EMPLOYMENT INSECURITY AS AN EXAMPLE OF PSYCHOSOCIAL RISK AT WORK – ANALYSIS OF GENDER DIFFERENCES

Joanna SADŁOWSKA-WRZESIŃSKA[1], Żaneta NEJMAN[2*],
Magdalena FIDERER-URBANIAK[3]

[1] Poznan University of Technology; joanna.sadlowska-wrzesinska@put.poznan.pl,
ORCID: 0000-0003-1335-6738
[2] Poznan University of Technology; zaneta.nejman@put.poznan.pl, ORCID: 0000-0002-5732-1476
[3] University Clinical Hospital in Poznan; magdalena.fiderer@gmail.com, ORCID: 0009-0009-1348-2030
* Correspondence author

Purpose: The aim of the article is to identify the feelings related to the development of automation, robotization and artificial intelligence, taking into account potential gender differences in the examined area.

Design/methodology/approach: The goal was achieved by using theoretical analysis of the problem and empirical research. Empirical research was conducted in 2023 using an own survey in the Greater Poland Voivodeship among employees of various industries (n = 189).

Findings: There are no significant differences between genders in feelings towards the development of artificial intelligence in the work environment. The results of the analysis of our own research did not confirm the fears and anxieties reported in the literature on the subject.

Research limitations/implications: Due to the pilot study being conducted, certain limitations may be the small sample and the specificity of the industry and positions held (the study was conducted primarily on a group of so-called knowledge workers and administrative employees).

Practical implications: Women feel a greater need for legal regulations regarding artificial intelligence than men, and they also show a more positive attitude towards the development of technology and artificial intelligence. It is worth using these conclusions when planning the implementation of new technologies in the company.

Social implications: AI technology is developing at an unprecedented pace, opening up unlimited possibilities for people and significantly impacting their personal and professional lives. The lack of significant gender differences in the approach to modern technologies allows us to refute some gender stereotypes.

Originality/value: While the issue of psychosocial occupational risks has been the subject of many studies and analyzes for years, the problem of gender differences in the discussed area constitutes a significant research gap.

Keywords: stress, AI, gender, job insecurity, automation, diversity management, sustainable working conditions.

Category of the paper: Research paper.

1. Introduction

In recent years, there has been a significant evolution in the work environment, which is related to the organization and management of work processes. Due to the changes, new risk factors have arisen in the work environment and, as a result, significant challenges for the employer the potential to cause psychological, social and physical harm (Mościcka, 2010; Sadłowska-Wrzesińska et al., 2017). These threats most often manifest themselves through psychophysiological mechanisms of stress. Experiencing excessive or chronic stress at work is associated with a number of negative consequences for employees in the form of health problems, including disorders in social and professional functioning (Sadłowska-Wrzesińska et al., 2016). Psychosocial risk factors are more often seen as one of the key challenges that must be faced by policymakers.

Job insecurity is an example of psychosocial risk and one of the main sources of work-related stress. This unfavourable phenomenon has intensified in recent years in a global perspective in every segment of the economy. The feeling of job insecurity is associated with expectations regarding the durability of work and concerns about its future, but also with a sense of threat to the stability of work performed. The European Agency for Safety and Health at Work indicates that 7 out of 10 respondents cite job insecurity as a source of work-related stress (OSHA).

Employment uncertainty is significantly influenced by external factors related to the unprecedented turbulence of political, social and economic phenomena (including the Covid-19 pandemic, economic crisis, war in Ukraine), but also by the very intensive development of technology in the segment of robotics, automation and artificial intelligence. According to the European Agency for Safety and Health at Work and based on reports from the World Health Organization stress levels are expected to increase dramatically as new technologies spread and globalization accelerates. It should be assumed that the consequence will be an increase in the number of psychosocial threats. Employment uncertainty is significantly influenced by external factors related to the unprecedented turbulence of political, social and economic phenomena (including the Covid-19 pandemic, economic crisis, war in Ukraine), but also by the very intensive development of technology in the segment of robotics, automation and artificial intelligence. According to the European Agency for Safety and Health at Work and based on reports from the World Health Organization stress levels are expected to increase dramatically as new technologies spread and globalization accelerates. It should be assumed that the consequence will be an increase in the number of psychosocial threats.

Organization stress levels are expected to increase dramatically as new technologies spread and globalization accelerates. It should be assumed that the consequence will be an increase in the number of psychosocial threats. While the issue of psychosocial occupational risks has been the subject of many studies and analyzes for years, the problem of gender differences in the discussed area constitutes a significant research gap.

The aim of the article is to identify feelings related to the development of AI among employees, taking into account potential gender differences in the researched area. The following hypothesis for the research problem was adopted in the article: "There are significant differences between genders in feelings towards the development of AI in the work environment". The article consists of 3 chapters, an introduction and a conclusion. The theoretical part discusses job insecurity in the context of the development of AI. The research part presents the results of the own research on the identification of sentiments, along with statistical elaboration. The third chapter contains a discussion of the research results.

2. Job insecurity

Paper Professional work is one of the most important forms of activity in life, creating multidirectional opportunities to meet material, social and developmental needs. However, for many employees it is also a source of negative emotional burdens, contributing to a decrease in psychophysical well-being. Modern organizations face a formidable challenge in the form of global competition, rapidly changing customer expectations and pressure to increase profits and reduce costs. One way to reduce costs is to limit the number of employees employed under full-time employment contracts and to give preference to civil law contracts that do not provide solid protection in the form of rights under the Labour Code. It can be observed that professional careers associated with one company are increasingly being replaced by a set of short-term employment episodes with different employers, which may further increase the feeling of economic instability. Such actions result in the widespread occurrence of job insecurity, understood as "the perceived threat of job loss and concerns related to this threat" (Witte, 2005). In recent years, this phenomenon has been the subject of research by scientists from research centres around the world (Chojnacki, 2015; Zyl et al., 2013; Schreurs et al., 2010; Huang et al., 2013; Cheng, Chan, 2008; Debus et al., 2014; Mauno, Kinnunen, 2002; Cuyper et al., 2014), the research results of which clearly indicate the negative consequences of this phenomenon for both employees and the organizations that employ them. In Poland, research on job uncertainty is not yet very common (Chojnacki, 2015).

Greenhalgh and Rosenblatt were among the first to be interested in the issue of job uncertainty (Greenhalgh, Rosenblatt, 2010). The authors built a model and defined job insecurity as "the perceived powerlessness to maintain desired continuity in a threatened employment situation" (Greenhalgh, Rosenblatt, 2010). The above definition assumes that this phenomenon includes two main elements: threat and helplessness.

An employee may feel powerless as a result of: lack of union protection or performing job duties not covered by a contract, unclear expectations, working in an environment in which there is a lack of participation and unfair treatment, as well as working in an organization where

there are no clear procedures for dismissing employees. (Greenhalgh, Rosenblatt, 2010; Chojnacki, 2015).

In the long term, job uncertainty increases psychosomatic symptoms (e.g. fatigue, lack of appetite, insomnia) and somatic disorders (balance disorders, increased heart rate, sleep problems). The long-term effects of uncertainty intensify the symptoms, which in turn leads to a deterioration of employee well-being and an increase in stress levels (manifested by anxiety, depression, annoyance). Employees working under conditions of severe and repeated stress are more likely to get sick, are less productive, make more mistakes, and are more likely to take sick leave or take days off (Hultén et al., 2023). Moreover, many of them lose interest in work, are less willing to engage in daily duties, and in extreme cases, resign and leave the organization. As a result of stress, there may be various types of conflicts with the environment, both at work and outside of work. From the point of view of occupational safety, stressed people are more likely to have accidents at worky (Michie, 2002). The social costs incurred by an employee as a result of feeling stressed include burnout, emotional exhaustion, depersonalization, and a sense of lower self-esteem (Tennant, 2001; Chirico, 2016; Rothmann, 2008). The consequences of job uncertainty for organizations include an increased number of accidents at work, costs of severance pay, employee replacements, recruitment and selection, working time lost due to employee absenteeism, as well as lower quality and efficiency. In long term, such a situation may lead to an increase in the prices of services or products of companies suffering measurable economic losses (Sęk et al., 2011).

3. Employment uncertainty – results of own research

The research was conducted in 2023 using our own survey in the Wielkopolskie Voivodeship. The authors focused on the issue of gender differences (Sadłowska-Wrzesińska, Nejman, 2020) in relation to stress resulting from job insecurity. This issue seems to be exceptionally interesting and important from the point of view of work organization and diversity management in the organization.

Respondents (n = 189) are employees of various industries. Approximately 80% of respondents are not afraid that artificial intelligence will soon replace them at work. Also, approximately 80% of respondents claim that their jobs will not be replaced by AI. Nearly 90% of respondents believe that a robot would not perform their professional job better. 90% of respondents do not know people who have lost their jobs due to the implementation of AI, and over 50% claim that they do not notice any acceleration in the development of automation in their organizations. In turn, over 60% of respondents would like the development of technology to be regulated by law, in order to protect current jobs. The interpretation of the results shows that women (more often than men) indicated stress as a feeling caused by the

development of automation and artificial intelligence. The tables present the results of the statistical analysis performed in the Statistica program.

Table 1.
Chi-square statistical analysis for gender and position held

Statistics	Chi-square	df	p
Pearson's Chi^2	2,441733	df = 1	p = 0.11815
Chi^2 NW	2,331768	df = 1	p = 0.12676
Yates's Chi^2	1,840974	df = 1	p = 0.17484
exact Fisher, 1-sided			p = 0.08934
2-sided			p = 0.14923
McNemar's Chi^2 (A/D)	74,67461	df = 1	p = 0.00000
(B/C)	4,196721	df = 1	p = 0.04050
Fi for 2 x 2 tables	0,1142690		
Correlation tetrachoric	0,2079579		
Contingency coefficient	0,1135302		

Source: own study based on research results.

The results indicated that the variables such as gender and managerial position, as well as gender and other positions held, are not dependent. Therefore, the statistical analysis indicated that there is no relationship between gender and the position held. The vast majority of respondents have no concerns that the development of automation, robotization and artificial intelligence will result in, among others, a threat to the respondents' workplace, replacing the respondents at work, or that they will perform a better job than the respondents. Only 17% of surveyed men and 10% of surveyed women have such concerns. The vast majority of respondents have a negative attitude towards the uncontrolled development of artificial intelligence. Only 12% believe that the development of automation, robotization and artificial intelligence will result in, among others, shorter working week, improved working conditions, improved quality of life, improved living conditions. For this purpose, the expected number was tested, which was >5, so the Chi-square test was used (Tab. 2).

Table 2.
The Chi-square statistical analysis for gender and attitude towards the development of automation, robotization and artificial intelligence

Statistics	Chi-square	df	p
Pearson's Chi^2	0,3784446	df = 2	p = 0.82760
Chi^2 NW	0,3766340	df = 2	p = 0.82835
Fi	0,0447477		
Contingency coefficient	0,0447029		
V Craméra	0,0447477		

Source: own study based on research results.

Detailed statistical analysis through application of Chi-square indicated that there is no relationship between gender and the attitude towards the uncontrolled development of artificial intelligence (p = 0.82760). The vast majority of respondents (85% of men and 78% of women) support the development of automation.

Table 3.

Chi-square statistical analysis for gender and development of automation, robotization and artificial intelligence

Statistics	Chi-square	df	p
Pearson's Chi^2	1,493102	df = 1	p = 0.22174
Chi^2 NW	1,567685	df = 1	p = 0.21054
Yates's Chi^2	1,044785	df = 1	p = 0.30671
exact Fisher, 1-sided			p = 0.15313
2-sided			p = 0.31746
McNemar's Chi^2 (A/D)	3,324675	df = 1	p = 0.06825
(B/C)	80,58036	df = 1	p = 0.00000
Fi for 2 x 2 tables	0,0888820		
Correlation tetrachoric	0,1750345		
Contingency coefficient	0,0885330		

Source: own study based on research results.

A detailed statistical analysis showed that there is no relationship between gender and support for the development of automation, robotization and artificial intelligence. Variables such as gender and support for the development of automation, robotization and artificial intelligence are not dependent on the position held. Half of the respondents have negative feelings about artificial intelligence, such as fear, anxiety, apprehension, doubt, stress and helplessness. 37% of respondents positive, such as hope, joy and curiosity.

Table 4.

The Chi-square statistical analysis for gender and feelings related with the development of automation and artificial intelligence

Statistics	Chi-square	df	p
Pearson's Chi^2	14,90581	df = 2	p = 0.00058
Chi^2 NW	14,62555	df = 2	p = 0.000067
Fi	0,2808322		
Contingency coefficient	0,2703728		
V Craméra	0,2808322		

Source: own study based on research results.

When applying the Chi-square test, the statistical significance for the variables such as gender and feelings associated with the development of automation and artificial intelligence. This result indicates the existence of a relationship between the studied variables. In further statistical analysis the Mann-Whitney U test was performed (Tab. 5).

Table 5.

Mann-Whitney U test

Variable	Mann-Whitney U test Relative to a variable: Gender The marked results are significant with p < 0.05000						
	Sum of ranks men	Sum of ranks women	U	Z	p	Z correct	p
A robot would do my professional job better than I could	5491,500	12463,50	3418,500	0,77868	0,436166	0,87019	0,384196

Cont. table 5.

Technology development should be regulated by law	4318,000	13637,00	2778,000	-2,65368	0,007962	-2,75602	0,005851
Positive feelings regarding the development of automation, robotization and artificial intelligence	6599,000	11356,00	2311,000	4,02077	0,000058	4,69037	0,000003
Negative feelings regarding the development of automation, robotization and artificial intelligence	4999,500	12955,50	3459,500	-0,65866	0,510113	-0,67844	0,497496
Fear that in the future humans will not be able to control AI	5055,500	12899,50	3515,500	-0,49473	0,620792	-0,51195	0,608689

Source: own study based on research results.

Results for the question that technology development should be regulated by law $p = 0.007962$. In turn, the results for the question related to positive feelings are $p = 0.000058$. There is a relationship, i.e. differences in the experience of positive feelings and legal relations between women and men. Women are characterized by a higher level of the analysed variable in terms of the question regarding legal regulations, with the average rank amounting to 13,637.00, while for positive feelings it is 11,356.00. The results are presented graphically in Figures 1 and 2.
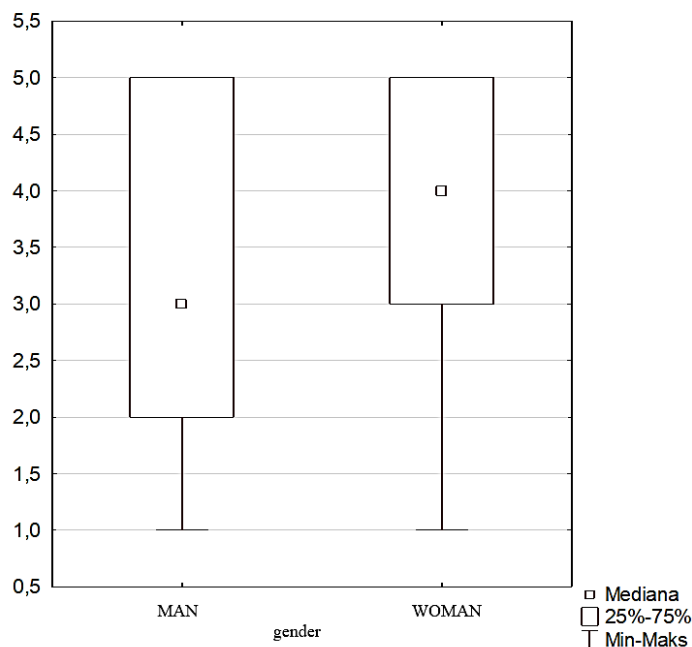

Figure 1. Technology development should be regulated by law - comparison of research results by gender.

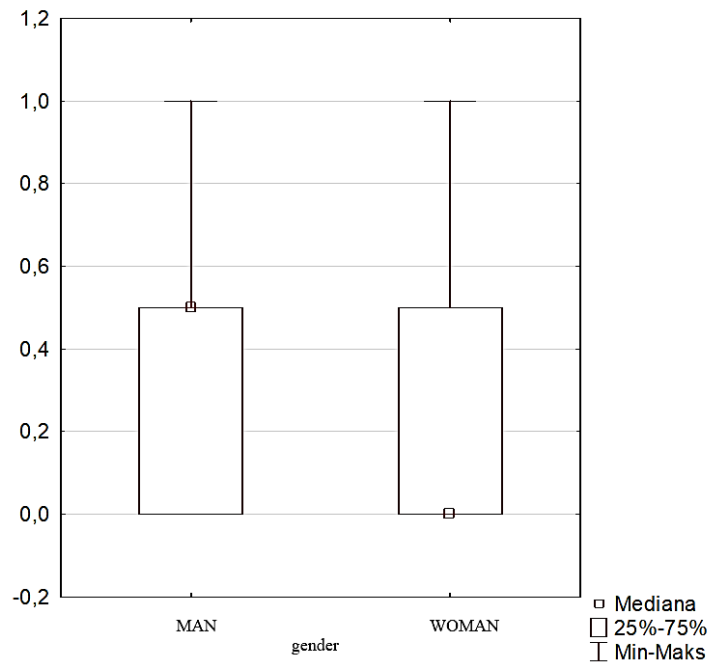Source: own study based on research results.

Figure 2. Positive feelings – comparison of test results by gender.

Source: own study based on research results.

In order to graphically represent the dependent variable gender, the median, minimum m, maximum m, lower quartile and upper quartile were established for both women and men. The results are presented in Tab. 5 and 6.

Table 6.

Men and Women

Variable	Gender	N important	Median	Minimum	Maximum	Bottom Quartile	Top Quartile
A robot would do my job better than me	M	55	1,000000	1,000000	4,000000	1,000000	2,000000
	W	134	1,000000	1,000000	5,000000	1,000000	2,000000
Technology development should be regulated by law	M	55	3,000000	1,000000	5,000000	2,000000	5,000000
	W	134	4,000000	1,000000	5,000000	3,000000	5,000000
Positive feelings regarding the development of automation, robotization and artificial intelligence	M	55	0,500000	0,000000	1,000000	0,000000	0,500000
	W	134	0,000000	0,000000	1,000000	0,000000	0,500000
Negative feelings regarding the development of automation, robotization and artificial intelligence	M	55	0,111111	0,000000	0,666667	0,000000	0,222222
	W	134	0,111111	0,000000	0,666667	0,000000	0,222222
I am afraid that in the future humans will not be able to control AI	M	55	4,000000	1,000000	5,000000	2,000000	4,000000
	W	134	4,000000	1,000000	5,000000	3,000000	5,000000

Source: own study based on research results.

The higher the lower quartile, the more respondents answered the following questions: *A robot would do my professional job better than I could*; *Technology development should be regulated by law*; *Positive feelings regarding the development of automation, robotization and artificial intelligence*; *Negative feelings regarding the development of automation, robotization and artificial intelligence*; *I am afraid that in the future humans will not be able to control AI*.

There are differences in the answers to these questions between women and men for the questions: *Technology development should be regulated by law*. Both the median and the lower quartile are higher and are different for women and men. And for the question: *Positive feelings regarding the development of automation*, robotization and artificial intelligence occur in the median between the responses of women and men.

4. Discussion of research results

The topic of gender is constantly discussed in many scientific publications. Generally, concepts related to the relationship between gender and the importance of a person's mental structure are analyzed, such as: personality and gender, discrepancies in competences, needs, temperament and emotional processes. Physiological differences between the sexes are responsible for the distinct occurrence of symptoms and reactions to anxiety and mental disorders (Becker et al., 2005, Sadłowska-Wrzesińska et al., 2016; Sadłowska-Wrzesińska, Nejman, 2020). It is also known from the latest research that gender affects activities such as: remembering, feeling emotions and even the ability to cope with stress (Krocz, 2021). Emotional processes have a much greater impact on the differentiation of male-female behaviour, because women are more emotional than men (Koraszewska, 2002; EUR-Lex, 2023). Perhaps this is due to the fact that *work is increasingly important for women. Over 70 percent of surveyed Polish women believe that they do something important for others, a similar percentage consider themselves experts in their profession* (GWPW, 2022). Women value stability and think about changing jobs less often than men (42% women and 37% men *Women, despite their great commitment to their careers, do not feel adequately rewarded for their wor* (Kantar Poland). *Women* are stressed much more often than men and have different reasons for anxiety. 74% surveyed women are stressed at least once a week, including as many as 22% every day. Women are twice as likely to experience stress as men. This is due to more responsibilities - trying to reconcile professional life with duties at home. 20% women reported that trying to maintain a healthy work-life balance (People at Work, 2022) was the origin of stress.

That although more people support the development of artificial intelligence than being in opposition to it, these are mainly men with high levels of education and income (Franken, Mauritz, 2021; Women in Digital Scoreboard, 2021; Gomes, 2022). Women have lower knowledge about artificial intelligence than men. Moreover, research and development of artificial intelligence is primarily in the hands of men - only less than 25% of employees in the AI sector are women. According to the results obtained, every third Polish woman declares that she uses AI privately or in her professional work (37%). Better educated women, living in larger cities, but also younger and with less work experience are more likely to see the benefits of

using AI, and only 40% of women share the opinion that AI will increase productivity. 75% of women believe that AI will not have a positive impact on work-life balance through more effective use of working time (Woźniak-Jęchorek et al., 2023). Almost one in two women using AI report a lack of transparency and find the understanding of AI algorithms difficult. More than half of women fear that the use of artificial intelligence may result in the loss of personal skills and interpersonal relationships (56%), limit the ability to perform creative work (53%) and increase the level of unemployment by automating routine activities (50%). Every fifth woman believes that the use of AI may result in lower salaries and may worsen their professional status. So, despite experts' assurances about the benefits of automation and the development of artificial intelligence, employees are not fully convinced that this will be a beneficial situation for them (Workplace, 2023; Gmyrek et al., 2023).

With regard to stress caused by the use of new technologies and the uncontrolled development of AI, a pilot study conducted by the authors on a selected group of respondents did not confirm the increased feeling of job insecurity. It can be assumed that *in recent years* job uncertainty has been determined to a greater extent by global factors, rather than organizational factors. One of the phenomena that significantly impacted the labour market was the COVID-19 pandemic (CBOS, 2020). Society was affected by the effects of the pandemic in the form of global inflation, which was further compounded by the war in Ukraine and the conflict of the world's main economies with Russia, while in the background these phenomena were accompanied by the dynamic development AI. Hawking *stated that the development of full artificial intelligence could mean the end of the human race* (Hawking, 2014). Jeff Bezos claimed that we are in the middle of a "renaissance" and "golden age" when it comes to the topics of machine learning and artificial intelligence Bezos, 2017). Dharmesh Shah believes that robots and artificial intelligence will improve our work and *safety* (BBC, 2018). Businessmen, investors and AI experts, including: Elon Musk, in a letter published by the Future of Life Institute, appealed to stop the development of AI systems, stimulating a global discussion on the directions and scope of the impact of AI, also in relation to the ethos of human work (Rozwój AI, 2023).

It is assumed in the analysis conducted by Pricewaterhouse Coopers that over the next 20 years in Great Britain, artificial intelligence and related technologies may eliminate as many jobs (approx. 7 million) as they generate (approx. 7.2 million), i.e. bring an increase of approximately 200,000 positions. The analysis also indicates that professional, scientific and technical services will have net growth of 16%, while education will grow by 6%. Meanwhile, the transport, storage and public administration sectors will see a decline of 22% and 18%, respectively (10 professions that AI can replace, 2020). The research conducted by Citrix (CRR) also indicates that robotization will not replace people at work, but will make them more engaged, effective and innovative. Over 77% of respondents claim that in 2035 artificial intelligence will significantly accelerate decision-making processes and increase employee productivity. In turn, research conducted in 2022 by Apifonica.com shows that 9 out of 10

respondents declare that thanks to the implemented voicebots, their work has become easier. As a result, robotization helps them because they can focus on more demanding, creative tasks. Meanwhile, all (100%) of the surveyed managers and 87.5% of lower-level managers in companies where robotization has been implemented believe that it is impossible for intelligent voice assistants to replace them (Will robotization take away jobs). Based on the above, it can be concluded that in the last few years the phenomenon of job uncertainty has been multidimensional. Starting with the global COVID-19 pandemic, through global inflation, economic conflicts, political tensions, the war in Ukraine, the concept of "uncertainty" began to accompany people every day, testing the resilience of both individuals and organizations, and even entire countries. However, the conducted pilot study did not confirm concerns about the need to change jobs, lose a job or need to retrain.

5. Summary

Artificial intelligence appears as a revolution that can introduce a completely new paradigm. AI technology is developing at an unprecedented pace, opening up unlimited possibilities for people and significantly impacting their personal and professional lives.

The aim of the article was achieved - feelings towards the development of AI were identified. Interesting results were obtained in some AI topics - e.g. women feel a greater need for legal regulations regarding artificial intelligence than men, and they also show a more positive attitude towards the development of technology and artificial intelligence. However, the hypothesis was not confirmed - there are no significant differences between genders in feelings towards the development of artificial intelligence in the work environment. The results of the analysis of our own research did not confirm the fears and anxieties reported in the literature on the subject. According to the authors, this could have been influenced by, among others, small sample and specific nature of the industry and positions held (the study was conducted primarily on a group of so-called knowledge workers and administrative employees). This encourages the authors to expand the research as quickly as possible on a larger scale and, in the next step, to analyze the responses of respondents representing various industries and various job positions.

The past has shown that technological breakthroughs always bring new opportunities and open the door to previously unknown career development paths. The awareness of changes, flexibility and readiness to learn new skills is important. The feeling of uncertainty, which is currently a common phenomenon, may lose its negative connotations over time.

References

1. *10 professions that AI can replace*. https://websensa.com/pl/2020/09/22/10-zawodow-ktore-ai-moze-zastapic-czy-robot-podejmie-twoja-prace/, 20.04.2024.
2. BBC (2018). https://www.bbc.com/news/business-44849492, 14.02.2024.
3. Becker, J. (2005). Strategies and Methods for Research on Sex Differences in Brain and Behavior. *Endocrinology, Vol. 146, Iss. 4.*
4. Bezos, J. (2017). https://www.retaildive.com/news/jeff-bezos-artificial-intelligence-permeates-amazons-business-strategy/442141/, 14.02.2024.
5. CBOS (2020). *Work situation of Poles during coronavirus outbreak,* https://www.cbos.pl/SPISKOM.POL/2020/K_126_20.PDF, 30.01.2024.
6. Cheng, G., Chan, D. (2008). Who Suffers More from Job Insecurity? *A Meta-Analytic Review, Applied Psychology: An International Review, 57,* 2.
7. Chirico, F. (2016). Job stress models for predicting burnout syndrome: a review. *Annali dell'Istituto superiore di sanita,52,* 3.
8. Chojnacki, R. (2015). Employment uncertainty and its effects – selected theoretical approaches. In: A. Rogozińska-Pawełczyk, *Human capital management*. Łódź: PHU.
9. CRR, Citrix Research Reveals a More Intelligent Future (2020). https://disruptivetechnews.com/big_news/citrix-research-reveals-a-more-intelligent-future/, 10.02.2024.
10. De Witte, H. (2005). Job insecurity: Review of the international literature on definitions, prevalence, antecedents and consequences. *SA Journal of Industrial Psychology, 31,* 4.
11. Debus, M.E., Konig, C.J., Kleinmann, M. (2014). The Building Blocks of Job Insecurity. *Journal of Occupational and Organizational Psychology, 87.*
12. EUR-Lex (2023). https://eur-lex.europa.eu/legal-content/EN/TXT/?qid=1623335154975&uri=CELEX%3A52021PC0206, 10.01.2024.
13. Franken, S., Mauritz, N. (2021). *Gender and Artificial Intelligence – Differences Regarding the Perception.* Competence Self-Assessment and Trust, Conference: 23rd General Online Research Conference, doi: 10.13140/RG.2.2.18755.68646.
14. Gaunt, R., Benjamin, O. (2007). Job insecurity, stress and gender: The moderating role of gender ideology. *Community, Work and Family, 10,* 3.
15. Gmyrek, P., Berg, J., Bescond, D. (2023). Generative AI and jobs: A global analysis of potential effects on job quantity and quality. *ILO Working Paper, 96.* Geneva: International Labour Office, doi: https://doi.org/10.54394/FHEM8239.
16. Gomes, L.G. (2022). *How AI can help women in the workforce, Let's talk about equality.* IDB, https://blogs.iadb.org/igualdad/en/ai-women-in-the-workforce/, 12.02.2024.
17. Greenhalgh, L., Rosenblatt, Z. (2010). Evolution of Research on Job Insecurity. *International Studies of Management and Organization, 40,* 1.

18. GWPW, Growing Women's Power - Women in the Labor Market, Thinktank - Center for Dialogue and Analysis, https://think-tank.pl/wp-content/uploads/2022/01/rosnaca-sila-kobiet-final_raport.pdf, 13.02.2024.

19. Hawking, S., https://www.bbc.com/news/technology-30290540, 25.01.2024.

20. Huang, G., Zhao, H.H., Niu, X., Ashford, S.J., Lee, C. (2013). Reducing Job Insecurity and Increasing Performance Ratings: Does Impression Management Matter? *Journal of Applied Psychology, 98*, 5.

21. Hultén, A.M., Holmgren, K., Bjerkeli, P. (2023). Work-related stress, reason for consultation and diagnosis-specific sick leave: How do they add up? *PLoS One, 18,* 7.

22. Kantar Poland. *The "Poles at work" at the age of 20-59 in February 2019*, 25.01.2024.

23. Krocz, K., *Differences between men and women*, https://portal.abczdrowie.pl/roznice-miedzy-mezczyzna-a-kobieta, 18.01.2024.

24. Mauno, S., Kinnunen, U. (2022). Perceived Job Insecurity Among Dual-Earner Couples: Do Its Antecedents Vary According to Gender, Economic Sector and the Measure Used? *Journal of Occupational and Organizational Psychology, 75*.

25. Michie, S. (2022). Causes and management of stress at work. *Occupational and environmental medicine, 59*, 1.

26. Mjoli, T.Q., Ngirande, H. (2020). Uncertainty as a moderator of the relationship between job satisfaction and occupational stress. *SA Journal of Industrial Psychology, 46*, 1.

27. Mościcka, A. (2010). Preventive care for psychosocial risks in the workplace. *Occupational Medicine, 1,* 61.

28. OSHA, https://osha.europa.eu/pl/topics/stress, 10.02.2024.

29. PwC, https://www.pwc.co.uk/press-room/press-releases/AI-will-create-as-many-jobs-as-it-displaces-by-boosting-economic-growth.html, 20.01.2024.

30. Rothmann, S. (2008). Job satisfaction, occupational stress, burnout and work engagement as components of work-related wellbeing. *SA Journal of Industrial Psychology, 34,* 3.

31. Sadłowska-Wrzesińska, J., Gabryelewicz, I., Krupa, P. (2017). *The use of IT tools for the analysis and evaluation of psychomotor efficiency of employees.* MATEC Web of Conferences, 94.

32. Sadłowska-Wrzesińska, J., Górny, A., Mościcka-Teske, A. (2016). The outcomes of shift work in the context of psychosocial functioning-sex aspects. M. Pedro (ed.), *Occupational Safety and Hygiene, IV*. Arezes: CRC Press.

33. Sadłowska-Wrzesińska, J., Nejman, Ż. (2020). *Non-material factors of employee motivation – sex aspects.* K.S. Soliman (ed.). Seville: International Business Information Management Association, IBIMA.

34. Schreurs, B., van Emmerik, H., Notelaers, G., De Witte, H. (2010). Job Insecurity and Employee Health: The Buffering Potential of Job Control and Job Self-Efficacy. *Work & Stress. An International Journal of Work, Health & Organizations, 24,* 1.

35. Sęk, M., Hędrzak, M., Bryzik, A. (2011). http://www.zus.pl/files/dpir/Identyfikacja_czynnikow_stresogennych_wystepujacych_w_miejscu_pracy_wraz_z_okresleniem_ich_wplywu.pdf, 10.02.2024.

36. Tennant, C. (2001). Work-related stress and depressive disorders. *Journal of psychosomatic research, 51,* 5.

37. *The Report: People at Work 2022*, https://www.adpri.org/assets/people-at-work-2022-a-global-workforce-view/, 30.01.2024.

38. van Zyl, L., van Eeden, C., Rothmann, S. (2013). Job Insecurity and The Emotional and Behavioural Consequences Thereof. *South African Journal of Business Management, 44*.

39. WHO (2023). https://www.who.int/news-room/questions-and-answers/item/stress, 22.02.2024.

40. *Will robotization take away jobs*, https://startupvoice.pl/czy-robotyzacja-zabierze-miejsca-pracy/, 30.01.2024.

41. Women in Digital Scoreboard (2021). https://digital-strategy.ec.europa.eu/en/news/women-digital-scoreboard-2021, 20.01.2024.

42. *Workplace*, https://www.workplace.com/blog/ai-and-the-future-of-work, 11.02.2024.

43. Woźniak-Jęchorek, B., Rydzak, W., Kuźmar, S. (2023). Decoding the interface: Exploring women's perspectives on integrating AI in professional work. *Human Technology, 19*, 3.