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A Review of Research Status on Job Burnout Among Production Line Employees in Manufacturing Enterprises

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Abstract: Job burnout is a prevalent issue among production line employees in manufacturing enterprises, impacting individual well-being, corporate productivity, and sustainable social development. This paper systematically reviews current research on job burnout by analyzing relevant domestic and international literature. First, the concept of job burnout is defined, and relevant theories—such as Maslow's hierarchy of needs—are analyzed. Second, measurement tools for job burnout are summarized, and influencing factors are examined from individual characteristics, job characteristics, and organizational characteristics. Additionally, the study examines job burnout among production line workers by focusing on their unique work environment in manufacturing enterprises. In addition, focusing on the special working environment of production line employees in manufacturing enterprises, the burnout status of them was analyzed. Finally, intervention measures for job burnout among manufacturing employees are summarized, including technical training, job rotation, and other approaches.

Keywords: Job burnout; Manufacturing enterprises; Influencing factors; Intervention measures

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1. Introduction

Despite the growing concern about burnout, it remains a prominent issue for frontline workers in manufacturing companies. For example, amid rapid economic growth in manufacturing, production line employees are constantly exposed to high-pressure competitive environments. Without effective mitigation, they are highly prone to job burnout. This not only reduces production efficiency and compromises product quality but may also increase safety risks, ultimately undermining a company's market competitiveness and sustainable development. It has become an issue that manufacturing enterprises cannot afford to ignore. In terms of research methodology, the measurement of job burnout has evolved from qualitative to quantitative approaches, with questionnaire surveys now being the primary method. With the deepening of research, the research direction and scope continue to extend and

expand to multiple fields. In order to understand the problem of burnout among employees in the production line of manufacturing enterprises, this study first sorted out the definition and related theories of burnout, then summarized its measurement methods and influencing factors, analyzed the current situation of burnout among employees in manufacturing enterprises, and finally put forward corresponding mitigation measures.

2. Definition of job burnout

Job burnout is a psychological syndrome induced by the accumulation of prolonged work stress, primarily manifested as emotional exhaustion, depersonalization, and diminished personal accomplishment [1]. Work burnout is a psychological syndrome caused by prolonged work stress, primarily characterized by emotional exhaustion, depersonalization, and reduced personal accomplishment. American clinical psychologist Freudenberger first introduced the concept of work burnout in 1974. It mainly consists of three aspects.

2.1. Emotional exhaustion

Emotional exhaustion is the core feature of work burnout, referring to a state of physical and mental fatigue caused by the excessive depletion of emotional resources. Prolonged high-intensity work, interpersonal conflicts, or lack of support can leave employees in a constant state of tension, manifesting as anxiety, irritability, insomnia, and even somatic symptoms (such as headaches and gastrointestinal discomfort).

2.2. Depersonalization

Depersonalization refers to developing a detached, indifferent, or cynical attitude toward one's work or the people being served. Employees may develop a "mechanical" work mode and resort to negative coping behaviors (e.g., being perfunctory, shirking responsibilities) toward colleagues or clients as a form of self-protection. For example, customer service representatives may grow indifferent to client needs, or managers might lack empathy toward subordinates. While this defense mechanism may temporarily relieve stress, it ultimately worsens interpersonal relationships.

2.3. Diminished personal accomplishment

Loss of personal accomplishment refers to a sense of futility in one's work, where individuals perceive their efforts as ineffective and doubt their ability to achieve meaningful outcomes. Even after completing tasks, employees may feel a sense of meaninglessness and gradually lose motivation. This negative mindset can stem from unclear goals, inadequate rewards, or workplace unfairness, ultimately leading to career stagnation.

Burnout not only harms an individual's physical and mental health, but it also affects organizational effectiveness. For individuals, burnout can lead to psychological problems such as anxiety, depression, and insomnia, and may even trigger physical health problems such as cardiovascular disease. In the workplace, this may lead to reduced productivity and increased errors among production-line employees, along with detached attitudes toward colleagues and clients, ultimately undermining team collaboration. For manufacturing companies, employee burnout drives higher turnover rates, lowers productivity, and results in talent drain and financial losses. If left unaddressed, this situation may create a vicious cycle, harming both individual career growth and long-term business operations. In summary, work burnout is a critical yet often overlooked risk in modern workplaces. Recognizing its symptoms and implementing targeted interventions are essential for achieving sustainable career development.

3. Research hotspots and evolution trends

3.1. Theories related to work burnout

Research indicates that life stress and workload easily lead to psychological burnout among employees, resulting in passive work attitudes and diminished creativity. In the study of work burnout, multiple theories explain its underlying causes, such as Maslow's hierarchy of needs, the conservation of resources (COR) theory, and two-factor theory (lack of motivators or excessive hygiene factors).

3.1.1. Maslow's hierarchy of needs

This theory, proposed by American psychologist Abraham Maslow, posits that human needs are hierarchically structured like a staircase, ascending from basic to higher levels [2]. It categorizes these needs into distinct tiers, forming a progressive pyramid. The base level consists of basic physiological needs essential for survival (e.g., food, sleep), while the next tier comprises safety needs—such as physical security and job stability. Once material needs are met, individuals shift their focus to psychological and emotional needs. First comes the social need for friendship and belonging, followed by the esteem need for respect and recognition from others. The ultimate goal is reaching the pinnacle of self-actualization—fully realizing one's potential and life aspirations. This theory has value in many aspects of organizational management. It shows that in order to reduce employee burnout, companies must focus on meeting needs at all levels—from providing fair wages to meet safety needs, to building a positive team environment that meets the needs of society, and ultimately providing development opportunities to help employees achieve self-fulfillment.

3.1.2. Conservation of resources (COR) theory

In 1989, psychologist Steven Hobfoll proposed a theory to explain work stress and burnout. The theory holds that individuals strive to obtain, protect, and maintain the resources they value (e.g., time, energy, social support, work autonomy, etc.). However, psychological stress arises when these resources are over-depleted, lost, or invested without the expected returns, and long-term accumulation can lead to burnout [3].

This theory suggests that to prevent employee burnout, companies must focus on helping employees replenish their daily physical and mental resources. Just like a phone needs regular charging, employees also need continuous work motivation and psychological energy. Specifically, organizations can take action in several ways. For example, providing competitive compensation makes employees feel their efforts are rewarded. Flexible work hours help them better balance life and work. Establishing psychological support systems gives employees someone to talk to when facing difficulties. Essentially, these measures all serve to replenish employees' key resources.

3.1.3. Two-factor theory

In 1959, American psychologist Frederick Herzberg proposed the renowned two-factor theory. This theory categorizes the factors affecting employees' work motivation into two distinct types [4]. The first type is "hygiene factors"—essentially the "basic safeguards" in the work environment. If these factors fall short—for example, with inadequate pay or poor working conditions—employees will become dissatisfied. However, even if these factors are optimized, they can only eliminate dissatisfaction, not genuinely ignite employee enthusiasm. The second type is "motivators"—these are the true drivers that foster employee satisfaction and boost engagement. For example, the sense of accomplishment, growth opportunities, and the feeling of being recognized that work brings. Interestingly, many companies make the mistake of treating material rewards, such as bonuses, as the only means

of motivation, when it is more important to make employees feel the meaning and value of their work.

3.2. Publication volume statistics

A comprehensive search was conducted in the Web of Science (WOS) database using the keyword "Employee burnout", yielding 58,693 relevant papers as of June 2025. According to the WOS citation report, these publications were cited 103,798 times in total, with an average citation frequency of 24.35 per paper. **Figure 1** shows the annual publication count and citation trends from 2010 to 2025. Notably, academic output on employee burnout has grown rapidly since 2015. **Figure 2** further reveals that burnout research is most prevalent in business and economics, which supports this study's focus on burnout among manufacturing frontline workers.

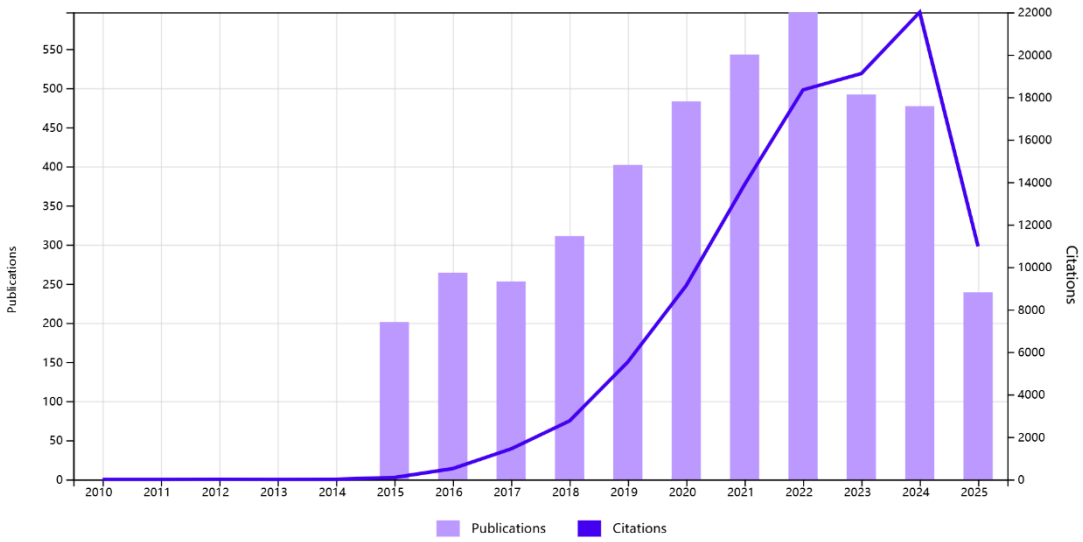

Figure 1. Number of papers and corresponding citations from 2010 to 2025

Figure 2. Number of work burnout-related papers across research fields

3.3. Research on burnout measurement

Scholars have developed various burnout scales from different perspectives, and many research results have been achieved through empirical research. The research object has gradually expanded from the traditional service industry to other fields

3.3.1. Maslach burnout inventory (MBI Scale)

Maslach first proposed the MBI scale, which assesses job burnout in three dimensions, namely, emotional exhaustion, depersonalization, and decreased personal fulfillment [5]. The emotional exhaustion scale measures whether a person feels emotionally drained and exhausted at work. The depersonalization scale assesses how cold, indifferent, or detached a person feels toward their job, colleagues, or those they serve. The personal accomplishment dimension evaluates whether a person feels they are making meaningful contributions at work and whether they believe their work has value. The MBI uses a 7-point Likert scale to assess an individual's level of job burnout across different dimensions. It is currently the most widely recognized and commonly used burnout measurement tool in academic research.

3.3.2. The MBI-GS scale

Later, scholar revised the Maslach Burnout Inventory and developed the generalized MBI-GS scale, which places greater emphasis on measuring interpersonal relationships rather than focusing solely on the relationship between individuals and their work [6]. The rationality and validity of the MBI-GS scale have been confirmed by a large number of studies, and it is not only applicable to the police, teachers and other industries, but can also be applied to the study of burnout among groups such as knowledge employees, corporate executives, and front-line workers in manufacturing enterprises, and is the best choice among job burnout measurement tools.

3.3.3. The burnout measure scale (BM scale)

Another scholar-approved measurement tool is the Burnout Measure (BM) scale, which assesses burnout across three dimensions: physical, emotional, and cognitive exhaustion in workers [7]. First, physical exhaustion refers to bodily fatigue, typically manifested as low energy, weariness, or even aversion. Second, emotional exhaustion reflects mental strain, often expressed through depression, helplessness, irritability, or mood swings. Third, cognitive exhaustion describes an individual's resistant attitude toward their environment. As the most widely used scale after the MBI, the BM scale features broad applicability across all occupational groups due to its comprehensive item coverage.

3.3.4. Other scales

In addition, the Oldenburg Burnout Inventory Scale (OLBI), which is measured from the two dimensions of "emotional exhaustion" and "work alienation" based on the theoretical model of work demand resources [8]. Compared with the MBI and BM scales, the scale is simplified in the measurement dimension, and the dimension of personal fulfillment is abandoned. The advantage of the OLBI scale is that it innovatively adopts a combination of forward and reverse tests, and adds positive questions such as work engagement and identity, which effectively avoids the one-way bias that often occurs in previous scales, but the rationality of this table needs to be further demonstrated. In addition to these scales, there are scales such as the S-MBM scale and the MBI-SS.

Finally, this paper summarizes some of the different measurement scales proposed by scholars both domestically and internationally, as shown in **Table 1**.

Table 1. Summary of the work burnout measurement scale

Time	Scholar	The name of the scale	Measure structure and content
1981	Pines, Aronson	BM scale	Physical exhaustion Emotional exhaustion Psychological exhaustion
1981	Maslach	MBI scale	Emotional exhaustion Dehumanization Ow fulfillment
1996	Maslach & Jackson (1996)	MBI-GS scale	Emotional exhaustion Cynicism Professional efficacy
2003	Demerouti & Schaufeli	OLBI scale	Exhaustion Work alienation
2003	Li Chaoping	CMBI scale	Emotional exhaustion Cynicism Reduced professional efficacy
2005	Kristensen	BI scale	Personal burnout Work-related burnout Client-related burnout

4. Research on the influencing factors of job burnouts

Production line employees experience job burnout due to their work, which in turn negatively impacts their job performance. Numerous factors contribute to work burnout, primarily concentrated in areas such as job characteristics, organizational attributes, individual traits.

4.1. Regarding individual characteristics

Individual characteristic variables such as gender, personality, physical condition, and self-control have a significant impact on job burnout.

Barboza et al. argue that the greater the match between an individual's job and their personality traits, the less likely they are to experience burnout during work [9]. Conversely, burnout symptoms will intensify when such alignment is lacking. Ramazan explored the relationship between introversion/extroversion and job burnout, finding that personality traits significantly influence burnout levels [10]. Extroverted individuals prove more susceptible to social factors, resulting in varied burnout experiences. Liu Songbo et al. studied 443 grassroots employees and found that self-efficacy has a significant negative impact on job burnout, that is, the stronger an individual's belief and expectation in completing a task or achieving a goal, the lower their sense of job burnout [11].

4.2. Regarding job characteristics

From the perspective of job characteristics, factors such as workload, occupation type, and monotony influence the level of job burnout. Li et al. argue that burnout does not develop in the short term but follows a latent progression [12]. Job demands and job resources are key influencing factors in this process, meaning job burnout can be mitigated through work resource-related interventions. Ashim found that excessive workload causes burnout in healthcare workers, but job autonomy weakens this effect [13].

Job characteristics have a decisive impact on employee burnout. In highly standardized and repetitive production roles, employees remain in a passive execution state for extended periods, with minimal job autonomy

and decision-making involvement. This mechanized work mode continuously depletes employees' psychological energy. When job content lacks challenge and creativity, and fails to match individual capabilities, employees struggle to gain a sense of achievement or achieve professional growth.

4.3. Regarding organizational characteristics

At the organizational level, factors such as perceived organizational fairness, perceived organizational support, and compensation benefits can influence job burnout. Yun found significant disparities in how different organizations handle work-related stress [14]. For example, while emergency medical service workers face high job pressure, substantial bonuses and compensation packages help alleviate their burnout. Ferne argue that job burnout stems from multiple factors, including not only the negative effects of work stress but also interpersonal dynamics within the organization. In other words, burnout results from the interaction of various stressors and conflicting factors in a specific organizational context [15].

5. Research on job burnout in manufacturing enterprises

Research on job burnout in the manufacturing industry holds significant practical value. Scholars have conducted various studies based on cultural contexts and occupational characteristics. Lin et al. studied the employment of 288 managers in a Sino-Japanese joint venture automobile manufacturing company in Guangzhou [16]. As a burnout situation, it was found that high occupational stress and low job satisfaction were associated with high job burnout, especially in mood Burnout and cynicism dimension. Valadez-Torres et al. surveyed 327 mid-to-senior managers in manufacturing parks in northern Mexico. Their findings revealed that job demands (such as production target pressures) had a significant positive impact on emotional exhaustion. The study also highlighted that building social support networks is particularly crucial in cultures emphasizing interpersonal relationships [17].

For frontline manufacturing employees, the current market environment presents unprecedented challenges. As industry competition becomes increasingly intense, companies are imposing stricter requirements in cost control, quality management, and production standardization. As a result, front-line workers, who originally only had to complete basic operations, now have to not only ensure the completion of daily production tasks, but also continue to learn new skills to adapt to the needs of modern production. This shift in the nature of work has brought significant pressures: on the one hand, production tasks have become more onerous and working hours have generally increased; On the other hand, employees need to take care of both operation and learning at the same time, and the psychological burden is significantly increased. Compared to other positions, production line workers face more pronounced issues of work intensity and psychological stress. Additionally, they encounter unique job pressures and occupational challenges. Due to strict standardized requirements for product quality and output quantity in manufacturing roles—where workflows are highly regimented and employees have limited autonomy in decision-making—these inherent job characteristics are particularly prone to triggering occupational burnout. What is more noteworthy is that this group often faces three dilemmas: first, high work intensity and relatively poor environmental conditions; Second, the salary level is often lower than that of other departments of the enterprise; Third, the career development channel is not smooth. This situation leads to multiple negative consequences: First, the mismatch between compensation and work effort diminishes the motivational effect of wages. Second, employees frequently develop a sense of organizational injustice. Third, limited training opportunities and promotion prospects make it difficult for workers to envision career growth. When employees

remain trapped in this "high-demand, low-reward, limited-growth" work pattern for extended periods, job burnout becomes an inevitable outcome. Such burnout not only harms employees' physical and mental health, but ultimately compromises product quality and production efficiency as well.

6. Interventions for job burnout

In summary, job burnout among production line employees creates adverse consequences for both individuals and organizations, leading to reduced work efficiency and diminished productivity. These findings underscore the necessity of implementing targeted interventions to address burnout in this workforce. First, for positions requiring advanced skills, regular technical training should be provided to employees. By helping workers adapt to job demands, this approach not only enhances work motivation and efficiency but also reduces job-related stress. Second, through the job rotation system, employees can find their favorite positions. This requires a comprehensive combination of the needs of the organization and the strengths of the employees, and a plan to meet the needs of the employees. If it is found that the employee is not suitable for the position, it should be replaced in time. Third, companies should strive to improve employees' working conditions, as the work environment for production line staff in manufacturing is often poor—for example, with excessive noise and dust—which can harm their physical and mental health. A comfortable and safe environment can better motivate employees. Finally, increasing employee compensation is essential. Research shows that lower wages are more likely to lead to job burnout. In the manufacturing sector, production line workers' salaries are generally below the company's average pay level, with many earning only enough to cover basic living expenses. At the same time, they face long-term high-intensity, excessive workloads, and frequent overtime, which further drains them physically and mentally, making occupational fatigue increasingly severe. Under these circumstances, establishing a scientific and reasonable compensation incentive mechanism becomes particularly crucial. A fair and competitive salary structure can not only effectively alleviate employees' financial pressure but also significantly enhance their motivation and job stability. By optimizing performance evaluations and benefits, companies can reduce turnover rates while boosting frontline workers' productivity, thereby achieving sustainable business growth.

7. Summary

Overall, research on job burnout both domestically and internationally primarily analyzes the issue from the following three aspects. First, the definition of job burnout and related theories. Second, the measurement of job burnout. Assessment scales such as MBI, MBI-GS, BM, and OLBI serve as effective tools for researchers, with the MBI scale in particular—due to its comprehensiveness and widespread applicability—now being the most commonly used instrument in academia. Third, research on influencing factors, primarily covering individual characteristics, job characteristics, and organizational characteristics, which reveal the complex causes of job burnout. In addition, current burnout research is not limited to service workers, but also managers, technicians, and production line employees. At present, the research on job burnout is developing in the direction of refinement and diversification.

In future research, studies on the influencing factors and measurement of job burnout should cover more diverse groups. Secondly, interventions for job burnout should explore multi-dimensional approaches. Finally, manufacturing enterprises should pay closer attention to the burnout levels of production line employees, more scientifically assess its contributing factors, and take proactive measures for intervention.

Disclosure statement

The author declares no conflict of interest.

References

[1] Guseva Canu, I, Marca SC, Dell'Oro F, et al., 2021, Harmonized Definition of Occupational Burnout: A Systematic Review, Semantic Analysis, and Delphi Consensus in 29 Countries. Scandinavian Journal of Work, Environment & Health, 47(2): 95–107. https://doi.org/10.5271/sjweh.3935

[2] Rojas M, Mendez A, Watkins-Fassler K, 2023, The Hierarchy of Needs Empirical Examination of Maslow's Theory and Lessons for Development. World Development, 2023(165): 106185. https://doi.org/10.1016/j.worlddev.2023.106185

[3] Demerouti E, 2025, Job Demands-resources and Conservation of Resources Theories: How do they Help to Explain Employee Well-being and Future Job Design? Journal of Business Research, 2025(192): 115296. https://doi.org/10.1016/j.jbusres.2025.115296

[4] Lee B, Lee C, Choi I, et al., 2022, Analyzing Determinants of Job Satisfaction Based on Two-Factor Theory. Sustainability, 14(19): 12557. https://doi.org/10.3390/su141912557

[5] Maslach C, Jackson SE, 1981, The Measurement of Experienced Burnout. Journal of Organizational Behavior, 2(2): 99–113. https://doi.org/10.1002/job.4030020205

[6] Schutte N, Toppinen S, Kalimo R, et al., 2000, The Factorial Validity of the Maslach Burnout Inventory-General Survey (MBI-GS) across Occupational Groups and Nations. Journal of Occupational and Organizational Psychology, 73(1): 53–66. https://doi.org/10.1348/096317900166877

[7] Schilling EJ, Randolph M, Boan-Lenzo C, 2018, Job Burnout in School Psychology: How Big Is the Problem? Contemporary School Psychology, 22(3): 324–331. https://doi.org/10.1007/s40688-017-0138-x

[8] Demerouti E, Bakker AB, Vardakou I, et al., 2003, The Convergent Validity of two Burnout Instruments: A Multitrait-multimethod Analysis. European Journal of Psychological Assessment, 19(1): 12–23. https://doi.org/10.1027/1015-5759.19.1.12

[9] Le TV, Barboza-Wilkes C, 2024, How Self-Determination Moderates Burnout in Public Organizations Across Gender, Race, and Generation. Public Personnel Management, 53(1): 113–147. https://doi.org/10.1177/00910260231191274

[10] Sak R, 2018, Gender Differences in Turkish Early Childhood Teachers' Job Satisfaction, Job Burnout and Organizational Cynicism. Early Childhood Education Journal, 46(6): 643–653. https://doi.org/10.1007/s10643-018-0895-9

[11] Liu SB, Zhang KR, Zhang XY, 2024, Mechanism of the Influence of Technical Complexity and Information Technology Knowledge on Task Performance: A Moderated Mediation Model. https://openurl.ebsco.com/contentitem/gcd:180259026?sid=ebsco:plink:crawler&id=ebsco:gcd:180259026

[12] Li Y, Tuckey MR, Bakker A, et al., 2023, Linking Objective and Subjective Job Demands and Resources in the JD-R Model: A Multilevel Design. Work and Stress, 37(1): 27–54. https://doi.org/10.1080/02678373.2022.2028319

[13] Roy A, van der Weijden T, de Vries N, 2017, Relationships of Work Characteristics to Job Satisfaction, Turnover Intention, and Burnout among Doctors in the District Public-private Mixed Health System of Bangladesh. BMC Health Services Research, 2017(17): 421. https://doi.org/10.1186/s12913-017-2369-y

[14] Yun JA, Lee Y, Mastracci S, 2019, The Moderating Effect of Female Managers on Job Stress and Emotional Labor for Public Employees in Gendered Organizations: Evidence from Korea. Public Personnel Management, 48(4): 535–564. https://doi.org/10.1177/0091026019829163

[15] Fernet C, Trepanier SG, Austin S, et al., 2025, Can Obsessive Passion Facilitate Responses to Job Characteristics and Help Prevent Psychological Distress and Turnover Intention? A Moderated Mediation Model. Journal of Managerial Psychology, preprint. https://doi.org/10.1108/JMP-07-2024-0490

[16] Lin QH, Jiang CQ, Lam TH, 2013, The Relationship between Occupational Stress, Burnout, and Turnover Intention among Managerial Staff from a Sino-Japanese Joint Venture in Guangzhou, China. Journal of Occupational Health, 55(6): 458–467. https://doi.org/10.1539/joh.12-0287-OA

[17] Valadez-Torres SG, Maldonado-Macias AA, Garcia-Alcaraz JL, et al., 2017, Analysis of Burnout Syndrome, Musculoskeletal Complaints, and Job Content in Middle and Senior Managers: Case Study of Manufacturing Industries in Ciudad Juarez, Mexico. Work: A Journal of Prevention Assessment & Rehabilitation, 58(4): 549–565. https://doi.org/10.3233/WOR-172642