

Research Article

Age Dynamics of Work Engagement: A Foundation for Developing a Training Programme within the Framework of Career Counselling

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Abstract

This study presents empirical results from two scientific research projects conducted in 2024 to determine the influence of age and other socio-demographic factors on work engagement. The research was conducted among 432 employees and managers in Bulgaria as well as among 109 working students and PhD students. Reliability Analysis, various types of T-Test comparisons, and One-Way ANOVA analysis were performed to test research hypotheses. Results indicate that all aspects of work engagement increase with age and work experience. Based on the established age dynamics of work engagement in the working population and the lower engagement levels observed among students and PhD students, this study proposes the development of a useful training programme. The programme aims to educate students and PhD students about work engagement, its influencing factors, and effective interventions for its enhancement and development. The creation and adaptation of a training programme tailored to Generation Z's characteristics will help reduce stress at the beginning of a career, improve efficiency, and increase job satisfaction.

Keywords: work engagement; career counselling; training programme; age dynamics; generations.

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This is an open access article distributed under the terms of the Creative Common Attribution License (<https://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

The text presents a contemporary theoretical overview and empirical psychological research from 2024 on an essential topic for different generations in Bulgaria – the dynamics of work engagement, generational differences, and potential training programmes addressing these issues.

Modern organizations face numerous challenges – multi-generational workforces, digitalization of workplaces and processes, employee demand for greater flexibility and hybrid work models, increasing competition across nearly all business sectors, and the need to research and enhance employee engagement while fostering conscious leadership.

In addition to organizational culture and effective management, key factors for business success include opportunities for training and development, social support, and practices that promote high levels of engagement and a fulfilling work-life balance. Another important aspect concerns how organizations can sustain engagement levels across all generations while accommodating both new hires and older employees with extensive work experience.

Presented psychological research tracks work engagement levels within a Bulgarian sample in 2024 – a period when COVID-19 is in the past, but many beneficial workplace practices such as increased flexibility, hybrid and remote work opportunities, leadership development, and internal surveys continue to be upheld and expanded within many Bulgarian organizations.

According to contemporary concepts, successful career development is linked to the presence of psychological resources that support individuals in achieving their professional goals ([Lai et](#)

al., 2024). Educational institutions worldwide provide students with career counselling opportunities aimed at supporting them in dealing with life challenges, transitions, and problem situations, thereby enhancing readiness for career entry and autonomy. The significance of work engagement for successful and satisfying career development is a critical reason for incorporating this construct into the foundation of training programmes within career counselling practices for young people, particularly those from Generation Z, who are beginning their careers while pursuing university education.

Work Engagement – Organizational Context

For both organizational psychologists and business leaders, the topic of employee engagement has been one of the most important in recent years. Research, practices, and literature reviews show that implementing targeted actions by leaders and human resources experts can foster positive beliefs and attitudes related to employee engagement. Highly engaged workplaces utilize a system of management practices that provide employees with skills, information, feedback, and sufficient autonomy. This, in turn, enhances both employees' competencies and commitment, serving as a source of competitive advantage.

Work engagement is one of the key components of positive organizational behavior and is a widely used term. There is abundant empirical evidence of the positive impact of high levels of employee engagement on increased productivity, customer satisfaction, lower employee turnover, and consequently, better organizational results. In other words, organizations that take pride in a high degree of employee engagement can expect to achieve strong organizational outcomes – revenue, profit, and more satisfied customers.

There are various definitions of what work engagement entails, both in academic literature and in a business context. According to authors in contemporary psychological literature, engagement is a positive, meaningful state related to work and is characterized by three main components: Vigor, Dedication, and Absorption in work (Bakker & Demerouti, 2008; Schaufeli et al., 2002).

Employee engagement arises when additional time, effort, mental strength, and energy are invested. According to Johnson, employee engagement requires a mutual contract between the organization and its employees, involving a reciprocal exchange of resources (Johnson, 2011). If resources are invested only by one party or disproportionately, an imbalance occurs. Additionally, other authors associate work engagement with a deep sense of connection to the company, which results in a willingness to contribute more to the organization's success and outcomes (Mone et al., 2011).

It is important for organizations to encourage employees to ask themselves key questions as part of their development and performance planning: "What are my strengths? What are my resources? What else can I plan, do, or achieve? How can I find ways to satisfy both sides? How can mutually beneficial relationships be established?" There is an ongoing discussion about the need for "sustainable engagement" toward the overall well-being of individuals in organizations – socially, psychologically, and physically (Towers Watson, 2009). The relationship between engagement and productivity, as well as employee effectiveness, has been confirmed. An example of this is the global workforce study by Towers Watson (2009), covering over 32,000 employees from 30 countries. It found a significant correlation between emotional well-being and workplace performance.

Various approaches and definitions of work engagement exist in academic literature, as well as definitions and models developed by consulting firms in a business context. Tasker describes engagement as a mutually beneficial two-way relationship in which employees and employers "go the extra mile" for each other relying on mutual support and leading to greater investment from both sides (Tasker, 2004).

Factors Influencing Work Engagement

Work engagement is an internal state, but several factors can enhance and influence it. In 2006, a study by Purcell identified a number of factors strongly associated with high levels of engagement (Purcell, 2006). A common characteristic of these factors is that they involve employee participation in workplace practices.

It has been found that factors such as opportunities for training and development within an organization, as well as the sense of meaning and purpose in work and social relationships, significantly contribute to strengthening employee engagement in organizations in Bulgaria (Naydenova, 2022).

According to Ferguson, employee engagement is influenced not only by individual differences but also by social, cultural, and organizational factors. Relationships within the organization and management also play a crucial role (Ferguson, 2007). A study conducted in the Netherlands and other European countries demonstrated that engaged employees are proactive – they take initiative and are responsible for generating positive feedback about their work. Engagement is also linked to well-being (Schaufeli et al., 2001).

In Bulgaria, employee engagement has only recently become the subject of empirical research, with studies examining various influencing factors such as demographic characteristics and

leadership styles ([Alexandrova-Karamanova et al., 2013](#); [Naydenova, 2022](#); [Naydenova & Stoykova, 2022](#); [Tair, 2019](#)).

Work Engagement and Age Dynamics

Work engagement and its age-related dynamics depend on cultural context, social, and organizational factors. In Bulgaria, there has been limited research on this topic, as well as on training opportunities and interventions.

Mori and colleagues conducted a review and analysis of dozens of studies and publications on work engagement and age ([Mori et al., 2024](#)). They found that work engagement increases with age. Additionally, age moderates the relationship between various psychological job-related factors and workplace conditions, with improved emotional regulation playing a key role.

In an increasingly dynamic and digitalized work environment, approaches must be developed to help older employees stay engaged and adapt more easily to change. Researchers like [Kooij et al. \(2011\)](#), through meta-analysis and development theories, confirmed predictions regarding the strength of different work-related motivators depending on age. Their findings show a significant positive relationship between age and intrinsic work motivators, as well as a significant negative relationship between age and growth-related motives and external incentives.

Another study by Roberts, involving 181 employees and using the Utrecht Work Engagement Scale (UWES), found that employees aged 50 and older scored statistically significantly higher on work engagement compared to employees under 50 ([Roberts, 2020](#)). Statistically significant higher scores were also observed in the categories of Absorption and Dedication.

Despite some negative stereotypes about older employees – such as resistance to change and digitalization – previous research suggests otherwise. Studies indicate that employees over 50 are the most engaged at work, demonstrating emotional and intellectual involvement that drives them to perform at their best and contribute to the organization's success ([James et al., 2011](#)).

However, since work engagement is influenced by numerous organizational, social, and other factors, there may be exceptions, and some aspects of engagement may be affected differently by age depending on the support and resources available in a given context. This highlights the crucial role of leadership and organizational psychologists in finding tailored approaches for different employee groups, age ranges, and generations, in order to ensure that employees

feel valued, have access to resources, and are motivated to achieve better results in individual and team performance.

Consideration should be given to programs for counselling young people who are about to enter or have recently entered the labor market by providing them with training programs on the topic of engagement and how it can impact their performance, results, well-being, and overall career growth.

Generations X, Y and Z – Differences in Work and Engagement

Numerous studies reveal generational differences in values, attitudes, and workplace preferences. Age is a significant factor influencing work engagement.

A 2012 meta-analysis found that generational differences in workplace attitudes are minor and can be influenced by factors such as age and career stage (Constanza et al., 2012). However, researchers like Sobrino-De Toro and colleagues emphasize that generational differences can lead to intergenerational workplace conflicts arising from diverse values, expectations, and behaviors (Sobrino-De Toro et al., 2019). They suggest that strategies are needed to manage these conflicts through fostering understanding and collaboration, highlighting the importance of leadership and training.

Interestingly, other researchers like Campbell and colleagues challenge the concept of "generational differences", arguing that trends are more gradual and linear. They propose that generations should be seen as vague social constructs rather than distinct categories and raise concerns about their use as a significant concept (Campbell et al., 2017).

It is essential to consider age, historical context, and organizational realities when discussing workplace behavior, values, and engagement.

A 2019 European study explored generational differences in work engagement and mobile learning in the workplace (Statnicke et al., 2019). Significant differences were observed in engagement levels based on generation and the use of mobile learning:

- Generation X and Generation Y are more engaged at work than Generation Z.
- Generation Z is more inclined to use mobile learning at work compared to Generations X and Y.
- Compared to other generations, Baby Boomers are the least likely to use mobile learning in the workplace.

It has to be emphasized, that with the increased and more frequent use of digital devices (not only for education) the risk of techno-stress and the need for digital well-being must be

considered. According to [Angelova \(2024\)](#), digital well-being is the ability to use digital devices and technology in a way that leads to satisfaction in achieving set goals and has a positive effect on psychological, social, and physical health ([Angelova, 2024](#)).

Empirical studies ([Naydenova, 2022](#); [Statnicke et al., 2019](#)) identify generational differences in motivation at work:

- **Generation X (born 1965–1980):** Values stability and work-life balance. Their motivation is often tied to financial security and respect.
- **Generation Y (Millennials, born 1981–1996):** Seeks meaningful work and career development opportunities. They are motivated by recognition for their contribution.
- **Generation Z (born 1997–2012):** Values autonomy and flexibility. They seek work-life balance and meaningful tasks.

Regarding digitalization, Generation Z is the most adaptable to new platforms, as they were born into the digital era. Generation Y is open to innovation and technologically literate, while Generation X is sometimes cautious about technological changes and gradually adopts new tools. During the Covid-19 pandemic, as well as afterward, education had to adapt to digital and hybrid forms ([Drugas, 2022](#)). Online and hybrid learning forms continue to be used in various educational settings, especially when access needs to be provided to a large number of participants from distant locations.

It is important to note that the concept of "generations" remains a subject of criticism in some academic circles ([Campbell et al., 2017](#)). While generational differences exist, they may not be as rigid or universal as commonly assumed, and individual and contextual factors play a crucial role in shaping workplace behavior.

Career Counselling – Importance and Effective Practices

Career counselling is becoming increasingly important in the context of lifelong learning, bridging the gap between education and the labor market. In higher education institutions, these practices should ideally begin in the first year of study. Beyond psychological assessments of interests and abilities, career counselling includes practical skill development, such as job interview preparation, application and project documentation, presentations, and networking with experts and employers. Equally crucial are motivational sessions and the development of soft skills like teamwork, leadership, and time management ([Cojocariu & Puiu, 2014](#)). Counselling, training, and workshops can be conducted individually, in group settings, or online. According to Lent and Brown, career counselling aims to address three key challenges: supporting decision-making and implementation related to career choices;

facilitating workplace adaptation and career development as well as assisting in career transitions and achieving work-life balance (as cited in [Cojocariu & Cojocariu, 2015](#)).

A meta-analysis by Brown and Krane identifies key components leading to effective career counselling, including: personalized interpretation of career situations; providing labor market information; developing skills to seek support for career decisions from social networks, etc. (as cited in [Spielberger, 2004](#)).

Career counselling among students helps them understand their individual strengths and interests while overcoming potential career and life barriers. Several meta-analyses highlight the importance of studying career-related constructs in this target group (as cited in [Carvalho et al., 2023](#)).

Career Counselling and Generation Z

Currently, students and young professionals entering the labor market belong to Generation Z, also known as the iGen (Internet Generation). This fact underscores the importance of analysing the characteristics and attitudes of this significant group in the context of career counselling and development. According to the National Statistical Institute ([NSI, 2024](#)), Generation Z accounts for over 13% of Bulgaria's population in 2023.

However, career counselling services are often not sufficiently adapted to the career-related values of Generation Z. It is essential to support young people in aligning their expectations with labor market realities, guiding them toward careers that match their skills, values, and needs to reduce future turnover.

Intergenerational workplace interactions are also crucial, especially for first-time employees. This highlights the importance of structured onboarding programmes, managerial training, knowledge transfer from older employees, and cross-generational mentoring (as cited in [Maloni et al., 2019](#)).

Educational / Training Programme for Knowledge on Work Engagement and Skill Development Related to its Fostering Factors

One of the main objectives of this study is to propose a training programme for young people from Generation Z, aimed at educating them on what work engagement is, its key components, and the factors that enhance it. Additionally, it is crucial for them to acquire knowledge about successful practices and projects that could lead to improved engagement. Recent studies in Bulgarian organizations indicate that opportunities for learning and development significantly impact work engagement and can strengthen it ([Naydenova, 2022](#)).

Although engagement is an intrinsic state, leaders and direct managers can do a lot to promote good practices that enhance engagement among both younger employees and long-term staff.

Work relationships positively influence the sense of meaning and engagement (May et al., 2004). In this context, relationships and communication with direct supervisors, colleagues, and team members are pivotal.

Several theoretical frameworks are used to explain various aspects of employee engagement, including the "Needs-Satisfaction" framework, the "Job Demands-Resources" model, and Social Exchange Theory. Factors that commonly influence employee engagement are divided into three categories: organizational factors (management style, etc.); job factors (task characteristics, work environment, etc.) and individual factors (energy, awareness, etc.).

Employee engagement is positively correlated with both individual outcomes (such as organizational commitment, positive behaviors, etc.) and organizational outcomes (such as customer satisfaction, financial performance, etc.).

Training programmes that could be offered to employees can be structured around two key areas:

1. Knowledge and awareness of what work engagement is and its components.
2. Factors that positively influence engagement and successful practices.

Effective training programmes should emphasize good and constructive leadership, work relationships, opportunities for idea generation and initiative, and workplace communication and climate as factors that positively impact engaged behavior and workplace well-being.

For example, a study by Malik and Garg (2017) in the context of IT companies showed how learning organizations and training practices affect engagement. The results indicated that Vigor and Dedication were most strongly influenced by established training systems and continuous learning opportunities in organizations, while Absorption (a key element of engagement) was most impacted by research and dialogue.

These studies provide guidance for leaders and specialists in organizational psychology and human resources on how training and development measures can positively affect how employees feel at work.

It is crucial that the proposed training programme is tailored to the specific characteristics of the target group – Generation Z in this study. Very important is also the context in which it will be implemented – in the particular case – as part of career counselling for students and PhD students in educational institutions such as universities and research organizations.

Research Model and Hypotheses

A research model, based on the theoretical analysis of work engagement, is created, including the influence of age and other socio-demographic factors on the construct. On the other hand, the expected results for the dynamics of engagement related to age are a basis for developing a training program as part of career counselling and professional guidance for young people. The training will include both knowledge about engagement and skills in communication, leadership, willingness to engage in training and teamwork – factors that are related to increasing engagement at work.

Incorporating the training programme within career counselling aims to not only provide young people with theoretical knowledge about engagement but also practical skills in communication, leadership, and teamwork, which are essential for a deeper understanding of engagement dynamics and enhancing it.

The expected outcomes of applying this model and training programme include a better understanding of engagement and the development of motivation to achieve higher levels of work engagement among young people. Such a programme can help create long-term strategic initiatives for career development and personal improvement, which will be beneficial for young people in their professional paths.

It would be useful to provide a graphic model that clearly shows how socio-demographic factors (such as age, work experience, etc.) influence engagement and how the training programme can serve as a bridge to higher levels of engagement.

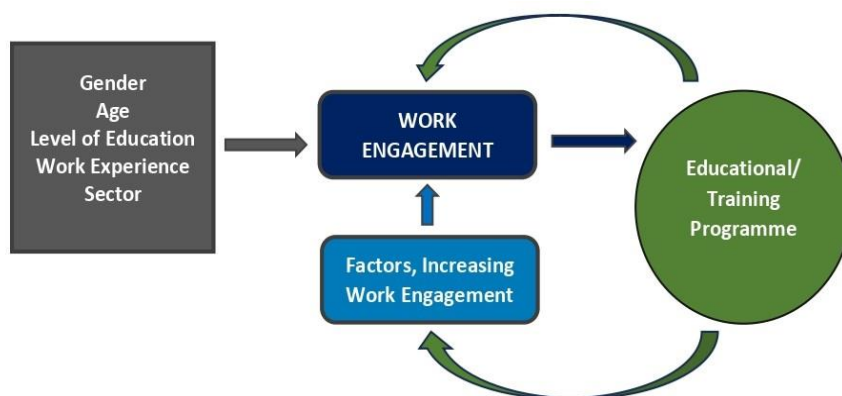


Figure 1. *Research Model – Work Engagement – Influence of Age and Other Sociodemographic Factors, as a Base for an Educational/Training Programme*

This study aims to investigate the influence of age and other socio-demographic determinants (gender, level of education, work experience, and sector) on work engagement, as a basis for developing a training programme for young people.

Based on the research model and the main objective of the study, the following hypotheses are formulated:

H1: It is hypothesized that age and work experience will affect work engagement. It is expected that older individuals and those with more work experience will have higher engagement scores (e.g., [Roberts, 2020](#)). This hypothesis is based on the fact that older age is typically associated with greater work experience, which often leads to finding and establishing a fulfilling workplace that meets the individual's needs, as well as an activity to which the individual approaches with dedication. With age, greater maturity and self-awareness are also expected.

H2: It is hypothesized that the work sector will influence work engagement, with higher results expected from respondents in the private sector than those in the public one. It is assumed that the competitive and dynamic environment of the private sector is likely to lead to greater vigor and dedication to achieve better performance.

H3: It is not expected that gender and level of education will influence work engagement. The hypothesis of no significant differences between men and women is based on empirical research data ([Naydenova, 2022](#)). No studies have found variations in work engagement levels among respondents with different levels of education, so education is not expected to be a factor in this study either.

H4: It is expected that work engagement will be lower among a sample of working students and PhD students from Generation Z compared to a sample of working individuals who are not involved in such forms of education. It is assumed that the lower age and additional commitments related to education are factors that explain the lower work engagement among students and PhD students.

Method

Participants

The testing of the formulated hypotheses was carried out based on the results obtained from two empirical studies, presented below and referred to briefly as Study 1 and Study 2.

Study 1

The study involved 432 working individuals from Bulgaria. The distribution of respondents into subgroups based on socio-demographic characteristics is presented in Table 1.

Table 1.

Subgroups, Based on Respondents' Sociodemographic Characteristics (Study 1) – Frequencies and Percentages, Frequency analysis.

Variable	Subgroups	Frequency	Valid percent
Gender (N = 432)	Women	300	69.4
	Men	132	30.6
Age (N = 432)	<= 30 years old	73	16.9
	31 – 40 years old	129	29.9
	41 – 50 years old	167	38.7
	51+ years old	63	14.6
Level of education (N = 431)	Secondary school graduates	69	16
	University graduates	335	77.7
	PhD graduates	27	6.3
General work experience (N = 432)	0 – 5 years	39	9
	6 – 10 years	66	15.3
	11 – 20 years	166	38.4
	21 – 30 years	131	30.3
	31+ years	30	6.9
Work experience at current workplace (N = 405)	< 1 year	35	8.6
	1 – 2 years	88	21.7
	3 – 5 years	85	21.0
	6 – 10 years	77	19.0
	11+ years	120	29.6
Current workplace status (N = 432)	Employee	242	56
	Manager/team leader	118	27.3
	Business owner	24	5.6
	Other	48	11.1
Type of work activity (N = 404)	Work with clients and sales	57	14.1
	Analytical/scientific work	36	8.9
	Managerial work	68	16.8
	Administrative work	53	13.1
	Information technology	90	22.3
	Other	100	24.8
Sector (N = 404)	Private organizations	346	85.6
	Public organizations	58	14.4

The presented distribution shows that most of the participants are women (69%), within an age range that is crucial for career development (31 – 40 years – 30% and 41 – 50 years – 39%). The largest proportion consists of individuals with higher education (78%), with significant general (overall) work experience (11 – 20 years – 38% and 21 – 30 years – 30%), and long work experience in the current organization (11+ years – 30%). Most respondents are employees (56%), working primarily in the field of information technology (22%) and in private sector organizations (86%).

Study 2

A sample of 109 working students and PhD students, aged 19 to 29 (representatives of Generation Z), was selected from a larger survey among students. The respondents are divided into subgroups based on socio-demographic characteristics, as presented in Table 2.

Table 2.

Subgroups, Based on Respondents' Sociodemographic Characteristics (Study 2) – Frequencies and Percentages, Frequency analysis. N = 109.

Variable	Subgroups	Frequency	Valid percent
Gender	Women	72	66.1
	Men	37	33.9
Level of education	University students	75	68.8
	PhD students	34	31.2
Type of work activity	Work with clients and sales	41	37.6
	Analytical/scientific work	14	12.8
	Managerial work	3	2.8
	Administrative work	13	11.9
	Information technology	3	2.8
	Other	35	32.1
Sector	Private organizations	79	72.5
	Public organizations	30	27.5

In Study 2, the majority of the respondents were women (66%), with students (69%) outnumbering PhD students. The largest share of respondents is employed in customer service and sales (38%) and in private sector organizations (73%). The participants have general work experience of up to 10 years and work experience in their current organization of up to 7 years. All participants are young people aged 19 to 29, inclusive.

Instruments

In Study 1, scales were included to examine several significant constructs for organizational practice, such as work-life balance, work engagement, social support, well-being, proactive behavior, attitude towards remote work models, and perceived benefits of digitalization in the workplace.

Study 2 includes some of the aforementioned methods to explore work engagement, well-being, proactive behavior, as well as scales to examine entrepreneurial intentions, perceived benefits of digitalization in education, and more.

Some of the methods were applied by researchers in Bulgaria, others were translated from English and Spanish, while the remaining questionnaires were modified or developed by the authors of the study.

This analysis focuses on one of the key constructs – work engagement – which is an important part of both studies. The construct is presented in the research model, illustrated in Figure 1, and the influence of age and other socio-demographic factors on engagement was studied.

Utrecht Work Engagement Scale (UWES-9)

The longer version of the Utrecht Work Engagement Scale (UWES-17), as well as the shorter version with nine items (UWES-9) applied in the current study, are available for academic purposes, and the Bulgarian translation has been published on the website of the methodology's author, Wilmar Schaufeli, at the following links:

https://www.wilmarschaufeli.nl/publications/Schaufeli/Tests/UWES_BG_17.pdf

https://www.wilmarschaufeli.nl/publications/Schaufeli/Tests/UWES_BG_9.pdf

These scales have shown good reliability in Bulgarian samples in several studies (e.g., [Naydenova, 2022](#); [Naydenova, et al., 2024](#)).

The Utrecht Work Engagement Scale (UWES-9) measures work engagement, which is defined as a positive, fulfilling work-related state of mind, characterized by vigor, dedication, and absorption ([Schaufeli et al., 2006](#)). An empirical study conducted in 10 different countries (14,521 respondents) shows that the original UWES version with 17 items can be reduced to 9 items (UWES-9) ([Schaufeli et al., 2006](#)). Example items for each of the subscales of UWES-9: Vigor: "At my work, I feel bursting with energy."; Dedication: "I am enthusiastic about my job." and Absorption: "I am immersed in my work .".

Participants express their opinions on a 7-point frequency scale, ranging from 0 (never) to 6 (always). The factorial validity of UWES-9 has been demonstrated through confirmatory factor analysis. The three subscales exhibit good internal consistency and reliability upon retesting.

The UWES-17 scale has been applied in Bulgarian studies ([Naydenova, 2022](#)), but the shortened UWES-9 version is still not widely used by researchers in the country. It is more suitable for research on multiple constructs than the longer version.

Procedure

In the implementation of Study 1, selected research methodologies were integrated into an anonymous online survey using the LimeSurvey platform. The link to the questionnaire was distributed among organizations in both the private and public sectors, as well as among groups in social networks. To ensure the accuracy of the analysis of the main constructs, it was explicitly stated in the introduction to the questionnaire that it was intended for employed individuals (at the time of their participation in the study or within the last 6 months). The study was conducted in April and May 2024.

Study 2 was similarly conducted in the form of an anonymous online questionnaire using the LimeSurvey platform with included psychological methodologies. In this case, the link to the questionnaire was distributed among students and PhD students. For the purposes of the current study, a sample of 109 young participants under the age of 29 was selected from a larger sample, who were both students and employees in organizations in the private or public sector (or had worked in the last 6 months). The study was conducted in May, June, November, and December 2024 in Bulgaria.

Data Analysis

The data from both studies were processed using SPSS Statistics.

To test the hypotheses **H1**, **H2**, and **H3**, based on the results from **Study 1**, the following analyses were applied: Reliability Analysis, One-Sample T Test, Independent-Samples T Test, Paired-Samples T Test, Mean Differences with Eta (η) Coefficient and One-Way ANOVA analysis with Games-Howell Post Hoc Multiple Comparisons. The verification of **H4** was based on the analysis of the data obtained from both **Study 1** and **Study 2**, using the Independent-Samples T Test.

Results

Study 1

In the first Study, the Reliability Analysis of the Utrecht Work Engagement Scale (UWES-9) shows excellent internal consistency for the tool in this study in Bulgaria. The reliability coefficients are as follows: for the overall scale: $\alpha = .940$; for the subscales: Vigor: $\alpha = .876$, Dedication: $\alpha = .889$ and Absorption: $\alpha = .832$.

Based on the results from the Paired-Samples T Test, it was found that there is a statistically significant difference in the ratings of the three subscales of work engagement. The rating for the Absorption subscale was the highest, followed by the Dedication subscale, and then the Vigor subscale. The results are presented in Table 3.

Table 3.

Statistical Significance of Differences in Scores Between Vigor, Dedication and Absorption Subscales of UWES-9, Paired-Samples T-Test. N = 413

Pairwise comparisons		<i>M</i>	<i>SD</i>	<i>t</i>	<i>p</i>
1	Vigor	4.2857	1.19854	-5.655	.000
	Dedication	4.4794	1.26564		
2	Dedication	4.4794	1.26564	-3.097	.002
	Absorption	4.6037	1.15578		
3	Vigor	4.2857	1.19854	-7.490	.000
	Absorption	4.6037	1.15578		

The data analysis shows higher results in the Absorption dimension for the Bulgarian sample compared to the other two factors. Absorption is characterized by the feeling of "immersion" in work, not wanting to detach from it, the sensation that time flies, and forgetting about everything else. Items related to this factor include: "I feel happy when I am working intensely."

The average results for all three subscales are good, representing positive work-related states ("often" and "very often"), considering that the values are above 4 on the scale, which ranges from 0 (never) to 6 (always). For comparison, the average norms for Dutch employees are: Vigor – 4.01, Dedication – 3.88 and Absorption – 3.35 (Schaufeli & Bakker, 2004). This study shows a positive trend with higher average values in all three areas of engagement for Bulgarian employees.

The Vigor factor in the Bulgarian sample has significantly lower results compared to the Dedication and Absorption factors. Vigor is a component of engagement and refers to high levels of energy, the desire to invest more effort, and is characterized by resilience. Energetic employees do not easily experience despair but are more likely to want to tackle difficulties and challenges. It is measured by items such as: "At my job, I feel strong and vigorous."

Employees with high scores on the Vigor subscale are characterized by a special drive, desire, and energy in the work process, in contrast to those with lower scores. Dedication is also an important element of overall engagement and includes questions related to the feeling of personal significance in work, enthusiasm, and pride in one's labor – feeling inspired and challenged by the work, truly committed. All three subscales of engagement show high results in the Bulgarian sample, with Absorption having the highest values.

In addition to the presented analyses of the methodologies, it is important to note that based on the One-Sample T Test, the participants' scores on the Utrecht Work Engagement Scale

(including at the subscales level) are significantly higher than the midpoint of the corresponding scale. The results are provided in Table 4.

Table 4.

Statistical Significance of Differences in Scores on Work Engagement (incl. at the Subscales Level) and the Middle Point of the Scale (Value 3), One-Sample T Test, N = 413.

Value 3	M	SD	t	p
Vigor	4.2857	1.19854	21.800	.000
Dedication	4.4794	1.26564	23.755	.000
Absorption	4.6037	1.15578	28.198	.000
Work engagement	4.4563	1.11697	26.496	.000

Based on the provided information, it can be concluded that participants in the study have achieved a good level of work engagement, which they experience frequently and very often. It is noteworthy that the Bulgarian sample shows higher values on the Absorption subscale compared to the averages studied by Schaufeli in Western organizations. When considering results with the UWES-9 scale from over 12,000 employees across various, mainly Western countries (Schaufeli & Bakker, 2004), the average values are: Vigor – 4.18, Dedication – 4.28, Absorption – 3.68, which are lower compared to those of Bulgarian employees.

The influence of respondents' age and general work experience on work engagement has been tested through significance of differences using η Coefficient and One-Way ANOVA analysis. Since the subgroups in each analysis are more than two, Games-Howell Post Hoc Multiple Comparisons are applied to determine if there are statistically significant differences between each pair of subgroups.

Statistically significant differences in the results of participants regarding work engagement (including at the subscales level) based on respondents' age are presented in Table 5.

Table 5.

Statistical Significance of Differences in Scores on Work Engagement (incl. at the Subscales Level) Between Respondents of Different Ages, One-Way ANOVA analysis and Mean Differences with η Coefficient, N = 413.

Constructs	Age	M	N	SD	F	p	η	η^2
Vigor	<= 30 years old	4.0637	68	1.23285	5.309	.001	.194	.037
	31 – 40 years old	4.0446	127	1.32028				
	41 – 50 years old	4.4417	163	1.09862				
	51+ years old	4.6545	55	.98750				
	Total	4.2857	413	1.19854				
Dedication	<= 30 years old	4.1912	68	1.50765	3.678	.012	.162	.026
	31 – 40 years old	4.3307	127	1.31636				
	41 – 50 years old	4.5992	163	1.14105				
	51+ years old	4.8242	55	1.06353				
	Total	4.4794	413	1.26564				
Absorption	<= 30 years old	4.3775	68	1.30683	4.262	.006	.174	.030
	31 – 40 years old	4.4567	127	1.19656				
	41 – 50 years old	4.6708	163	1.06186				
	51+ years old	5.0242	55	1.02008				
	Total	4.6037	413	1.15578				
Work engagement	<= 30 years old	4.2108	68	1.26163	4.991	.002	.188	.035
	31 – 40 years old	4.2773	127	1.19004				
	41 – 50 years old	4.5706	163	.99744				
	51+ years old	4.8343	55	.95841				
	Total	4.4563	413	1.11697				

The η Coefficient for all constructs shows that there is a small effect size ($<.24$). The Games-Howell Post Hoc Multiple Comparisons indicate, that there are statistically significant differences between the following subgroups: 41 – 50 years old vs. 31 – 40 years old, 51+ years old vs. ≤ 30 years old and 31 – 40 years old (Vigor subscale); 51+ years old vs. ≤ 30 years old and 31 – 40 years old (Dedication subscale, Absorption subscale and Work engagement scale).

The results from the empirical psychological study conducted among over 430 Bulgarians showed significant differences regarding age in both overall work engagement and each of the three components – Vigor, Dedication, and Absorption.

As illustrated in Figure 2 and Table 5, there is a trend where, with increasing age among the working respondents from Bulgaria, their levels of engagement rise ($p < .05$). This trend is observed for all three main elements of work engagement — Dedication, Vigor, and Absorption.

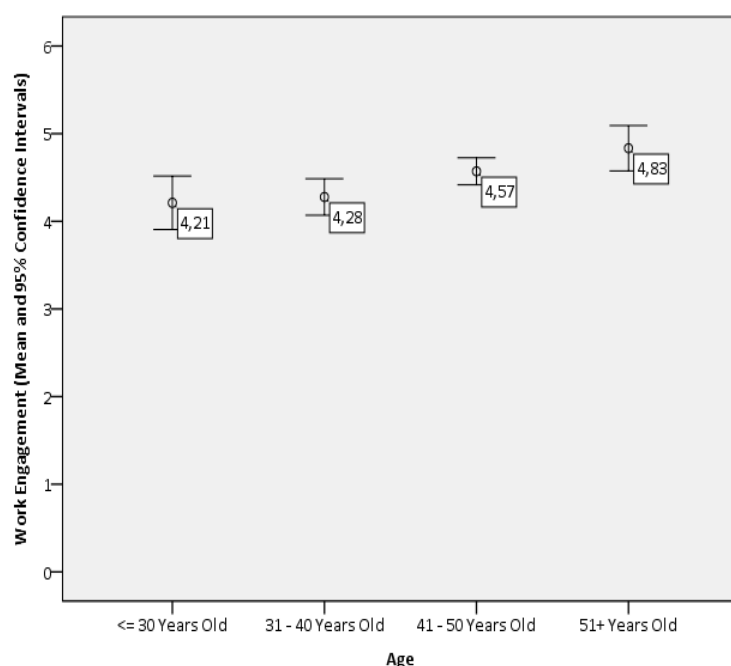


Figure 2. Differences in Scores on Work Engagement (incl. at the Subscales Level) Between Respondents of Different Ages.

These results are interesting and can be compared with some studies from Western Europe. For example, in their large-scale study, [Schaufeli and Bakker \(2004\)](#) did not find significant relationships between age and work engagement. Interesting results are reported by [Avery et al. \(2007\)](#), who studied English workers and found that engagement decreases with age, with younger employees showing higher levels of engagement than older ones. Another study by [Robinson et al. \(2004\)](#) suggests that engagement is highest among both the youngest (<20 years) and older employees, with a dip in mid-career. According to the authors, engagement varies depending on the length of service in the organization and the type of experience the organization offers. The presence of both younger and older colleagues, perceived as competent, makes employees feel more engaged in their work ([Avery et al., 2007](#)).

In the present study from 2024, a trend was identified in which work engagement increases with age, which applies to all three elements – Dedication, Absorption and Vigor.

Analysis using the significance of differences with η Coefficient and One-Way ANOVA analysis shows that there are statistically significant differences in participants' results regarding work engagement (including at the subscales level), based on the general work experience of the respondents. The results are presented in Table 6.

Table 6.

Statistical Significance of Differences in Scores on Work Engagement (incl. at the Subscales Level) Between Respondents with Different General Work Experience, One-Way ANOVA analysis and Mean Differences with η Coefficient, N = 413.

Constructs	General work experience	M	N	SD	F	p	η	η^2
Vigor	0 – 5 years	3.8922	34	1.28896	3.649	.006	.186	.035
	6 – 10 years	4.0769	65	1.26487				
	11 – 20 years	4.2114	164	1.21456				
	21 – 30 years	4.5054	124	1.09650				
	31+ years	4.7436	26	1.01678				
	Total	4.2857	413	1.19854				
Dedication	0 – 5 years	4.0294	34	1.59833	3.325	.011	.178	.032
	6 – 10 years	4.2974	65	1.46856				
	11 – 20 years	4.4228	164	1.19708				
	21 – 30 years	4.6640	124	1.11934				
	31+ years	5.0000	26	1.07909				
	Total	4.4794	413	1.26564				
Absorption	0 – 5 years	4.2353	34	1.49416	4.440	.002	.204	.042
	6 – 10 years	4.3282	65	1.20832				
	11 – 20 years	4.5467	164	1.11743				
	21 – 30 years	4.8118	124	1.05173				
	31+ years	5.1410	26	.91006				
	Total	4.6037	413	1.15578				
Work engagement	0 – 5 years	4.0523	34	1.37130	4.388	.002	.203	.041
	6 – 10 years	4.2342	65	1.24352				
	11 – 20 years	4.3936	164	1.07518				
	21 – 30 years	4.6604	124	.99161				
	31+ years	4.9615	26	.94696				
	Total	4.4563	413	1.11697				

The η Coefficient for all constructs indicates that there is a small effect size ($<.24$). The Games-Howell Post Hoc Multiple Comparisons show, that there are statistically significant differences between the following subgroups: 31+ years vs. 0 – 5 years (Vigor subscale); 31+ years vs. 0 – 5 years and 6 – 10 years and 11 – 20 years (Absorption subscale); 31+ years vs. 0 – 5 years and 6 – 10 years (Work engagement scale).

The results of the study revealed an interesting trend: as the total work experience of the employees increases, so does their work engagement, along with its components – Vigor, Dedication, and Absorption. This may suggest a connection between experience and engagement in the work process, with more experienced employees possibly feeling a stronger commitment to their work, as well as displaying higher levels of vigor and absorption related to their role in the organization.

It is important for organizations and leaders to create a favorable environment and leadership that focuses on all employees (with different lengths of service and ages) and their



engagement. According to Bal and De Lange (2015), working conditions for different age groups can be crucial for satisfaction and engagement. Furthermore, in youth, when time horizons are perceived as unlimited, individuals tend to focus on long-term goals, such as acquiring new skills, knowledge, and experience (Carstensen et al., 2003). Older colleagues perceive the time available as limited, and thus begin to focus more on short-term goals related to psychological well-being. Positive emotions and good relationships become more important to them.

This trend is illustrated in Figure 3, which graphically represents the differences in work engagement across different levels of general work experience.

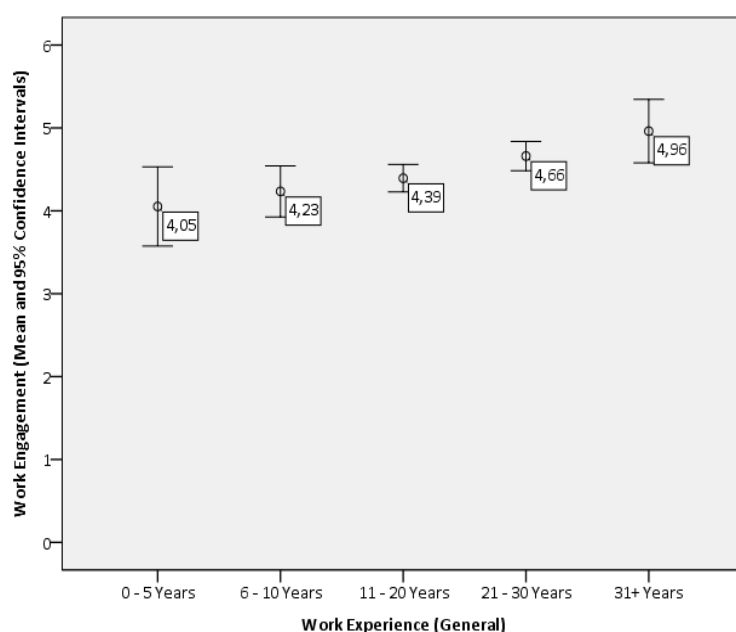


Figure 3. Differences in Scores on Work Engagement (incl. at the Subscales Level) Between Respondents with Different General Work Experience.

Interestingly, according to other studies, older employees and experts show stronger work engagement compared to younger workers (Kim & Kang, 2017), and also have a clearer career perspective. As seen in the results of this study, there is a trend among Bulgarian employees for engagement to increase with years of work experience (see Figure 4).

In this context, organizations need insightful leadership that understands the needs of different employee groups, as well as those with different work experience, and implements strategies for engagement and retention.

The results confirmed H1, regarding the influence of age and work experience on work engagement.

By applying the Independent-Samples T Test to examine the influence of the sector (private or public) in which the respondents work on work engagement, it was found that there are no statistically significant differences in the results of the respondents concerning engagement (including at the subscales level) based on the sector ($p > .05$). In the future, it is necessary to include more employees from the public sector in the sample, which would allow for better comparisons. In the current sample, there are significantly more employees from the private sector, with only 14.4% from the public sector, and no significant differences in engagement were found. Likely, it is not so much the sector itself, but the leadership within the organization, the nature of the work, and social support that have a stronger influence, which will be the subject of further research and analysis.

The presented results regarding the lack of influence of the sector on the respondents' work engagement scores do not confirm H2.

An Independent-Samples T Test was also applied to examine the impact of participants' gender on work engagement. The results showed no statistically significant differences in work engagement levels between men and women (including at the subscales level) ($p > .05$).

According to much of the scientific literature, engagement is considered a gender-neutral construct, with some authors suggesting that men may have a greater ability to commit to their work due to social roles (Wilson, 1998). It is argued that both women and men can equally demonstrate their engagement in the workplace. In this sense, gender neutrality implies that differences in the levels and forms of work engagement are more likely to be related to individual differences rather than gender differences. Over the years, various researchers have explored the extent to which gender influences work engagement. For example, according to Schaufeli et al. (2006), studies show varying results regarding the relationship between work engagement and gender depending on the country and culture. For instance, studies in Germany, Norway, and Belgium found that men had higher work engagement than women, while in Spanish samples, women had higher engagement. Interestingly, no gender differences in work engagement levels were found in Canadian, Australian, and French samples (Schaufeli et al., 2006). In a Bulgarian sample from 2022, no significant gender differences in work engagement were found (Naydenova, 2022).

The results confirm H3 regarding the lack of influence of the participants' gender on work engagement.

The analysis of the significance of the differences with η Coefficient and One-Way ANOVA analysis shows that there are no statistically significant differences in the participants' results

regarding work engagement associated with the respondents' education level ($p > .05$). This result is not surprising, as no significant differences in engagement were expected based on education. Engagement is much more influenced by other factors and characteristics. Both individuals with secondary and higher education can be equally engaged, depending on individual, organizational, and other influences. The literature does not find significant evidence that the level of education has a strong effect on work engagement.

The results regarding the lack of influence of the respondents' education level on work engagement confirm H3.

The Study 1 and Study 2 are conducted consequently in Bulgaria. The basic aim for Study 1 was to determine if there was any age dynamics in work engagement score in a Bulgarian sample of 432 working people from different age groups. Only 73 of them were young people (≤ 30 years old), representatives of Generation Z, moreover – only 24 respondents of all the sample were working students and PhD students. However, young people, engaged in studies are the main target group for our training programme (tailored mainly for educational institutions and also for organizations). The Study 2 is focused exactly on Generation Z representatives, engaged in university or PhD studies – young people that start their career and would benefit from participating in the proposed training programme. Analyses confirm the age dynamic tendency, having this specific group lower level of work engagement, compared to the larger Study 1 sample and this fact confirms that the group is a suitable target for training. The results from Study 2, which include working students and PhD students, provide a necessary foundation for testing the final research hypothesis, H4.

The Reliability Analysis of the Utrecht Work Engagement Scale (UWES-9) for the Study 2 sample shows again excellent internal consistency of the instrument – both for the overall scale ($\alpha = .927$) and its subscales (Vigor $\alpha = .868$, Dedication $\alpha = .851$, Absorption = .776).

The testing of H4 required a reduction in the Study 1 sample – respondents who are currently students and PhD students (a total of 24 individuals) were excluded from further analysis.

For the analysis of the data from Study 1 and Study 2, an Independent-Samples T Test was applied. It was found that the work engagement results (including at the subscales level) for the Study 1 sample (referred to as "working individuals") were significantly higher than those of the participants in Study 2 (referred to as "working and studying individuals"). The results are presented in Table 7.

Table 7.

Statistical Significance of Differences in Scores on Work Engagement (incl. at the Subscales Level) Between Working Respondents (Study 1) and Working and Studying Respondents (Study 2).

Constructs	Working respondents (N = 389)		Working and studying respondents (N = 109)		t	p
	M	SD	M	SD		
Vigor	4.2905	1.20584	3.8104	1.47501	3.119	.002
Dedication	4.4850	1.26596	4.0979	1.46937	2.503	.013
Absorption	4.6238	1.15216	4.2049	1.27811	3.088	.002
Work engagement	4.4664	1.11776	4.0377	1.28915	3.156	.002

The differences found are illustrated in Figure 4.

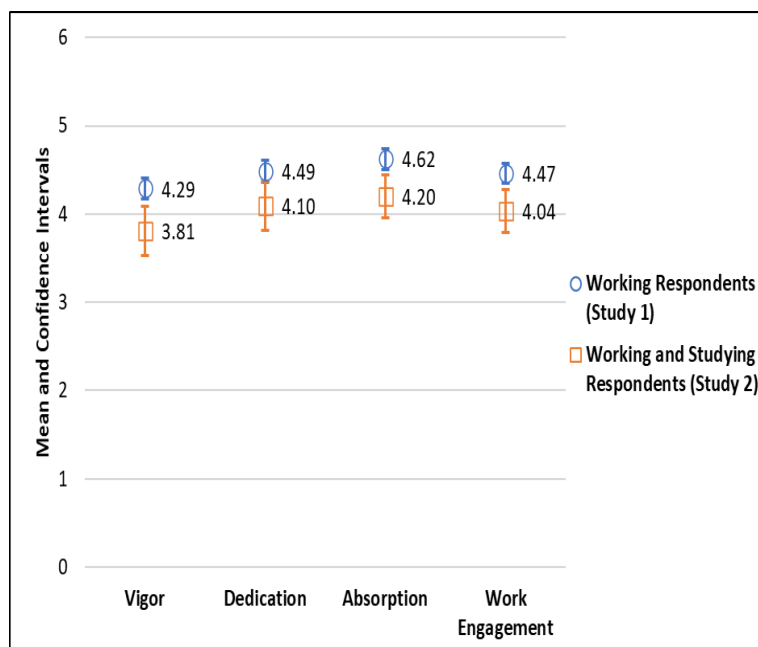


Figure 4. *Differences in Scores on Work Engagement (incl. at the Subscales Level) Between Working Respondents (Study 1) and Working and Studying Respondents (Study 2).*

The studied working and learning individuals, representatives of Generation Z, are probably at the beginning of the process of building engagement at work. It is possible that for a large part of them, it is a question of low-motivating work that is not in the desired field, given the fact that they are in the process of acquiring a qualification. Despite the supposed temporary nature of such employment, however, the low level of engagement at work is likely to lead to a decline in the effectiveness of the activity performed. The attitude towards such a type of unmotivating work is not a constructive basis for subsequent career steps. Another possible explanation

could be that for these young people it is a question of a desired professional choice, but given the lack of career and life experience, and the need for a balance between education and employment, lower engagement at work is observed.

The results obtained when comparing the two samples confirm H4. They emphasize the need to develop a training program for a better understanding of work engagement, as well as for acquiring useful skills related to the factors that influence it. It is important that it be tailored to the specifics of the target group it is aimed at – representatives of Generation Z, who are currently students or PhD students.

The results highlight the importance of understanding the unique challenges and motivations of Generation Z, particularly those who are both studying and working. Their engagement in work is influenced by the transitional nature of their employment and the balancing act between study and work responsibilities. Recognizing these factors is crucial for developing effective interventions.

To foster better work engagement among this group, educational institutions (and also organizations) can focus on providing targeted training and counselling programmes. These should not only focus on skills development but also on increasing motivation and engagement through alignment with their long-term career goals. By addressing the specific needs of Generation Z, such programmes could better prepare them for the workforce, improving both their engagement and future career prospects.

Discussion

To ensure effective career counselling, it is important to base it on the actual needs of the target group (Chircu, 2014). This study analysed the evaluation of work engagement and found that it is lower among working students and PhD students, who represent Generation Z, compared to those who are working but not studying. These results highlight the need for creating an effective and motivating training programme as part of career counselling for working students and PhD students.

Training programmes for young people should include two main components: acquiring knowledge about the essence of work engagement and its components, on the one hand, and building skills related to the factors that positively influence engagement (including successful practices), on the other.

Effective learning programmes for young people will focus on fostering constructive workplace relationships, expanding opportunities for idea generation and initiative, promoting proactivity,



providing frequent feedback from and to managers, and assisting with communication improvements – factors that will positively affect engaged behavior and well-being.

The hybrid learning model is very suitable for this age group, combining in-person and digital forms of learning which are liked by young people. Generation Z members possess well-developed digital skills and prefer to learn through websites and online channels (Pearson Higher Education, 2018, as cited in [Gabrielova & Buchko, 2021](#)). However, this is also linked to certain deficits in social skills and face-to-face communication – these young people tend to be more individualistic and prefer not to participate in team activities (as cited in [Gabrielova & Buchko, 2021](#)). These characteristics of the target group necessitate combining online training sessions with individual consultations and group training that will be conducted in person.

The aim of the study was to explore an important phenomenon in organizations – work engagement and its levels across different ages. It also aimed to present the most important results from a psychological study conducted in Bulgaria in 2024 among over 430 employees and more than 100 working students and PhD students. The results are optimistic regarding work engagement and show higher values in Bulgaria compared to similar studies in Western Europe, with this being most evident in work absorption ([Schaufeli & Bakker, 2004](#)). Bulgarian results showed that all aspects of engagement increase with age. Length of work experience also significantly influences work engagement. The study provides an explanation and better understanding of the differences and summarizes the diverse and clustered results regarding the relationship between socio-demographic factors and work engagement.

Understanding how age influences employee work engagement supports human capital management strategy within organizations. HR professionals can use the findings to develop targeted employee engagement strategies to leverage the dedication and talents of young, but also of older employees.

The results obtained are highly interesting and demonstrate that the phenomena are very complex and influenced by various factors. Organizational leaders should pay attention to the specifics of different employee groups and implement strategies tailored to them. Key factors include the proper development and training of managers as a key to engagement, as well as best practices in people development within and outside organizations.

Limitations and Directions for Future Research

A limitation of the conducted study is that both samples are somewhat unbalanced in terms of gender and the sector in which the participants work – there is a predominance of women and employees in private organizations. The smaller number of male respondents is typical for

online surveys. This imbalance could be addressed in future studies, but on the other hand, it is not directly related to the main research objective of the present study.

The contribution of the study with a scientific-applied character is the potential for subsequent detailed development and testing in a real-world environment among working students and PhD students of the described training programme for work engagement and the development of skills related to the factors that influence engagement.

Conclusions

The study presented empirical research on the age-related dynamics of work engagement among young and older Bulgarians, explored career counselling opportunities for young people, and proposed ideas for a useful training programme aimed at them.

Achieving mental well-being among working young people – a fundamental value at the individual, organizational, and social levels, as well as a satisfactory work-life balance – is an important goal that requires specific approaches, supported by scientifically-based and up-to-date training methods. It has been empirically proven that work engagement is a construct closely related to achieving mental well-being and a satisfactory work-life balance.

The importance of this construct and the results obtained in the current study regarding its dynamics provide grounds for formulating the foundations of integrating targeted, scientifically-based training focused on work engagement knowledge and the factors that shape it, as part of career counselling and vocational guidance practices for young people, regardless of the organizational trainings applied by the still relatively small number of companies in Bulgaria.

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Competing Interests.

The authors have declared that no competing interests exist.

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