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A STUDY OF WELL-BEING IMPACT ON WORK EFFECTIVENESS

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Abstract: This study analyzes literature from the perspective of factors that contribute to organizational human resources innovation processes. The need for permanent changes attributed to progress, the situations created by pandemics and wars, the predominance of ensuring well-being at work, the digitalization in all sectors are some of the factors that are considered in innovation. The main factor analyzed in this research is to ensure the well-being of employees as an innovative method of increasing performance. The basis is research into how the reduction in working time by employees, to 4 days, affects the productivity of the organization.

Key words: work time, factors, results, well-being, human resources, innovation

1. INTRODUCTION

Innovation is characterized by a new product, process or technology, and innovation management by the implementation of new value-creating processes, when at least one-dimension changes [1]. Employees are at the center of organizations, and if innovation is desired or required, most of the time, employers are forced to focus on management strategies in the human resources department. Creativity becomes a quality that the employer to fulfil the objectives of the organization. On the other hand, employers implement evaluation systems, measuring the results of employees, as well as the system of rewarding those who perform as a method of stimulation, of encouraging productive work [2]. The adoption of innovations is attributed both to external environmental factors and social processes. A strongly constructed and well-applied leadership leads to the introduction of innovations in management more easily, with a more open perspective on the employees who, having a state driven by well being, will respond according to expectations [3].

In search of the factors involved in the results of human resource management innovation, we identified individual, decisional, communication practices and progress [4].

Any decision at the manager or employee level has a direct impact on the results. Innovation clearly brings an impact, a novelty, total or partial, which is seen and implemented differently from individual to individual. The perception of innovation is essential, and it starts from leadership and personal convictions, adaptability, creativity, and mode of action. That is why communication practices are vital for an organization, practices that must encourage a light brainstorming, in which there is no room for conflicts, but for teamwork, competitive only at the market level, not at the organizational level.

Human resources themselves represent an innovation factor, which leads to competitiveness through quality, education, availability, capacity, abilities, skills, motivation [5]. The staff in an organization has a certain capacity for innovation, which is influenced by [6]: training and development of employees; the organizational structure; the information system; individual thinking; creative skills; organizational policy; sensitivity to disturbances; managerial style; the motivation system; training in the field of managerial methods; the decision-making system. Managers and employees have as their future goal an improved organizational culture, being concerned with its permanent evaluation to

support a strategy. This is true worldwide according to this year's Global Report. The field of construction is one in which motivation at work is lower and in which managers are fighting to increase it [7; 8].

2. RESEARCH METHODOLOGY AND RESULTS

By analyzing the specialized literature of the keywords "innovation factors in HRM" we found 3403 articles on the Web of Science, sorted by relevance, of which 175 articles in 2023, 436 in 2022, 422 in 2021, and 383 in 2020. We processed with VosViewer after refining the articles according to key words and to the most cited author, and the result is shown in Figure 1 and 2.

Innovation trends go towards green technologies, towards the mix between the innovation of green products and the innovation of ecological processes, to improve the quality of the environment and life. Organizations are increasingly faced with the identification and development of ecological organizational capabilities, through ecological programs and green management, inclined toward reducing pollution [9].

To carry out this study, we have researched practice and theory, through specialized literature analysis methods and synthesis, the comparison method, and logic (inductive and deductive). Bibliographic sources were analyzed and subjected to comparisons and forecasts. We have formulated two questions to which we want to show the answers from the study of the existing and researched specialized articles.
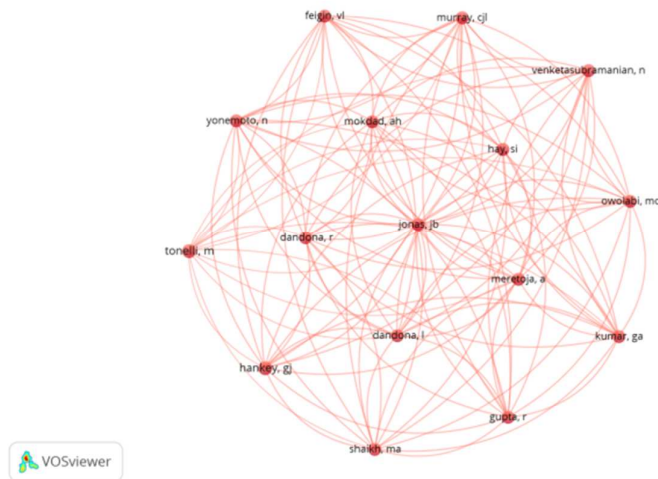

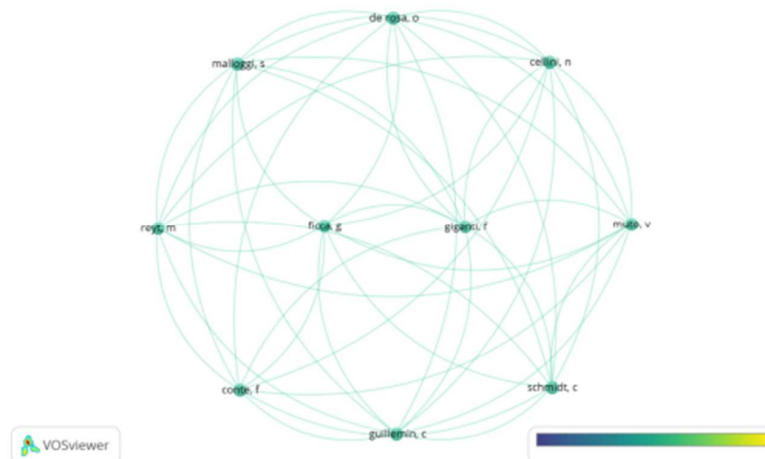**Fig. 1** The most cited authors on Web of Science.

Fig. 2 Authors concerned with the work schedule.

Question 1: Does reducing working time contribute to the organization's success?

In the web of science database, we identified 1,188,884 scientific articles on the topic of the work program and the conflicts generated by it, of which 5,276 are highly cited papers, 150 hot papers, 33,289 review articles, 418,653 open access.

Working-time society consensus statements: Evidence-based effects of shift work on physical and mental health from 2019 is the most cited scientific article on this topic. In the figure, an image was made with VosViewer of the authors who were particularly concerned with this topic [10]. It found that most employees say they could complete their work tasks in a maximum of 5 hours, but interruptions are a real problem. These interruptions are caused by problems involving other people, answering the phone, email or other types of messages, administrative work and other routine causes [11].

Organizations seek to make their employees happy and provide them with various programs and strategies to boost employee morale, which achieve the correlation between the employee's expectation of his level of satisfaction and the achievement of organizational performance. Thus, they divide their strategies according to the proposed objectives: short, medium and long term. Employee satisfaction is considered an objective to be achieved in a short period of time, being very necessary for the fulfilment of the other objectives, so we start from a satisfied employee, in a good working condition. As a medium-term objective, we must keep what we have won - the retention of good employees. The long-term strategy is focused on profitability, expansion, and the need for additional employees.

Peter Skillman brought up a design problem, where a team of four had to solve the problem of a marshmallow. They started with 20 sticks of spaghetti, 1 m of adhesive tape, 1 m of string, and a meringue that will have to be placed on top, to build the highest structure. People in the team evaluate, plan, organize, fight for leadership in the group, and focus on making the structure as tall and stable as possible, and in the end, when they must place the meringue, they find that there is not enough time left for testing, rebuilding calculations, and why most of the time the build collapses. The problem was presented by Tom Wujec in a TED talk in February 2010 [12].

Another convincing technique that focused work on a short time has proven effective is the Pomodoro Technique of large and small stones, a method created by Francesco Cirillo in the 1980s, used as a time management tool. A traditional 30-minute pomodoro is considered the most suitable and effective, assuming 25 minutes of concentration at work, without any interruption, then 5 minutes total break [13]. Furthermore, Agile and Scrum are used in project management, and their difference is that Agile represents a philosophy of principles and values, and Scrum is a facilitating method of the Agile concept [14].

The Institute of Applied Economics and Social Research in Melbourne concluded that after a maximum of 30 hours a week at an age greater than 40 years, it is tiring and even harmful to the performances that could be obtained with a reduced schedule [15]. Perpetual Guardian conducted an experiment in which for eight weeks they imposed the shortening of the work schedule to four days a week and the employees showed greater enthusiasm and efficiency, being happier and more focused [16]. The main reason for this method is that technology makes people happier, work is less due to the technology we use at work, which should reduce the time spent at work and increase the quality of professional and personal life. Many countries have tried the short work week, even Romania, among Iceland, Germany, Canada, New Zealand, France, or Spain and have obtained beneficial results, improved productions, and obvious well-being [17].

Question 2: Does the well-being of employees bring organizational success?

When searching for the keywords well-being HR in Google Trends (Figure 3), we find that in the period 2020-2023, the search trends about this topic were high, with fluctuations, but this topic is always kept up to date for the field of human resources management. The United Kingdom stands out as the most interested,

having the most explorations in this regard (Figure 4).

Introducing the working program concept, by comparison with the well-being one, we found that the first one has a greater impact, it is more explored in several countries, such as the United Kingdom, the Philippines, the USA, Canada, Nepal, for the same period of three years analyzed. Employee well-being can be measured by comparing job satisfaction and workplace commitment. Up to now, it appears that the assessment of job satisfaction was done most of the time with the help of bosses and less based on self-assessment and that job satisfaction is

negatively correlated with counterproductive work behavior [18].

The employee's well-being can be influenced by factors such as lifestyle, personality, working conditions, stress, uncertainty, and his state of health [19]. Researchers are interested in a century of job satisfaction, along with concepts such as involvement, commitment, motivation, and performance. Eudaimonic well-being is realized together with commitment, competence and experience, in collaboration with social well-being at work, regarding the adhesion in communities, which leads to superior results in the organization [20].
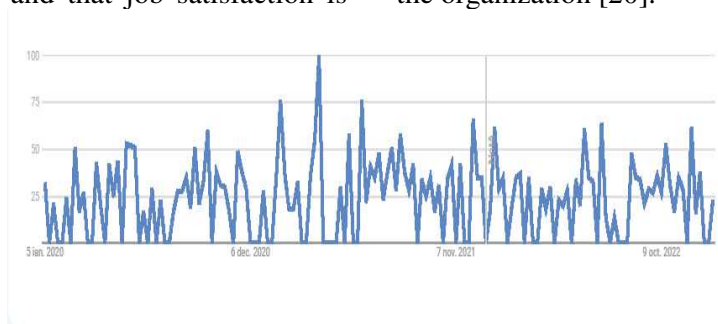

Fig. 3 The level of interest in the well-being of human resources from 2020-2023 (Google Trends).

Fig. 4 Comparison between the exploration of human resources wellbeing and working program, 2020-2023 (Google Trends).

Table 1

Factors that affect the well-being of employees and their implications (a synthesis based on the

No.	Factor	No. of articles	Observations, comments and implications
1.	**Job satisfaction**	49385	The concept of "job satisfaction" has evolved strongly since the Covid-19 pandemic with an increasing focus on factors beyond just salary and benefits. Here's a look at the "new meaning" that work has [21, 22]: (1) Change focus: from extrinsic to intrinsic; from individual to collective; from static to dynamic; (2) Key elements of the new meaning: purpose and meaning; growth and development; work-life balance; positive work environment; flexibility and autonomy. These changes have been supported by the following aspects related to the workforce [21, 22]: • Changing workforce because Millennials and Gen Z prioritize purpose, flexibility and work-life balance over traditional factors; • Remote work has been a generalized practice which has blurred the lines between work and personal life, making wellbeing and flexibility even more important;

			• As automation and Artificial Intelligence replace routine tasks, human jobs will be much more focus on creativity, problem solving and interpersonal skills, requiring a different approach to satisfaction. The implications for businesses can be summarized as following [21, 22]: • Organizations should be focus on employee wellbeing, investing in mental health support, flexible working arrangements and a positive work environment is crucial; • A new priority has been identified by providing opportunities for growth for each employee (provide training, development programs and career paths) to keep employees engaged; • Organizations should provide interesting experiences to their employees by connecting individual work with the company's mission and social impact. Thus, this will foster a sense of purpose; • Organizations should give employees autonomy and control over their work to drive ownership and satisfaction (empower employees); By understanding the evolving meaning of job satisfaction, businesses can create work environments that are not only productive, but also fulfilling for their employees.
2.	**Health status**	6128	Research in recent years has highlighted that the state of health of an employee has a significant impact on work efficiency in several ways [23, 24]: • Reducing absenteeism because healthy employees are less likely to be absent from work, which implies increased work productivity with reduced costs associated with recovery and rehabilitation after illness or accidents; • When employees come to work even though they are sick, productivity and performance are negatively affected due to pain or difficulty concentrating. This phenomenon is known as "presenteism"; • Healthy employees have better cognitive function, enabling them concentration and focus on carrying out tasks efficiently; • Healthy employees are in a good mood and have a high level of motivation, which leads to increased commitment and effort in their work; • Employees with a good state of health can have a positive impact on cognitive skills such as creativity and problem solving, which supports innovation and favors fluidity in the decision-making process; • Chronic health conditions or minor ailments lead to stress and anxiety, which negatively influence performance and productivity at work. Conversely, good health can help employees manage stress more effectively, with positive effects on concentration and productivity; • When employees prioritize their health and well-being, they are more energized, engaged and resilient, leading to better overall performance in their work roles. It is recommended that organizations promote occupational health and well-being through initiatives such as wellness programs, flexible work arrangements, and access to healthcare resources, leading to increased productivity and a more positive work environment [23, 24].
3.	**Working conditions**	2989	Specialized literature and international studies such as [27] have highlighted that working conditions are constantly evolving, and the future of work is likely to bring significant changes due to some global phenomena or trends such as those mentioned below [25-27]: • The growth of the gig economy has led to the existence of many independent or temporary employees, which has led to flexibility, but also to concerns about job security and benefits; • Automation and the use of AI applications that have a strong impact on certain categories of jobs and require adaptation and the development of new skills in employees; • Remote work offers greater flexibility, but challenges in maintaining work-life balance and company culture; • Employee well-being becomes an organizational priority, and investments focus on mental health support, flexible work arrangements and the creation of healthy work environments;

			• There is a skills gap in the areas of technology and data analysis, which creates a gap between available skills and job requirements. The trends noticed by numerous researchers refer to the following aspects [25-27]: • Automation and AI will continue to replace routine tasks, requiring a focus on reskilling and upskilling the workforce; • Hybrid work models that involve a mix of remote and in-office work are likely to become the norm, requiring companies to adapt their workspaces and culture; • Creativity, critical thinking, problem solving and collaboration will be critical skills for success in the changing job market; • Organizations must provide personalized work experiences, meeting individual needs and preferences; • Employees will seek jobs that align with their values and contribute to a greater purpose; • Organizations will have to increase their environmental and social sustainability concerns, thus impacting working conditions.
4.	**The stress**	4159	The scientific literature has underlined that there are several main categories of working stress that are prevalent today [28, 29]: 1. workload and time pressure; 2. job insecurity; 3. interpersonal stress: 4. role ambiguity: 5. organizational change; 6. lack of control; 7. technology and connectivity. A lot of authors agreed that the specific occupational stressors that an employee will experience will depend on their individual job, workplace, and personality.
5.	**Lifestyle**	649	According to the recent studies in the literature [31, 31], there is not one "actual" occupational lifestyle, as it varies greatly depending on the specific job and industry. However, there have been identified some common factors that influence the occupational lifestyle of many workers today as mentioned in the following: work-life balance; job security; mental health; physical health; technology and connectivity; flexibility; purpose and meaning; personalization. The specific occupational lifestyle will vary significantly depending on the individual's job, industry, company culture, and personal circumstances.
6.	**The uncertainty**	1444	According to the literature study [32, 33], uncertainty plays a significant role in the well-being impact on work effectiveness. It can have both positive and negative consequences, depending on the individual and the specific situation. Negative impacts are provided by increased stress and anxiety; decreased productivity; reduced motivation and engagement; decision-making difficulties; physical health issues. Positive impacts are supported by increased adaptability; enhanced problem-solving; personal growth. Overall, several studies have underlined that the impact of uncertainty on well-being and work effectiveness depends on several factors as the nature and duration of the uncertainty [32, 33]: short-term uncertainty can be manageable, while prolonged periods can be more detrimental; individual coping mechanisms; organizational support as a supportive work environment can help mitigate the negative impacts of uncertainty. Therefore, managing uncertainty effectively is crucial for maintaining employee well-being and work effectiveness and organizations can implement strategies in the following areas: open communication; employee support; flexibility and autonomy; focus on purpose and meaning. By acknowledging the role of uncertainty and implementing supportive measures, companies can foster a more resilient and adaptable workforce that thrives even in the face of change.
7.	**The personality**	3211	Studies has proved that the impact of personality traits on well-being and work effectiveness can be influenced by the specific work environment [34, 35]. For example: • Job demands - A mismatch between personality and job demands can lead to stress and dissatisfaction; • Work culture - A supportive and flexible work culture can help mitigate the negative impacts of certain personality traits; • Individual coping mechanisms - Individuals develop coping mechanisms to manage stress and challenges, influencing how their personality affects their well-being and work effectiveness. Overall, personality plays a complex role in the well-being impact on work effectiveness. While certain traits may have a general positive or negative influence,

				the specific impact depends on the individual, the work environment, and their coping mechanisms [34, 35]. Understanding the role of personality can help: • Individuals: Identify their strengths and weaknesses and develop strategies to manage stress and challenges. • Organizations: Create work environments that are supportive of diverse personalities and foster well-being for all employees.

3. CONCLUSIONS

In conclusion, the concentrated work program carried out in a favorable environment is beneficial for both the employee and the employer, resulting in performance results. The satisfied and happy employee, who is in an optimal state in the morning, will carry out activities more constructively, with more availability, and focus on targets, knowing that then he is free to spend time with his family or to rest as he wishes. Most of the time in life, people spend at work, with colleagues and bosses, and shortening this period increases the quality of life and personal satisfaction. This is proven by reviewing the literature and its own experience, along with the observation of those around. Creativity and innovation come with the acceptance of these factors - well-being and 4-hour work schedule, which create the right environment and encourage exceptional results in organizations.

4. REFERENCES

[1] Volberda, H. W., Van Den Bosch, F. A., Heij, C. V. (2013). Management innovation: Management as fertile ground for innovation. *European Management Review*, *10*(1), 1-15.

[2] Gupta, A. K., Singhal, A. (1993). Managing human resources for innovation and creativity. *Research-Technology Management*, *36*(3), 41-48.

[3] Kossek, E. E. (1987). Human resources management innovation. *Human resource management*, *26*(1), 71-92.

[4] Foss, N. J., Laursen, K. (2012). Human resource management practices and innovation. SMG Working Paper No. 5/2012, Available at SSRN: https://ssrn.com/abstract=2149464 or http://dx.doi.org/10.2139/ssrn.2149464

[5] Slutu-Bogdan, R. (2005). Competitivitatea economică şi factorii care o determină. In *Economia regională: problemele şi perspectivele dezvoltării* (Vol. 1, pp. 61-65).

[6] Griffin, R. W. (2022). *Fundamentals of management*. Cengage Learning, Inc.

[7] Global Report 2023 Revealing the difference in managerial and employee preferences for Organizational Culture, https://www.octanner.com/global-culture-report-executive-summary/2023

[8] Pelser, A. M. F., Vaiman, V., & Nagy, S. (2022). *The improvement of Skills & Talents in the workplace*. Published by Axiom Academic Publishers, Potchefstroom, South Africa. https://real.mtak.hu/163212/1/NSZ_Theimprovementof skillsandtalentsintheworkplaceVol2-978-1-991239-06-89847.pdf

[9] Singh, S. K., Del Giudice, M., Chierici, R., & Graziano, D. (2020). Green innovation and environmental performance: The role of green transformational leadership and green human resource management. *Technological forecasting and social change*, *150*, 119762.

[10] Rivera, A. S., Akanbi, M., O'Dwyer, L. C., McHugh, M. (2020). Shift work and long work hours and their association with chronic health conditions: a systematic review of systematic reviews with meta-analyses. *PloS one*, *15*(4), e0231037.

[11] Reidhead, C. (2022). Competency and ability of workers in a four-day work week. *International Journal of Multidisciplinary Research and Analysis*, *5*(08). https://ijmra.in/v5i8/Doc/4.pdf

[12] Wujec, T. (2010). *Build a tower, build a team*. TED presentation available at: www.ted.com/talks/tom_wujec_build_a_tower_build_a_team

[13] Reagle Jr, J. M. (2019). *Hacking life: Systematized living and its discontents*. MIT Press.

[14] Layton, M. C., Ostermiller, S. J., Kynaston, D. J. (2022). *Scrum for Dummies*. John Wiley & Sons.

[15] Kajitani, S., McKenzie, C., Sakata, K. (2016). Use it too much and lose it? The effect of working hours on cognitive ability. Melbourne Institute Working Paper no. 07/16. https://melbourneinstitute.unimelb.edu.au/publications/working-papers/search/result?paper=2156560

[16] Şendrea, M. (2021). Tendinţe în reducerea programului de lucru. *Economica*, *116*(2), 22-35.

[17] Student, M., Date, A. Is a Four-day Work Week on Canada's Horizon? https://ecampusontario.pressbooks.pub/app/uploads/sites/2391/2022/06/Annotated-sample-report.pdf

[18] Aubouin-Bonnaventure, J., Chevalier, S., Lahiani, F. J., Fouquereau, E. (2023). Well-being and performance at work: a new approach favourable to the optimal functioning of workers through virtuous organizational practices. *International Journal of Organizational Analysis*.

[19] Schulte, P., Vainio, H. (2010). Well-being at work– overview and perspective. *Scandinavian journal of work, environment & health*, 422-429.

[20] Bekalu, M. A., Sato, T., Viswanath, K. (2023). Conceptualizing and measuring social media use in health and well-being studies: Systematic review. *Journal of Medical Internet Research*, 25, e43191.

[21] Judge, T. A., Zhang, S. C., Glerum, D. R. (2020). Job satisfaction. *Essentials of job attitudes and other workplace psychological constructs*, 207-241.

[22] Hilton, SK, Madilo, W., Awaah, F., Arkorful, H. (2023). Dimensions of transformational leadership and organizational performance: The mediating effect of job satisfaction. *Management Research Review, 46* (1), 1-19.

[23] Shipman, K., Burrell, DN, Huff MacPherson, A. (2023). An organizational review of how managers need to understand the mental health impact of remote work during COVID-19 on employees. I*nternational Journal of Organizational Analysis, 31* (4), 1081-1104.

[24] Lunde, LK, Fløvik, L., Christensen, JO, Johannessen, HA, Finne, L B, Jørgensen, IL, Vleeshouwers, J. (2022). The relationship between telecommuting and employee health: a systematic review. *BMC Public Health, 22* (1), 1-14.

[25] Ravalier, J., Jones, D., Truell, R., McFadden, P. (2022). Global social work working conditions and wellbeing. *International Social Work*, 65(6), 1078-1094.

[26] Cramer, E., Hunter, B. (2019). Relationships between working conditions and emotional wellbeing in midwives. *Women and Birth*, 32(6), 521-532.

[27] World Economic Forum (2023). The Future of Jobs Report 2023, https://www.weforum.org/publications/the-future-of-jobs-report-2023/digest/

[28] Eek, F., Axmon, A. (2013). Attitude and flexibility are the most important workplace factors for working parents' mental wellbeing, stress, and work engagement. *Scandinavian journal of public health*, 41(7), 692-705.

[29] Uclaray, A. C. (2023). Stress and Wellbeing of Social Work Students in Field Instruction. *Journal of Teaching in Social Work*, 43(1), 99-115.

[30] Munir, F., Nielsen, K., Garde, A. H., Albertsen, K., Carneiro, I. G. (2012). Mediating the effects of work–life conflict between transformational leadership and health-care workers' job satisfaction and psychological wellbeing. *Journal of nursing management*, 20(4), 512-521.

[31] Zeidner, M., Matthews, G., Shemesh, D. O. (2016). Cognitive-social sources of wellbeing: Differentiating the roles of coping style, social support and emotional intelligence. *Journal of Happiness Studies*, 17, 2481-2501.

[32] Jensen, M. T., Øygarden, O., Mikkelsen, A., Olsen, E. (2022). Competence development and collaborative climate as antecedents of job performance, job commitment and uncertainty: validation of a Theoretical Model across Four Hospitals. *International Journal of Environmental Research and Public Health*, 20(1), 425.

[33] Zha, R., Qin, C., Zhang, L., Shen, D., Xu, T., Zhu, H., Chen, E. (2023). Career mobility analysis with uncertainty-aware graph autoencoders: A job title transition perspective. *IEEE Transactions on Computational Social Systems*.

[34] Kim, M., Baek, S. I., Shin, Y. (2020). The effect of the congruence between job characteristics and personality on job crafting. *International journal of environmental research and public health*, 17(1), 52.

[35] Zheng, A., Hoff, K. A., Hanna, A., Einarsdóttir, S., Rounds, J., Briley, D. A. (2024). Job characteristics and personality change in young adulthood: A 12-year longitudinal study and replication. *Journal of personality*, 92(1), 298-315.

Un studiu al impactului bunăstării asupra eficienței muncii

Acest studiu analizează literatura din perspectiva factorilor care contribuie la procesele de inovare a resurselor umane organizaționale. Necesitatea unor schimbări permanente atribuite progresului, situațiile create de pandemii și războaie, predominanța asigurării bunăstării la locul de muncă, digitalizarea în toate sectoarele sunt câțiva dintre factorii care sunt luați în considerare în inovare. Principalul factor analizat în această cercetare este asigurarea bunăstării angajaților ca metodă inovatoare de creștere a performanței. Baza este cercetarea modului în care reducerea timpului de lucru de către angajați, la 4 zile, afectează productivitatea organizației.

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