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Work Engagement and Employee Health in the Post-Pandemic Reality

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Abstract ***Purpose.*** *The main aim of the article was to find out the level and structure of work engagement, employee health ratings, their relationship to each other, and whether the form of work performed (remote vs. hybrid work) differentiates health ratings among surveyed employees in a post-pandemic reality.*
Methodology. *The study used mixed methods. The survey was empirical in nature. The survey was conducted in 2023 among 402 employees doing remote and hybrid work using the -UWES-17 tool and questions diagnosing the assessment of their own health. The research method was a diagnostic survey using an online questionnaire. In addition, 20 in-depth interviews were conducted.*
Findings. *The results indicate that the form of work performed does not differentiate health evaluation among the surveyed employees. Differences are seen only between the dimensions of engagement (vigor, dedication to work, absorption) and the components of health evaluation (health status, physical condition). A relationship was confirmed only between vigor and health status and physical condition and between the dimension of dedication and physical condition.*
Originality. *This article makes an important contribution to the field of research on the importance of employee engagement and health in flexible work arrangements (remote work and hybrid work).*

Keywords work engagement, employee health, remote work, hybrid work

Introduction

The changes in the employment model of employees that have taken place in recent years have affected the way they function in the organizational space. As a result of the COVID-19 pandemic, many organizations have been forced to make their work environment more flexible, mostly regardless of the nature of the work they do. New (old) problems have emerged in the areas of shaping work engagement and motivation, mental toughness, and team building and management. In turn, the newly addressed requirements for employees, taking into account the current social situation, revealed a number of physical and mental health consequences. This is the so-called dark side of flexibility in the work environment. Despite this, as Hays Poland points out, only 33% of organizations in 2023 declared an exclusively stationary mode of work in the office (Tyszkiewicz, 2023). In such an environment, the problem of employee engagement, which is not always associated with adequate employee health and well-being, seems to be particularly relevant (Zalewska, 2020, p.33-46).

Thus, in the context of the noticeable further growth of the role of flexible forms of work (remote work and hybrid work), it seems important to know the level and structure of work engagement, employee health ratings and their relationship to each other, and to determine whether the form of work performed (remote vs. hybrid work) differentiates health ratings among surveyed employees in a post-pandemic reality.

The results presented in the article are an attempt to fill the research gap on the individual factors associated with hybrid and remote work and their relationship to employee health in organizations. To achieve the stated goal, the article first reviews the literature and research results of various authors. Then, the results of my own research conducted in the post-pandemic reality in 2023 among employees working in a hybrid model and only remote work were presented. In the final section, conclusions are formulated for economic theory and practice.

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Theoretical Framework

Changes in work patterns and employee health

The pandemic undoubtedly accelerated changes in the sphere of work organization and made transformations in social relations. While in the first phase of the pandemic, exclusively remote work was dominant; in the later period, a hybrid work model began to prevail. In the current reality, which "conventionall". can be called the post-pandemic era, three dominant models of employment are clearly outlined (Tabor-Błażewicz, 2022, p.50):

- stationary work - exclusively at the workplace,

- partially remote work (so-called hybrid work) - division of work between performing it in the organization and the place designated by the employee,

- remote work (telework, work from home)- work fully online, there is no possibility to work in the organization, the choice of place and time of work depends on the decision of the employee.

During and since the pandemic, two recent forms of work, remote and hybrid work, have gained importance. Although the use of flexible work arrangements has gained popularity thanks to the development of information technology since the 1970s, these forms are now quite well-studied, representing an ongoing area of scientific reflection (Singh, Sant, 2023; Parent-Lamarche, 2022; Sampat, Raj, Behl, Schöbel, 2022). The explosion in their use has just occurred under the influence of the pandemic. They have also been shown to generate numerous negative effects, including health effects (Gomez-Salgado et al., 2021; Palumbo, Manna, Cavallone, 2020). Some of the most common of these include lack of an ergonomic workspace at home (e.g., uncomfortable chair, inadequate lighting), lack of access to a work canteen, the need to set aside time for meal preparation, difficulty in maintaining a work-home balance, inability to clearly separate time spent on work, difficulty in focusing due to distractions from other household members, or higher stress levels (Tabor-Błażewicz, 2022, p.51-52), and mental health deterioration as a result of the pandemic was experienced by one in three employees (Czyż, 2023). Indeed, interestingly, while employers note a correlation between good employee health and employee engagement, effectiveness, and overall job satisfaction, specific solutions to support mental health are still not standard in the Polish market (Czyż, 2023). Meanwhile, as a CBRE report indicates, today's employees would ultimately like to work hybrids with the advantage of working in the office rather than at home (The Global Live-Work-Shop Report).

Wellbeing needs have also been highlighted during the pandemic. A 2021 CBOS survey indicated that 57% of Poles consider maintaining good health as one of the most important values of daily life. Meanwhile, the physical condition of workers has been particularly affected by the pandemic, including deterioration of well-being and the impact of immobility on health and figure (HR Polska, 2021).

Although employers are becoming increasingly conscious of supporting the well-being of their employees, it is only with the outbreak of the pandemic and lockdown that there has been a noticeable strengthening and increase in interest. Their growing awareness of measures to support the physical and mental well-being of their employees is of particular importance in a situation where the popularity of hybrid and remote work is increasing. This makes it important to consider whether such forms are conducive to building engagement and whether they are associated with certain health consequences. Also, whether a subjective assessment of one's own health determines a certain level of employee engagement.

The concept of engagement

Engagement is a key concept in organizational psychology. When reviewing the literature, three approaches to describing this issue are clearly distinguished. These are engagement to work, organizational commitment, and employee involvement (Lewicka, 2019; Juchnowicz, 2012; Kahn, 1990). Despite various conceptualizations, Schaufelli and Bakker devote special attention to engagement, treating it as a separate construct clearly related to the energetic state of the individual in connection with his or her activity at work, health, and psychological well-being (Wojtczuk-Turek, 2016). This is the so-called engagement to work, which consists of three components: vigor, dedication to work (dedication), and absorption. Vigor is understood and measured as the level of energy and mental resilience during work. Dedication comes from pride in one's work and the willingness to identify with it. However, absorption refers to full concentration, focusing on work and difficulty breaking away from it (Schaufeli et al., 2002, p.71-92).

An engaged employee is a person who is engaged in his or her work, is highly motivated to achieve the organization's goals and objectives, and shows special determination and dedication in performing his or her professional duties. He also displays a proactive attitude, contributing to the organization's efficiency, innovation, and performance. It also points to ample evidence of a relationship between job engagement and customer satisfaction, turnover rates, and business performance (Harter, Schmidt,

Hayes, 2002), labor resources (Bakker et al., 2007), workaholism (Cook, Gilin, 2023; Clark et al., 2014), work-life balance (Opoku, Kwao, Johnson, 2023; Shimazu et al., 2010), intention to leave the organization (Van Schalkwyk et al., 2010) or employee health (Friedrich, 2022, Zalewska, 2020).

During the pandemic, determining the relationship between work engagement and employee health has become one of the organization's main priorities. The influence on the employee in terms of shaping and strengthening his involvement in the workplace by the superior began to focus on other ways, adapted to the current situation of the organization. For example, as Hays emphasizes, even when the team leader consciously approaches the issue of building engagement during remote work, stays in constant contact with subordinates, offers them the necessary support, and organizes regular, informal online meetings, in this situation, it is more difficult to notice that something bad is happening to the employee (Czyż 2023). It is therefore easier for a supervisor to notice symptoms of deteriorating health in an employee in a traditional rather than a flexible employment model and to propose therapeutic measures in advance. Thus, in a flexible work environment, the supervisor is required to be more attentive to the employee's behavior. Numerous studies conducted so far (Shi et al., 2023; Friedrich, 2022; Clark et al., 2014) in this area have allowed to establish a relationship between partially remote work (hybrid work) and productivity with work engagement as a mediator (Naqshbandi et al., 2023) and employee health (Shi et al., 2023; Galanti et al., 2021). Moreover, providing work in a hybrid model does not always affect the employee's subjective well-being in terms of health (Shi et al., 2023, Tabor-Błażewicz 2022, Van Schalkwyk et al., 2010) and his engagement to work (Błaszczak, 2023; Sardeshmukh et al., 2012).

This raises the question of whether work engagement is more likely to occur with the provision of flexible work arrangements and whether this influences positive evaluations in perceptions of one's health. However, these positive evaluations (Kahn, 1990) are not always conducive to work engagement (Czyż, 2023). Referring to the theoretical and empirical premises presented, the following hypotheses were formulated:

H1 An employee's health positively influences his or her engagement at work

H2 The form of work performed (hybrid vs. remote) differentiates employee health evaluation

Sample

The survey included 402 employees of organizations declaring a form of hybrid and remote work organization, of which 51.2% were women and 49% were men. There is a clear downward trend in the various age groups. Respondents from the age group up to 25 years (29.1%) dominated. Respondents from the 26-35 age group accounted for 26.9%, from the 36-45 age group (23.4%), and from the 46-55 range (17.9%). Respondents from the 56+ age group accounted for the least, at only 2.7%. The majority of workers (25.1%) were characterized by seniority in the range of 3 to 5 years. Of comparable proportion are respondents with seniority of more than 20 years (15.90%) and seniority of 16 to 20 years (15.2%). The least numerous group is respondents with seniority of up to 6 months (4.5%), 7 to 12 months (6.5%), and 1 to 2 years (9.5%). Among all respondents, 61.7% were employees working in a hybrid work organization, and only 38.3% were employees working exclusively remotely.

In addition, 20 in-depth interviews were conducted among the respondents on the perceived health consequences of providing hybrid or remote work. These were respondents who had previously participated in surveys.

The survey was conducted in 2023 among two categories of employees: those working exclusively remotely and those working in a hybrid workflow model using the CAWI method. It was voluntary and anonymous. The sampling was purposive, convenience sampling. While 480 surveys were sent, 402 were received. Therefore, the return of responses was 83.75%.

The study used mixed methods. Quantitative and qualitative methods were combined and integrated in order to better understand the research problem and the discussed phenomenon - employee health in the context of remote vs. hybrid work and complex. In this study, the research was carried out based on a sequential explanatory strategy (Kolasińska-Morawska 2023, p.26).

The empirical material obtained was then subjected to statistical analysis using IBM SPSS Statistics 28.0.

Variables were measured as follows:

- Work engagement - measured using the 17-item version of the Utrecht Work Engagement Scale (UWES-17) (Schaufeli, Bakker, 2003). This tool examines three dimensions of work engagement: Vigor (6 items), Dedication (Devotion) to Work (5 items), and Absorption (6 items). Reliability was obtained for the dimensions: Vigor (0.77), Devotion to Work (0.85), Absorption (0.76), and for the entire scale of the UWES tool the reliability was $\alpha = 0.96$.
- Form of work performed - hybrid vs. remote work was measured by one item; it was coded for hybrid work - 1 and remote work - 2.
- Health - measured by two questions related to the assessment of one's health: "My health is adequate for the work I do". and "My physical condition is adequate for the work I do". In the survey, these were defined respectively: "health status". and "physical condition". Respondents answered on a 5-point Likert scale; the reliability of this measure was $\alpha = 0.634$.

Research Results

The respondents gave an average assessment of their health (M=6.7114, Me=7, SD=1.85814). Regarding work involvement, average ratings were also obtained, meaning that they are not completely dedicated to their work and do not fully feel emotionally connected to their work role (M=65.1045, Me=67, SD=16.5186). In turn, in the factor structure of work engagement, as shown by the analysis of the empirical material in the surveyed group of employees, the highest level was recorded for the vigor dimension (M=24.2388, SD=5.85976). Respondents are characterized to a lesser extent by dedication at work (M=18.3756, SD=6.20399). Table 1 presents the results of descriptive statistics and the variables used in the survey.

Table 1 Descriptive statistics of variables used in the study (N=402)

Variable	M	Me	SD	Skewness	Kurtosis
Vigor	24.23	25	5.85	-0.886	1.270
Dedication	18.37	19	6.20	-0.480	-0.358
Absorption	22.49	23	6.44	-0.730	0.829
Work Engagement- General	65.10	67	16.51	-0.629	0.333
Health	6.71	7	1.85	-.375	-.082

Source: own study

The results indicate that there is a statistically significant correlation between the dimensions of work dedication studied. The relationship with the highest strength (r=0.752, p<0.001) links engagement to work with vigor. The weakest correlations are between absorption in work and dedication to work (r=0.633, p<0.001). (Table 2).

Table 2 Correlation for components of engagement to work and health

Variable	Dedication	Absorption	Health
Vigor	0.752**	0.633**	0.083
Dedication		0.701**	0.090
Absorption			0.087
Health			

** Correlation significant at the 0.01 level (two-sided)

Source: own study

Regression analysis was used to verify the hypothesis of determining the type of relationship between an employee's health rating (independent variable) and his engagement at work (dependent variable). (Table 3).

Table 3 Regression analysis results - health versus intention to leave

Variable	Engagement to work				
Model	B	SE	**β**	t	p
Constant	58.388	3.025		19.301	<.001
Health	1.026	0.435	0.117	2.359	0.019
	R2=0.014; F(1.399)=5.565				

* p<0.001.

Source: own study

Statistical significance was obtained for the relationship between health evaluation and work engagement (p<0.05). The effect of health assessment on the explanatory variable was positive. Interestingly, between the dimensions of engagement (vigor, dedication, absorption) and the components of health assessment (health status, physical condition), the relationship was confirmed only between vigor and health status (r=0.106, p<0.05) and physical condition (r=0.120, p<0.05) and between dedication and physical condition (r=0.161, p<0.001). Interestingly, gender did not differentiate either health ratings (U=18918.5,

p=0.268) or work engagement (U=20140, p=0.966).
However, these data are not satisfactory because, during in-depth interviews with employees about health consequences, it was revealed that most often, employees have problems with clearly demarcating the boundaries between work and life. In addition, they indicate that employees performing only remote work, especially, are deteriorating health (increase in somatic diseases). On the other hand, employees in the hybrid model suffer from work overload, have problems with concentration and shifting their attention. The surveyed respondents also indicate a decrease in motivation to work and stress related to performing remote or hybrid work. Some respondents emphasized that they "feel professionally burnt ou". and cannot separate the professional and family spheres. This results in less engagement in work and worse well-being.

Conclusions from the Research

The results obtained confirmed the first hypothesis. Perceived health assessment influences engagement at work. The result obtained is consistent with previous research findings that health factors (physical and mental) have a positive relationship with work engagement (Veromaa, Kautiainen, Korhonen, 2017). This is also confirmed by qualitative research on the health consequences of surveyed respondents in the context of remote/hybrid work. Supporting health, including mental health, can help increase employee engagement. Those who feel supported, appreciated, and motivated are more likely to do their jobs and strive for more in their careers. This can be a positive boost to employees' mental health and self-confidence, especially when they feel this way when their contributions to the team are recognized (Hart, 2022). However, during in-depth interviews, respondents pointed out a number of negative aspects resulting from working remotely vs. hybrid. The most common burdens in the work process included those related to psycho-social costs, including stress, burnout, and lack of balance between work and family life. Therefore, thanks to effective actions on work environment factors, you can simultaneously eliminate the negative consequences affecting mental health and reap the benefits from work engagement.
In turn, by effectively acting on factors in the work environment, negative consequences affecting mental health can be simultaneously offset, and the benefits of engagement at work reaped. Organizations can reduce employees' psychological stress by reducing the level of conflict and workload and supporting them with psychological measures to maintain ideal working conditions (Ruiz-Frutos et al., 2022, p.1330). Also, good physical condition translates into tangible benefits related to effective task performance in the organization. Respondents who experienced feelings of a surge of energy (vigor) rated their health and physical condition better. They are, therefore, more resistant to physical and mental fatigue. Therefore, organizations should ensure that their employees are physically active, as they can then count on more satisfied, creative, and motivated employees. In addition, physical activity reduces many somatic diseases, supports brain fitness, and increases self-esteem and self-confidence (Rusz się…, 2023).
Interestingly, the belief in the importance of the work performed is also associated with the physical condition of the respondents surveyed. This indicates that the very sense of meaningfulness of the work performed, coupled with a high assessment of one's physical condition, protects against negative health effects. It should be emphasized, however, that in addition to studies revealing a positive link between engagement and health (Zalewska, 2020, p.33-46), there are other studies indicating that high engagement in work is not a sufficient measure of work-related well-being and when studying it, other indicators should be taken into account (Upadyaya, M. Vartiainen, K. Salmela-Aro, 2016).
The second hypothesis was verified negatively. The form of work performed (hybrid vs. remote) does not differentiate employees' health ratings. However, research to date is inconclusive in this regard. Both negative impacts of remote/hybrid work (Shi et. al 2023, Friedrich 2022, Satpathy, Patel, Kumar 2021, Sardeshmukh, Sharma, Golden 2012) as well as positive impacts (Unda-Lopez et al., 2023; Mohanty, Jyotirmaya, 2021; de Menezes, Kelliher, 2011) are indicated. In contrast, respondents surveyed in interviews indicated many negative components affecting their health. Similar results among employees doing remote or hybrid work have been obtained by other researchers (Shi et al., 2023; Friedrich, 2022; Dawidsen, Petersen, 2021; Gierszon, 2021). Managers who want, instead, to retain employees in an organization that provides flexible work and avoid their departure from the organization should, first and foremost, give more importance to those programs that would shape and increase the emphasis on health promotion in the workplace. This is quite important, especially since a positive assessment of one's health promotes engagement at work. These can include a variety of corporate wellness programs. It also means directing modern organizations to shape working conditions that would support an employee's mental and physical resilience and enable him or her to perform tasks that are important and fill him or her with pride. In addition, organizations should be concerned about the health of their employees, not forgetting their well-being.
The study has various practical implications for organizational management. First, organizations that allow employees to work flexibly, regardless of the form of work, contribute to an increase in the level of engagement. In addition, they allow us to understand that the form of work (remote vs. hybrid) equally affects the health of the employee and does not necessarily create

a favorable environment for his health. However, its high rating promotes greater engagement in work.
In turn, the manager should support the individual development of the employee and take care of his physical, mental, and social well-being. Particularly important is both the mental and physical condition of a person, which translates into his efficiency and engagement in work. Therefore, one of the employer's goals should be to support employee well-being, taking care of the health and broad development of employees, which is embedded in corporate wellness. By creating such a work environment, the organization fosters the employee's full potential by taking care of his health and life balance (Burke, Richardsen, 2014). Employee health also depends on requirements (physical, psychological, social, and organizational aspects of work) and resources (Schaufeli, Bakker, 2004). This is because meeting them requires effort on the part of employees and results in a number of psychophysiological costs. If the demands are very high, they lead to burnout and health problems (energy process) (Zalewska, 2020, p.36).
Instead, in the context of building employee engagement, it is necessary to look for solutions that synchronize this engagement with low health costs. In addition, given the new organizational conditions, employers should increasingly target programs related to health promotion.
The above study is also a source of practical information for managers and researchers working in the field of human resource management. Knowing that a flexible work environment is also fostered by high engagement, it should become a priority for managers to build employee engagement while shaping so-called "wellbein". programs. This is important, especially among employees working exclusively from home, who have no direct contact with the work team at all, as opposed to those providing work in a hybrid model. It also becomes important for the manager to learn about the needs, aspirations, and expectations of employees, which makes it possible to create a diverse work environment and health benefits.

Limitations and future research
However, the survey has several limitations. First, the survey only obtained responses from employees doing remote work (from home) or hybrid work. It is recommended that the survey be expanded to learn more about the opinions of employees doing traditional work and to make comparisons among these three groups about the level of engagement in work and health ratings. The survey should also be expanded to include other variables moderating the form of work performance versus employee engagement and health, for example, employee productivity, performance, job satisfaction, and to examine which elements of health-promoting programs promote employee retention in the organization. It would also be important to know if and which mental or physical factors promote engagement at work.
There are also limitations on the methodological level. The survey is limited only to respondents with flexible work, without taking into account the type of organization, type of work (physical vs. white-collar), or category of employees (specialist, manager, director). In addition, the health assessments made are only subjective assessments, as opposed to objective medical assessments, which form the basis for suitability for the job. Also, for assessing health, it is recommended to use other extensive multidimensional tools, including Goldberg's GHQ 28 General Health Questionnaire (Goldberg, Williams, 1988).

Conclusion

In summary, it can be said that perceived health determines engagement at work in an organization. Therefore, it seems important for employees to strive to develop and maintain a high level of vigor, to find a sense of meaning in work, and to use methods that support full concentration on work. Since it is nowadays expected that the flexible model of work provision will be, in post-pandemic reality, a popular model of work organization in many organizations, and in the future, for example, hybrid work organization will even become the dominant model of work (Moglia, Hopkins, Bardoel 2021); therefore, further research in this area is called for, which would take into account the dispositions of the employee, his physical and mental well-being, and determine the possibility of leveling any health consequences.

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