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EVIDENCE BRIEF

The **Social Sciences and Humanities Research Council** in collaboration with the **Future Skills Centre**

SSHRC's Imagining Canada's Future initiative mobilizes social sciences and humanities research to address emerging economic, societal and knowledge needs for Canada, and help guide decision-making across all sectors toward a better future. This evidence brief addresses the Future Challenge Area of: **Skills and Work in the Digital Economy**

Artificial intelligence and the future of work: What do we know so far?

About the project

The COVID-19 pandemic increased the pace at which we are heading into the future of work. One of the trends at the heart of the future of work is undoubtedly the relationship between artificial intelligence (AI) and human work. AI relies on data analytics and machine learning to delegate data recognition, explanation and decision: it has the potential to change the nature of work as we know it. Since AI is a still-emerging technology, there is a persistent gap in terms of definition and diagnosis to fully understand this technology, appreciate its integration into the workplace and grasp its potential consequences. In a context where changes and disruptions are on the horizon, it becomes necessary to better understand the impacts of the forthcoming digitalization on workers' jobs and their psychological health. This research project pursued the following objectives:

1. exploring how AI technologies are transforming the nature of work; and
2. exploring how these technological changes affect employee psychological health, engagement and performance.

To review the empirical literature focusing on the impact AI will have on the future of work, we conducted a structured, comprehensive and transparent search of the literature. This enabled us to critically analyze, synthesize and map the extant research by identifying themes investigated by the literature. Of 1,241 articles originally retrieved from databases, eight were included. We performed a thematic analysis of the selected articles based on the model proposed by Malhotra (2021). This model regroups the characteristics, challenges and design of the future of work.

Key findings

According to the theoretical framework that guided our study (Malhotra, 2021), we group our results according to the characteristics, challenges and design of the future of work:

- Regarding the **characteristics** of the future of work, two themes stand particularly out in the reviewed literature—the "gig economy" and algorithmic management.
- Among the **challenges** of the future of work, the following four are frequently discussed in the reviewed articles: assuring inclusion, diversity and equity; monitoring employees' performance; monitoring and controlling employees; and protecting employees' confidential data.
- Moreover, in the reviewed literature, only one article addressed the increased **autonomy** that the future of work creates.
- Additionally, few studies address **meaningful work** or **mindful work design**.
- Moreover, the reviewed articles rarely discuss the consequences of AI for managers and organizations, and when they do, they tend to concern employees. As to the consequences for employees, the articles discuss several, such as psychological distress and anxiety, the number of hours worked, intention to quit, compensation, a feeling of isolation and work intensity.

- Eventually, we found that three articles discussed **underlying/influential factors** playing a role in the future of work. These are competitive psychological climate, perceived organizational support, social support and organizational culture.

Key messages can be drawn from our study, guiding organizations and scholars:

- Our systematic review demonstrates that organizations need to better consider employees' perspectives regarding AI implementation and not only the technical aspects of such a radical transformation. When introducing AI, organizations need to further consider employee well-being, power asymmetry, support for change, psychological climate and organizational culture. Organizations should carefully choose the appropriate timing for introducing and implementing AI-based technology in the workplace. Organizations could also start with lighter and more positive changes, such as task automation and the augmentation of human capabilities.

- Our systematic review shows that more empirical research is needed to better understand the potential impacts of AI in the workplace and on employees. More research is also needed to better understand the changing roles of the human resource (HR) triad members (employees, managers, HR professionals) induced by the implementation of AI in the workplace. Further research also seems to be required to better understand how employees will react toward the challenges induced by AI and algorithmic management, notably regarding the sharing of leadership and decision-making.

Policy implications

Key messages can be drawn from our study, guiding public policy:

- Stricter control and guidance over the use of AI technologies may be recommended to protect employees, particularly regarding the **use of workers' data by algorithms.**

- The establishment of sufficient safeguards is also necessary to ensure that there will be **no discrimination in decisions affecting workers.** It is important to increase decision-making transparency when an algorithm is used to avoid discrimination. Some authors have already stressed the importance of governmental and civil society to ensure that there is no discrimination or bias in decisions made with the use of algorithms and big data (Edwards & Veale, 2017; Todoli-Signes, 2019).

- Moreover, **workers should be informed that they are involved in an automated decision-making process that uses an algorithm** (Todoli-Signes, 2019). The organization should have an obligation to provide the workers with meaningful information on the logic of the algorithms and the parameters used by the algorithm to reach a decision (Todoli-Signes, 2019).

- As a number of **ethical issues** have been raised by the articles reviewed, reflections around AI ethics, transparency and fairness should be debated by government (Dwivedi et al., 2021).

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FURTHER INFORMATION

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