



Doomscrolling as Occupational Hazard: A Conceptual Framework Linking Digital Distraction to Safety Performance in Manufacturing

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Abstract

Doomscrolling as the compulsive, self-reinforcing consumption of negative online news – has emerged as a documented occupational behaviour with measurable consequences for employee psychological well-being and work engagement. Despite growing empirical attention, there is a lack of studies examining doomscrolling in manufacturing environments, where attentional failures carry direct and potentially irreversible safety consequences. This paper addresses that gap through a systematic literature review conducted in accordance with PRISMA 2020 guidelines, retaining sixteen studies spanning multiple countries for synthesis. Evidence is organised into three streams. The first establishes theoretical and contextual foundations of doomscrolling as an affect-driven subtype of cyberloafing shaped by algorithmic amplification and developmental factors. The second synthesises empirical evidence on psychological effects among working adults: across four independent samples, doomscrolling consistently predicted rumination, psychological distress, existential anxiety, and reduced work engagement, with a weighted effect size of $d = 0.88$ for the distress–anxiety pathway – a large effect appears notably larger than effect sizes commonly reported for general internet use at work, though direct comparison is constrained by construct heterogeneity. The third draws on bridge evidence from industrial settings linking problematic internet use and deviant cyberloafing to diminished safety behaviour in mining and healthcare contexts. A conceptual model integrating these pathways through Conservation of Resources Theory is proposed, identifying three parallel depletion mechanisms – rumination, attentional depletion, and psychological distress – that translate doomscrolling into reduced safety compliance, elevated human error, and productivity loss. Four empirical propositions are advanced to guide future research in manufacturing contexts.

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1. Introduction

Digitalisation has profoundly influenced the way individuals engage with information during working hours. Smartphones and Internet connectivity, which were previously perceived as productivity-enhancing tools, now provide ongoing access to news, social media and disturbing material. An increasingly studied behaviour pattern since 2020 is doomscrolling, which is commonly defined as self-reinforcing behavior of compulsively consuming negative news via the Internet (often causing emotional distress) (Sharma et al., 2022; Sharpe et al., 2026). Longitudinal data

show a clear one-way developmental pathway as a result, social media addiction can predict doomscrolling behaviour, but doomscrolling cannot predict social media addiction (Akat and Hamarta, 2025). Doomscrolling differs from the general class of cyberloafing (a broader class of personal internet usage during work hours) in that doomscrolling is proposed to generate an affective feedback loop in which negative material may increase levels of anxiety, sustaining continued scrolling behaviour (van Vugt et al., 2024). There is variability to who is susceptible to this cycle, generational cohort and development history play a role in determining an individual's level of risk (Lissitsa and Kagan, 2026).



The cyclical reinforcement of the behaviour is due in part to the structure of digital media – an algorithm-ordered digital newsfeed must deliver maximum amounts of threat-related information so that users are engaged, rather than blocking the ability to disengage voluntarily with the same amount or type of threat in non-digital contexts (van Vugt et al., 2024). As a result, there is increasing interest from both the general public and practitioners regarding the behaviour of doomscrolling in the workplace; however, the majority of peer-reviewed empirical evidence regarding doomscrolling in workplace settings is limited and primarily comes from practitioners' blogs and health communication sources, rather than from research within the fields of both occupational and human resource management or management science.

Increased documentation of workplace implications resulting from this behaviour has been observed through research such as Hughes et al.'s (2024) study of doomscrolling by employees. Their findings suggest that employees who engage with doomscrolling will have a significant decrease in levels of work engagement due to increased levels of rumination. These findings support the principles of the Conservation of Resources Theory (COR) (Hobfoll, 1989; Hobfoll et al., 2018), which states that events that deplete one's resources will cause psychological stress in all different areas of one's life. Other researchers have shown how these findings are related to how much psychological distress, existential anxiety, and mindful suppression those individuals will experience; therefore, impacted their ability to sustain focused attention (Satici et al., 2023; Shabahang et al., 2024; Taskin et al., 2024).

There remains a gap despite the accumulating body of evidence. None of the empirical studies reviewed were conducted in a manufacturing setting; they were all office based, remote work based, or student based. While there has been research on the attentional failures associated with doomscrolling, its impact on manufacturing performance and safety has not been studied to date. This gap is particularly important, as it appears to be a systemic safety hazard created by an "Organisational Level" mechanism for doing damage to the employee's wellbeing. Kuzior et al.'s (2025) multilevel modelling of the 'Burn-out' syndrome associated with Techno-Burnout has now been categorised as a "Systemic Safety Problem" rather than an individual 'Wellbeing' issue. This means that Techno-Burnout is created at an "Organisational Level" (Kuzior et al., 2025), citing the workplace as being responsible for creating this syndrome, not just the employee themselves. As a compulsive, affect-driven form of digital over consumption, doom scrolling operates through similar types of depletion pathways as Techno-Burnout, making its potential occupational health-related impacts on organisations more likely than those relating to human resources. The manufacturer study conducted by Doğan (2026) highlighted operator inattention as a major contributor to industrial accidents. If doomscrolling uses up similarly to safety-critical tasks, it's likely that the impact of doomscrolling would have serious implications for the safety of manufacturing operations beyond those which have been

observed in relation to the psychological effects of doomscrolling.

The present paper addresses that gap with a systematic conceptual review. The three aims of this conceptual review include (1) the synthesis of the literature pertaining to the psychological and occupational impact of doomscrolling and its parent construct, cyberloafing; (2) the development of a theoretically-based link between existing evidence of psychological mechanisms and manufacturing safety outcomes; and (3) the proposition of a conceptual model and empirical propositions designed to support future research into manufacturing contexts.

The research questions include: (1) What cognitive and psychological mechanisms link doomscrolling to reduced occupational safety performance in manufacturing environments?; (2) How do cyberloafing and Problematic Internet Use (PIU) affect worker behaviour in safety-critical manufacturing contexts?.

2. Literature review

The phrase "doomscrolling" first appeared in the media in 2020, during the COVID-19 pandemic, when it was used to describe excessive engagement with negatively charged news articles on social media (Leskin, 2020; Sharma et al., 2022). Definitions of doomscrolling were initially quantitative in nature, referring to how much time someone spends reading negative news; later definitions included elements of motivation and affect, as demonstrated by Sharma et al. (2022), who indicated that doomscrolling is an obsessive form of engagement with the news that is distinct from typical news consumption due to an inability to stop or disengage from the news even while experiencing increasing levels of discomfort. Satici et al. (2023) examined the definitions of doomscrolling by establishing a validated measure of the construct and found significant correlations with neuroticism, social media addiction and indicators of negative well-being in three independent samples in Turkey.

The systematic review performed by Sharpe et al. (2026), which synthesised empirical studies on the topic of doomscrolling, confirmed that there is a consistent predictive relationship between doomscrolling and increases in anxiety, depressive symptoms and decreases in attentional capacity, regardless of cultural origin. Sharpe et al. noted that two mechanisms were commonly identified in the literature that explain how doomscrolling negatively influences psychological functioning, both of which are particularly relevant to occupations where worker safety is a concern: the suppression of mindfulness, and the creation of secondary traumatic stress.

The article by Turk-Kurtca and Kocaturk (2025) introduces individual differences in the dimensionality of psychosociological protection from doomscrolling and the increase in vulnerability due to an intolerance of uncertainty among workers that can be explained through risk. There is evidence of psychological effects from doomscrolling, but there is also evidence of somatic effects from doomscrolling that impact physical health. McLaughlin et al. (2023) found

that individuals who have difficulty controlling their news consumption through checking and not being able to disengage from the news are much more likely to experience higher levels of both physical and mental ill-health than purposefully checking the news or willingly disengaging from the news (sample N=1100 adults from the US), including headaches, fatigue, and disruption of sleep. These physical manifestations of a sustained overload of cognition and emotion have direct occupational implications because discomfort and disruption of sleep have both been shown to reduce attention and reaction time in industrial tasks.

In addition to examining the psychological health consequences of doomscrolling, researchers have begun to investigate the developmental progression of doomscrolling behaviour. Akat and Hamarta (2025) conducted the first longitudinal study to examine the relationship between social media addiction and doomscrolling behaviour using a cross-lagged structural equation model to assess the development of a sample of Turkish adolescents over two measurement waves separated by two months (N=301 adolescents). They found that social media addiction at T1 significantly predicted doomscrolling at T2 but that doomscrolling at T1 was not a significant predictor of social media addiction at T2. Thus, there appears to be evidence of a Unidirectional Proximal Relationship between doomscrolling and social media addiction.

This research reveals a clear directionality of an important antecedent of doomscrolling vulnerability: the increasing number and frequency of use of heavy platforms correlates with increased doomscrolling vulnerability. This has significant implications for manufacturing organisations with employees who regularly access social media via smartphones while on shift breaks. Furthermore, Lissitsa and Kagan's (2026) research found that 570 Israel men demonstrate generational diversity in relation to antecedents of doomscrolling: Generation X has no direct links between adverse childhood experiences and doomscrolling; Generation Y shows a direct effect that was unmediated by feelings of loneliness; and Generation Z has feelings of loneliness as a complete mediator of their experience; therefore, reflecting compensatory digital coping. As most manufacturing workforces are comprised of all three cohorts, these differences in generations suggest that uniform digital hygiene approaches may be insufficient; rather, it would be expected that a targeted intervention, which addresses the motivational drives of each generation, is likely to be more successful.

Since the early 2000s, organizational research has been examining cyberloafing (Lim, 2002; Lim & Teo, 2024), defined as the personal use of the Internet for non-work-related purposes during work hours. Yildiz and Yildiz (2025) further classified this behaviour into two categories: minor (checking personal email or very brief browsing) and serious (shopping online, streaming video, or immersing in social media). Out of these two classifications, serious cyberloafing was found to predict employee job satisfaction and performance more consistently than minor cyberloafing.

Doomscrolling falls into the serious and affect-driven end of the cyberloafing spectrum because it has none of the

characteristics of instrumental cyberloafing, is emotionally dysregulating, and does not have a defined time limit like typical micro-breaks do.

The taxonomic placement of doomscrolling has important implications for methodology. The existing extant literature on cyberloafing contains an extensive body of work (hundreds of peer-reviewed articles) that could provide a basis for drawing conclusions about potential effects of doomscrolling that have not yet been studied. An evolutionary mismatch perspective offered by van Vugt et al, (2024) provides a theoretical explanation for why this category of behaviour appears to be particularly resistant to self-regulation. Human attention was designed to maximize the chance of survival by giving priority to relevant information about threats. In the context of threats to our survival there was little information in our natural habitat. Contrarily in today's digital information space, we have access to an abundance of threat-related content, and it is constantly being delivered and amplified via algorithms, which effectively nullifies the voluntary disengagement mechanisms available to employees in physically based workplaces.

Many individuals are driven by a desire to acquire, maintain and protect everything from material possessions (houses and cars) to social settings (community members) to personal characteristics (patience and kindness) to emotional resources (the ability to show empathy). The theory also states that stress occurs when there is a loss of resources, there is a threat to resources, or anticipated resources fail to be realized. COR Theory suggests that once an individual has lost a resource, that loss creates additional vulnerability to losing more resources. As a result, the individual will continue to be impacted by the same stressor repetitively over time.

There are two ways in which doom scrolling fits within the COR Theory framework: first, doom scrolling is resource-consuming because time spent watching and consuming content will deplete attention, emotional and executive resources; and, second, since doom scrolling depletes attention resources, it increases the likelihood of making errors in the workplace, generates negative feedback from supervisors or others in the workplace, and thus further depletes resources. The net effect is that individuals whose resources have recently been depleted through doom scrolling will be more susceptible to future episodes of doom scrolling as a way of escaping from negative feelings.

In occupational accident causation for the manufacturing environments, human error is identified as being the leading proximate cause of such accidents. Although production processes are automated in a modern manufacturing facility, human factors remain the primary risk factor even when the potential for exposure to physical hazards has been reduced or eliminated through the use of process engineering (Klimecka-Tatar et al., 2023) showed that it is impossible to replace occupational risk assessment for special processes with automation alone because of the evolving nature of the cognitive and behavioural variables that control residual risk. Ninety-six percent of workplace accidents have been attributed to human factors according to meta-analytic reviews (Doğan, 2026) which estimate that human factors are

responsible for seventy to eighty percent of all industrial accidents. The predominant error categories attributable to human factors in industrial accidents are inattention, cognitive overload and lack of situational awareness. The Human Factors Analysis and Classification System (HFACS) categorizes these errors as 'unsafe acts', because of skill-based errors and decision errors that occur as a result of attentional and executive resource depletions that occur during doomscrolling as established through the research of Wihler et al. (2022). The behavioural framing aligns with evidence observed in various manufacturing sectors. As evidenced by a 12-country survey (n=289) conducted by Sá et al. (2025), unsafe behaviours are the main cause of work-related accidents, and organisational OHS system effectiveness is the strongest predictor of the affected behaviour, surpassing sector location influences. As such, organisations are beginning to also acknowledge that psychological safety, in addition to physical safety, is a critical driver of safety results (Sá et al., 2025).

Wihler et al. (2022) provided empirical evidence demonstrating that trait mindfulness moderates the relationship between job monotony and performance quality in a sample of one hundred seventy-four (174) blue-collar employees in the Mexican manufacturing sector, supporting the assertion that psychological states (not just task demands) during work will determine safety related outcomes in manufacturing settings. Taskin et al. (2024) provided further evidence that doomscrolling suppresses trait mindfulness thereby establishing a chain of digital distraction to psychological resource depletion to a resultant decline in industrial performance due to worsening safety outcomes.

The literature review conducted by Doğan (2026) included a phenomenological study of 19 Turkish manufacturing employees and provided more evidence that digital distraction was contributing to cognitive overload, disconnection from coworkers while working, and silence within organizations regarding safety risks because of using digital devices while working. In addition, the qualitative evidence presented in Doğan's (2026) article supports the quantitative pathway proposed by the present study and is consistent with the view that continued use of digital devices while working in a manufacturing environment may negatively affect both individual performance and collective organisational safety culture.

A targeted search for studies on "doomscrolling" and "manufacturing" or "factory" (Scopus, n = 17) yielded no results on the phenomenon of doomscrolling within industrial/production environments. All references found regarding doomscrolling were used in a metaphorical sense (e.g., "manufacturing of narratives"). Following a broader bridge search combining cyberloafing and PIU, plus occupational safety and manufacturing (Scopus, n = 47), only 2 actual empirical studies were found related to doomscrolling: Ghasemi et al. (2022) regarding mining; and Yildiz and Yildiz (2025) about health care sphere. However, none of these studies had any part of the data set regarding doomscrolling as an independent variable. This represents a clear, bounded void in research: the psychological

mechanisms that have been researched in both office and remote working populations have not yet been evaluated with respect to the performance demands required for safety-critical manufacturing operators.

3. Review methodology

3.1. Research design

This paper draws on a systematic literature review conducted with the PRISMA 2020 guidelines (Page et al., 2021). Though scholarly attention to doomscrolling as a workplace phenomenon has recently risen, its relevance to industrial safety has not yet been examined. Therefore, we designed the review to fulfil a dual purpose: (1) to consolidate what is known about doomscrolling's effects on employees, and (2) to determine whether the manufacturing context has featured in this emerging literature. The research logic connecting these objectives is illustrated in Appendix A, Fig. 1. It should be noted that no direct evidence linking doomscrolling to manufacturing safety outcomes currently exists; the conceptual bridge constructed here is hypothesis-generating and all four propositions presented in Section 5 require direct empirical testing before causal conclusions can be drawn.

Two research questions structured the research. The first one addresses the mechanisms both cognitive and psychological through which doomscrolling may decrease occupational safety performance in manufacturing. The second one asks how cyberloafing and problematic internet use more broadly relate to safety-relevant behaviour in industrial environments. These questions formed the search strategy as well as the criteria used to evaluate relevance.

3.2. Search strategy

This approach reflects the iterative nature of the research problem. The manufacturing dimension of doomscrolling had to be verified. Searches were conducted in March 2026. Rather than applying a single, uniform query structure, the search strategy was organised into three sequential phases, each informed by the findings of the preceding one (Table 1).

Table 1. Strategy Summary

Phase/ID	Search query (verbatim)	Database	Date restriction	Filters
Phase 1 – Workplace effects of doomscrolling (S1)	"doomscrolling" AND ("work*" OR "employee*")	Scopus	None	Language applied at screening stage
Phase 1 – Workplace effects of doomscrolling (S2)	"doomscrolling" AND ("work*" OR "employee*")	Web of Science	None	Language applied at screening stage
Phase 1 – Workplace effects of	doomscrolling workplace employee	Google Scholar	None	Language applied at

doomscrolling (S3)	occupational work engagement			screening stage
Phase 2 – Manufacturing gap verification (S4)	"doomscrolling" AND ("manufacturing" OR "factory")	Scopus	None	None
Phase 3 – Bridge evidence (cyberloafing + safety + manufacturing)	("cyberloafing" OR "doomscrolling") AND ("human error" OR "occupational safety" OR "workplace accident") AND ("manufacturing" OR "production" OR "operator")	Scopus	2020–2026	English; peer-reviewed; final publication on stage
Citation searching	Manual screening of reference lists of included records	–	None	Relevance assessed against research questions

Note. S5 date restriction (2020–2026) was applied deliberately to focus the bridge search on recent industrial safety evidence. The four studies added via citation searching (Satıcı et al., 2023; Taskin et al., 2024; Sharma et al., 2022; Turk-Kurtca & Kocaturk, 2025) were not subject to this restriction.

3.3. Study selection

Table 2 presents the inclusion and exclusion criteria applied at all screening stages.

Table 2. Inclusion and Exclusion Criteria

Criterion	Inclusion	Exclusion
Publication type	Peer-reviewed journal article, final publication stage	Preprint, thesis, conference paper, book chapter, editorial, opinion piece
Topic	Doomscrolling, cyberloafing, or PIU; workplace or occupational context	Unrelated topics; figurative use of manufacturing terminology (e.g., 'manufacturing of narratives')
Population	Working adults, employees, or occupational samples	Adolescents or student samples with no occupational dimension

Journal indexing	Indexed in Scopus or Web of Science at time of search	Not indexed in Scopus or Web of Science
Study design	Any quantitative or qualitative empirical design; theoretical/conceptual papers with clear relevance to the research questions	Non-empirical commentary without theoretical contribution

Screening was performed by one author. To minimise subjective exclusion bias, all borderline cases at both title/abstract and full-text stages were re-examined at a later sitting and discussed with co-authors before a final decision was made. Full dual independent screening was not performed; this is acknowledged as a limitation. The full selection process is reported in the PRISMA 2020 flow diagram (Appendix A, Fig. 1). After removing seven duplicate records across databases, 129 unique records entered the screening stage. Title and abstract screening applied the following eligibility criteria: relevance to doomscrolling or cyberloafing; presence of a workplace or occupational context and peer-reviewed journal article format. The 110 records returned by screening excluded in their entirety. Beyond the prevalent misuse of manufacturing terminology in a non-technical sense, the retrieved sources failed to meet inclusion criteria due to topical irrelevance, non-English language, overly broad scope, publishing in journals not indexed in Scopus or WoS, or were preprints, theses, or conference papers without peer review.

Nineteen records passed screening and were sought for full-text retrieval. Four proved inaccessible due to restricted access. The remaining 15 full texts were read in their entirety and assessed against eligibility criteria. Three records were excluded at this stage because they addressed adolescent populations without any occupational dimension, or because the publishing journal was not indexed in Scopus or Web of Science at the time of the search.

3.4. Included studies

Sixteen studies met all eligibility criteria and were retained for systematic synthesis: twelve retrieved through database searches and four through citation searching. To reflect the distinct contribution of each group, the included studies were organised into three evidence streams. The first stream (n=9) gathers theoretical and contextual studies whose primary role is to support the development of the conceptual framework rather than contribute directly to the effect-size synthesis; these are presented in Table 3. The second stream (n=5) documents the psychological effects of doomscrolling on working adults and provides the empirical foundation for the effect-size synthesis reported in Table 4. The third stream (n=2) addresses the relationship between cyberloafing, PIU, and safety-relevant behaviour in industrial settings, and underpins Table 5.

A structured quality appraisal was conducted for each evidence stream. Stream 1 (theoretical/contextual studies, n =

9): these studies are not evaluated for risk of bias in the conventional sense; their contribution is theoretical rather than effect-size-generative, and their inclusion is justified by the distinctiveness and relevance of their conceptual contribution. Stream 2 (psychological effects, $n = 5$): all studies are cross-sectional and rely on self-report measures, limiting causal inference. Sample sizes range from 180 to 630; all samples are drawn from Turkey ($k = 3$), Iran ($k = 1$), the USA ($k = 1$), and the UK ($k = 1$), limiting generalisability to European manufacturing populations. Stream 3 (bridge evidence, $n = 2$): neither study examines doomscrolling as an independent variable; both use adjacent constructs (PIU, deviant cyberloafing). The mining study (Ghasemi et al., 2022) uses regression with a single cross-sectional sample; the hospital study (Yildiz & Yildiz, 2025) applies a Bayesian network design, which captures conditional dependencies but not directionality in the causal sense. Given the heterogeneity of study types across streams, application of a single standardised risk-of-bias tool was not appropriate; a narrative quality commentary is provided instead, consistent with PRISMA 2020 guidance for conceptual and scoping reviews.

4. Results and discussion

The 9 studies illustrated in Table 3 form the theoretical and contextual strands and establish three foundational premises.

Table 3. Theoretical and Conceptual Background

Authors, year	Construct examined	Key contribution to framework
Sharma et al., 2022	Doomscrolling typology	Defines compulsive negative newsfeed browsing; establishes psychological impact as a core feature
Anand et al., 2022	Doomsurfing / doomscrolling	Demonstrates doomscrolling mediates psychological distress in COVID-19 lockdown
Wihler et al., 2022	Mindfulness in monotonous jobs	Trait mindfulness moderates performance and well-being in monotonous blue-collar manufacturing tasks (Mexican sample, $n = 174$); mindfulness as a buffer against the cognitive costs of job monotony
van Vugt et al., 2024	Digital workplace mismatch	Evolutionary mismatch perspective explaining why digital environments bypass attentional disengagement mechanisms that function adequately in physical workplaces; algorithmic amplification of threat-relevant content as the structural driver of doomscrolling
Yildiz, Yildiz, 2025	Minor vs. serious cyberloafing	Distinguishes cyberloafing subtypes; links serious cyberloafing to reduced job satisfaction

Shabahang, Weber, 2025	Mindful news consumption	Proposes harmonious approaches to negative media as protective coping framework Resilience ($\beta = -0.12$) protective against doomscrolling; intolerance of uncertainty ($\beta = 0.29$) increases doomscrolling; first study to identify individual-difference moderators of the trait anxiety-doomscrolling pathway
Turk-Kurtca, Kocaturk, 2025	Trait anxiety, resilience, intolerance of uncertainty	First scoping review of doomscrolling and mental health ($k = 17$ primary studies); confirms consistent associations with anxiety, depression, and diminished attentional capacity across cultural contexts
Sharpe et al., 2026	Doomscrolling → mental health	Phenomenological study ($n = 19$ manufacturing workers in Turkey); digital addiction contributes to cognitive overload, social disconnection from co-workers, and organisational silence regarding safety risks
Doğan, 2026	Digital addiction → safety awareness	

Note. β – standardised regression coefficient.

First, a new form of cyberloafing, digitally scrolling for extended periods of time and compulsively viewing negative news to intensify one's distress cycle, identifies this phenomenon as distinct from past typologies of cyberloafing by augmenting them with an "affective" dimension which was not included in previous classifications (Sharma et al., 2022; Yildiz, H.; Yildiz, B., 2025). Secondly, van Vugt et al. (2024) provide an evolutionary mismatch framework to account for how digital environments bypass attentional filters that would typically be sufficient for successful disengagement in an employee's physical workplace, thus producing additional cognitive costs associated with the act of volitionally disengaged from work (according to COR Theory's principle of resource conservation). And finally, research conducted with safety-critical workers highlights how performing tasks while experiencing reduced mindfulness and greater cognitive load leads to lower levels of overall performance, regardless of goal complexity (Wihler et al., 2022; Doğan, 2026).

Table 4 presents the effect-size synthesis for the first empirical literature stream.

Table 4. Effect Size Synthesis: Psychological Effects of Doomscrolling ($k = 4$ studies)

Authors, year, country	N	Outcome variable	Est.	p	Method
Hughes et al. 2024 UK	352	↑ Rumination	$b = 0.39$	0.01	Path

Hughes et al. 2024 UK	352	↓ Work engagement (via rumination)	b = -0.13	0.01	Med
Hughes et al. 2024 UK	630	↓ Work engagement	$\gamma = -0.16$	0.05	MLM
Hughes et al. 2024 UK	630	↑ Rumination	$\gamma = 0.77$	0.01	MLM
Satici et al. 2023 TR	460	↑ Psychological distress	$\beta = 0.43$	0.01	SEM
Satici et al. 2023 TR	460	↓ Life satisfaction (via distress)	$\beta = -0.191$	0.01	SEM
Satici et al. 2023 TR	460	↓ Mental wellbeing (via distress)	$\beta = -0.282$	0.01	SEM
Shabahang et al. 2024 IR	620	↑ Existential anxiety	$\beta = 0.38$	0.001	SEM
Shabahang et al. 2024 USA	180	↑ Existential anxiety	$\beta = 0.33$	0.001	SEM
Taskin et al. 2024 TR	400	↓ Mindfulness	$\beta = -0.27$	0.01	SEM
Taskin et al. 2024 TR	400	↑ Secondary traumatic stress	$\beta = 0.44$	0.01	SEM

Note. ↑ positive effect on outcome; ↓ negative effect on outcome. All effects: Doomscrolling → outcome. p-values shown without "<" prefix. Est. – standardised (β) or unstandardised (b, γ) coefficient. Med – mediation analysis; MLM – multilevel modelling. SEM – structural equation modelling; Path – path analysis. TR – Turkey, IR – Iran, US – United States, UK – United Kingdom.

All of the effect sizes were statistically significant, and they were all also in the same direction (negative one). These findings are consistent with the findings from a scoping review by Sharpe et al. (2026) that indicated that doomscrolling was related to anxiety, depression, and lower attention in a consistent manner. The present review exactly quantifies the size of the effects of doomscrolling that were identified in a narrative review.

Doomscrolling predicted more rumination ($b = 0.39 - 0.77$), psychological distress ($\beta = 0.43$), existential anxiety ($\beta = 0.33 - 0.38$), and secondary traumatic stress ($\beta = 0.44$); whereas doomscrolling also predicted worse work engagement ($\gamma = -0.16$), life satisfaction ($\beta = -0.191$), and mental wellness ($\beta = -0.282$).

The alternative to the rumination example of the effect of doomscrolling (Hughes et al., 2024) was the one that had the strongest cross-method effects of all the effects of doomscrolling; in this case, the authors identified

perseverative cognition as the primary mechanism by which doomscrolling negatively affects work performance. The findings of Taskin et al. (2024) that doomscrolling reduces mindfulness ($\beta = -0.27$) supported the previous findings of Wihler et al. (2022) that lower levels of mindfulness reduced blue-collar performance.

Additionally, the presence of three individual-difference moderators of doomscrolling (resilience $\beta = -0.12$; intolerance of uncertainty $\beta = 0.29$) (Turk-Kurtca and Kocaturk, 2025) verified that individuals who are exposed to the risks of doomscrolling are exposed to those risks differently and that this finding is consistent with the COR theory that individuals with more resources withstand resource-depleting experiences more successfully than those with fewer resources.

To provide a rough descriptive estimate – not a formal meta-analytic pooling – a weighted mean was calculated for the homogeneous distress-anxiety subgroup only (Satici et al., 2023; Shabahang et al., 2024 Iran; Shabahang et al., 2024 USA; Taskin et al., 2024). This subgroup was selected because all four estimates share the same directional construct (doomscrolling → negative affect/distress), making within-subgroup aggregation more defensible than pooling across heterogeneous outcomes. The β , b, and γ coefficients in the broader table are not directly comparable across models and are therefore excluded from this calculation. The result should be interpreted as an exploratory approximation only:

$$\bar{\beta} = \frac{\sum(n_i \times \beta_i)}{\sum n_i} = \frac{(460 \times 0.43) + (620 \times 0.38) + (180 \times 0.33) + (400 \times 0.44)}{1660} = \frac{668.8}{1660} = 0.403 \quad (1)$$

Conversion to Cohen's d:

$$d = \frac{2\bar{\beta}}{\sqrt{1-\beta^2}} = \frac{2 \times 0.403}{\sqrt{1-0.162}} = \frac{0.806}{0.916} = 0.88 \quad (2)$$

The value of $d \approx 0.88$ exceeds Cohen's (1988) threshold for a large effect size and is notably larger than effect sizes commonly reported for general internet use at work, though direct comparison is limited by heterogeneity in cyberloafing construct operationalisation across studies (Mercado et al., 2017). These findings suggest that the negative affective nature of doomscrolling may impose greater psychological costs than general personal internet use, though direct experimental comparison is not yet available. Due to the large number of heterogeneous outcome measures and diverse methodologies used in the complete set of studies, formal meta-analytic techniques have not been employed to conduct a statistical pooling of results; however, equations (1) and (2) provide a descriptive estimate based on a weighted average of the distress-anxiety subgroup only. This descriptive estimate should not be interpreted as a formal meta-analytic result; formal meta-analytic techniques were not applied, and the figure is provided solely to orient future researchers conducting power calculations.

Table 5 presents the two studies comprising the bridge evidence literature stream.

Table 5. Effect Size Synthesis: Cyberloafing and Problematic Internet Use as Predictors of Occupational Safety Behaviour (k = 2 studies)

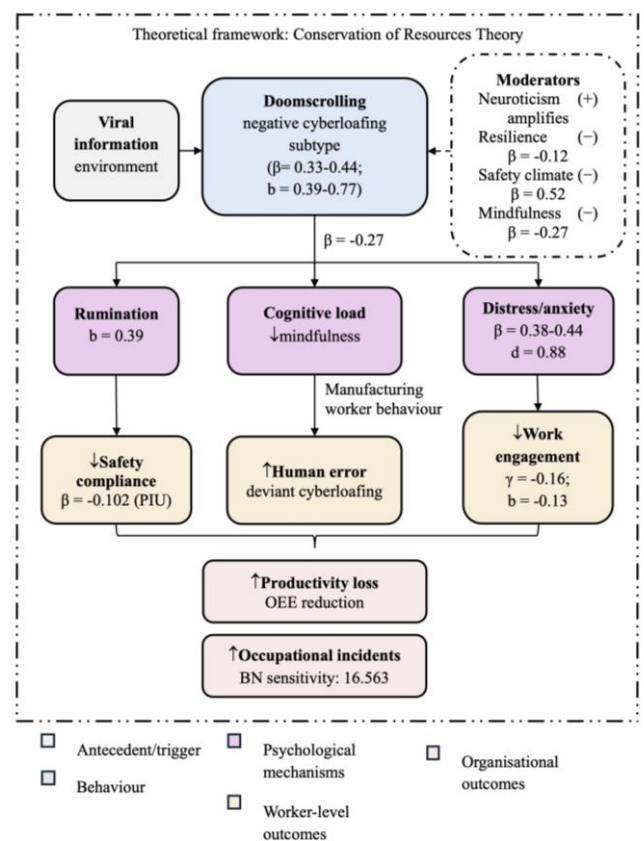
Authors, year, country	N, context	Industry / Context	X → Y	Est.	p	Method
Ghasemi et al. 2022 IR	485 Mining	Mining industry, Iran	PIU; ↓ Safety behaviour	$\beta = -0.102$	0.01	Reg
Ghasemi et al. 2022 IR	485 Mining	Mining industry, Iran	PIU × Safety climate; ↑ Safety behaviour	$\beta = 0.520$	0.01	Mod
Yildiz, Yildiz 2025 TR	210 Hospital	Hospital, Turkey	Deviant cyberloafing; ↓ Safety behaviours	-15.637*	-	BN
Yildiz, Yildiz 2025 TR	210 Hospital	Hospital, Turkey	Recovery cyberloafing; ↑ Safety behaviours	18.222*	-	BN
Yildiz, Yildiz 2025 TR	210 Hospital	Hospital, Turkey	Safety behaviours; ↓ Occupational incidents	16.563*	-	BN

Note. ↑ increase in outcome; ↓ decrease in outcome. Reg – ordinary least-squares regression: estimates the linear relationship between predictor and outcome. Mod – moderation analysis: tests whether the effect of the predictor on the outcome varies as a function of a third variable. BN – Bayesian network: a probabilistic graphical model estimating conditional dependencies among variables; the sensitivity index (absolute mean Δp) indicates how strongly the probability of the outcome changes with unit changes in the input node. × – interaction term (moderator variable). * – BN sensitivity index (absolute mean Δp). – p-value not applicable for BN analysis. IR – Iran. TR – Turkey.

Even though neither study examined doomscrolling as a distinct phenomenon (supporting S4 findings of 17 studies where no relevant results were present), both studies utilise constructs with substantial overlap to doomscrolling. Ghasemi et al (2022) reported that PIU negatively predicted the safety behaviour of 485 employees in the mining industry ($\beta -0.102$, $p < 0.01$), thereby extending the connection between cyberloafing and performance, which Yildiz and Yildiz (2025) showed, to safety-critical industrial outcomes for the first time. Furthermore, this study identified that safety climate modifies this relationship ($\beta 0.520$, $p < 0.01$) indicating that the organisational context may mitigate the safety costs of being distracted digitally.

Yildiz and Yildiz (2025) differentiated between deviant cyberloafing (sensitivity score -15.637) and recovery cyberloafing (18.222) amongst 210 hospital employees. It was shown that through this differentiating factor, the deviant form deteriorated safety behaviour, and the recovery form improved it, and that deviations in safety behaviour reduce the likelihood of incidents (16.563). Doomscrolling can be categorised as deviant cyberloafing: affectively dysregulating, being of an involuntary nature, and having no temporal limitations (Sharma et al., 2022; Yildiz, H.; Yildiz, B., 2025). Although the nature of hospitals differs from manufacturing, both settings are risk-critical operational environments and, therefore, mistakes made through a lack of attention will lead to physical implications that will impact both environments.

Conceptually, a model outlining how doomscrolling may serve as an occupational hazard is provided by Figure 1, which synthesizes the three streams of evidence that support this construct.

**Fig. 1.** Conceptual model: doomscrolling as an occupational hazard in manufacturing environments

Note. Effect sizes from Tables 4-5. Dashed box includes moderating variables. BN – Bayesian Network. OEE – Overall Equipment Effectiveness. PIU – Problematic Internet Use.

Doomscrolling is viewed in Figure 1 as an instance of cyberloafing behaviour that is instigated by the presence of viral information and contributes to cognitive resource depletion, as indicated by three concurrent mechanisms (rumination, attentional depletion and psychological distress).

The resultant cognitive resource depletion may manifest into three adverse outcomes at the individual worker level (decreased safety compliance, increased human error and decreased work engagement) and result in negative organisational level impacts (increased occurrence of occupational incidents and decreased organisational productivity). Safety climate, resilience, mindfulness and neuroticism are posited as moderator variables.

From the perspective of research question one – what are the cognitive and psychological processes that link doomscrolling with diminished occupational safety outcomes in manufacturing – the synthesis identified three mechanisms for depletion that are mutually interdependent:

1. Rumination was the most strongly supported mediator ($b = 0.39$) producing perseverative cognition which competes with task relevant attention.
2. Doomscrolling decreases trait mindfulness ($\beta = -0.27$), which Wihler et al. (2022) found to be an essential resource for blue-collar employees' successful performance on manufacturing tasks.
3. Doomscrolling increases psychological distress and existential anxiety (weighted $d = 0.88$), creating an affective strain, which in turn, decreases executive resources available for making safety critical decisions.

Collectively, these mechanisms suggest a theoretically coherent depletion cascade consistent with COR theory, though the pathway awaits direct empirical testing in manufacturing settings.

From the perspective of research question two – do cyberloafing and PIU impact worker behaviour in safety-critical manufacturing environments? – PIU is a statistically significant negative predictor of safety behaviour among workers in manufacturing organisations ($\beta = -0.102$) which is moderated by an employee's perception of the organisation's safety climate ($\beta = 0.520$).

Finally, deviant cyberloafing, the most comparable form of cyberloafing to doomscrolling, reduces worker safety behaviour and increases the likelihood of an incident occurring.

While there have been no studies to date that have examined the relationship between doomscrolling and worker behaviour within the context of safety-critical manufacturing production environments, this constitutes the principal boundary condition for the present systematic review and, therefore, the most pressing priority for future empirical research.

5. Discussion and conclusion

The research conducted the first coefficient-level synthesis of doomscrolling's psychological impacts within an occupational setting. Across four independent samples, doomscrolling was consistently found to predict greater rumination, psychological distress, and existential anxiety; the weighted descriptive effect size for the pathway leading to distress was $d = 0.88$, which exceeds Cohen's (1988) threshold for a large effect and appears notably larger than effect sizes commonly reported for general cyberloafing, though direct comparison remains constrained by heterogeneity in construct

operationalisation across studies (Mercado et al., 2017). This exploratory approximation provides an empirical reference point for future experimental power calculations and should not be interpreted as a formal meta-analytic result.

The present synthesis advances what is known about doomscrolling beyond prior narrative accounts in two respects. First, by restricting the weighted descriptive estimate to the homogeneous distress-anxiety subgroup, it provides a more conservative and defensible quantitative reference point than an unqualified pooling of heterogeneous effects would yield. Second, by juxtaposing this estimate against the broader cyberloafing-performance literature – while acknowledging construct heterogeneity (Mercado et al., 2017) – it illustrates that the affective, compulsive character of doomscrolling may impose costs that are qualitatively, not merely quantitatively, different from general personal internet use. What remains contested is whether these additional costs persist under real-world manufacturing conditions where task demand and social presence may buffer or amplify the depletion mechanisms identified.

Empirically, it is the first review to calculate coefficient-level estimates of doomscrolling's occupational effects rather than relying on qualitative synthesis alone – providing a baseline for future power calculations and meta-analyses. Theoretically, it constructs the first explicit conceptual bridge between the doomscrolling literature and manufacturing safety, using Conservation of Resources Theory to link three distinct depletion mechanisms (rumination, attentional depletion, psychological distress) to occupational safety outcomes. Practically, it advances four testable propositions that operationalise the conceptual model in terms directly applicable to manufacturing research design – specifying moderators, task-type contingencies, and generational boundary conditions that prior reviews have not addressed.

Several gaps remain. Longitudinally, all evidence reviewed is cross-sectional; intra-individual variability in doomscrolling and its lagged effects on safety behaviour across shifts remain entirely unexamined. Geographically, the evidence base is concentrated in the UK, Turkey, Iran, and the USA; Central and Eastern European manufacturing populations. Methodologically, experience-sampling or ecological momentary assessment designs would permit the separation of between-person vulnerability from within-person fluctuation, which is critical given the strong individual-difference moderators identified (neuroticism, resilience, intolerance of uncertainty). Finally, the role of AI-mediated production environments as independent sources of attentional demand – and thus as potential compounders of doomscrolling-related depletion – remains unstudied.

The construction of a theoretically based bridge between doomscrolling research and occupational safety in the manufacturing sector represents the second significant contribution of this article. By providing evidence that doomscrolling depletes the attentional and mindfulness resources required to maintain safe behaviours in industrial settings, and showing how PIU (problematic internet use) and deviant cyberloafing behaviours had a negative impact on safety behaviours in mining and healthcare settings. The

author presents a defensible and empirically supported case for linking digital distraction and physical harm (e.g., from unsafe labour practices).

Finally, the conceptual framework and associated hypotheses offer an organized domain for empirical research with a clearer set of future empirical research directions: (1) research should focus on longitudinal designs using experience sampling methodology to examine intra-personal variability in doomscrolling behaviour and resulting safety behaviour; (2) the creation and examination of a representative sample of manufacturing employees in Poland and Central/Eastern Europe to examine both doomscrolling behaviour and the impact of doomscrolling on occupational safety; (3) experimental testing of the direct effects of dose of exposure during doomscrolling and the impact of doomscrolling on workplace safety; and (4) testing the efficacy of interventions (e.g., strengthening safety climate, increasing digital hygiene training, and/or incorporating mindfulness-based programs) to moderate the relationship between doomscrolling behaviour and safety in the workplace. The conceptual model proposed here is a hypothesis-generating framework, not a demonstrated causal account; all four propositions require direct empirical testing before conclusions about manufacturing safety can be drawn.

The four empirical propositions guiding this agenda are as follows:

- Doomscrolling during work shifts will be positively associated with rumination and cognitive load among manufacturing operators, with trait mindfulness serving as a partial mediator of the doomscrolling–attention depletion pathway.
- The relationship between doomscrolling and safety compliance will be stronger among operators performing high-attention tasks (e.g., machine operation, quality inspection) than low-attention tasks, consistent with the documented PIU–safety behaviour pathway.
- Neuroticism will amplify the doomscrolling–rumination pathway, while psychological resilience and organisational safety climate will attenuate the doomscrolling–safety compliance relationship.
- The doomscrolling–safety pathway will vary across generational cohorts, with Generation Z workers showing stronger loneliness-mediated vulnerability than Generation X and Y counterparts.

This review faces several limitations that need to be addressed. There is limited evidence connecting the present conceptual bridge as it relates to doomscrolling behaviour in manufacturing employees to doomscrolling as a predictor variable. Out of all studies assessed, most of the research is from the UK, Turkey, US and Iran which leads to reduced generalisability to the European manufacturing context. A further methodological limitation concerns the screening procedure: screening was performed by one author rather than two independent reviewers. Borderline cases were re-examined at a later sitting and discussed with co-authors. Of the studies, they were all cross-sectional and therefore create limitations to establishing cause and effect. Additionally, though the effect size suggests a weight of evidence to support

the claims of a narrative synthesis, the effect size should not be viewed as a formal meta-analysis.

The limitations identified may hinder any definitive conclusion regarding doomscrolling being a genuine risk factor within occupational settings, however, the empirical evidence reviewed is sufficient to support the view that psychological frameworks for understanding doomscrolling have been sufficiently developed to create motivation for application based interventions; and that the implications related to safety and health warrant to be considered top priority by occupational health specialist and research scientist alike.

An additional boundary of this review will examine both the use of artificial intelligence mediated information environments as structural antecedents to doomscrolling, as well as the role that algorithms play in increasing the amount of threat-relevant content and hence the level of involuntary engagement (van Vugt et al., 2024). The current review does not include an assessment of how AI-supported management and workflow systems at manufacturing facilities contribute to information overload and extraction of attention away from the operator in an independent manner. Artificial intelligence-based methods of management in the manufacturing domain have been implemented at an increasing rate (Kuzior et al., 2023), necessitating future research into whether or not AI-supported production monitoring systems, real-time performance dashboards, and notification-heavy digital interfaces contribute additional cognitive load on operators, thereby compounding the resource depletion from doomscrolling – a research question that is located at the intersection of human factors engineering and OHS governance in organisational contexts.

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Appendix Appendix A

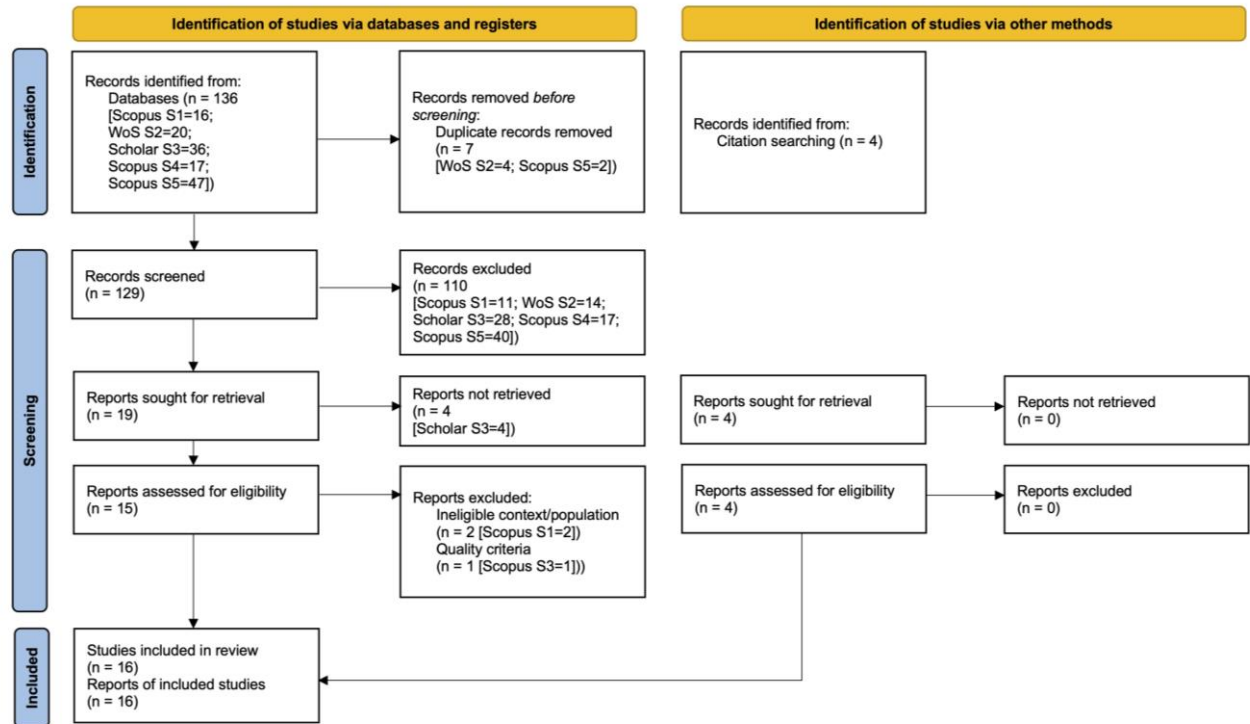


Fig. 1. PRISMA flow diagram of the study selection process