

The SEM Model of Better Workers' Life in Companies

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Abstract: *This paper seeks to build a model of the aging workers' work-life quality and analyze the effect of its factors on the work engagement of elderly workers. Structural equation modeling was used to analyze the effects among seven constructs. The results show that the effect of the occupational stress of elderly workers on their work engagement and work satisfaction is negative, and the effects of the friendly working conditions, maintenance of work ability, and training programs on the work engagement of elderly workers are positive. The results show that the effect of health promotion in the workplace for elderly workers on their work satisfaction is positive, and so is the effect of work satisfaction on work engagement. The findings of this research can help employers better manage elderly workers and create a healthy and safe work environment for them. A better environment leads to higher work engagement of elderly workers.*

Keywords: elderly workers; work engagement of elderly workers; structural equation modelling

JEL Classification: J24, C38, I19

Introduction

The age structure of Slovenia's population is changing, as is the case in most developed countries. The key feature of the changes is a contraction in the share of the working-age population and an increase in the number of elderly people (Institute of Macroeconomic Analysis and Development, 2021). The process of population aging, which is already ongoing, will be more intense in Slovenia than in other EU countries. The projections are conditional on the realization of the key assumptions (change in the number of births, deaths, and net migration), but all demographic indicators show the aging of the population is inevitable (Institute of Macroeconomic Analysis and Development, 2020). In the Slovenian labor market, the decline of the

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working-age population in the next ten years will impede economic growth. An altered age structure of the reduced supply of labor could also slow down productivity growth and affect the structure of consumption (Institute of Macroeconomic Analysis and Development, 2020; 2021). Demographic change requires different capacities in the education system as the demand for lifelong learning and the teaching of skills for life and work grows (Institute of Macroeconomic Analysis and Development, 2019).

Elderly workers are often discriminated against in the workplace based on inaccurate stereotypes about aging (Nicholson et al., 2016). Companies are still not sufficiently aware of the importance of demographic changes and the challenge of the aging of the workforce for their future development and operation (see, e.g., Magnavita, 2017; Fasbender and Wang, 2017). The aging population and the growing of elderly workers are linked to the integration of elderly workers into the labor market (Bejtkovský, 2016). Thus, from the point of view of human resources management in the company, it is necessary to understand the factors that increase the work engagement of elderly workers. The problem of the current situation shows that employers prefer to hire younger people than older ones. Compared to younger workers, elderly workers are less involved in work and often face discrimination in the workplace. Also, elderly workers do not have opportunities for education and training (Korsakienė et al., 2017). Therefore, companies should pay attention to differences between generations and develop a suitable working environment for elderly workers (Chen and Gardiner, 2019).

Ilmarinen (2001) argues that the aging of the workforce at the organizational level requires consideration of the age and age factors of workers in day-to-day management. Kooij et al. (2011) and Vasconcelos (2018) assert that elderly workers have generally been with the company for a long time and have insight gained through longevity; therefore, they bring valuable resources to the workplace. According to Naegele in Walker (2006), Kooij et al. (2011), and Vasconcelos (2018), the benefits coming from the employment of elderly people are reflected in low fluctuation, knowledge of the work system, reliability, responsibility, and loyalty. Elderly people are often more qualified than their younger colleagues, and their competencies may be more appropriate to the company's needs. Also, elderly workers will transfer their experience and knowledge to younger colleagues.

Ilmarinen (2006) emphasizes that companies should provide flexibility in the workplace and structure of the work environment for elderly workers (Ilmarinen, 2006). Care for the good health of elderly workers, support from the workplace, suitable working conditions, good leadership, and training programs for elderly workers often lead to successful management of elderly workers (see, e.g., Vasconcelos, 2018; Ilmarinen, 2001; Naegele and Walker, 2006). Furthermore, when the company is committed to successful aging in the workplace, this increases work motivation, work satisfaction, productivity, and work engagement of elderly workers (see, e.g.,

Korsakiene et al., 2017; Najung and Seung-Wan, 2017; Ilmarinen 2001; Kooij et al., 2011). The problem is that companies are still not sufficiently aware of the importance of successful aging in the workplace and the benefits of elderly workers' work engagement for the company (Magnavita, 2017).

Above all, a changed mindset about the elderly is needed in all companies. By introducing management of elderly workers, companies can significantly increase the work engagement of elderly people, change ingrained stereotypes, myths and prejudices about elderly people, and reduce discrimination against elderly people in the labor market (Yeung et al., 2021). Appropriate working conditions, which should be available in all companies, improve the management of elderly workers and their work engagement (Uhunoma et al., 2021). The strategy of managing elderly workers must be part of an integrated and continuous process in the company (Bentley et al., 2019). It covers creating an appropriate working environment for the elderly and, above all, the prevention of problems related to elderly workers. It focuses on the life expectancy of all age-diverse workers and is based on acting for the benefit of elderly workers and changing attitudes towards the elderly throughout the company (Kilroy et al., 2022; Yeung et al., 2021). Human resource management is a key element of all approaches to managing elderly workers and represents an appropriate response to the aging workforce's challenges, leading to higher work engagement among elderly workers (Douglas and Roberts, 2020; Oliveira, 2021). Work engagement is an essential factor in work satisfaction and motivation, well-being, and productivity of elderly workers. In addition, workers with higher work engagement have better mental and physical health (Magnavita, 2017). Patro (2013) argues that work engagement positively affects the organization's financial success. Work engagement among workers leads to organizational success, successful working results of workers, higher quality of work, and greater company financial performance (Patro, 2013). Workers are fully engaged when they know what is expected of them in the company, they have the resources they need to do their job, have opportunities for improvement and development, and perceive that they are part of something important with co-workers they trust (Nishanthini and Upamali, 2015).

In the context of demographic change and active aging in the workplace, management contributes to creating new perspectives in the entire field of human resource management, emphasizing the treatment of elderly workers (Peng and Min, 2020; Mansour and Tremblay, 2019). The aging workforce is crucial for future economic growth, competitiveness, and performance, which will depend on how effectively employers can take advantage of elderly workers (Egdell et al., 2021). Managing elderly workers is an evolving branch of human resource management and will, in the future, offer many solutions and concepts on how to solve the problem of elderly workers in companies (Kim and Kim, 2022; Zhang and Farndale, 2022). Today, the workforce's diversity is considered an important basis for successful, customer-oriented, and outward-looking companies (Kim and Kim, 2022). Therefore, age diver-

sity in companies must be recognized and valued, and at the same time, we must be aware of the need to create an appropriate environment to respect the diversity of the workforce (Zhang and Gibney, 2020). The age diversity of workers must become part of the company's overall strategy for equality and diversity (Oliveira, 2021). Age management is poorly developed in Slovenian companies (Institute of Macroeconomic Analysis and Development, 2021). The findings of the MEET Change project (Institute of Macroeconomic Analysis and Development, 2016) show that 42% of companies do not carry out activities to adapt to an aging workforce. Furthermore, most Slovenian companies do not plan measures to encourage older workers to work longer or are not interested in the following: (i) implementation of training programs for older employees in the context of lifelong learning; (ii) implementation of programs to change opinions and stereotypes about older employees; and (iii) promotion of intra-company active aging strategies. Therefore, the main scientific contribution of this paper is reflected in the first model of the quality of the aging workers' life in Slovenian companies. There is not much theoretical knowledge nor studies that are systematically based on research about the quality of the aging workers' life and their work engagement in the companies. Elderly workers should be a part of a holistic and permanent process in a company. Therefore, with this research resulting in a new model of the aging workers' work-life quality, we wanted to fill that gap.

This paper seeks to build a model of the aging workers' work-life quality and to analyze the effect of its factors (occupational stress, friendly working conditions, maintenance of work ability, training programs, and work satisfaction affected by occupational stress and health promotion in the workplace for elderly workers) on the work engagement of elderly workers in Slovenian companies. The new findings will help Slovenian, and other companies understand the importance of managing elderly workers and its impact on their work engagement. The research results will provide workers and individuals with a more detailed overview of the management of elderly workers and their work engagement. Demographic change and active aging lead to a change in human resource management, as it must respond to new challenges in the internal and external environment of the company. From this point of view, the management of elderly workers in the context of demographic change and active aging contributes to the formation of new perspectives on the entire management field.

In Section 2, we present the literature review. It is followed by a description of the conceptual model and hypotheses tested (Section 3) and the research design and methodology used in our empirical research (Section 4). The results are introduced in section 5, followed by the discussion and conclusion (Section 6).

Literature Review

Negative Attitude Towards Elderly Workers in Companies

Elderly workers are often seen as a burden on society, but the power sources with which elderly people enrich society, and other generations are forgotten (Zhang and Gibney, 2020). Companies are still not sufficiently aware of the importance of managing age in the workplace and effectively managing the problems that accompany employee aging (Egdell et al., 2021). The first step towards the proper management of elderly workers is to create an appropriate working environment and re-create jobs that dictate a successful aging result for workers and thus achieve the company's goals, performance, and competitiveness (Douglas and Roberts, 2020; Niemi and Komp-Leukkunen, 2021). However, the company can achieve this by the work engagement of elderly workers, as they feel a deep connection with the company, support it and stand up for it (Niemi and Komp-Leukkunen, 2021).

Elderly workers are often confronted with negative stereotypes in the workplace. These stereotypes negatively affect the strategic decisions about elderly workers in the company (Lazazzara and Bombelli, 2011). Elderly workers often face age discrimination against employers. Age discrimination is reflected, for example, in age restrictions on job vacancies and less favorable employment, promotion and training behaviors (Fasbender and Wang, 2017). Employers prefer to hire younger people because employers recognize younger individuals as more flexible and familiar with new information technologies than elderly ones. Employers see elderly workers as less work engaged, work motivated, and face health problems (Korsakiene et al., 2017). Therefore, it is essential that employers aware that elderly workers show a willingness to learn new skills or knowledge and the willingness to engage in work activities, but their opportunities in the company are limited (Ilmarinen, 2012). Age should generally be seen as a positive value and as a synonym for the knowledge and competencies that can be shared by elderly workers (Lazazzara and Bombelli, 2011). Training, learning, and development practices present a strategic component of good practices for age management in companies (Naegele and Walker, 2006). The stereotype about elderly, that elderly workers are not motivated to learn new things is not true, but employers should motivate them appropriately according to their changing needs and characteristics (see, e.g., Zwick, 2015; Lazazzara and Bombelli, 2011; Naegele and Walker, 2006). In all companies, it is necessary to change the whole view of elderly workers. Eliminating age discrimination and stereotypes of elderly workers require considerable effort (Korsakiene et al., 2017). Thus, age management strategies must be part of an integrated process in the company, which includes (see, e.g., Principi et al., 2015; Lazazzara and Bombelli, 2011; Vasconcelos, 2018; Ilmarinen, 2012):

- prevention of age management problems by avoiding loss of skills on the part of elderly workers through continuous training;

- a focus on the entire working life of all age groups;
- a holistic approach that embraces all dimensions in an effective age management program;
- adoption of measures in favor of older workers both in terms of training and well-being at work;
- changing the negative attitude towards elderly workers throughout the company and regular assessments of the effectiveness of age management policies and initiatives.

Employers need to know that there is no significant difference between the work performance of elderly and younger workers, and that age is also not a condition for failure at work (Aidukaite and Blaziene, 2021). The impact of aging on their productivity is highly dependent on the individual job and the work performed by the worker (Ho and Yeung, 2021). Companies that are aware of the importance of the age diversity of their workers have a great advantage over others, as they can best respond to ever-faster changes in the global environment (Yeung et al., 2021). Age-diverse workers bring different opinions, knowledge, experience, values, and lifestyles to the company (Bentley et al., 2019).

Occupational Stress of Elderly Workers

Occupational stress is the most obvious indicator of discrepancies between workers and their work. Nowadays, workers have to do too much in a short amount of time with too little resources (Torres, et al., 2022; Mansour and Tremblay, 2019). Occupational stress increases with the ever-faster pace of work, which damages quality, causes psychological strain, disrupts work relationships, decreases innovation, and causes burnout in the workplace (Egdell et al., 2021; Chen and Gardiner, 2019). Employers will need to find new and better ways to manage elderly workers, thereby achieving greater job satisfaction, performance, and well-being of elderly workers in the workplace (Pluta and Rudawska, 2021; Ratanasiripong et al., 2021). Employers who do not recognize and take proactive action to address the aging of the workforce may face serious labor shortages in the future (Ratanasiripong et al., 2021). Thus, poor working conditions, labor policies, leadership, and employee relations affect workers' workload, stress, and exhaustion levels (Hsu, 2018). Turnell et al. (2015) emphasize that higher job demands correlate with greater stress in the workplace; moreover, job demands are negatively correlated with psychological health. In addition, elderly workers face various barriers and stressors at work reflected in health problems or physical strength limitations, gaps relating to the use of new technology, and poor work engagement (Hsu, 2018). Elderly workers tend to feel more stress than younger ones when their employers do not provide them with the support and resources needed to do their jobs well (Airila et al., 2012). According to Mosadeghrad (2014), high levels of workload and stress at work are associated with major physical inju-

ries, heart disease, high blood pressure, vascular disease, depression, and an increase in negative personal behaviors such as anger, irritability, and anxiety. Abu Al Rub (2004), Spickard et al. (2002) and Mosadeghrad (2013; 2014) summarize that there is a negative relation between occupational stress and employee performance. In addition, the authors summarize that occupational stress decreases concentration, attention, decision-making, and judgment skills. Also, stress reduces employees' quality of working life, work satisfaction, and work engagement. According to Spickard et al. (2002) and Mosadeghrad (2013), stress increases physical, emotional, mental exhaustion, burnout, absenteeism, presentism, and intention to leave the workplace.

Importance of Quality of Elderly Workers' Work-life and Suitable Working Environment for Elderly Workers

Good practice in health promotion and workplace design means optimizing work processes and organization to make it possible for workers to perform well and be healthy and enable their capacity to work (Naegele and Walker, 2006). Companies should ensure that elderly workers have appropriate physical adjustments, flexible working arrangements, and full access to support occupational health and well-being (Chen and Gardiner, 2019). Better working conditions promote workplace training among elderly workers; low physical workload and high task resources are related to the better working ability (Airila et al., 2012). With workplace flexibility, elderly workers can have a more satisfying working life until retirement age (Hsu, 2018). Therefore, a friendly work environment and maintaining work ability among elderly workers should be an important goal in all companies. According to Naegele and Walker (2006), Ilmarinen (2012), Chen and Gardiner (2019), and Vasconcelos (2018), a suitable working environment for elderly workers leads to better productivity and quality of work, higher life quality, and better well-being, higher satisfaction, and motivation on the workplace and also, higher work engagement.

Despite the problems associated with the age and aging of the population, few companies are aware of the need to develop and implement management of elderly workers (Bentley et al., 2019). Rare companies have established goals, visions, and comprehensive management models for elderly workers (Kilroy et al., 2022). In most cases, they only approach each case's individual treatment only when problems are in sight (Oliveira, 2021). They also do not place special emphasis on health and do not introduce various programs on health and sports activities that positively impact the health and well-being of the elderly (Zhang and Gibney, 2020). Often, elderly workers are faced with the dilemma of whether to stay in the company or leave, and employers do not look for creative ways to keep them in the company (Kilroy et al., 2022).

Importance of Suitable Training Programs for Elderly Workers

The aging workforce is a major challenge for all companies (Torres et al., 2022). Companies can demonstrate that they value and respect elderly workers by implementing human resources policies and practices designed to address the needs and improve the working conditions of elderly workers (Eppler-Hattab, 2021). Elderly workers need to understand their emotions, needs and motivations, and cognitive abilities to determine what it takes to function successfully in the workplace (Uhunoma et al., 2021). Haile (2022) states that more attention needs to be paid to the needs of workers. However, elderly workers are still given less access to training and development than younger workers (Chen and Gardiner, 2019). From this point of view, it is important to include elderly workers in training designed and tailored specifically to them (Torres et al., 2022). Employers need to recognize the benefits of elderly workers, value their contributions, be willing to invest in their age-diverse workers and reward them for a job well done (Eppler-Hattab, 2021). Moreover, training for workers is an important component for retaining elderly workers and increasing their working capacity (see, e.g., Armstrong-Stassen and Templer, 2005; McNair et al., 2012, Zwick, 2015). The likelihood of a worker having formal qualifications is generally lower for older than younger workers, mainly because many (now) elderly workers were not encouraged to take qualifications in their youth. Many employers think that elderly workers do not need training because they have experience. Experienced workers are valuable, but they need the training to keep their skills up to date and relevant to a changing environment (see, e.g., Armstrong-Stassen and Templer, 2005; McNair et al., 2012; Zwick, 2015). According to Davies et al. (2017), the importance of elderly workers is increasing as a source of labor for organizations. Irrespective of age, a worker needs the appropriate skills and knowledge to be productive and to help the organization achieve its strategic objectives. However, as already mentioned, in many companies, elderly workers are less likely to be offered training opportunities than younger workers. This is due, in part, to negative stereotypical assumptions about elderly workers by managers or employers. Thus, employers should use the right learning strategies for elderly workers.

Importance of Health Programs for Elderly Workers and Their Work Satisfaction

The good health of workers is a prerequisite for a good and successful life and work (Haile, 2022). Healthy and satisfied workers who work in a safe and stimulating work environment are more productive and creative, are less likely to get sick and go on sick leave, and remain loyal to the company (Ratanasiripong et al., 2021). Although the efforts that value, support, and promote the health and well-being of all workers need to be encouraged in the workplace, employers still do not pay enough attention to them (Aidukaite and Blaziene, 2021). Workplace health promotion is aimed

at helping workers change their lifestyles and achieve optimal health (Douglas and Roberts, 2020). Optimal health means achieving a balance between physical, mental, and social health (Haile, 2022). Employers can promote lifestyle changes through various measures to raise awareness, change life patterns, and create an environment that promotes healthy habits (Torres et al., 2022). Health programs in the workplace are a comprehensive set of health promotion that includes programs, benefits, environmental supports, and policies designed to encourage the health and safety of workers. Therefore, employers who provide health programs for elderly workers invest in human capital (Poscia et al., 2016). Health programs for workers and improvements in working conditions bring numerous benefits to companies, which relate to greater health and safety in the workplace, lower costs of sick leave, better health, greater productivity, and higher workers' satisfaction (Bizjak, 2014). Work satisfaction is a significant factor that has a positive effect on increasing productivity and quality of work. In addition, work satisfaction is an attitude towards one's job that impacts not only work motivation but also work engagement (see, e.g., Mansour and Tremblay, 2019; Bizjak, 2014). Successful aging is correlated with the work satisfaction of elderly workers (Cheung and Wu, 2013). For example, better work conditions and health programs for elderly workers lead to high satisfaction, which is reflected in the higher work engagement of elderly workers (Cheung and Wu, 2013; Ilmarinen 2006, 2012; Chen and Gardiner, 2019).

Importance of Work Engagement of Elderly Workers

Demographic change and age diversity in the workplace bring new research questions (Aidukaite and Blaziene, 2021). From this perspective, the role of companies is becoming increasingly important to find ways for age-diverse workers that contribute to work engagement through different age groups (Kilroy et al., 2022). Uhunoma et al. (2021) explain that work engagement depends on the type of individual work in the company. Also, work engagement and work satisfaction vary among different age groups (Zhang, L. and Farndale, 2022). Companies need to be primarily aware of the role of human resource management, as this is the only way to find out how age-diverse workers think and feel about their jobs and how much they are willing to dedicate to the company (Ning and Alikaj, 2019). Also, age-diverse workers have different work commitments, suggesting that attention needs to be paid to all age groups (Bentley et al., 2019). The main reason for the lack of work engagement of elderly workers are employers. Thus, employers have the greatest impact on the level of work engagement among workers (Douglas and Roberts, 2020; Kilroy et al., 2022). The problem of non-engagement among workers is primarily in the attitude of managers towards elderly workers (Zhang and Farndale, 2022). In order, for employers to benefit the most from each worker, they need to know the factors that influence their work engagement (Ning and Alikaj, 2019).

Bakker (2011, p. 265) defined work engagement as “an active, positive work-related state that is characterized by vigor, dedication, and absorption.” Memon et al. (2019), Barlett and Dibben (2002) summarize that workers who are engaged in the workplace and behave intrapreneurial have courage and the driving force to put new and unproven ideas, innovations into practice. Furthermore, James et al. (2010) emphasize that engaged workers tend to be less stressed, are in better health, and are more satisfied, motivated, and productive. Najung and Seung-Wan (2017) concluded that friendly working conditions are associated with greater engagement of elderly workers. Elderly workers might differ from younger ones in their attitudes toward work. Many elderly workers agree to an extended working day, but they may want to work differently. For example, elderly workers tend to prefer flexible schedules and other work conditions that are more responsive to their particular needs (James et al., 2010; Korsakiene et al., 2017).

Conceptual Model and Hypotheses Tested

Today, occupational stress is unavoidable in all companies. Excessive level of occupational stress causes anxiety, fatigue, and depression. Therefore, work engagement and work satisfaction are negatively associated with work-related stress (Magnavita, 2017). Occupational stress experienced by a worker plays a key role in his emotional and cognitive availability at work (Mosadeghrad, 2014). Therefore, higher levels of occupational stress negatively relate to employee engagement and satisfaction (Nishanthini and Upamali, 2015). Pluta and Rudawska (2021) defined occupational stress as experiencing unpleasant emotions such as tension, despair, fear, anxiety, anger and depression. These are psychological conditions of the individual, which result in a high rate of sick leave, poor productivity of workers and termination of employment (Mansour and Tremblay, 2019). In addition to creating appropriate jobs for the age-diverse workers, the company needs to address age-related physical and mental changes and thus ensure proper management of elderly workers (Aidukaite and Blaziene, 2021). According to this, the following two hypotheses are proposed:

H1: Occupational stress of elderly workers has a negative effect on their work engagement.

H2: Occupational stress of elderly workers has a negative effect on their work satisfaction.

Managing elderly workers includes eliminating discrimination and many negative stereotypes about elderly, and emphasizes the retention of elderly in companies, their well-being, and work engagement (Yeung et al., 2021). It is mainly based on changes to improve working conditions and create suitable jobs for elderly workers

(Uhunoma et al., 2021). The essential task of the company is to promote the working ability of its workers of all ages (Bentley et al., 2019). Appropriate design of jobs and working conditions affect the satisfaction of the elderly at work and their health and increased work engagement (Kilroy et al., 2022). The work performance of elderly workers largely depends on the characteristics of the workplace (Oliveira, 2021), so an individual approach to human resource management for each worker is necessary, and thus a greater emphasis on the well-being of the individual in the workplace (Douglas and Roberts, 2020). Also, more attention should be paid to implementing an age-diverse work team, as this would allow workers to work together and create intergenerational synergies (Egdell et al., 2021). Elderly workers need flexible working conditions and ergonomic changes in the working environment, leading to better work engagement (Magnavita, 2017). Thus, a healthy and friendly workplace environment for elderly workers improves productivity and work engagement and reduces costs related to absenteeism, turnover, workers' compensation, and medical claims (Ilmarinen, 2012; Korsakiene et al., 2017; McNair et al., 2012). Researchers reported about a positive relationship between friendly working conditions and work engagement of elderly workers (Crawford et al., 2017; Najung and Seung-Wan, 2017). Therefore, the following hypothesis is proposed:

H3: Friendly working conditions for elderly workers have a positive effect on their work engagement.

Occupational requirements for the predominantly elderly population have not decreased or changed, although physical working capacity declines with age (Niemi and Komp-Leukkunen, 2021). It is necessary to consider the fact that there are changes in muscle composition over different periods of life and changes in musculoskeletal capacity (Peng and Min, 2020). These falls can reduce working capacity and, consequently, increase work-related injuries and occupational diseases (Mansour and Tremblay, 2019). Therefore, from this point of view, it is important that, in addition to the proper creation of jobs in companies, the promotion and possibility of providing physical activities prevail (Eppler-Hattab, 2021). Physical activity during working hours can reduce the incidence and frequency of age-related injuries (Pluta and Rudawska, 2021). Adapted physical exercise affects the well-being and satisfaction of the elderly (Aidukaite and Blaziene, 2021). Thus, elderly workers can optimally perform their work until retirement if they regularly maintain their physical strength (Torres et al., 2022). Chen and Gardiner (2019) explain that working ability is higher among those elderly workers who have reported improvements in the company, better work measures, and a better relationship with an employer. Furthermore, work ability is the most important asset of workers in work-life (Ilmarinen, 2006). Work ability refers to the ability of a worker to do his job, which means that he has the necessary professional qualifications and professional virtues necessary to manage his work

tasks. According to Airilaa et al. (2014), there is a relationship between work ability and work engagement. Good work ability is associated with a high quality of work, well-being, and increased productivity. Therefore, work ability has a positive impact on work engagement of the elderly in the company (Converso et al., 2018). Hence, the following hypothesis is proposed:

H4: Maintenance of work ability of elderly workers has a positive effect on their work engagement.

Uhunoma et al. (2021) explain the need to introduce education and training programs involving all age-diverse workers, as this can significantly reduce the social exclusion of the elderly. So, such group programs lead to intergenerational cooperation and interaction between generations (Haile, 2022). Also, acquiring new knowledge has a beneficial effect on workers in terms of increasing their self-confidence, so the continuous implementation of training for all age-diverse workers has become a necessary part of every company's business strategy (Eppler-Hattab, 2021; Mansour and Tremblay, 2019). However, the type and program of training must be adapted to the age-diverse workers (Ho and Yeung, 2021). Training is considered as a very universal method of improving workers' productivity and performance levels, but methods of training should be adapted to elderly workers (Davies et al., 2017); however, most companies do not focus on training programs for elderly workers (Zwick, 2015). Training is reflected in upgrading the skills and knowledge of the elderly workers, which ultimately adds to job performance and productivity and leads to higher work engagement (see, e.g., Azeem et al., 2013; Ilmarinen, 2012). Therefore, training is positively associated with work engagement (Azeem et al., 2013). According to this, the following hypothesis is proposed:

H5: Training programs for elderly workers have a positive effect on their work engagement.

Researchers (see, e.g., Faragher et al., 2005; Cheung and Wu, 2013) reported about a relationship between worker health and work satisfaction. Companies need to consider developing policies to manage stress at work, because it leads to work dissatisfaction and employee health problems (Faragher et al., 2005; Cheung and Wu, 2013). The advantages of introducing health promotion in the company are reduction in absenteeism of workers, reduction of premature chronic diseases and risk factors (Kilroy et al., 2022), reduction of disability in workers, lower risk of occupational diseases, greater work satisfaction and productivity (Douglas and Roberts, 2020). The advantages of introducing health promotion in the company are reduced worker turnover and greater business affiliation, improved working climate, and higher company competitiveness (Oliveira, 2021). Hence, the following hypothesis is proposed:

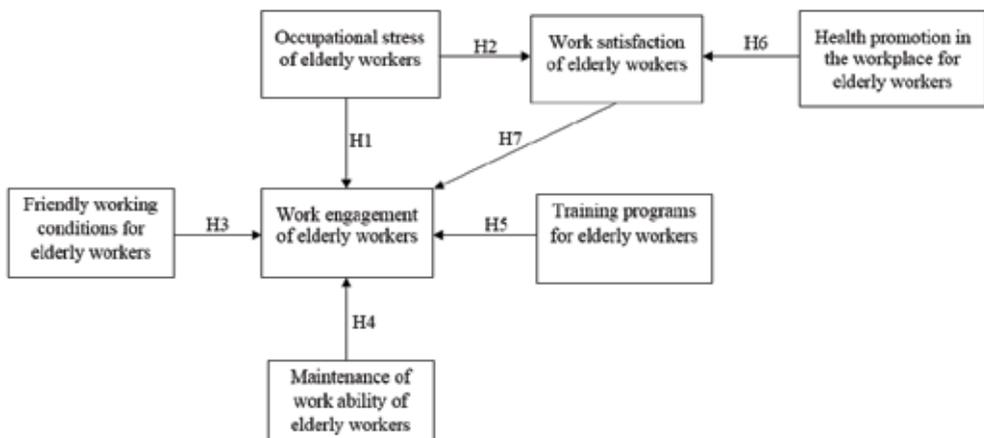
H6: Health promotion in the workplace for elderly workers has a positive effect on their work satisfaction.

People spend most of their lives in the workplace, and their satisfaction and engagement are essential factors for their job performance and productivity. Nowadays, companies operate in a highly competitive global environment, and given the rapid changes in the market, and they need to do everything possible to become and remain competitive (Zhang and Gibney, 2020). In such a competitive environment, employers need to deal with the work satisfaction of their workers, which is one of the key factors for the effectiveness of the company (Kim and Kim, 2022). Zhang and Farndale (2022), emphasize that work satisfaction is key to organizational success, as satisfied workers do their work with greater dedication, they are more productive and more engaged. A higher level of work satisfaction usually leads to lower absenteeism and better mental and physical health among workers (Egdell et al., 2021). On the other hand, low levels of work satisfaction in the workplace are associated with low productivity and capacity, low job performance, absenteeism, poor quality of services or products, and lower consumer satisfaction (Niemi and Komp-Leukkunen, 2021; Peng and Min, 2020). According to Vorina (2013), Avery et al. (2007), Vorina et al. (2017), and Hennekam (2016), the work satisfaction of workers positively impacts their work engagement. Yalabik et al. (2017) emphasize that when elderly workers are satisfied with their work, this leads to higher work engagement. Hence, it is proposed:

H7: Work satisfaction of elderly workers has a positive effect on their work engagement.

According to the above hypotheses, the conceptual model presented in Figure 1 was proposed.

Figure 1: Conceptual model and hypotheses



Methodology

Data and Sample

We included 1.000 companies (AJPES, 2020) in the sample based on random selection. In our research, we limited to Slovenian companies. The main survey involved 472 employers and 1086 elderly workers.

The structure of employers was as follows (Table 1):

Table 1: The structure of employers

Company activity	Percentages
Processing activities	30.7%
Trade, maintenance, and repair of motor vehicles	16.9%
Professional, scientific and technical activities	10.2%
Financial and insurance activities	10.0%
Information and communication activities	7.8%
Construction sector	4.7%
Other diverse business activities	3.4%
Real estate services	3.2%
Health and social security	3.2%
Catering	2.5%
Supply of electricity, gas, and steam	2.3%
Traffic and storage	2.1%
Agriculture and hunting, forestry and fishing	1.3%
Water supply, remediation activities	0.8%
Mining	0.4%
Other activities	0.4%
Education level of employers and percentages	
Master's degree or doctorate	21.6%
High professional or university education	62.9%
College	14.4%
Vocational or high school	1.1%
Length of service and percentages	
From 11 to 20 years	1.5%
From 21 to 30 years	25.0%
From 31 to 40 years	71.2%
More than 41 years	2.3%

The structure of elderly workers is presented in Table 2.

Table 2: The structure of elderly workers

Company activity	Percentages
Processing activities	30.3%
Trade, maintenance, and repair of motor vehicles	16.4%
Professional, scientific, and technical activities	10.9%
Financial and insurance activities	11.0%
Information and communication activities	7.6%
Construction sector	4.4%
Other diverse business activities	3.4%
Real estate services	3.4%
Health and social security	2.4%
Catering	2.8%
Supply of electricity, gas, and steam	2.2%
Traffic and storage	1.8%
Agriculture and hunting, forestry and fishing	1.2%
Water supply, remediation activities	1.0%
Mining	0.4%
Other activities	0.7%
Age	
From 50 to 55 years	38.4%
From 56 to 61 years	41.8%
From 62 to 67 years	19.3 %
Over 68 years	0.6%

Research Instrument

A survey questionnaire (closed type) was used as a research instrument. On a 5-point Likert-type scale, the respondents indicated their agreement to the listed statements, where 1 = strongly disagree and 5 = completely agree.

Items for the occupational stress of elderly workers were adopted from Mosadeghrad (2014), items for friendly working conditions for elderly workers were adopted from Shacklock and Brunetto (2011), for the maintenance of work ability of elderly workers from Beck (2013), for the training programs for elderly workers construct from Davies et al. (2017), and items for the work engagement of elderly workers were adopted from Robinson et al. (2004).

Methodology

A model of the aging workers' work-life quality is built, and structural equation modeling (SEM) was used to verify the effect of its factors on work engagement of elderly workers.

We established the justification to use the factor analysis with Kaiser-Meyer-Olkin measure of sampling adequacy ($KMO \geq 0.5$) and Bartlett's test of sphericity (Kaiser, 1974). In the analysis, we considered criteria regarding communalities of variables

($h > 0.4$), factor loadings ($\eta \geq 0.5$), and eigenvalues of factors ($\lambda \geq 1.0$) (Tabachnick, Fidell, 2013). With Cronbach's alpha coefficient, we checked the reliability of measurements within the scope of inner consistency (Chronbach, 1951). Within convergent validity, we examined composite reliability coefficients ($CR > 0.7$) and average variance extracted ($AVE > 0.5$) and the criterion $CR > AVE$ (Kock, 2016). We also used variance inflation factors ($VIF < 5.0$) to check the multicollinearity (Hair et al., 2010). To test the structural model, we used the following quality indicators and criteria according to Kock (2016): nonlinear causality direction ratio – NLBCD ($NLBCD \geq 0.7$); statistical suppression ratio – SSR ($SSR \geq 0.7$); R-squared contribution ratio – RSCR ($RSCR \geq 0.9$); Simpson's paradox ratio – SPR ($SPR \geq 0.7$); Goodness-of-fit – GoF ($GoF \geq 0.1$ – low, $GoF \geq 0.25$ – medium, $GoF \geq 0.36$ – high); Average full collinearity VIF – AFVIF ($AFVIF < 5.0$); Average block variance inflation factor – AVIF ($AVIF < 5.0$); Average path coefficient – APC ($p < 0.05$); Average adjusted R-squared – AARS ($p < 0.05$); Average R-squared – ARS ($p < 0.05$).

To test the hypotheses, we used the path coefficient associated with a causal link in the model (γ) and indicator of Cohen's effect (f^2), with 0.02 (small effect size), 0.15 (medium effect size), and 0.35 (large effect size) (Kock, 2016).

Results

Based on the SEM we developed the model of the quality of the aging workers' work-life and their work engagement. The results of Bartlett's test of sphericity and the values of the measure of sampling adequacy for each construct related to elderly workers, i.e., occupational stress, friendly working conditions, training programs, health promotion in the workplace, work engagement, maintenance of work ability and work satisfaction suggest that it is appropriate to apply factor analysis. Also, we have not eliminated any variable because the values of all communalities for all seven constructs are higher than the value of 0.40. All factor loadings are higher than 0.60, significant at the 0.001 level, and for each construct, the one-dimensional factor solution was obtained. The total variance explained for the constructs related to elderly workers is as follows: for occupational stress is 69.652 %, for friendly working conditions is 63.122 %, for training programs is 76.825 %, for health programs is 81.226 %, for work engagement is 84.931 %, for work satisfaction is 76.844 % and for maintenance of work ability is 62.838 %. Considering the values of the coefficient Cronbach's alpha, which were higher than 0.80, we found out that all measurement scales proved high reliability. Table 3 shows the key quality assessment indicators of the research model.

Table 3: Model fit and quality indicators

Quality indicators	Calculated values of indicators of model
Average path coefficient (APC)	0.312, $p < 0.001$
Average R-squared (ARS)	0.678, $p < 0.001$
Average adjusted R-squared (AARS)	0.677, $p < 0.001$
Average block variance inflation factor (AVIF)	2.198
Average full collinearity VIF (AFVIF)	3.534
Goodness-of-fit (GoF)	0.709
Simpson's paradox ratio (SPR)	1.000
R-squared contribution ratio (RSCR)	1.000
Statistical suppression ratio (SSR)	1.000
Nonlinear causality direction ratio (NLBCD)	1.000

Table 3 shows that the indicators APC, ARS, and AARS are statistically significant ($p < 0.001$). The indicators AVIF and AFVIF are suitable because they are lower than the value of 5.0. The results of indicator GoF show that the model is highly appropriate. The values of indicators SPR, RSCR, SSR, and NLBCD are suitable, because they are higher than the minimum prescribed values. Table 4 shows the indicators of the quality of the structural model.

Table 4: Indicators of quality of a structural model

Constructs	CR	AVE	R ²	Adj. R ²	Q ²	VIF
Occupational stress	0.959	0.699	(-)	(-)	(-)	2.557
Work satisfaction	0.948	0.672	0.604	0.603	0.605	3.675
Friendly working conditions	0.912	0.672	(-)	(-)	(-)	2.599
Maintenance of work ability	0.936	0.622	(-)	(-)	(-)	3.528
Training programs	0.931	0.772	(-)	(-)	(-)	2.789
Health promotion in the workplace	0.962	0.807	(-)	(-)	(-)	2.598
Work engagement	0.985	0.850	0.847	0.846	0.837	3.812

Note: (-) values cannot be calculated because the construct is a baseline

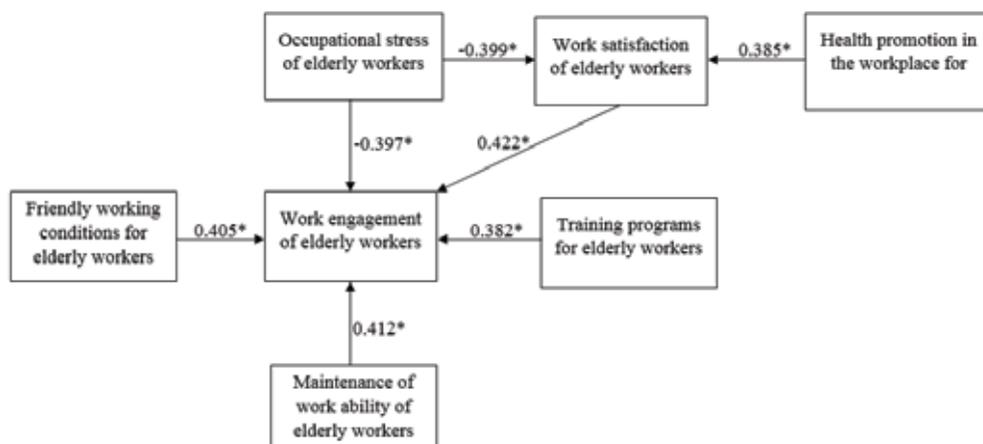
The results in Table 4 show that the values of the latent variables' R², adjusted R², and Q² coefficients are greater than zero, and also, composite reliabilities (CR) for all seven constructs are greater than 0.7. The values of AVE for all seven constructs are greater than 0.5. We confirmed the convergent validity for all the constructs studied because all CR values were higher than AVE values. The VIF values ranged between 2.557 and 3.812 (VIF < 5.0), providing confidence that the structural model results were not affected by collinearity. The results of SEM and structural coefficients of links of the basic structural model are presented in Table 5. In addition, Figure 2 presents the conceptual model with the values of path coefficients.

Table 5: Standardized Path Coefficients for Proposed Model

Hypothesized path	Link direction	Path coefficient (γ)	Effect size (f^2)	Standard error
Occupational stress @ Work engagement	Negative	-0.397*	0.358	0.030
Occupational stress @ Work satisfaction	Negative	- 0.399*	0.359	0.031
Friendly working conditions @ Work engagement	Positive	0.405*	0.364	0.031
Maintenance of work ability @ Work engagement	Positive	0.412*	0.367	0.031
Training programs @ Work engagement	Positive	0.382*	0.354	0.031
Health promotion in the workplace @ Work satisfaction	Positive	0.385*	0.356	0.030
Work satisfaction @ Work engagement	Positive	0.422*	0.375	0.030

Note: * $p < 0.001$

Figure 2: Conceptual model of the model of quality of aging workers' work-life and its effect on work engagement of elderly workers



The results in Table 5 and Figure 2 show that occupational stress of elderly workers has a negative effect on their work engagement ($\gamma = -0.397$, $p < 0.001$) and also a negative effect on their work satisfaction ($\gamma = -0.399$, $p < 0.001$) in Slovenian companies. In addition, friendly working conditions for elderly workers have a positive effect on their work engagement in Slovenian companies ($\gamma = 0.405$, $p < 0.001$). Also, the maintenance of work ability of elderly workers has a positive effect on their work engagement in Slovenian companies ($\gamma = 0.412$, $p < 0.001$). The results show that the training programs for elderly workers have a positive effect on their work engagement in Slovenian companies ($\gamma = 0.382$, $p < 0.001$). The results in Table 5 also show that health promotion in the workplace for elderly workers has a positive effect on their work satisfaction in Slovenian companies ($\gamma = 0.385$, $p < 0.001$). Also, work satisfaction of elderly workers has a positive effect on their work engagement in Slo-

venian companies ($\gamma = 0.422$, $p < 0.001$). All values of Cohen's coefficient (f^2) are greater than 0.35 and indicate large effect size. Also, results show that the highest value of path coefficient presents the work satisfaction of elderly workers and its effect on their work engagement in Slovenian companies, followed by maintenance of the work ability of elderly workers and its effect on their work engagement. In the third place are friendly working conditions for elderly workers and its effect on their work engagement. Based on the path coefficient values, we found that it is important that employers put the managing of elderly workers at the forefront as one of the key factors contributing to raising the company's performance and competitiveness. Also, it should be borne in mind that human resource management is crucial in managing elderly workers, as the company consists of age-diverse workers with different values, experience, knowledge, personality traits, and expectations. The main aim of employers is to successfully integrate appropriate management of elderly workers into the work environment, considering that age-diverse employees will be successful and engaged only in a properly designed work environment. Based on the results, we confirmed hypothesis 1 (occupational stress of elderly workers has a negative effect on their work engagement), hypothesis 2 (occupational stress of elderly workers has a negative effect on their work satisfaction), hypothesis 3 (friendly working conditions for elderly workers have a positive effect on their work engagement), hypothesis 4 (maintenance of work ability of elderly workers has a positive effect on their work engagement), hypothesis 5 (training programs for elderly workers have a positive effect on their work engagement), hypothesis 6 (health promotion in the workplace for elderly workers has a positive effect on their work satisfaction) and hypothesis 7 (work satisfaction of elderly workers has a positive effect on their work engagement).

Discussion and Conclusion

Based on the results, we found that occupational stress of elderly workers has a negative effect on their work engagement and work satisfaction in companies in Slovenia. This is consistent with the findings of Magnavita (2017), Mosadeghrad (2014) and Nishanthini and Upamali (2015), Bizjak (2014), Poscia et al. (2016) where the authors explain that there is a negative relationship between occupational stress, work engagement and work satisfaction of elderly workers and also, that high levels of stress at work lead to dissatisfaction and disengagement of elderly workers. Therefore, companies should create a suitable working environment that encourages good health and work satisfaction of elderly workers, leading to higher work engagement of elderly workers. Thus, companies that promote and protect older workers' health are building a culture dedicated to the overall well-being and happiness of elderly workers. Consequently, these companies will have higher levels of work engagement of elderly workers, work satisfaction of elderly workers, and productivity. Also, they become

more successful and competitive in the long term. To reduce stress in the workplace of elderly workers, we recommend that companies organize more workshops or seminars about well-being and health, programs to reduce stress in the workplace, reduce excessive workloads, more shorter breaks during work, and flexible working practices. Also, working conditions should be adapted to people's differing physical and mental aptitudes. The worker must have the opportunity to participate in the processes of changes and development that affect his work. Working conditions should provide opportunities for personal and professional development.

The results show that friendly working conditions for elderly workers have positive effect on their work engagement in companies in Slovenia. This is in line with several findings of Ilmarinen (2012), Korsakiene et al. (2017), McNair et al. (2012), Magnavita, (2017), Crawford et al. (2017), Najung and Seung-Wan (2017) in which authors found out that there is a positive relationship between friendly working conditions and work engagement of elderly workers. In addition, the results also show that maintenance of work ability of elderly workers has positive effect on their work engagement, which is in line with Ilmarinen (2006), Tengland (2011), Airilaa et al. (2014) and Converso et al. (2018). Authors Ilmarinen (2012), Converso et al. (2018), Korsakiene et al. (2017), McNair et al. (2012), Magnavita, (2017), Crawford et al. (2017), Najung and Seung-Wan (2017) found that the efficiency of the friendly work conditions for elderly workers and maintenance of work ability of elderly workers are reflected in the reduction of stress, improvement of the mental and physical health, satisfaction with work, work motivation, higher productivity and also reducing absence from the workplace. Therefore, we recommend that friendly working conditions for elderly workers and maintenance of work ability of elderly workers should include preventing age discrimination, promoting active aging and better awareness about aging in whole company, creating an atmosphere of appreciation towards aging workers, promotion of work ability and productivity, flexible working conditions, implementation of age ergonomics, tailored training in new technology, work-rest schedules, and part time work.

Based on the results, we also found that training programs for elderly workers have positive effect on their work engagement in companies in Slovenia. This is consistent with the findings of Zwick (2015), Davies et al. (2017), Azeem et al. (2013), and Ilmarinen (2012) where authors explain that there is a positive relationship between training programs for elderly workers and their work engagement and also, that appropriate methods of training programs that are tailored specifically for elderly workers lead to higher work engagement. Further, elderly workers who are given opportunities to learn new skills or participate in training intend to stay longer with their employers and feel respected. Therefore, to increase training efficiency of elderly workers, we recommend that companies take into consideration the specific training needs and interests of elderly workers. Elderly workers can learn new skills and require more practice and environmental support. Employers should be aware of

the difference between generations in training programs and get a complete picture of differences in training efficiency over the life cycle. Also, Ilmarinen (2006) asserts that training in the workplace should be part of every company.

In addition, based on the results, we found that the health promotion in the workplace for elderly workers has a positive effect on their work satisfaction in companies in Slovenia. This is consistent with the findings of Faragher et al. (2005), Cheung and Wu (2013), Dickson-Swift et al. (2014) where authors explain that there is a positive relationship between health promotion in the workplace for elderly workers and their work satisfaction. According to Dickson-Swift et al. (2014), promoting health in the workplace improves worker health and well-being, enhances productivity, satisfaction and therefore the success of companies. Therefore, we recommend to companies that health promotion in the workplace includes more activities that aims to improve or promote the physical or mental health and well-being of elderly workers, programs of balance between business and private life for workers, different seminars or programs for health promotion, for healthy lifestyle and for managing stress in the workplace.

The results also show that the work satisfaction of elderly workers has a positive effect on their work engagement in companies in Slovenia. This is also in line with several findings of Avery et al. (2007), Vorina (2013), Hennekam, (2016), Vorina et al. (2017), Yalabik et al. (2017) in which authors found out that there is a positive relationship between work satisfaction and work engagement of elderly workers. Hennekam (2016) summarizes that satisfied elderly workers work with higher engagement and higher productivity. Higher levels of work satisfaction tend to lead to lower levels of absenteeism, and low work satisfaction is related to low performance, poor mental and physical health, reduced customer satisfaction and higher staff turnover (Hennekam, 2016). Based on this, we recommend that companies should provide a positive working environment and pay more attention to create healthy and friendly working environment for elderly workers, friendly working conditions for elderly workers, promote health programs in the workplace, take care for good employee relations, good communication in the company, and promote intergenerational synergy.

Ilmarinen (2006), Nicholson (2016), Converso et al. (2018) and Crawford et al. (2017), Stončikaitė (2020) emphasize that successful aging can be built during work-life by ensuring that work does not increase illnesses and the probability of functional deficiency related to illnesses and that it supports good cognitive and physical capacity, as well as an active attitude towards life (Ilmarinen, 2006; Nicholson, 2016; Converso et al., 2018; Crawford et al., 2017). The research findings presented in this paper can help employers better manage elderly workers and create a healthy and safe work environment for elderly workers, leading to higher work engagement.

Our study is limited to the focus on elderly workers in Slovenia companies. Also, when building the model of the aging workers' work-life quality, we limited our research to already mentioned constructs: occupational stress of elderly workers, work

satisfaction, friendly working conditions for elderly workers, maintenance of work ability of elderly workers, training programs for elderly workers and health promotion in the workplace for elderly workers. Our statistical analysis of the data is limited to the SEM analysis. SEM analysis simultaneously determines the dependence impact between multiple variables and is a frequent choice in social studies for its validity and reliability when using inferred observations and likely measurement error. It frequently comes with a model size limit in measuring only up to two independent factors explained variance. Otherwise, the robustness of the interpreted results is restricted. Also, we take into account the potential endogeneity problem. For example, we may not have considered all the possible determinants of work engagement, thus overestimating the role of job demands and resources. In order to rectify this issue, we relied on thoroughly developed theoretical models, which may have reduced the omitted variable bias. Another limitation is reflected in reverse causality. In our research, we did not analyze reverse causality between constructs because we analyzed the effects of the independent variables on the dependent variables according to a theoretically justified conceptual model. As an opportunity for future research, we recommend an upgrade of the measurement instrument with new constructs in the area of elderly workers for better manage elderly workers (for example, leadership, motivation of elderly workers, positive organizational climate, intergenerational synergy) and also, compare these results with some other countries.

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