresa onde o João trabalha está neste momento a passar por uma restruturação interna de forma a aumentar a sua competitividade no mercado. Parte desta restruturação passa pela introdução de uma nova tecnologia. Em vez de recrutar pessoas completamente novas, a empresa decidiu requalificar alguns dos seus colaboradores. Para incentivar ainda mais, a posição a ocupar teria um salário atrativo e redução/flexibilidade de horários.
Essa requalificação envolve um programa de formação na nova tecnologia, com tempo estimado em 2 meses. Um dos trabalhadores sinalizados foi o João de 26 anos.
Durante a formação, o João mostrou facilidade e rapidez na aprendizagem e adquiriu todas as competências tecnológicas necessárias à nova função.
No final do período da formação, a chefia decidiu não colocar o João na nova posição.

Adherence, 41



O João tem 41 anos de idade, e trabalha há 4 anos na indústria de alta intensidade tecnológica.
A empresa onde o João trabalha está neste momento a passar por uma restruturação interna de

forma a aumentar a sua competitividade no mercado. Parte desta restruturação passa pela introdução de uma nova tecnologia. Em vez de recrutar pessoas completamente novas, a empresa decidiu requalificar alguns dos seus colaboradores. Para incentivar ainda mais, a posição a ocupar teria um salário atrativo e redução/flexibilidade de horários.
Essa requalificação envolve um programa de formação na nova tecnologia, com tempo estimado em 2 meses. Um dos trabalhadores sinalizados foi o João de 41 anos.
Durante a formação, o João mostrou facilidade e rapidez na aprendizagem e adquiriu todas as competências tecnológicas necessárias à nova função.
No final do período da formação, a chefia decidiu não colocar o João na nova posição.

Adherence, 53



O João tem 53 anos de idade, e trabalha há 4 anos na indústria de alta intensidade tecnológica.
A empresa onde o João trabalha está neste momento a passar por uma restruturação interna de forma a aumentar a sua competitividade no mercado. Parte desta restruturação passa pela introdução de uma nova tecnologia. Em vez de recrutar pessoas completamente novas, a empresa decidiu requalificar alguns dos seus colaboradores. Para incentivar ainda mais, a posição a ocupar teria um salário atrativo e redução/flexibilidade de horários.
Essa requalificação envolve um programa de formação na nova tecnologia, com tempo estimado em 2 meses. Um dos trabalhadores sinalizados foi o João de 53 anos.
Durante a formação, o João mostrou facilidade e rapidez na aprendizagem e adquiriu todas as competências tecnológicas necessárias à nova função.
No final do período da formação, a chefia decidiu não colocar o João na nova posição.

Violation, 26



O João tem 26 anos de idade, e trabalha há 4 anos na indústria de alta intensidade tecnológica. A empresa onde o João trabalha está neste momento a passar por uma restruturação interna de forma a aumentar a sua competitividade no mercado. Parte desta restruturação passa pela introdução de uma nova tecnologia. Em vez de recrutar pessoas completamente novas, a empresa decidiu requalificar alguns dos seus colaboradores. Para incentivar ainda mais, a posição a ocupar teria um salário atrativo e redução/flexibilidade de horários.
Essa requalificação envolve um programa de formação na nova tecnologia, com tempo estimado em 2 meses. Um dos trabalhadores sinalizados foi o João de 26 anos.
Durante a formação, o João adquiriu as competências tecnológicas mínimas para a nova função. No entanto mostrou dificuldade e demorou mais tempo do que o esperado.
No final do período da formação, a chefia decidiu não colocar o João na nova posição.

Violation, 41



O João tem 41 anos de idade, e trabalha há 4 anos na indústria de alta intensidade tecnológica. A empresa onde o João trabalha está neste momento a passar por uma restruturação interna de forma a aumentar a sua competitividade no mercado. Parte desta restruturação passa pela introdução de uma nova tecnologia. Em vez de recrutar pessoas completamente novas, a empresa decidiu requalificar alguns dos seus colaboradores. Para incentivar ainda mais, a

posição a ocupar teria um salário atrativo e redução/flexibilidade de horários.
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Durante a formação, o João adquiriu as competências tecnológicas mínimas para a nova função. No entanto mostrou dificuldade e demorou mais tempo do que o esperado.
No final do período da formação, a chefia decidiu não colocar o João na nova posição.

Violation, 53



O João tem 53 anos de idade, e trabalha há 4 anos na indústria de alta intensidade tecnológica. A empresa onde o João trabalha está neste momento a passar por uma restruturação interna de forma a aumentar a sua competitividade no mercado. Parte desta restruturação passa pela introdução de uma nova tecnologia. Em vez de recrutar pessoas completamente novas, a empresa decidiu requalificar alguns dos seus colaboradores. Para incentivar ainda mais, a posição a ocupar teria um salário atrativo e redução/flexibilidade de horários.
Essa requalificação envolve um programa de formação na nova tecnologia, com tempo estimado em 2 meses. Um dos trabalhadores sinalizados foi o João de 53 anos.
Durante a formação, o João adquiriu as competências tecnológicas mínimas para a nova função. No entanto mostrou dificuldade e demorou mais tempo do que o esperado.
No final do período da formação, a chefia decidiu não colocar o João na nova posição.

Humility-Deference Vignettes (Study 2)

Adherence, 24



John is 24 years old and works in a large company.
Recently, John was called to a meeting with his supervisor. John's supervisor has been working in the company for 16 years and has been in his current role for 6 years.
In this meeting, the supervisor assigned a new task to John, and explained in detail how he would like the task to be performed.
John listened carefully to his supervisor's instructions. Then John proposed another way to perform the task, which he believed would be better. When the supervisor disagreed, John, with his limited career experience, did not question him again. Following the meeting, John proceeded as instructed by his supervisor.
This has been the usual behavior of 24-year-old John: he might question the usual way of doing things but ends up following the orders from people above him in the hierarchy.
A few weeks after this interaction, John received a poor evaluation from his supervisor, who said that he had not acted professionally and performed at a high level in recent weeks.

Adherence, 42



John is 42 years old and works in a large company.
Recently, John was called to a meeting with his supervisor. John's supervisor has been working in the company for 16 years and has been in his current role for 6 years.
In this meeting, the supervisor assigned a new task to John, and explained in detail how he would like the task to be performed.
John listened carefully to his supervisor's instructions. Then John proposed another way to perform the task, which he believed would be better. When the supervisor disagreed, John, with his fair amount of career experience, did not question him again. Following the meeting, John proceeded as instructed by his supervisor.
This has been the usual behavior of 42-year-old John: he might question the usual way of doing things but ends up following the orders from people above him in the hierarchy.
A few weeks after this interaction, John received a poor evaluation from his supervisor, who said that he had not acted professionally and performed at a high level in recent weeks.

Adherence, 62



John is 62 years old and works in a large company.
Recently, John was called to a meeting with his supervisor. John's supervisor has been working in the company for 16 years and has been in his current role for 6 years.
In this meeting, the supervisor assigned a new task to John, and explained in detail how he would like the task to be performed.
John listened carefully to his supervisor's instructions. Then John proposed another way to perform the task, which he believed would be better. When the supervisor disagreed, John, with his long career experience, did not question him again. Following the meeting, John proceeded as instructed by his supervisor.
This has been the usual behavior of 62-year-old John: he might question the usual way of doing things but ends up following the orders from people above him in the hierarchy.

A few weeks after this interaction, John received a poor evaluation from his supervisor, who said that he had not acted professionally and performed at a high level in recent weeks.

Violation, 24



John is 24 years old and works in a large company.
Recently, John was called to a meeting with his supervisor. John's supervisor has been working in the company for 16 years and has been in his current role for 6 years.
In this meeting, the supervisor assigned a new task to John, and explained in detail how he would like the task to be performed.
John listened carefully to his supervisor's instructions. Then John proposed another way to perform the task, which he believed would be better. When the supervisor disagreed, John, with his limited career experience, again questioned his supervisor's instructions. Following the meeting, John ended up deciding to go for his own idea, and try his own way, which he expected to work better.
This has been the usual behavior of 24-year-old John: he tends to challenge directions from superiors and question the usual way of doing things, not necessarily following the orders from people above him in the hierarchy.
A few weeks after this interaction, John received a poor evaluation from his supervisor, who said that he had not acted professionally and performed at a high level in recent weeks.

Violation, 42



John is 42 years old and works in a large company.
Recently, John was called to a meeting with his supervisor. John's supervisor has been working in the company for 16 years and has been in his current role for 6 years.
In this meeting, the supervisor assigned a new task to John, and explained in detail how he would like the task to be performed.
John listened carefully to his supervisor's instructions. Then John proposed another way to perform the task, which he believed would be better. When the supervisor disagreed, John, with his fair amount of career experience, again questioned his supervisor's instructions.
Following the meeting, John ended up deciding to go for his own idea, and try his own way, which he expected to work better.
This has been the usual behavior of 42-year-old John: he tends to challenge directions from superiors and question the usual way of doing things, not necessarily following the orders from people above him in the hierarchy.
A few weeks after this interaction, John received a poor evaluation from his supervisor, who said that he had not acted professionally and performed at a high level in recent weeks.

Violation, 62



John is 62 years old, works in a large company.

Recently, John was called to a meeting with his supervisor. John's supervisor has been working in the company for 16 years and has been in his current role for 6 years.

In this meeting, the supervisor assigned a new task to John, and explained in detail how he would like the task to be performed.

John listened carefully to his supervisor's instructions. Then John proposed another way to perform the task, which he believed would be better. When the supervisor disagreed, John, with his long career experience, again questioned his supervisor's instructions. Following the meeting, John ended up deciding to go for his own idea, and try his own way, which he expected to work better.

This has been the usual behavior of 62-year-old John: he tends to challenge directions from superiors and question the usual way of doing things, not necessarily following the orders from people above him in the hierarchy.

A few weeks after this interaction, John received a poor evaluation from his supervisor, who said that he had not acted professionally and performed at a high level in recent weeks.