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MANAGING AN AGING WORKFORCE: SOME EVIDENCE FROM SILESIA

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Purpose: The demographic changes and population ageing have far-reaching consequences for organisations. The growing number of older employees leads to changes in human resource management (HRM). However, in many Polish organisations this problem is marginalised, which may have a negative impact on the work engagement and performance of older employees. Therefore, the aim of this paper is to answer the following question: what is the impact of the organisational equal opportunities climate (EO climate) and age-inclusive HR practices on the work engagement and performance of older employees?
Methodology: This aim is addressed through the analysis of the results of a survey conducted in Silesia involving employees aged 50 and over. The data were analysed using structural equation modelling (SEM).
Findings: The study revealed that the EO climate and age-inclusive HR practices positively influenced the work engagement of older employees, which subsequently affected their work performance, hence it showed that work engagement mediated the relationship between the EO climate, age-inclusive HR practices and work performance.
Research implications: A key contribution of this study is that it provides evidence that age-inclusive HR practices, when implemented within an EO climate significantly enhance older employees' work engagement and performance. This finding implies that initiatives aimed at improving the performance of older employees should focus on increasing their work engagement, as this acts as a mediator in the relationships between organisational factors and employee performance. However, a key limitation of the study, which also points the way for future research, is the relatively small sample size and the fact that it covers only employees from Silesian organisations.
Social implications: The findings are highly significant in the context of ongoing demographic changes and the growing number of older workers in the labour market because they show that, by taking appropriate HRM initiatives within organisations, it is possible to enhance the performance of a growing number of older employees.
Originality/value: Although the topic of age management has gained popularity in the literature on HRM, there is still little research identifying specific actions that should be taken in this area and their impact on older employees' performance.
Keywords: HRM, older employees, age management, work performance.
Category of the paper: Research paper.

1. Introduction

The demographic changes and population ageing that have been underway since the late 1970s have become a key focus of socio-economic policy in economically developed countries. Today, in many countries, the average age of the population is the highest it has ever been (World Population Review, 2026). The ageing of the workforce has become a fact in most EU countries. In Poland, this trend began to become clearly apparent in the early 1990s, particularly following the political transition after 1989 (GUS, 2023). In 2025, population ageing continued in Poland; the old-age index was 148, meaning that for every 100 grandchildren, there were 148 grandparents (GUS, 2026). Life expectancy is still increasing, while the birth rate continues to decrease.

These changes have increasingly far-reaching consequences for many aspects of economic life, including the functioning of organisations. They slow down economic growth and have a negative impact on the labour market, leading to a growing risk of labour and skills shortages. Consequently, for nearly two decades, this issue has also been addressed through employment policy and various EU initiatives aimed at increasing the economic activity of the population and the participation of older employees in the labour market (e.g., Council of the European Union, 2010). One of the key guidelines for the EU Member States set out in the European Employment Strategy, established in 1997 and revised in 2003, was to increase labour supply and promote active ageing (OJEU, 2003). With the launch of the Europe 2020 strategy in 2010, this approach became part of a broader governance framework (e.g., the European Semester) (European Commission, 2010). As part of the employment component of the European Semester, the EU, recognising an ageing population as one of the key challenges facing Europe and pursuing the concept of 'active ageing', promotes the upskilling of older people and their increased participation in the labour market (Zeitlin, Vanhercke, 2018).

In Poland, the 'Act on the Labour Market and Employment Services' (2025), in line with EU objectives, provides for employment subsidies for people aged 50 and above, as well as training and retraining opportunities for older people. As part of the state's social policy, the 'Active Seniors – ASY (2026–2030)' programme is being implemented (Office of the Prime Minister, 2025), focusing not only on the social and educational engagement of older people, but also on their participation in the labour market. Although this programme is not directly an employment programme, its objectives indirectly influence the professional activity of older people, as it aims, among other things, to improve the digital skills of older employees and to promote the idea of lifelong learning. Initiatives such as 'Active 50+' (Ministry of Family and Social Policy, 2021), educational and information programmes implemented by the Social Insurance Institution (ZUS, 2025) are also noteworthy.

There are already mismatches between labour supply and demand, as well as between the supply of and demand for skills, across many sectors and occupations in the Polish labour market. In this situation, many organisations facing staff shortages in certain occupational groups hire employees whose skill sets do not fully match organisational requirements, leading to numerous negative consequences for both organisations and employees, such as lower efficiency, reduced job satisfaction, and decreased employee engagement. Therefore, organisations must address this challenging situation and adapt their HR policies to the age structure of the workforce.

The growing number of older employees should inevitably lead to changes in organisational human resource management practices. However, in many Polish organisations, the extent of these changes still varies greatly. This issue is often marginalised, and initiatives aimed at maintaining and enhancing the employability of older employees are not widely implemented. This approach may have a negative impact on their work performance and work engagement and may, in the long term, lead to serious staff shortages. Therefore, the aim of this article is to answer the following question: What is the impact of the organisational equal opportunities climate and age-inclusive HR practices on the work engagement and performance of older employees? This aim is addressed through an analysis of the results of a survey conducted in Silesia involving employees aged 50 and over.

2. Literature Review

2.1. Work performance

Enhancing employee performance is one of the central concerns of human resource management (HRM), as employee performance is a key determinant of organisational effectiveness (Campbell, Wiernik, 2015). Individual contributions made by employees accumulate at a higher organisational level. However, despite having been studied for more than a century**,** there is no single universally accepted conceptualisation of the notion of work performance, because its understanding has developed over time. It concerns employees' actions, behaviours, and outcomes, which impact the achievement of organisational goals (Alqarni et al., 2023). Consequently, there are no universal measures of work performance, and the methods of its evaluation depend largely on how it is conceptualised. Some researchers focus on the assessment of the quantitative aspects of work performance, whilst others take a broader approach, emphasising its qualitative aspects (Marzec, 2024).

One of the first definitions of work performance was proposed by Burtt (1926), who viewed it in terms of professional proficiency. This understanding of work performance also appeared in later works on the subject, which are now considered classics (e.g., Vroom, 1962).

Later, it came to be associated with an employee's performance of tasks formally defined in the job description (e.g., Borman, Motowidlo, 1993). According to Lee and Jo (2023), work performance concerns the extent to which employees fulfil their roles in achieving organisational goals and completing assigned tasks. Skowron-Mielnik (2016) defines work performance as the ratio of work output (in the sense of direct work results) to work input. In turn, Demerouti and Cropanzano (2010) distinguish two elements of work performance, namely in-role and extra-role performance. In-role performance refers to behaviour that directly supports the formally requested outcomes of an employee's work and contributes to the achievement of organisational goals, while extra-role performance concerns the discretionary behaviour of an employee as a member of an organisation. Another distinction differentiates between task performance, involving specific job-related tasks and behaviours, and contextual performance, encompassing extra-role behaviours (Alqarni et al., 2023). Generally, the proposed approaches can be divided into two main categories of definitions of work performance, i.e. those that focus on the measurable outcomes of work and those that focus on employee behaviour (Grobelny, 2023).

Since the 1980s, there has been an intensive search for clear methods of measuring work performance (Marzec, 2024). However, the variety of its concepts results in numerous measures and criteria for its evaluation. Generally, they can be classified as objective and subjective measures. In the opinion of some researchers, objective measures better reflect the actual level of performance (Du, Choi, 2009). Objective measures of work performance typically include indicators such as absenteeism, work output (e.g., the number of tasks completed, the number of customers served, units produced per hour, or the average time required to complete a task), work quality (e.g., the number of errors, defect rate, or number of complaints), and sales performance (e.g., monthly sales volume, target achievement, revenue contribution, punctuality, and compliance with production standards) (Miraglia et al., 2025; Aarstad, Kvitastein, 2023; Bauer, Omeragic, 2022; Vuong, Nguyen, 2022). Others, however, argue that subjective measures may be better at revealing the relationships between employee performance and other variables; this is particularly justified in the case of employee self-assessments of work performance and their links to employee behaviors and attitudes (Chen et al., 2023). It can therefore be concluded that there is no single best measure of work performance, as its evaluation is relative and depends on the objectives, the specific nature of the tasks and job position, as well as the evaluator and the person being evaluated (Quinn, Rohrbaugha, 1983).

A review of the literature indicates that employee performance is influenced by various individual and organizational factors, both objective and subjective (e.g., Marzec, 2024; Ahmadi, Forouzandeh, Kareh, 2010). Among the organizational conditions identified as influencing employee work performance are leadership style, social support, compensation systems, job characteristics, role ambiguity, employee empowerment, organizational culture and climate, information and communication technology (ICT), and knowledge management,

etc. (Tuffaha, 2020; Ding, Yu, Li, 2023; Chen et al., 2023; Harwiki, 2016; Bakker, Demerouti, 2007; Chen, Chiu, 2009; Yun, Takeuchi, Liu, 2007). The literature also identifies numerous individual factors that may affect work performance. These include motivation, work-family balance, employee well-being, commitment, personality traits, cognitive abilities, organizational citizenship behavior, organizational tenure, job satisfaction, and age (Van Iddekinge et al., 2018; Basu, Pradhan, Tewari, 2017; Ng, Feldman, 2010; Le et al., 2011; Judge et al., 2001; Medina-Garrido, Biedma-Ferrer, Ramos-Rodriguez, 2024).

2.2. Age-inclusive HR practices and Equal Opportunities Climate as a part of Age Management

Due to the growing number of older employees and the wide age diversity of employees in many organisations, where different generations often work side by side, the issue of age management has become an increasingly important topic in HRM. Age management generally refers to HRM activities and practices that take into account the age diversity of the workforce and aim to make effective use of the potential of employees representing different age groups (Liwiński, Sztanderska, 2010).

As populations age, initiatives targeting older employees, aimed at retaining them within organisations, are becoming an increasingly important aspect of age management. Because HRM practices focused on empowering employees across different age groups and on maintaining and enhancing their employability throughout their working lives, regardless of age**,** may help address labour shortages resulting from current demographic trends and the declining number of young workers (OECD, 2025). Such practices are commonly referred to as age-inclusive HR practices. Rudolph and Zacher (2021) define age-inclusive HR practices as practices that benefit the majority of employees throughout their entire working lives (Rudolph, Zacher, 2021). Fan et al. (2023) offer a slightly different conceptualisation, describing age-inclusive HR practices as organisational practices that ensure employees have access to the resources required to successfully perform their work tasks, irrespective of age (Fan et al., 2023). This enables all employees to fully engage in their work, which is reflected in their improved work performance. Furthermore, age-inclusive HR practices positively influence both intrinsic and extrinsic motivation of employees by providing, for example, equal access to promotion opportunities and training regardless of age (Fan et al., 2023).

However, in the context of age management, some researchers focus on older employees. Boehm, Schröder, and Bal (2021, p. 257) emphasise that age-related HR policies and practices ‘allow individuals to extend their working lives’. Such initiatives aimed at older employees enhance their employability and motivation, thereby delaying their decision to retire (Loretto, White, 2006). Moreover, according to Social Exchange Theory, older employees who perceive that they are valued and treated fairly by their organisations are likely to reciprocate through increased work effort and higher levels of work engagement, which may, in turn, lead to enhanced their work performance (Waligóra, 2024). The most frequently mentioned age-

inclusive HR practices include, e.g. age-neutral recruitment and selection, promotion and career development, equal access to training and lifelong learning, flexible working arrangements, health promotion and workplace wellbeing, etc. (e.g. Marques, Nunes, Moreira, 2020; Farr-Wharton et al., 2023; National Academies of Sciences, 2022; Boehm, Schröder, Bal, 2021; Finsel et al., 2025).

Furthermore, researchers highlight the relationship between age-inclusive HR practices and organisational climate. Empirical research conducted by Rudolph and Zacher (2021) suggests that age-diversity climate mediates the relationship between age-inclusive HR practices and employees' work ability. The findings indicate that age-inclusive HR practices foster the development of an age-diversity climate, which, in turn, has a positive impact on employee work ability. Fan et al. (2023) argue that an age-inclusive workplace climate and perceived organisational support mediate the relationship between age-inclusive HR practices and work engagement. These findings show that in contemporary organisations, creating an organisational climate in which all employees, regardless of their age, have equal opportunities for career advancement and professional development is an important aspect of age management.

The concept of 'climate' was introduced into the social sciences by Lewin, Lippitt and White (1939) in reference to the social climate prevailing within groups between the leader and the group members, which arises as a result of the use of different leadership styles. However, the subject of organisational climate gained prominence in management literature in the late 1960s and early 1970s. The literature on the subject offers many definitions of organisational climate. Even in early studies on organisational climate, it was emphasised that it defines the quality of the organisation's internal, social environment as perceived by employees, and that it can be described in terms of values perceived by employees, specific to that organisation (Tagiuri, 1968). Schneider (1990) conceptualizes organizational climate as the perception of events, practices, procedures, and types of behavior that are rewarded, supported, and expected in a given work environment. Grobler and Van Rensburg (2018) describe the organizational climate in a similar way, defining it as the employees' shared perception of organizational policies, practices, and procedures.

One of the first comprehensive studies of the equal opportunity climate (EO climate) was conducted in the U.S. Army in the late 1980s for the Defense Equal Opportunity Management Institute (Dansby, Landis, 1991). This study aimed to develop and validate a scale called the Military Equal Opportunity Climate Survey (MEOCS) to measure the EO climate. It considered the EO climate as a perception of climate in terms of five factors: sexual harassment/ discriminatory behaviors, differential command behaviors, positive command/social behaviors, overt racist/sexist behaviors, and "reverse discrimination" behaviors (Knouse, Landis, Dansby, 1996). This conceptual framework and the EO climate measurement tool have been successfully applied in subsequent studies (e.g. Matthews et al., 2009). Based on this approach, Walsh et al. (2010, p. 192) define the EO climate as "employees' perceptions of the degree to

which discrimination and harassment are likely to occur within their work unit". However, the demographic changes observed over the past decade and the development of the concept of age management have led to definitions of the EO climate increasingly emphasizing the issues of age diversity and equal opportunities in the workplace for employees of different age groups. The term 'age diversity climate' has also been used more frequent use, sometimes replacing the EO climate. It focuses on age and concerns the extent to which organizational policies, practices, and procedures reflect efforts aimed at supporting and valuing age diversity (Bellotti et al., 2022).

Many studies have proved that the organisational climate is a significant factor that affects employees' attitudes and behaviour. Its perception is related to a variety of significant outcomes at the individual, group, and organizational levels (Patterson et al. 2005). Its impact on employee motivation has already been highlighted in classic studies (e.g., Litwin, Stringer, 1968)**.** Research conducted by Grobler and Jansen van Rensburg (2018) at higher education institutions showed that a negative organizational climate significantly influences the intentions of Generation Y and Baby Boomer employees to leave the organization. The results of a study conducted by Zhang and Liu (2010) revealed that the organizational climate influences employees' level of engagement and performance. Similarly, research conducted in Italy has found that age diversity climate not only affects employee work engagement but also their intentions to leave an organization and the job-related well-being (Bellotti et al., 2022).

2.3. Conditions and Outcomes of Work Engagement: Hypotheses Development

The classic definition proposed by Kahn (1990) states that work engagement refers to the "harnessing of organization members' selves to their work roles: in engagement, people employ and express themselves physically, cognitively, emotionally, and mentally during role performances" (Kahn, 1990, p. 694). He claims that an engaged employee is fully engaged physically, emotionally, and cognitively in the performance of his/her work role and that work engagement comprises three elements, namely meaningfulness**,** safety, and availability (Khan, 1990). However, Britt (1999) considers work engagement to be a unidimensional construct. He defines engagement as a sense of responsibility for one's work and a sense of attachment to it (Britt, 1999). According to Bakker (2011), employee engagement constitutes a relatively stable psychological state that depends on environmental factors.

Many researchers emphasise the influence of individual and organisational factors on work engagement (e.g. Bakker, Demerouti, 2008). Individual factors include, for example, an employee's motivation, attitudes, and positive self-evaluations (Schaufeli, 2012; Makowski, 2018). Research presented by Wołpiuk-Ochocińska (2015) indicates a link between work engagement and employees' age, showing that young employees exhibited a lower-than-average level of commitment to their work. Similarly, a study conducted by Böhm et al. (2014) in Germany, involving a sample of 18,269 employees, showed that a perceived climate of age discrimination has a negative influence on employees' collective commitment. A meta-analysis

of studies on the relationship between age and work engagement by Mori et al. (2024) also showed that work engagement increases as employees get older. Therefore, the previously observed relationships between age-inclusive HR practices, the EO climate, and work engagement justify the formulation of the following hypotheses (Fig. 1):

H1: *Age-inclusive HR practices positively influence work engagement of older employees*.

H2: *EO climate positively influences the work engagement of older employees.*

The literature lists various positive effects of work engagement, including, e.g. job satisfaction, organisational citizenship behaviour, personal initiative, a reduced risk of burnout, etc. (Schaufeli, 2012). Many studies indicate that work engagement has a positive impact on work performance (e.g. Bakker, Demerouti, Verbeke, 2004). According to the model proposed by Bakker and Demerouti (2008), organisational factors such as social support, performance feedback, and job characteristics enhance work engagement, which in turn leads to higher work performance. Therefore, employees who are immersed in their work often achieve better performance outcomes.

According to Kruse (2012), the relationship between work engagement and work performance is part of the so-called engagement-profit chain, which begins with strengthening employee engagement, leading to improved work performance, which results in higher customer satisfaction, and this translates into increased sales; higher sales mean greater profits, which translate into higher returns for shareholders (Skowron-Mielnik, 2016). Furthermore, in line with the Social Exchange Theory, when faced with organisational conditions such as an organisational climate that is welcoming to all employees regardless of age, and HRM practices that support older workers, older employees will respond with greater effort and commitment to their work, as well as with greater loyalty to the organisation. Therefore, the following research hypothesis has been formulated (Fig. 1):

H3: *Work engagement of older employees positively influences their work performance.*

It should be noted that hypotheses H1, H2 and H3 are directed toward a mediating role of work engagement in the relationships between the EO climate, age-inclusive HR practices, and work performance. Moreover, this proposition is reinforced by a previous study, which revealed that collective commitment is a mediator of the relationship between perceived age discrimination climate and organisational performance (Böhm et al., 2014). Therefore, it has been proposed:

H4a: *Work engagement is a mediator of the relationship between the EO climate and work performance.*

H4b: *Work engagement is a mediator of the relationship between age-inclusive HR practices and work performance*.

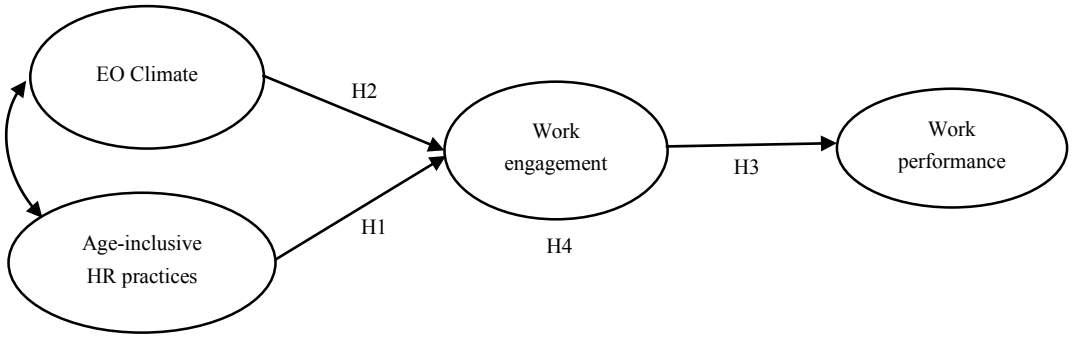


Figure 1. Conceptual model of relationships.

Source: own developed.

Figure 1 presents a conceptual model of the relationships among the constructs under study, namely the organizational predictors examined – the EO climate and age-inclusive HR practices, the mediating variable – work engagement, and the outcome variable – work performance. It is hypothesized that the EO climate and age-inclusive HR practices influence work engagement (H1 and H2), which in turn affects employees' work performance (H3), thereby mediating the relationships between the organizational predictors examined and work performance (H4).

3. Methods

The study was conducted in Silesian organisations in late 2024 as part of an international collaborative network involving researchers from 17 countries, with the aim of developing and validating the long version of the Later Life Workplace Index (LLWI) (Finsel et al., 2025). The study used purposive sampling. The selection criteria were employees' age (50 years or older), tenure with the current employer exceeding one year, organisation size (more than 30 employees), and working at least 20 hours per week. It was assumed that participating organisations should have at least 30 employees, as smaller organisations rarely have specialised HR departments or implement targeted HR policies. Furthermore, respondents employed by temporary work agencies were excluded from the sample.

208 employees took part in the survey in Silesia, of whom 134 were women and 74 were men. The average age of the respondents was 55.3 years (median = 54 years, SD = 4.5 years). Of the respondents, 33.2% held managerial positions and 66.8% held operational positions. In terms of educational attainment, 12% of participants had incomplete secondary education or less, 35.6% had completed secondary education (i.e. high school diploma), 11.1% had completed higher vocational education, 36.1% had a master's studies completed, 4.3% held a doctorate, and 1% reported another form of education.

Regarding organisation size, 36.6% of the respondents worked in medium-sized organisations (50-249 employees), 34.2% were employed in large organisations (250 or more employees), and 28.8% worked in small organisations. The largest groups of respondents were employees of manufacturing companies (18.2%), healthcare organisations (13%), public administration and national defence institutions (10.1%), financial and insurance organisations (9.1%), education (8.2%), retail trade (4.8%), transport and warehousing (4.3%), and IT services (3.8%). Respondents from other sectors accounted for 28.5% of the sample.

The study used previously tested measurement tools, including a scale measuring the EO climate (3 items) (Finsel et al., 2025), the age-inclusive HR practices scale developed by Boehm, Kunze, and Bruch (2014) (5 items), the shortened Utrecht Work Engagement Scale (UWES; 3 items) (Schaufeli et al., 2017), and a scale for self-assessment of work performance (4 items) developed by Eisenberger et al. (2001). The questions were rated on a seven-point Likert scale.

The Cronbach's alpha values for all scales indicated a good level of reliability. Specifically, the Cronbach's alpha coefficient for the scale measuring equal opportunities climate for was 0.86 (AVE = 0.71; CR = 0.88), for the age-inclusive HR practices scale it was 0.77 (AVE = 0.41; CR = 0.77), for work engagement it was 0.82 (AVE = 0.64; CR = 0.84), and for the work performance scale it was 0.89 (AVE = 0.67; CR = 0.89). The obtained Cronbach's alpha, and AVE, CR, demonstrated satisfactory level of reliability and validity for the scales used. The only exception was the age-inclusive HR practices for which the AVE value fell slightly below the recommended threshold. Nevertheless, according to Fornell and Larcker (1981), an AVE below the suggested cutoff may still be considered acceptable when composite reliability exceeds 0.60. In the present study, the CR value for this scale was 0.77, supporting its adequacy.

4. Results

Data were analysed using SPSS 28.0 and Amos 24.0. First, descriptive statistics were calculated for all variables. The overall levels of age-inclusive HR practices, EO climate, work engagement, and work performance were assessed using composite variables computed as the mean scores of the items comprising each scale (Table 1).

The analysis indicated that respondents rated their work performance the highest (M = 6.18 on a seven-point scale), whereas age-inclusive HR practices received the lowest ratings (M = 3.50 on a seven-point scale). Respondents also reported relatively high levels of work engagement (M = 5.04 on a seven-point scale). It should be noted that the greatest variability in ratings was observed for EO climate (SD = 1.60). At the same time, this variable was evaluated relatively positively, with a mean score of 4.64 on a seven-point scale.

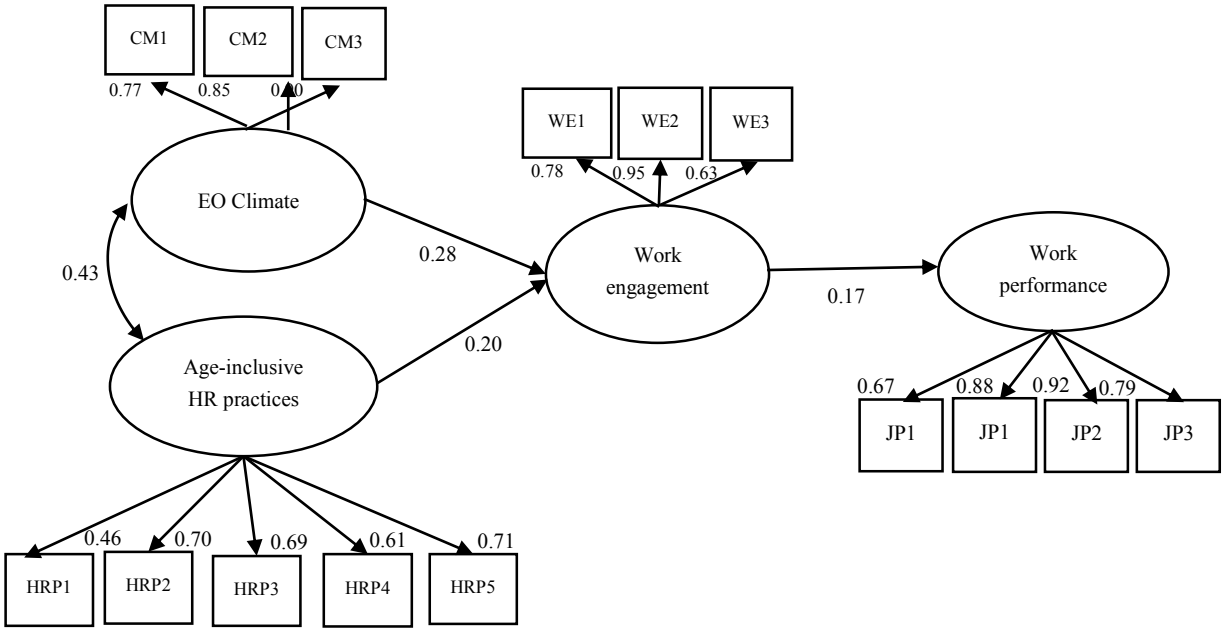
Table 1.

Descriptive statistics of variables examined

Variables	Mean	Median	Std. Deviation	Minim.	Maxim.	Range
EO climate	4.64	5	1.60	1	7	6
Age-inclusive HR practices	3.5	3.6	1.06	1	6	5
Work Engagement	5.04	5	1.09	1.33	7	5.67
Work performance	6.18	6	0.79	2.5	7	4.5

Source: own developed.

Structural equation modelling (SEM) was then used to test the conceptual model of the relationships between the phenomena under study and to analyse the paths among the examined variables. All examined relationships were statistically significant ($p < 0.05$) (Fig. 2). The analysis showed that both the EO climate and age-inclusive HR practices significantly influenced the work engagement of older employees (respectively, $\gamma_1 = 0.28$; $p < 0.05$, $\gamma_2 = 0.20$; $p < 0.05$). Therefore, these results do not provide grounds for rejecting Hypotheses 1 and 2. It was also found that work engagement positively affected the work performance of older employees ($\beta = 0.17$; $p < 0.05$).



Note. The model presents standardised regression weights.

Figure 2. The measurement model of relationships examined

Source: own developed.

The analysis of the model's fit to the empirical data indicates that it fits well; all the fit indices used were within acceptable ranges (Table 2). However, since an acceptable level of model fit does not mean that it is the only or the best possible model of the relationships among the variables, an alternative model was also analysed. This model included the direct effects of the predictors examined - namely, the EO climate and age-inclusive HR practices on work performance (Model 2; Table 2) (Konarski, 2009). However, the model fit measures indicated that this model fit the empirical data slightly less well and, more importantly, the SEM analysis

showed that the direct effects of both the EO climate and age-inclusive HR practices on work performance were statistically insignificant (respectively: $\gamma_3 = 0.09$, $p = 0.32$; $\gamma_4 = -0.07$, $p = 0.47$).

Table 2.

Model fit measures

Models	Chi^2	df	p	Chi^2/df	GFI	CFI	TLI	RMSEA
Model 1	164.89	86	0.00	1.917	0.91	0.95	0.93	0.067
Model 2	163,77	84	0.00	1.950	0.91	0.94	0.93	0.068
Model 0 (lack of relations)	1561.96	105	0.00	14.876	0.44	0	0	0.259

Source: own developed.

The results therefore indicate that work engagement mediates the relationship between the EO climate, age-inclusive HR practices, and work performance, and that this mediation is full. To provide further evidence for the mediating role of work engagement, a Sobel test was conducted. The results confirmed the earlier findings (i.e., $Z_1 = 1.55$, $_{p1} = 0.06$; $Z_2 = 1.84$, $p_2 = 0.03$). The value of p_1 was slightly above the conventional significance threshold, which may be attributable to the relatively small sample size, as the statistical power of the test increases with sample size (Cohen, 1988).

5. Discussion and Conclusions

The results obtained do not provide grounds for rejecting the hypotheses formulated. The analysis showed that both age-inclusive HR practices and the EO climate have a positive impact on work engagement, which in turn has a positive effect on the work performance of older employees. It was also confirmed that work engagement mediates the relationships between age-inclusive HR practices, the EO climate, and work performance, and that this is a case of full mediation, since the direct impact of the organisational factors under investigation on work performance proved to be statistically insignificant.

These findings suggest that in the face of demographic changes and an increase in the number of older employees, organisations should implement management initiatives, especially in the area of HRM, aimed at maintaining and enhancing the work engagement of older employees. This is because the study has shown that age-inclusive HR practices do not directly influence the performance of older employees, but indirectly – by enhancing their work engagement. Moreover, it has also been found that age-inclusive HR practices are linked to the EO climate and both indirectly affect the performance of older employees through their impact on work engagement. This indicates that organisations employing older employees should, above all, strive to strengthen their work engagement in order to improve their work

performance, as a change in objective organisational conditions alone does not guarantee an improvement in performance. Furthermore, the relationship between organisational climate and age-inclusive HR practices suggests that it is not only the organisation's actions that matter, but also how these are perceived by employees.

These results are consistent with some earlier studies which revealed that older employees' work engagement mediates the relationship between age-inclusive human resource practices and an age-diversity climate, on the one hand, and work ability, on the other (Rudolph, Zacher, 2021). Furthermore, they suggest that, in addition to objective HRM initiatives, it is equally important to create an appropriate psychological climate in which employees feel that they are valued by the organisation regardless of their age. Such a climate is conducive to initiatives in the areas of age management and organisational development – it creates the right psychosocial conditions within the organisation for the introduction of age-inclusive HR practices. In line with the assumptions of Social Exchange Theory, older employees who feel supported by the organisation will respond in return with increased work effort and greater engagement in their work, which in turn will lead to an improvement in their performance. A lack of organisational support perceived by older employees, in turn, will lead to a decrease in their work effort and engagement. It will also decrease the perceived costs of leaving the organisation, which will result in leaving the organization and earlier retirement. These observations are supported by the results of an empirical study conducted in Portugal, which showed that work engagement mediates the relationship between age-diversity practices and employees' preference for early or late retirement (Sousa, Ramos, Carvalho, 2019). This study also revealed that age-diversity practices increase the engagement and work capacity of older employees, leading to a preference for a later retirement age (Sousa, Ramos, Carvalho, 2019). In practice, this suggests that the introduction of such initiatives in organisations may help them to mitigate labour shortages caused by demographic changes, as an appropriate HRM policy and organisational climate will encourage many older employees to continue working even after becoming eligible for retirement.

The study also has some other significant practical implications. It clearly demonstrates to management that investing in retaining older employees within an organisation can yield tangible benefits such as improved employee performance, which is a key driver of organisational performance. In many organisations, older employees are marginalised in developmental initiatives, as employers believe that investing in this group of employees is not cost-effective, and that they adapt more slowly to change and learn at a slower pace. However, as many previous studies indicate, this is usually a mistaken and misguided view (Marzec, 2015).

The primary contribution of this study lies in providing empirical evidence that age-inclusive HR practices, together with an organisational climate that promotes equal opportunities regardless of employee age, positively influence work engagement and job performance of older employees. Furthermore, an important insight into the development of

age management theory provided by this research is the finding that age-inclusive human resource management practices and the organisational climate do not directly influence work performance; rather, work engagement is the mediator in these relationships. At the same time, this finding suggests that the effectiveness of age management initiatives should not be assessed solely in terms of employees' performance, but primarily in terms of their impact on employees' attitudes and psychological states, such as engagement, motivation, and identification with the organisation.

The limitations of this study should also be highlighted. Significant limitations include the relatively small sample size and the fact that the research focused solely on employees of organisations located in Silesia. Future research should include a larger sample of employees representing organisations from all regions of Poland. It would also be useful to compare the initiatives aimed at older employees that are implemented in organisations across different sectors and of varying sizes. Furthermore, age-inclusive HR practices were examined only in general terms. It would be worthwhile, however, to specify more precisely which specific practices aimed at older employees are being undertaken within various HR functions. For example, future studies could examine the extent to which the development of older employees' competencies is supported in organisations, what career development opportunities are available to them, whether actions are being taken to manage the health of older employees, whether ergonomic working conditions adapted to their needs are being created and how intergenerational cooperation is promoted within the organisations. Additionally, the study examined only the effects of age-inclusive HR practices and the EO climate on work engagement and performance. It would also be worthwhile to investigate how these factors influence the employability of older workers, their intentions to retire or continue working within the organisation, as well as their proactive and civic behaviours.

To sum up, particularly in the context of an ageing society, efforts to fully utilise the potential of older employees are no longer optional but are increasingly becoming a necessity for organisations facing growing labour shortages. Consequently, age-inclusive policies should constitute an integral component of every organisation's HRM strategy. Such policies can generate substantial benefits for employees of all ages by facilitating knowledge and experience sharing, fostering mutual learning, and promoting effective intergenerational collaboration.

References

1. Aarstad, J., Kvitastein, O.A. (2023). Effect of long-term absenteeism on the operating revenues, productivity, and employment of enterprises. *Administrative Sciences, Vol. 13*, *Iss. 6,* 156, doi: 10.3390/admsci13060156
2. Ahmadi, P., Forouzandeh, S., Kareh, M.S. (2010). The relationship between OCB and social exchange constructs. *European Journal of Economics and Administrative Sciences*, *Vol. 19*, pp. 108-117.
3. Alqarni, S., Hamsan, H., Rasdi, R.M., Abdul Rahman, H. (2023). A systematic literature review on job performance in diverse organizations from 2010 to 2023. *International Journal of Academic Research in Business and Social Sciences*, *Vol. 13*, *Iss. 18*, pp. 203-216, doi: 10.6007/IJARBSS/v13-i18/19960
4. Bakker, A.B. (2011). An Evidence-Based Model of Work Engagement. *Current Directions in Psychological Science*, *Vol. 20, Iss. 4*. Retrieved from: http://cdp.sagepub.com/content/20/4/265, 05.07.2013.
5. Bakker, A.B., Demerouti, E. (2007). The Job Demands–Resources model: State of the art. *Journal of Managerial Psychology*, *Vol. 22, Iss. 3,* pp. 309-328, doi: 10.1108/02683940710733115
6. Bakker, A.B., Demerouti, E. (2008). Towards a model of work engagement. *Career Development International*, *Vol. 13*, pp. 209-223.
7. Bakker, A.B., Demerouti, E., Verbeke, W. (2004). Using the Job Demands - Resources model to predict burnout and performance. *Human Resource Management*, *Vol. 43*, pp. 83-104.
8. Basu, E., Pradhan, R.K., Tewari, H.R. (2017). Impact of organizational citizenship behavior on job performance in Indian healthcare industries: The mediating role of social capital. *International Journal of Productivity and Performance Management, Vol. 66, Iss. 6*, pp. 780-796, doi: 10.1108/IJPPM-02-2016-0048
9. Bauer, A., Omeragic, J. (2022). Volatility in the relative standard deviation of target fulfilment as key performance indicator (KPI). *Academia Revista Latinoamericana de Administracion*. Retrieved from: https://arxiv.org/abs/2201.06373, 12.07.2025.
10. Bellotti, L., Zaniboni, S., Balducci, C., Menghini, L., Cadiz, D.M., Toderi, S. (2022). Age diversity climate affecting individual-level work-related outcomes. *International Journal of Environmental Research and Public Health, Vol. 19*, *Iss. 5*, 3041, doi: 10.3390/ijerph19053041
11. Boehm, S.A., Kunze, F., Bruch, H. (2014). Spotlight on age-diversity climate: The impact of age-inclusive HR practices on firm-level outcomes. *Personnel Psychology, Vol. 67, Iss. 3,* pp. 667-704, doi: 10.1111/peps.12047

12. Boehm, S.A., Schröder, H., Bal, M. (2021). Age-related human resource management policies and practices: Antecedents, outcomes, and conceptualizations. *Work, Aging and Retirement, Vol. 7, Iss. 4*, pp. 257-272, doi: 10.1093/workar/waab024
13. Böhm, S.A., Dwertmann, D.J.G., Kunze, F., Michaelis, B., Parks, K. i McDonald, D. (2014). Expanding Insights on the Diversity Climate-Performance Link: The Role of Work Group Discrimination and Group Size. *Human Resource Management*, *Vol. 53, Iss. 3*, pp. 379-402, doi: 10.1002/hrm.21589
14. Borman, W.C., Motowidlo, S.J. (1993). Expanding the Criterion Domain to Include Elements of Contextual erformance. In: N. Schmitt, W.C. Borman (Eds.), *Personnel Selection in Organizations* (pp. 71-98). San Francisco: Jossey-Bass.
15. Britt, T.W. (1999). Engaging the Self in the Field: Testing the Triangle Model of Responsibility. *Personality and Social Psychology Bulletin*, *Vol. 25,* pp. 696-706, doi: 10.1177/0146167299025006005.
16. Burtt, H.E. (1926). *Principles of employment psychology*. Boston: Houghton-Mifflin.
17. Campbell, J.P., Wiernik, B.M. (2015). The modeling and assessment of work performance. *Annual Review of Organizational Psychology and Organizational Behavior*, *Vol. 2*, pp. 47-74, doi: 10.1146/annurev-orgpsych-032414-111427
18. Chen, Ch., Chiu, S. (2009). The Mediating Role of Job Involvement in the Relationship Between Job Characteristics and Organizational Citizenship Behavior. *Journal of Social Psychology, Vol. 149, Iss. 4*, pp. 474-494.
19. Chen, Y., Zhang, Z., Zhou, J., Liu, C., Zhang, X., Yu, T. (2023). A cognitive evaluation and equity-based perspective of pay for performance on job performance: A meta-analysis and path model. *Frontiers in Psychology, Vol. 13*, 1039375, doi: 10.3389/fpsyg.2022.1039375
20. Cohen, J. (1988). *Statistical power analysis for the behavioral sciences*. Hillsdale, NJ: Lawrence Erlbaum Associates.
21. Council of the European Union (2010). *Council Decision 2010/707/EU on guidelines for the employment policies of the Member States.* Retrieved from: https://eur-lex.europa.eu, 13.05.2026.
22. Dansby, M.R., Landis, D. (1991). Measuring equal opportunity climate in the military environment. *International Journal of Intercultural Relations*, *Vol. 15*, pp. 389-403.
23. Demerouti, E., Cropanzano, R. (2010). From thought to action: Employee engagement and job performance. In A.B. Bakker, M.P. Leiter (Eds.), *Employee engagement: A handbook of essential theory and research* (pp. 147-160). New York, NY: Psychology Press.
24. Ding, H., Yu, E., Li, Y. (2023). Strengths-based leadership and employee work engagement: A multi-source study. *Journal of Vocational Behavior, Vol. 142*, 103859, doi: 10.1016/j.jvb.2023.103859
25. Du, J., Choi, J.N. (2010). Pay for performance in emerging markets: Insights from China. *Journal of International Business Studies*, *Vol. 41*, *Iss. 4*, pp. 671-689, doi: 10.1057/jibs.2009.40

26. Eisenberger, R., Armeli, S., Rexwinkel, B., Lynch, P.D., Rhoades, L. (2001). Reciprocation of perceived organizational support. *Journal of Applied Psychology*, *Vol. 86*, *Iss. 1*, pp. 42-51, doi: 10.1037/0021-9010.86.1.42
27. European Commission (2010). *Europe 2020: A strategy for smart, sustainable and inclusive* growth *(COM(2010) 2020 final)*. Retrieved from: EUR-Lex, 23.02.2024.
28. Fan, P., Song, Y., Fang, M., Chen, X. (2023). Creating an age-inclusive workplace: The impact of HR practices on employee work engagement. *Journal of Management & Organization*, *Vol. 29, Iss. 6*, pp. 1283-1302, doi: 10.1017/jmo.2023.18
29. Farr-Wharton, B., Bentley, T., Onnis, L.-a., Caponecchia, C., Neto, A.D.A., O'Neill, S., Andrew, C. (2023). Older Worker-Orientated Human Resource Practices, Wellbeing and Leave Intentions: A Conservation of Resources Approach for Ageing Workforces. *International Journal of Environmental Research and Public Health*, *Vol. 20, Iss. 3*, 2725, doi: 10.3390/ijerph20032725
30. Finsel, J.S., Axelrad, H., Choi, S.J., Derous, E., Gu, X., Guandalini, P., Ha, J., Kim, E.S., Marzec, I., Mykletun, R.J., Oliveira, E., Pajic, S., Schellaert, M., Van der Heijden, B.I.J.M., Vignoli, M., Wöhrmann, A.M., Deller, J. (2025). Development and validation of the short form of the Later Life Workplace Index (LLWI-SF): A study across ten countries. *Work, Aging and Retirement.* Advance online publication, doi: 10.1093/workar/waaf006
31. Fornell, C., Larcker, D.F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, Vol. 18*, *Iss. 1*, pp. 39-50, doi: 10.1177/002224378101800104
32. Główny Urząd Statystyczny (GUS) (2023). *Sytuacja demograficzna Polski do 2023 roku*. Warszawa: GUS. Retrieved from: https://stat.gov.pl/files/gfx/portalinformacyjny/pl/defaultaktualnosci/5468/40/4/1/sytuacja_demograficzna_polski_do_2023.pdf, 15.05.2026.
33. Główny Urząd Statystyczny (GUS) (2026). *Statistics Poland*. Retrieved from: https://x.com/StatPoland/status/2049480827453538452, 12.05.2026.
34. Grobelny, J. (2023). *Efektywność zawodowa. Problemy definicji i pomiaru*. Poznań: Wydawnictwo Nauk Społecznych i Humanistycznych UAM. doi: 10.14746/9788366983236
35. Grobler, A., Jansen van Rensburg, M. (2018). Organisational climate, person–organisation fit and turn over intention: a generational perspective within a South African Higher Education Institution, *Studies in Higher Education*, *Vol. 44, Iss. 11*, pp. 2053-2065, doi: 10.1080/03075079.2018.1492533
36. Harwiki, W. (2016). The impact of servant leadership on organization culture, organizational commitment, organizational citizenship behaviour (OCB) and employee performance in women cooperatives. *Procedia - Social and Behavioral Sciences*, *Vol. 219*, pp. 283-290, doi: 10.1016/j.sbspro.2016.04.032

37. Judge, T.A., Thoresen, C.J., Bono, J.E., Patton, G.K. (2001). The job satisfaction–job performance relationship: A qualitative and quantitative review. *Psychological Bulletin, Vol. 127*, *Iss. 3*, pp. 376-407, doi: 10.1037/0033-2909.127.3.376
38. Kahn, W.A. (1990). Psychological conditions of personal engagement and disengagement at work. *Academy of Management Journal*, *Vol. 33*, pp. 692-724.
39. Knouse, S.B., Landis, D., Dansby R.M. (1996). *Recent diversity research at the Defense Equal Opportunity Management Institute (DEOMI): 1992-1996* (DEOMI RSP 96-14). Defense Equal Opportunity Management Institute. Retrieved from: https://apps.dtic.mil/sti/tr/pdf/ADA316554.pdf, 22.04.2026.
40. Konarski, R. (2009). *Modele równań strukturalnych. Teoria i praktyka*. Warszawa: PWN.
41. Kruse, K. (2012). What is Employee Engagement. *Forbes*. Retrieved from: http://www.forbes.com/sites/kevinkruse/2012/06/22/employee-engagement-what-and-why, 10.09.2013.
42. Kunze, F., Toader, A.F. (2019). Lifespan perspectives on organizational climate. In: B.B. Baltes, C.W. Rudolph, H. Zacher (Eds.), *Work across the lifespan* (pp. 561-580). San Diego: Elsevier Academic Press, doi: 10.1016/B978-0-12-812756-8.00024-7
43. Le, H., Oh, I.-S., Robbins, S.B., Ilies, R., Holland, E., Westrick, P. (2011). Too much of a good thing: Curvilinear relationships between personality traits and job performance. *Journal of Applied Psychology*, *Vol. 96*, *Iss. 1*, pp. 113-133, doi: 10.1037/a0021016
44. Lee, D.Y., Jo, Y. (2023). The job demands-resource model and performance: The mediating role of employee engagement. *Frontiers in Psychology, Vol. 14*, 1194018. doi: 10.3389/fpsyg.2023.1194018
45. Lewin, K., Lippitt, R., White, R.K. (1939). Patterns of aggressive behavior in experimentally created "social climates". *Journal of Social Psychology*, *Vol. 10*, *Iss. 2*, pp. 269-299, doi: 10.1080/00224545.1939.9713366
46. Litwin, G.H., Stringer, R.A. (1968). *Motivation and organizational climate*. Boston: Harvard University Press.
47. Liwiński, J., Sztanderska, U. (2010). *Zarządzanie wiekiem w przedsiębiorstwie*. Warszawa: Polska Agencja Rozwoju Przedsiębiorczości. Retrieved from: https://www.parp.gov.pl/storage/publications/pdf/19001zarzadzaniewiekiemd.pdf, 21.04.2026.
48. Loretto, W., White, P. (2006). Employers' attitudes, practices and policies towards older workers. *Human Resource Management Journal*, *Vol. 16, Iss. 3*, pp. 313-330, doi: 10.1111/j.1748-8583.2006.00013.x
49. Makowski, M. (2018). Zaangażowanie w pracę w perspektywie psychologii pozytywnej. *Zeszyty Naukowe Uniwersytetu Ekonomicznego w Krakowie*, *Vol. 12, Iss. 972*, pp. 85-97, doi: 10.15678/ZNUEK.2017.0972.1206

50. Marques, A.M., Nunes, C., Moreira, S. (2020). Age management practices toward workers aged 45 years or older: An integrative literature review. *Revista Brasileira de Medicina do Trabalho, Vol. 18, Iss. 4*, pp. 423-435, doi: 10.47626/1679-4435-2020-549
51. Marzec, I. (2015). *Uwarunkowania rozwoju zatrudnialności pracowników w organizacji*. Katowice: Wydawnictwo Uniwersytetu Ekonomicznego w Katowicach.
52. Marzec, I. (2024). Employee empowerment as a driver of citizenship behaviour and job performance in the digital age. *Zeszyty Naukowe. Organizacja i Zarządzanie*, *Vol. 203.*, Politechnika Śląska, pp. 313-326, doi: 10.29119/1641-3466.2024.203.18
53. Matthews, R.A., Parks, K.M., Walsh, B.M., Tuller, M.D., McDonald, D.P. (2009). *Deployed Army personnel: The effect of equal opportunity climate perceptions on job satisfaction and organizational commitment*. Paper presented at the Defense Equal Opportunity Management Institute Biennial Symposium, Cocoa Beach, United States. Retrieved from: https://www.researchgate.net/publication/252158323_Deployed_Army_Personnel_The_Affect_of_Equal_Opportunity_Climate_Perceptions_on_Job_Satisfaction_and_Organizational_Commitment, 23.03.2026.
54. Medina-Garrido, J.A., Biedma-Ferrer, J.M., Ramos-Rodriguez, A.R. (2024). Relationship between work-family balance, employee well-being and job performance. *Academia Revista Latinoamericana de Administracion*, *Vol. 30, Iss. 1,* pp. 40-58*,* doi: 10.48550/arXiv.2401.13683
55. Ministry of Family and Social Policy (Ministerstwo Rodziny i Polityki Społecznej) (2021). *Program wieloletni na rzecz Osób Starszych „Aktywni+" na lata 2021-2025*. Retrieved from: https://www.gov.pl, 21.04.2026.
56. Miraglia, M., Dello Russo, S., Bouville, G. (2025). The hazards of performance management: An investigation into its effects on employee absenteeism and presenteeism. *Human Relations, Vol. 78, Iss. 7,* pp. 847-875, doi: 10.1177/00187267241274619
57. Mori, K., Odagami, K., Inagaki, M., Moriya, K., Fujiwara, H., Eguchi, H. (2024). Work engagement among older workers: A systematic review. *Journal of Occupational Health*, *Vol. 66, Iss. 1*, uiad008, doi: 10.1093/joccuh/uiad008
58. National Academies of Sciences, Engineering, and Medicine (2022). *Understanding the aging workforce: Defining a research agenda*. Washington, DC: National Academies Press, doi: 10.17226/26173
59. Ng, T.W.H., Feldman, D.C. (2010). Organizational tenure and job performance. *Journal of Management*, *Vol. 36, Iss. 5*, pp. 1220-1250, doi: 10.1177/0149206309359809
60. OECD (2025). *OECD Employment Outlook 2025: Can We Get Through the Demographic Crunch?* OECD Publishing, Paris. Retrieved from: https://www.oecd.org/en/publications/oecd-employment-outlook-2025_194a947b-en.html, 24.03.2026.
61. Office of the Prime Minister (Kancelaria Prezesa Rady Ministrów) (2025). *Program „Aktywni Seniorzy – ASY" na lata 2026-2030*. Retrieved from: https://www.gov.pl, 22.03.2026, 12.03.2026.

62. Official Journal of the European Union (OJEU) (2003). Council Decision of 22 July 2003 on guidelines for the employment policies of the Member States (2003/578/EC). *Official Journal of the European Union, L 197*, pp. 13-21. Retrieved from: https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32003D0578&utm_source, 13.05.2026.
63. Patterson, M.G., West, M.A., Shackleton, V.J., Dawson, J.F., Lawthom, R., Maitlis, S., Robinson, D. L., Wallace, A.M. (2005). Validating the organizational climate measure: Links to managerial practices, productivity and innovation. *Journal of Organizational Behavior*, *Vol. 26, Iss. 4,* pp. 379-408, doi: 10.1002/job.312
64. Quinn, R.E., Rohrbaugh, J. (1983). A spatial model of effectiveness criteria: Towards a competing values approach to organizational analysis. *Management Science*, *Vol. 29*, *Iss. 3*, pp. 363-377, doi: 10.1287/mnsc.29.3.363
65. Rudolph, C.W., Zacher, H. (2021). Age inclusive human resource practices, age diversity climate, and work ability: Exploring between- and within-person indirect effects. *Work, Aging and Retirement, Vol. 7, Iss. 4*, pp. 387-403, doi: 0.1093/workar/waaa008
66. Schaufeli, W.B. (2012). Work engagement: What do we know and where do we go? *Romanian Journal of Applied Psychology*, *Vol. 14, Iss. 1,* pp. 3-10.
67. Schaufeli, W.B., Shimazu, A., Hakanen, J., Salanova, M., De Witte, H. (2019). An ultra-short measure for work engagement: The UWES-3 validation across five countries. *European Journal of Psychological Assessment*, *Vol. 35, Iss. 4*, pp. 577-591, doi: 10.1027/1015-5759/a000430
68. Schneider, B. (1990). The climate for service: An application of the climate construct. In: B. Schneider (Ed.), *Organizational climate and culture* (pp. 383-412). San Francisco, CA: Jossey-Bass.
69. Skowron-Mielnik, B. (2016). *Paradoks efektywności pracy – między budowaniem zaangażowania a wypaleniem zawodowym*. *Nauki o Zarządzaniu [Management Sciences], Vol. 2, Iss. 27*, pp. 151-163, doi: 10.15611/noz.2016.2.13
70. Sousa, I.C., Ramos, S., Carvalho, H. (2019). Age-Diversity Practices and Retirement Preferences Among Older Workers: A Moderated Mediation Model of Work Engagement and Work Ability. *Frontiers in Psychology, Vol. 10*, 1937, doi: 10.3389/fpsyg.2019.01937
71. Tagiuri, R. (1968). The concept of organizational climate. In: R. Tagiuri, G.H. Litwin (Eds.), *Organizational climate: Explorations of a concept* (pp. 11-32). Boston: Harvard University, Graduate School of Business Administration.
72. Tuffaha, M. (2020). The determinants of employee's performance: A literature review. *Journal of Economics and Management Sciences*, *Vol. 3*, *Iss. 3*, pp. 14-24. doi: 10.30560/jems.v3n3p14
73. Ustawa z dnia 20 marca 2025 r. o rynku pracy i służbach zatrudnienia. *Dz.U. 2025, poz. 620*.

74. Van Iddekinge, C.H., Aguinis, H., Mackey, J. D., DeOrtentiis, P.S. (2018). A meta-analysis of the interactive, additive, and relative effects of cognitive ability and motivation on performance. *Journal of Management, Vol. 44*, *Iss. 1*, pp. 249-279, doi: 10.1177/0149206317702220
75. Vroom, V.H. (1962). Ego-involvement, job satisfaction, and job performance. *Personnel Psychology*, *Vol. 15*, *Iss. 2*, pp. 159-177, doi: 10.1111/J.1744-6570.1962.TB01858.X
76. Vuong, T.D.N., Nguyen, L.T. (2022). The key strategies for measuring employee performance in companies: A systematic review. *Sustainability, Vol. 14*, *Iss. 21*, 14017, doi: 10.3390/su142114017
77. Waligóra, L. (2024). Exploring the impact of age diversity on organizational identification: A study of HR practices and perceived age discrimination climate. *Administrative Sciences*, *Vol. 14, Iss. 10*, 243, doi: 10.3390/admsci14100243
78. Walsh, B.M., Matthews, R.A., Tuller, M.D., Parks, K.M., McDonald, D.P. (2010). A multilevel model of the effects of equal opportunity climate on job satisfaction in the military. *Journal of Occupational Health Psychology, Vol. 15*, *Iss. 2*, pp. 191-207, doi: 10.1037/a0018756
79. Wołpiuk-Ochocińska, A. (2015). Motywacje do pracy i zaangażowanie w nią młodych pracowników na rynku pracy. *Zeszyty Naukowe Wyższej Szkoły Zarządzania Ochroną Pracy w Katowicach*, *Vol. 1, Iss. 11*, pp. 72-84.
80. World Population Review (2026). *Median Age by Country 2026*. Retrieved from: https://worldpopulationreview.com/country-rankings/median-age, 02.04.2026.
81. Yun, S., Takeuchi, R., Liu, W. (2007). Employee self-enhancement motives and job performance behaviors: Investigating the moderating effects of employee role ambiguity and managerial perceptions of employee commitment. *Journal of Applied Psychology, Vol. 92, Iss. 3*, pp. 45-756, doi: 10.1037/0021-9010.92.3.745
82. Zakład Ubezpieczeń Społecznych (ZUS) (2025). *Co robi Europa w zakresie aktywizacji*. Retrieved from: https://www.zus.pl/en/aktywni-50-plus/co-robi-europa? 15.04.2026.
83. Zeitlin, J., Vanhercke, B. (2018). Socializing the European Semester: EU social and economic policy co-ordination in crisis and beyond. Swedish Institute for European Policy Studies. *European Policy Analysis, Iss. 1,* pp. 34-51, doi: 10.1002/epa2.1022
84. Zhang, J., Liu, Y. (2010). Organizational climate and its effects on organizational variables: An empirical study. *International Journal of Psychological Studies*, *Vol. 2*, *Iss. 2*, pp. 189-195, doi: 10.5539/ijps.v2n2p189