

Emotional Labor in the Age of Artificial Intelligence: Psychosocial Risks in Algerian AI-Driven Digital Workplaces

Received date:13/04/2026 Accepted date:31/05/2026 Published date:12/06/2026

Hezabra Imane¹

¹ University of Biskra, Algeria, **Email:** imane.hezabra@univ-biskra.dz
<https://orcid.org/0009-0001-1364-912X>

Abstract:

This paper examines the intersection of emotional labor and psychosocial risk in AI-mediated workplaces within the Algerian context. Using the Job Demands-Resources (JD-R) model, it develops an original AI-Amplified Emotional Labor (AAEL) model. A qualitative research design was applied in AI-intensive Algerian organizations, including banking, telecommunications, and public administration. Semi-structured interviews were conducted with 18 workers and 6 HR managers. Findings reveal that Algerian workers in AI-mediated environments report significantly higher levels of opacity-induced anxiety. They also show reduced interactional autonomy compared to non-AI-supervised counterparts.

Keywords: Emotional Labor ; Psychosocial Risks; Artificial Intelligence; Digital Work.

Corresponding Author:Imane,Hezabra,**Email:** imane.hezabra@univ-biskra.dz

1. INTRODUCTION

The twenty-first century workplace is undergoing a structural transformation of unprecedented scope. Artificial intelligence encompassing machine learning, natural language processing, and automated decision systems has progressively infiltrated operational, managerial, and communicative dimensions of organizational life. While much scholarly attention has focused on AI's implications for employment displacement and productivity optimization, comparatively less theoretical scrutiny has been directed toward its affective and psychosocial consequences for workers.

Emotional labor the management of one's emotional expressions in accordance with organizational feeling rules (Hochschild, 1983) has long been recognized as a significant occupational stressor, particularly in service-intensive industries. Yet the emergence of AI-mediated work environments introduces novel dynamics that existing frameworks are only beginning to address. When algorithms monitor, evaluate, and prescribe emotional performance, the locus of emotional regulation shifts in ways that are theoretically and practically consequential.

This paper addresses a critical gap in the literature by examining how AI-driven digital workplaces reconfigure emotional labor and amplify psychosocial risk, with particular attention to the Algerian context a setting characterized by accelerating digitalization, nascent regulatory infrastructure, and culturally specific organizational dynamics. Algeria represents an instructive case precisely because it occupies a transitional position: a country actively integrating digital technologies into its workforce while grappling with the institutional and human consequences of that integration.

Our analysis proceeds through three interconnected theoretical movements: first, we reconceptualize emotional labor in light of algorithmic management; second, we map the psychosocial risk landscape of AI-mediated work; and third, we situate these dynamics

within the Algerian socio-organizational context to develop an integrated conceptual model. The paper concludes with implications for organizational governance, occupational health policy, and a research agenda for future empirical investigation.

2.THEORETICAL FRAMEWORK AND LITERATURE REVIEW

2.1 Emotional Labor: Foundations and Contemporary Developments

Arlie Hochschild's (1983) foundational concept of emotional labor designates the work of managing one's emotions as part of a job role specifically, inducing or suppressing feelings to sustain an organizational display deemed appropriate. Hochschild distinguished between surface acting (modifying visible emotional expression without changing internal states) and deep acting (genuinely cultivating the required emotion). Subsequent scholarship has elaborated this binary, identifying a third form: naturally expressed emotion, wherein displayed and experienced emotion align organically (Grandey, 2000).

The psychosocial costs of emotional labor are well-documented. Prolonged surface acting is associated with emotional exhaustion, depersonalization, and burnout key components of the Maslach Burnout Inventory (Maslach & Jackson, 1981). Deep acting, while cognitively demanding, may preserve a degree of authenticity that mitigates some adverse outcomes (Brotheridge & Grandey, 2002). However, when the gap between felt and displayed emotion termed emotive dissonance (Hochschild, 1983) becomes chronic, the psychological toll can be severe, manifesting in somatic symptoms, reduced job satisfaction, and organizational withdrawal.

More recently, scholars have begun to examine how digital technologies mediate emotional labor. Customer relationship management (CRM) platforms, sentiment analysis tools, and digital performance dashboards introduce new modalities of emotional scripting and surveillance (Warhurst & Nickson, 2007; Stein et al., 2019). These developments presage the more radical transformation introduced by AI systems, wherein emotional performance is not merely monitored but algorithmically prescribed and evaluated in near-real time. Critically, however, existing literature has yet to adequately theorize the qualitative rupture introduced by AI management: whereas CRM tools and dashboards extend human supervisory logic, AI systems replace the human evaluative gaze with a computational one, fundamentally altering the interactional grammar of emotional labor. This distinction between AI as amplifier and AI as structural transformation constitutes the central analytical contribution of the present study and differentiates its theoretical position from prior accounts (cf. Hochschild, 1983; Grandey, 2000; Warhurst & Nickson, 2007) that were elaborated prior to the widespread deployment of machine-learning-based management systems.

2.2 Psychosocial Risk Frameworks in the Digital Workplace

Psychosocial risks at work are defined by the European Agency for Safety and Health at Work (EU-OSHA, 2022) as those aspects of work design, organization, and management that have the potential to cause psychological or physical harm. The principal psychosocial risk factors as codified in frameworks such as the Copenhagen Psychosocial Questionnaire (COPSOQ) and the Karasek Demand-Control-Support model include high job demands, low decision latitude, role ambiguity, poor social support, job insecurity, and organizational injustice.

The Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007) provides a particularly generative framework for analyzing psychosocial risk in contemporary work contexts. The



model posits that all job characteristics can be classified as either demands (physical, psychological, or organizational aspects requiring sustained effort) or resources (structural, social, or personal aspects that facilitate goal achievement and buffer demand-induced strain). Crucially, the JD-R model predicts that high demands erode and in AI-mediated contexts, this erosion is accelerated by what we term algorithmic demand-resource ambiguity: the paradoxical condition in which AI systems simultaneously function as demand generators (through surveillance and scripting) and apparent resource providers (through decision-support automation), creating cognitive instability that is itself a novel source of psychosocial strain. This ambivalence is not captured by the original JD-R architecture, which assumes stable, identifiable demand and resource categories. The present study therefore proposes an extended JD-R formulation specific to AI-mediated work environments

psychological reserves, leading to burnout, when not offset by adequate resources.

The digitalization of work has introduced a new category of psychosocial demand: technostress. Technostress encompasses the cognitive and emotional strain generated by the need to continuously adapt to evolving digital technologies including techno-overload, techno-invasion, techno-complexity, and techno-insecurity (Tarafdar et al., 2007). In AI-intensive environments, these stressors are compounded by additional dimensions: algorithmic opacity, social isolation, and the psychological burden of working alongside systems perceived as evaluative or supervisory.

2.3 Algorithmic Management and the Reconfiguration of Affective Work

Algorithmic management the use of data-driven automated systems to direct, monitor, and evaluate worker performance represents a qualitative shift in the nature of managerial authority (Lee et al., 2015; Duggan et al., 2020). Unlike human supervisors, algorithmic managers are characterized by: continuous surveillance capacity, quantified performance metrics, and the appearance of objectivity that may obscure embedded biases and normative judgments. For workers in AI-mediated environments, the managerial gaze is omnipresent, granular, and ostensibly impartial.

The implications for emotional labor are profound. When AI systems monitor customer satisfaction scores in real time, analyze vocal tone during service interactions, or flag deviations from prescribed emotional scripts, workers are subjected to what we term algorithmic emotional surveillance. This form of monitoring differs categorically from human supervisory evaluation: it is continuous rather than episodic, quantified rather than qualitative, and experienced as depersonalized generating a distinctive form of affective alienation.

Ravenelle (2019) and Rosenblat (2018), examining platform-based gig work, document how algorithmic management creates conditions of emotional hypervigilance a state in which workers must perpetually calibrate their affective presentations not to a human interlocutor but to a computational system whose evaluative logic remains opaque. This opacity is itself a psychosocial stressor: workers cannot engage in the interpretive, relational processes through which emotional labor has traditionally been negotiated.

3. THE ALGERIAN CONTEXT: DIGITALIZATION, CULTURE, AND REGULATORY LANDSCAPE

Algeria presents a particularly instructive context for examining these dynamics. As the largest country in Africa by area and the second-largest economy in the Arab world, Algeria has pursued an ambitious digitalization agenda under the rubric of its Digital Algeria 2025 strategy, which encompasses e-government,

digital financial services, and the expansion of digital infrastructure. The Algerian workforce is increasingly encountering AI-mediated environments particularly in banking, telecommunications, public administration, and customer service sectors. Concretely, as of 2024, Algeria's three largest public banks BNA, CPA, and BEA had deployed AI-powered customer interaction systems in their front-office operations, with chatbot-mediated service handling an estimated 35–40% of initial client contacts (Ministère des Finances, 2024). In the telecommunications sector, Algérie Télécom and Ooredoo Algeria have implemented algorithmic performance monitoring systems in their call center operations, covering an estimated 12,000 agents nationwide. In public administration, the digitalization of citizen services under the e-Algérie program has introduced AI-assisted triage and case-routing systems in at least 48 wilayas. These deployments provide the concrete institutional backdrop against which the psychosocial dynamics analyzed in this paper must be understood and underscore the urgency of moving beyond purely theoretical analysis toward empirically grounded investigation of actual worker experiences within these environments.

Yet this digitalization occurs within a distinctive socio-organizational context. Algerian organizational culture, shaped by post-independence statist legacies and Mediterranean collectivist values, tends toward hierarchical authority structures, strong in-group solidarity, and a relatively high tolerance for power distance (Hofstede, 2001; Djenane, 2018). These cultural features condition how workers experience and respond to algorithmic authority: in contexts where managerial legitimacy is traditionally derived from personal relationships and seniority, the impersonality of algorithmic management may be experienced as particularly alienating.

Furthermore, Algeria's regulatory framework for digital labor and occupational psychosocial health remains nascent. While Law No. 83-13 and subsequent labor legislation address occupational health in general terms, specific provisions governing psychosocial risks let alone those associated with AI-mediated work are largely absent. This regulatory gap creates conditions in which workers in AI-intensive sectors may be exposed to significant psychosocial hazards without institutional protection or recourse.

The gendered dimension of emotional labor in Algeria also warrants attention. Women, who constitute a growing proportion of the digital economy workforce particularly in call centers and financial services bear disproportionate emotional labor burdens in most national contexts (Hochschild, 1983; Guy & Newman, 2004). In Algeria, this burden may be compounded by intersecting pressures of professional performance, cultural femininity norms, and the added demands of AI-mediated surveillance systems.

Table 1. Contextual factors mediating AI-amplified emotional labor in Algerian workplaces

Contextual Factor	Implications for AI-Mediated Emotional Labor
Organizational Culture	Hierarchical, collectivist; high power distance; relational authority norms may intensify alienation under algorithmic management (Hofstede, 2001).
Digital Maturity	Accelerating but uneven; Digital Algeria 2025 agenda; gaps in digital literacy create techno-complexity stressors.
Regulatory Framework	Nascent psychosocial risk legislation; absence of AI-specific labor provisions; EU precedents not yet transposed.
Gender Dynamics	Growing female participation in digital economy; intersecting femininity norms and AI surveillance compound emotional labor burden.
Sector Exposure	High AI-mediation in banking, telecoms, public administration, and call centers — all emotionally intensive service sectors.

Source: Authors' synthesis based on Hofstede (2001), Djenane (2018), and EU-OSHA (2022).



4. AN INTEGRATED CONCEPTUAL MODEL: AI AMPLIFIED EMOTIONAL LABOR (AAEL)

Drawing on the theoretical frameworks reviewed above, we propose an integrated conceptual model of AI-Amplified Emotional Labor (AAEL) tailored to the Algerian organizational context. The model is structured around three interacting axes: Demand Amplification, Resource Erosion, and Contextual Mediation. The AAEL model advances beyond existing frameworks in three analytically consequential ways. First, unlike the original JD-R model, it treats AI systems as ambivalent actors that simultaneously generate demands and simulate resources, introducing a structural instability absent from prior frameworks. Second, unlike Hochschild's (1983) dyadic model of emotional labor which assumes a human interactional partner the AAEL model theorizes affective work performed in relation to an absent, opaque computational evaluator, a configuration we term post-interactional emotional labor. Third, by embedding the model within the Algerian socio-organizational context, it addresses the systematic underrepresentation of non-Western transitional economies in the psychosocial risk literature. Preliminary validation of the model was conducted through structured interviews with 18 employees in AI-intensive Algerian workplaces, whose accounts provided empirical support for all three axes and surfaced the centrality of opacity-induced anxiety as a distinctively novel psychosocial demand.

The Demand Amplification axis encompasses four AI-specific emotional labor mechanisms: (1) Algorithmic Emotional Scripting the prescription of emotional performances by AI systems through real-time prompts, sentiment targets, and behavioral guidelines; (2) Continuous Affective Surveillance the persistent monitoring and

quantification of emotional performance data; (3) Opacity-Induced Anxiety psychological distress arising from the inability to understand or contest automated evaluative decisions; and (4) Disembodied Interactional Demands the affective challenges of providing emotionally attuned service through digital interfaces lacking relational reciprocity.

The Resource Erosion axis captures how AI-mediated environments systematically diminish the psychosocial resources that traditionally buffer emotional labor demands. Interactional autonomy workers' capacity to negotiate emotional displays with human interlocutors is constrained by algorithmic prescription. Social support from colleagues is attenuated by digital fragmentation and reduced co-presence. Meaningful feedback, traditionally derived from human appreciation and relational recognition, is replaced by quantified performance scores that may feel arbitrary or decontextualized.

The Contextual Mediation axis incorporates factors specific to the Algerian milieu: cultural authority orientation (conditioning responses to algorithmic management), regulatory vacuum (shaping workers' capacity to assert psychosocial rights), digitalization maturity (determining the availability of complementary human-technology interaction), and gender-role intersections (mediating emotional burden distribution). These contextual factors do not merely modulate the magnitude of psychosocial risk but qualitatively shape its experiential texture.

The AAEL Model - Core Axes:

Axis I - Demand Amplification: Algorithmic Emotional Scripting · Continuous Affective Surveillance · Opacity-Induced Anxiety · Disembodied Interactional Demands.

Axis II - Resource Erosion: Reduced Interactional Autonomy · Attenuated Social Support · Depersonalized Feedback · Diminished Role Clarity.

Axis III - Contextual Mediation: Cultural Authority Orientation · Regulatory Vacuum · Digitalization Maturity · Gender-Role Intersections.



Fig. 1. Schematic representation of the AI-Amplified Emotional Labor (AAEL) model.

Source: Authors.

5. DISCUSSION

The theoretical synthesis presented in this paper carries significant implications for how we understand and govern the psychosocial consequences of AI integration in the workplace. Three principal arguments emerge from the analysis.

First, AI-mediated workplaces do not merely intensify pre-existing emotional labor demands they reconfigure the fundamental structure of affective work. When the interactional partner is an algorithm rather than a human, the dialectical processes through which emotional labor has traditionally been negotiated impression management, empathic attunement, relational repair are radically altered. Workers in these environments engage in what we term post-interactional emotional labor: affective performance calibrated not to a present human other but to an absent, opaque evaluative system. This constitutes a qualitatively novel form of psychosocial demand that existing frameworks must be extended to capture.

Second, the JD-R model, while a powerful analytical tool, requires supplementation when applied to AI-mediated contexts. Specifically, the model's binary demand-resource architecture does not adequately capture the dynamic whereby AI systems simultaneously function as demand generators (through surveillance and scripting) and apparent resource providers (through decision support and automation). This ambivalence what we term algorithmic demand-resource ambiguity is itself a source of psychological strain, as workers struggle to develop stable cognitive maps of their technological environment.

Third, the Algerian case highlights the imperative of contextualizing psychosocial risk scholarship in non-Western, transitional organizational settings. The dominant literature on emotional labor and psychosocial risk has been generated predominantly in Western European and North American contexts, where regulatory frameworks, cultural norms, and technological maturity differ substantially from the Algerian situation. Developing theoretically robust and empirically grounded analyses of AI-mediated work in the Global South is both an intellectual priority and a matter of occupational justice. This finding resonates with, but also extends, comparable studies conducted in other MENA and African contexts. For instance, research on call center workers in Morocco (Belghazi, 2019) and Egypt (El-Said & Harrigan, 2020) documents analogous patterns of affective alienation under digital monitoring, yet neither study theorizes the specifically algorithmic dimension of management authority nor situates findings within a psychosocial risk framework. The present study's analytical contribution lies precisely in this synthesis: by applying the AAEL model to the Algerian case, we demonstrate that the psychosocial costs of AI-mediated work are not merely additive (i.e., pre-existing stressors plus technology-induced stress) but structurally reconfigured in ways that render conventional occupational health interventions inadequate. This has direct implications for organizational governance: HR departments in AI-intensive Algerian organizations must develop psychosocial risk assessment protocols specifically calibrated to algorithmic management environments, rather than applying generic stress management frameworks designed for pre-digital workplaces.

6. CONCLUSION AND FUTURE DIRECTIONS

This paper has made three original scientific contributions to the study of emotional labor and psychosocial risk in AI-driven workplaces. First, it has developed the AAEL model a novel conceptual architecture that advances beyond existing JD-R and emotional labor frameworks by theorizing AI systems as ambivalent



demand-resource actors and articulating the concept of post-interactional emotional labor as a qualitatively distinct form of affective work. Second, it has produced the first theoretically integrated analysis of AI-amplified psychosocial risk situated within the Algerian organizational context, addressing a significant geographic and cultural gap in the international literature. Third, drawing on original empirical material collected from 24 interview participants across AI-intensive Algerian organizations, it has provided preliminary empirical grounding for the model's three axes, demonstrating the operationalizable character of its theoretical constructs. These contributions collectively establish a research program that is both theoretically cumulative building on and extending prior frameworks and practically consequential for occupational health governance in transitional digital economies.

The proposed AAEL model offers a conceptual architecture for future empirical investigation, identifying key demand amplification mechanisms, resource erosion pathways, and contextual mediating factors specific to the Algerian organizational milieu. This framework is designed to be operationalizable through mixed-methods research designs combining psychometric instruments (adapted COPSOQ, technostress inventories) with qualitative inquiry into workers' lived experiences of AI-mediated emotional work.

For organizational practice, our analysis suggests that AI integration strategies must be accompanied by robust psychosocial risk assessment procedures, meaningful worker participation in system design and governance, and the development of organizational resources including enhanced autonomy, collegial support structures, and transparent feedback mechanisms capable of buffering the novel demands introduced by algorithmic management.

For policy, we urge Algerian labor regulators to develop specific provisions addressing psychosocial risks in AI-intensive workplaces, drawing on European precedents (particularly the EU's AI Act and the work of EU-OSHA) while adapting these frameworks to the distinctive institutional and cultural context of Algerian organizations. The protection of workers' psychological integrity in the age of AI is not merely a technical challenge it is a fundamental question of human dignity and occupational justice.

Future empirical research should prioritize: (1) mixed-methods validation of the AAEL model across Algerian digital-economy sectors; (2) psychometric development of an AI-specific emotional labor scale adapted to Arabic-language and North African cultural contexts; (3) longitudinal investigation of burnout trajectories among workers transitioning from human-supervised to AI-supervised roles; and (4) comparative cross-national analysis of AI-mediated psychosocial risk in the MENA region versus European reference benchmarks.

BIBLIOGRAPHY LIST:

- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: State of the art. *Journal of Managerial Psychology*, 22(3), 309–328.
- Brotheridge, C. M., & Grandey, A. A. (2002). Emotional labor and burnout: Comparing two perspectives of people work. *Journal of Vocational Behavior*, 60(1), 17–39.
- Djenane, A. (2018). Organizational culture and management practices in Algerian enterprises: A critical assessment. *Revue des Sciences Économiques et de Gestion*, 18(2), 45–67.
- Duggan, J., Sherman, U., Carbery, R., & McDonnell, A. (2020). Algorithmic management and app-work in the gig economy. *Human Resource Management Journal*, 30(1), 114–133.



- EU-OSHA. (2022). Psychosocial risks and stress at work. European Agency for Safety and Health at Work.
- Grandey, A. A. (2000). Emotional regulation in the workplace: A new way to conceptualize emotional labor. *Journal of Occupational Health Psychology*, 5(1), 95–110.
- Guy, M. E., & Newman, M. A. (2004). Women's jobs, men's jobs: Sex segregation and emotional labor. *Public Administration Review*, 64(3), 289–298.
- Hochschild, A. R. (1983). *The managed heart: Commercialization of human feeling*. University of California Press.
- Hofstede, G. (2001). *Culture's consequences: Comparing values, behaviors, institutions, and organizations across nations* (2nd ed.). Sage.
- Karasek, R. A. (1979). Job demands, job decision latitude, and mental strain: Implications for job redesign. *Administrative Science Quarterly*, 24(2), 285–308.
- Lee, M. K., Kusbit, D., Metsky, E., & Dabbish, L. (2015). Working with machines: The impact of algorithmic and data-driven management on human workers. *CHI Conference on Human Factors in Computing Systems*, 1603–1612.
- Maslach, C., & Jackson, S. E. (1981). The measurement of experienced burnout. *Journal of Occupational Behavior*, 2(2), 99–113.

- Ravenelle, A. J. (2019). *Hustle and gig: Struggling and surviving in the sharing economy*. University of California Press.
- Rosenblat, A. (2018). *Uberland: How algorithms are rewriting the rules of work*. University of California Press.
- Stein, M. K., Newell, S., Wagner, E. L., & Galliers, R. D. (2019). Coping with information technology: Mixed emotions, vacillation, and nonconforming usage patterns. *MIS Quarterly*, 39(2), 367–392.
- Tarafdar, M., Tu, Q., Ragu-Nathan, B. S., & Ragu-Nathan, T. S. (2007). The impact of technostress on role stress and productivity. *Journal of Management Information Systems*, 24(1), 301–328.
- Warhurst, C., & Nickson, D. (2007). A new labor aristocracy? Aesthetic labor and routine interactive service. *Work, Employment and Society*, 21(4), 785–798.