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Fear of Digital Exclusion and Workplace Anxiety in Contemporary Organisations: A Conceptual Review and Research Agenda

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Abstract: The digitalisation of contemporary organisations has transformed how employees access information, interact with colleagues, demonstrate competence, and pursue career opportunities. While digital technologies have been described as tools for connectivity and inclusion, they can also create new anxieties for employees who feel digitally disconnected, insufficiently visible, or professionally disadvantaged. This paper proposes a conceptual framework to understand the phenomenon of fear of digital exclusion (FDE) and its connection to workplace anxiety. The paper is based on the affective events theory, conservation of resources theory, and the job demands–resources model, and conceptualises FDE as a multidimensional, technology-related job demand that includes informational, relational, and developmental exclusion fears. It suggests that FDE can be a source of workplace anxiety due to resource depletion and rumination, which can have implications for employee wellbeing, performance, creativity, inclusion and organisational commitment. The framework also outlines individual, technological, and organisational factors that influence FDE, such as digital self-efficacy, platform complexity, digital surveillance, communication norms, leadership practices, and digital psychological safety. The paper makes a contribution to the study of organisational behaviour and digital work by clarifying the concept of FDE from other concepts related to it, including technostress, workplace fear of missing out, technology anxiety, and digital overload. It also provides a research programme for the development of measurement, longitudinal testing, cross-cultural analysis, algorithmic management research, and evaluation of intervention. The paper argues that digital literacy training is not enough to address FDE; inclusive digital cultures, norms of communication, recognition systems, psychological safety, and access to digital resources must also be addressed.

Keywords: *digitalisation, employees, digitally disconnected, insufficiently visible, professionally disadvantaged, conceptual review*

Introduction

Contemporary organisations are undergoing rapid digital transformation. Artificial intelligence, enterprise social media, collaborative platforms, algorithmic management systems, and remote work technologies have become more and more part of the daily life of organisations, changing the way work is coordinated, monitored, evaluated, and experienced (Budnick et al., 2020; Ragu-Nathan et al., 2008). Social and economic groups do not have equal access to digital. The studies of digital access have revealed that digital access is linked to broader socioeconomic factors, such as income and employment-related factors, and can impact access to key resources and services (Labudova & Fodranova, 2024; Alhrahsheh & Ivanova, 2022; Lukac, et al., 2025). While this evidence was about students and access to health-related digital resources, it helps to support the larger argument that unequal access to digital resources can lead to feelings of disadvantage, exclusion, or reduced capacity to fully engage in digitally mediated environments. While these technologies may be adopted to improve productivity, flexibility, connectivity and innovation, they also create new psychological stresses for employees. One of these pressures is the FDE which is described in this paper as the fear that a lack of digital access, engagement, visibility or competence could result in marginalisation from information, workplace relationships, decision-making processes and/or career opportunities.

FDE is not just about technophobia, computer anxiety or technology stress in general. While technostress studies have focused on overload, complexity, uncertainty, invasion and insecurity of technology use (Ayyagari et al., 2011; Ragu-Nathan et al., 2008), FDE highlights the social and organisational implications of being digitally absent, less visible or less connected. Important information, informal influence, professional recognition, and developmental opportunities are now increasingly shared online in digitally mediated workplaces. This can lead to anxiety for employees not just due to the complexity of digital systems, but also because these systems have become a means of belonging, status, and promotion in the organisation.

FDE is also linked to, but different from, workplace fear of missing out (FoMO), which refers to employees' fear of missing out on information, relationships, or work opportunities (Budnick et al., 2020). FDE is specifically about exclusion as a result of organisational digital systems and how these systems influence access to information, visibility, collaboration and career development. It thus not

only captures individual concerns, but also organisational settings in which digital participation is required for professional recognition and relevance. This worry has grown more acute in the era of hybrid working, platform-based collaboration, digital monitoring, and algorithmic decision support. New working methods have been shown to have an impact on employee well-being in terms of technostress, recovery requirements, and work engagement (Andrulli & Gerards, 2023; Ali, 2025). Staff who are unable to access vital communication channels, stay up to date with new technologies, or maintain the required digital responsiveness may feel disadvantaged or excluded. These perceptions can lead to rumination, social comparison, uncertainty and perceived resource loss in the workplace, and can have implications for wellbeing, engagement, performance, inclusion and retention. Digitalisation can create opportunities for everyone, but not for all. The United Arab Emirates (UAE) provide evidence that income inequality and inequitable access to digital resources can influence digital access and outcomes (Alhrahsheh, 2023).

While this evidence was related to public health and not organisational life, it reinforces the overall theme that inequities in digital resources can restrict participation in digitally mediated systems and lead to the sense of being left behind or overlooked. Although there is an increasing body of research on technostress, FoMO, digital surveillance, digital overload and workplace anxiety, these literatures have not been fully integrated around the concept of (FDE). Specifically, little research has focused on the interplay between informational, relational, and developmental forms of exclusion to create workplace anxiety, or on how leadership, digital culture, psychological safety, access to resources, and platform design can exacerbate or diminish these anxieties.

This paper aims to fill these gaps by introducing an integrative framework of FDE and workplace anxiety. It is based on affective events theory, conservation of resources theory and the job demands–resources model, and conceptualises FDE as a multidimensional job demand with informational, relational and developmental exclusion. The paper differentiates FDE from similar constructs, constructs a theory-driven model of the relationship between FDE and workplace anxiety and organisational outcomes, and proposes a research agenda for measurement development, longitudinal research, cross-cultural research, interventions, and algorithmic or AI-mediated exclusion.

Theoretical foundations and conceptual framework

Defining Fear of Digital Exclusion

FDE is when employees feel they are not able to access, see, interact with, or feel confident in their digital skills, which could lead to them being left out of information, workplace relationships, recognition, or career opportunities. It is indicative of the growing need of organisations to use digital systems for communication, coordination, evaluation and development.

FDE is not technostress and FoMO at work. Technostress is the overload, complexity, insecurity, invasion and uncertainty of technology use (Ayyagari et al., 2011; Ragu-Nathan et al., 2008). Workplace FoMO is the fear of missing out on work-related information, relationships, or opportunities (Budnick et al., 2020). FDE, by contrast, is about the organisational implications of being digitally disconnected or less visible. and developmental exclusion.

Affective Events Theory

Affective events theory (AET) describes how emotional reactions to events in the workplace influence employees' emotions, attitudes, and wellbeing (Weiss & Cropanzano, 1996). Being left out of a channel, not being part of an online decision, not being notified, or appearing incompetent in a digital tool can cause anxiety in a digital workplace. Small incidents can add up over time, such as late responses or unnoticed contributions, which can lead to growing feelings of exclusion.

Conservation of Resources Theory

According to conservation of resources theory, stress is a result of threatened or lost resources, including time, energy, self-efficacy, social support, status, and job security (Hobfoll, 1989). FDE can pose a threat to informational, relational, personal and career resources. Staff can become over-checking, over-responsiveness or constantly monitoring the platform, leading to fatigue and anxiety.

Job Demands–Resources Model

The job demands–resources model identifies job demands that cause strain and job resources that foster wellbeing and performance (Bakker & Demerouti, 2017). FDE can be considered as a technology related job demand as employees might feel compelled to stay digitally informed, visible, connected and competent. Digital technologies can offer flexibility, communication and collaboration, but can also lead to overload, surveillance, social comparison and fear of exclusion. FDE can be mitigated by training, leadership support, digital autonomy, and psychological safety, while fragmented platforms, unclear norms, and unequal access can exacerbate FDE.

Integrative Conceptual Framework

The framework suggests that FDE is a result of personal, technological and organisational factors. Personal factors are digital self-efficacy, anxiety, previous experience, and career insecurity. Technological factors include platform complexity, notifications, visibility measures, algorithmic systems, and surveillance. Organisational factors encompass norms of communication, digital culture, access to resources, leadership, and psychological safety. FDE can be a source of workplace anxiety because of resource depletion and rumination. These mechanisms can impact wellbeing, performance, creativity, inclusion and retention. Digital self-efficacy, organisational support, autonomy, inclusive leadership and digital psychological safety can buffer their effects. Overall, FDE is described as an umbrella term for a multidimensional technology-based work demand that occurs when workers see digital systems as a means to access information, a sense of belonging, and a path to growth within their organisation. The impact on anxiety at work will likely vary according to personal competence, as well as the way organisations design, manage and culturally integrate digital work.

Table 1

Dimensions of FDE

Dimension	Definition	Workplace Example	Likely Anxiety Outcome
Informational exclusion	Fear that limited digital access, monitoring, or competence may lead to missing important work-related information.	Missing updates shared through Teams, Slack, project dashboards, or enterprise social media platforms.	Cognitive anxiety, uncertainty, and persistent checking.
Relational exclusion	Fear that limited digital participation may weaken professional relationships, team belonging, or informal workplace networks.	Being absent from online discussions, informal digital exchanges, virtual meetings, or team channels.	Social anxiety, perceived invisibility, and concern about belonging.
Developmental exclusion	Fear that low digital visibility may reduce access to recognition, promotion, or mentorship, high-profile tasks, or because contributions are less visible on digital platforms.	Being overlooked for projects, Career recognition performance pressure, and less fear of professional marginalisation.	anxiety,

Note. FDE = fear of FDE. The three dimensions are analytically distinct but may overlap in practice. For example, missing digital information may also reduce relational visibility and developmental opportunity.

Methodological Approach: Conceptual Review and Research Agenda

This paper uses a theory-informed conceptual review and research agenda approach. It does not present primary empirical data, nor does it state to be a systematic review or meta-analysis. Instead, it is based on a selective review of the theoretical and empirical literature on technostress, fear of missing out, digital surveillance, algorithmic management, digital inequality, workplace anxiety, and employee wellbeing.

The aim of the review is to define FDE as a separate organisational construct and to build a theory-based account of its antecedents, dimensions, mechanisms, boundary conditions and potential consequences. The paper combines the concepts of affective events theory, conservation of resources theory, and the job demands–resources model to suggest an integrative framework that connects FDE to workplace anxiety. It also outlines priorities for future measurement development, longitudinal research, cross-cultural investigation, and intervention studies.

Antecedents of FDE

The FDE is the result of the interplay of individual, technological and organisational factors. Limited digital confidence and heightened anxiety can make employees more vulnerable, and fragmented platforms, visibility metrics, surveillance, and unclear communication norms can increase FDE in organisations.

Individual Factors

Digital self-efficacy is the confidence that employees have in using, adapting to, and troubleshooting digital technologies (Compeau & Higgins, 1995). Low digital self-efficacy employees may be afraid of missing information, making mistakes that are obvious to others, or being less competent than digitally competent employees. In contrast, confidence in learning and managing digital systems may be a buffer against FDE. Training should therefore reinforce autonomy and psychological safety, in addition to technical skills.

Other factors such as trait anxiety, negative affectivity, age, career stage and previous digital experience can also influence vulnerability to FDE. Rumination or social comparison-prone employees may see a lack of response, lack of read, or lack of access to digital channels as a form of marginalisation. Experienced workers might feel that their skills are not valued as much as those of their younger counterparts, while younger workers may feel the pressure to be constantly available and

technologically savvy. Past exclusion, lack of training or experiences related to surveillance can further add to anticipatory anxiety in digital change.

Technological Factors

FDE can be exacerbated by platform complexity and fragmentation, where employees have to keep track of several platforms to communicate, work on projects, track performance, and share information. Employees, even those who are technically proficient, may be constantly vigilant due to uncertainty about where critical information or opportunities are located.

Participation can also be very visible through notifications, read receipts, online-status indicators, reaction counts, and contribution metrics. Staff might think that if they don't respond quickly or if the platform is not very active, it means that they are not engaged or committed. These can foster social comparison and performative digital presence.

These worries could be exacerbated by digital surveillance and algorithmic management. Algorithmic systems can influence monitoring, autonomy, job quality and occupational health, especially when employees are not aware of or have no control over the digitally mediated processes (Vignola et al., 2023). This can make employees feel anxious about the potential impact on their performance reviews or job opportunities if they do not see the results or get a quick response.

Organisational Factors

Digital culture, communication norms, leadership practices and access to resources have a significant impact on FDE. The “always-on” culture, unclear expectations of responses, and connectivity outside of working hours can lead to greater anxiety, particularly if employees find it difficult to manage digital demands (Ren et al., 2023). Communication rules, non-working time protected, and multiple participation channels can help minimize uncertainty.

Inclusive leaders can reduce FDE by communicating important information in ways that are accessible, acknowledging contributions that go beyond what is visible, and valuing different communication styles. Access to hardware, software, internet, training and technical support is also a key component of equity. Digital work includes resources such as ICT control, access to ICT upgrades, employee involvement, and telepressure, as well as stressors (Cianci et al., 2024). Digital transformation can exacerbate inequality and exclusion in the workplace if not properly supported.

Summary

The antecedents of FDE function at various levels. Individual characteristics affect the way digital work demands are interpreted by employees, technological systems affect the visibility, complexity and uncertainty of digital participation, and organisational practices affect the sense of inclusion or exclusion of digitalization. These are interdependent levels. Digital self-efficacy can be less negative in an organisation with strong support and clear norms, while even high self-efficacy users can be experiencing FDE in high surveillance, fragmented and always on digital cultures. These antecedents are thus crucial to the design of interventions that will not only improve the skills of employees, but also the technical and organisational contexts that foster FDE.

Consequences for Workplace Anxiety and Organisational Outcomes

While discomfort with technology may be a symptom, the (FDE) is likely to have repercussions that go beyond this. In the context of the growing role of digital systems in the mediation of information, visibility, collaboration and career development, FDE can have an impact on the thinking, feeling, behaving and relating of employees to their organisation. This section reviews the possible effects of FDE on employees' anxiety, wellbeing and organisational outcomes.

Workplace Anxiety Manifestations

FDE can cause a number of workplace anxieties. Such concerns are analytically distinct, but in practice can overlap.

Cognitive anxiety

Cognitive anxiety is a sustained worry, a mental rumination over possible digital omission, and/or an inability to stop thinking about something. FDE can cause employees to repeatedly think about messages that they have not read, updates they missed, platforms that were not monitored, or decisions made in digital spaces that they were not part of. This distraction can be distracting, may lead to loss of attention control, and can make it difficult to focus and maintain concentration for sustained periods of time.

The anxiety can be exacerbated by the nature of the design of digital platforms. Staying updated with notifications, threads, dashboards, and constantly updated feeds can make it look like there is never an end to work. For this reason, employees might be tempted to monitor digital platforms multiple times per day, even if they are not all significant messages, but because it is still psychologically salient that something important could be missed.

Social anxiety

Social anxiety may arise during the relational aspect of FDE. Staff may be concerned that digital participation is being seen as a lack of engagement, commitment, social interaction or team identification. For remote and hybrid organisations, in which a lot of informal communication takes place via digital media, low digital visibility can be felt as social invisibility.

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This type of anxiety can cause workers to hyper-read digital communications, hyper-read tone, compare their use of digital communications to others, or performatively participate to signal belonging. These behaviours over time can make real partnership more difficult and lead to emotional tension building up.

Performance and Career Anxiety

Developmental exclusion fears can also be a factor in performance and career anxiety. Staff might fear that not being seen online will be a disadvantage for them in terms of recognition, promotion, mentoring, or access to high dollar projects. This concern may be especially prominent in organisations that have digital dashboards, online collaboration indicators, or platform visibility as formal or informal ways to assess performance. This may lead employees to prioritise visible digital activity over substantive work, creating a tension between appearing digitally engaged and performing meaningful, high-quality work. For instance, staff might be pressured to reply promptly, post often, go to unwanted virtual conferences, or keep their eyes on their phones at all times, even if these actions don't lead to better performance. FDE can thus create a conflict between being digitally connected and being involved in productive, meaningful work.

Employee Wellbeing Outcomes

Chronic psychological strain is a way in which FDE can impact employee wellbeing. Being constantly on the information and visibility loop, and responding to information, can exhaust emotional and cognitive resources. This can over time lead to fatigue, emotional exhaustion, irritability, sleep disturbance and decreased psychological recovery. The findings of digital work settings suggest that technostress can negatively impact employee well-being by causing work exhaustion, especially when employees feel that technology-related demands are challenging to manage (Wang et al., 2023).

One of the important mechanisms is resource depletion. Staff who feel they need to be online and visible to others and need to be able to respond quickly to digital cues could have less capacity to regulate their emotions, generate ideas, interact with others or recover outside of work. This is in line with

Conservation of Resources theory, which posits that when people feel valued resources are threatened or depleted, their experience of stress increases (Hobfoll, 1989). The evidence from smart-working contexts suggests that techno-overload, techno-invasion and techno-complexity can negatively affect wellbeing, while psychological detachment can mitigate some of these negative effects (Mondo et al., 2023).

Rumination may also be a factor of FDE. Employees can still be thinking about digital messages, missed interactions, or possible exclusion, when the working day is over. This may make it difficult to differentiate between work and non-work life, especially when digital platforms are available on personal devices. In such instances, workers can still be psychologically present at work even if they are physically absent. Longitudinal evidence also indicates that ICT workload and telepressure in the workplace may negatively affect psychological detachment from work, thus increasing the psychological burden of digital demands beyond working hours (Zinke et al., 2024).

The implications of these wellbeing outcomes can be particularly strong in organisations where expectations of 'always-on' are high, communication norms are ambiguous, there is little or no digital support, and there is low psychological safety. On the other hand, organisations with clear digital boundaries, support and recognition of alternative communication styles may minimise wellbeing risks of FDE.

Organisational Consequences

FDE is experienced at the individual level but can build up to wider organisational impacts. Some of the effects could be a decline in productivity, innovation, inclusion, and retention risks.

Productivity impairment

FDE can lead to less productive work behaviour through reactive and fragmented work. Staff can invest significant time in monitoring platforms, replying to low priority messages, monitoring digital activity or managing their online presence. These can make it look like they're involved, but can also limit the time spent on more complex thinking, problem solving and good quality task completion.

Digital technology alone is not to blame for this productivity risk. It happens instead when the rules of the organisation cause employees to think that they must always be online to fit in, be recognized or feel safe. In these situations, digital engagement can turn into the performance of engagement, rather than the engagement itself.

Reduction in creativity and innovation.

FDE can also curtail creativity and innovation. Creativity demands sustained focus, psychological security, thinking time and the ability to live with uncertainty. Employees who are focused on digital monitoring or who worry about being excluded may not have as much mental capacity left over for exploratory thinking or creative problem solving.

Furthermore, if digital visibility is a sign of value, workers might become less inclined to challenge prevailing practices, to try out other ways of doing things, or to disconnect for a while to contemplate. This can compromise the ability of the organisation to learn and innovate.

Inclusion and inequality risks

FDE can exacerbate inequalities in organisations. Staff who have less digital confidence, less access to technology, disabilities, caring responsibilities, language barriers or are in marginalised organisational positions may be more likely to experience FDE. Digitalisation may be creating new forms of workplace advantage if those systems favour people who are always “on display”, always “on call”, or already socially networked.

This is especially relevant as (FDE) can be insidious. They can be allowed to be on platforms, but they might not feel confident, have access, time, support, or social capital. Organisations should thus consider digital inclusion as more than access, but also as participation, recognition and psychological safety.

Retention and Organisational Commitment

But when the digital workplace brings up anxiety, exclusion or unfairness for employees, this can lead to lower organisational commitment, which can be an issue for FDE. Chronic digital pressures on employees can lead them to feel less connected with their organisations and more inclined to look elsewhere for an environment with a healthier digital culture. The FDE-retention link, however, is probably to be contingent on organisational resources. Leadership support, autonomy, communication norms and digital wellbeing policies can minimise the risk of withdrawal and/or turnover intentions as a result of FDE.

Summary

There can be cognitive, social and career-related workplace anxieties due to FDE. These concerns can, in turn, have a negative impact on wellbeing, productivity, creativity, inclusion and organisational commitment. The suggested framework proposes that FDE should not be seen as just a problem of an

individual skill. Instead, it is seen as a demand of organisation which is mediated by digital platforms, leadership actions, communication norms, and access to resources. To tackle FDE, therefore, action needs to be taken at individual, technological and organisational levels.

Conceptual Synthesis, Supporting Evidence, and Boundary Conditions

This section does not claim to provide a systematic review of all available evidence; rather, it highlights selected empirical findings that support and contextualise the proposed conceptual framework.

Emerging Empirical Evidence

Despite the still limited empirical studies on FDE, there are some studies that give valuable support in the conceptual development of FDE. The research on work FOMO is especially pertinent. Budnick et al. (2020) demonstrated that workers can be negatively affected in the workplace by FoMO, which can manifest in the apprehension of missing out on information, relationships, and work productivity. These dimensions are very similar to the proposed informational, relational and developmental dimensions of FDE. Their research indicates that digitally mediated work environments may intensify employees' perceived need to remain constantly informed, visible, and responsive.

The literature of technostress also has a solid base for the understanding of FDE. Research has found that digital technologies can be a source of stress due to overload, complexity, uncertainty, invasion, and insecurity (Ayyagari et al., 2011; Ragu-Nathan et al., 2008). Building on this literature, FDE narrows the scope to look specifically at the exclusionary effects of digital work systems. For example, a technology can cause stress for workers not only because it is complicated, but also because the inability to utilise the technology effectively can result in missing information, strained relationships, or even loss of a bit of career opportunities.

The proposed framework is further supported by the research on loneliness and digital disconnection in the workplace. Social isolation in the workplace could mean that employees are more likely to seek connection, recognition and reassurance on digital platforms. This dependence, however, can also make individuals more vulnerable to being left out of online interactions, receiving a delayed response, or feeling left out. FDE can thus be seen as operating in a symbiotic relationship with social disconnection: social disconnection can further increase fear of digital disconnection, and FDE can further decrease the sense of belonging among employees.

Relevant evidence is also available on digital surveillance and algorithmic management. Platform work also suggests that algorithmic management can exacerbate psychosocial strain, by intensifying work

demands, decreasing employees' control, and restricting access to workplace support (Mbare et al., 2024). As organisations come to increasingly rely on digital traces, platform analytics and algorithmic systems to track work, employees might become more aware of how their digital activity is interpreted. While on a platform, it may feel like a career risk when responses are delayed or limited platform activity, or digital visibility is reduced, even if employees are doing well in other ways. It helps to support the claim that FDE is not just about digital competence but a result of organisational systems valuing digital visibility.

Last but not least, employee wellbeing studies indicate that a digital workload can cause anxiety, burnout, emotional exhaustion and a lack of recovery. The results are in line with the proposed mechanisms of resource depletion and rumination. Employees who feel that they must be constantly connected may suffer from reduced psychological detachment from work, attention fragmentation and decreased ability to recover. FDE can then be one route of how digital work demands can become anxiety provoking.

The following are the boundary conditions and moderating factors.

Boundary Conditions and Moderating Factors

The link between FDE and workplace anxiety is not likely to be consistent among employees, technologies or organisations. A number of boundary conditions can influence the likelihood of the emergence of FDE and the likelihood of the FDE leading to anxiety in the workplace.

Digital self-efficacy

Digital work demands is likely to moderate the effect on FDE, which is mediated by digital self-efficacy. Confidence in digital systems could mean that employees are less likely to feel that platform complexity, digital ambiguity or new technologies are exclusionary. In comparison, those who feel less digitally self-efficacy could be more likely to view digital expectations as a threat to competence, belonging, and career security. Digital confidence can then serve as a psychological resource to help cope with the anxiety-inducing impact of FDE.

Organisational support

Organisational support can also help to minimize the relationship between FDE and workplace anxiety. Staff who are properly trained, have easy access to technical assistance, have been provided with communication guidance and are reassured by leaders might be less likely to feel threatened by digital systems. To minimise uncertainty, supporting organisations can explain where information is being

shared, expected response times, how digital participation is assessed and if non-digital participation is recognised. Organisational support can therefore shift digital systems from being a source of exclusion anxiety into work resources that are more manageable in this sense.

Increased autonomy in the workplace and digital flexibility.

Job autonomy can mitigate the impact of FDE by providing increased autonomy over the use of digital systems by the workers. Employees who are able to select the right mediums for communication, control notification settings, plan work time to be focused and able to switch off when not working will have less anxiety than those who are expected to be digitally available at all times. Digital flexibility is thus not only convenient, but also psychologically controlling and good for wellbeing.

Leadership practices

Digital participation will probably have an emotional component that is determined by the way it is led. Leaders who equate digital visibility with commitment can exacerbate FDE, and those who recognise diverse work styles can lessen FDE. To reduce FDE, inclusive leaders can provide multiple opportunities to share information; engage all participants through multiple channels; create open digital decision-making spaces; and make sure that substantive contributions are valued more than visible platform activity. Setting a positive example of proper digital boundaries by leadership can also help to decrease the pressure on workers to be "always on".

Digital psychological safety

Digital psychological safety is when employees feel they can ask questions, admit that they don't know something, take breaks to disconnect, and communicate in other ways without fear of embarrassment or repercussions. It could be an important moderator in the relationship between FDE and anxiety. Digital psychological safety can allow workers to ask for assistance, explain information, and express their digital preferences. During a time when it's low, workers can conceal their challenges, over-check platforms, or act in a performative digital way to prevent feeling excluded or unable.

Cultural and Occupational Context.

FDE can also be different among different cultural and occupational groups. Relational exclusion can be particularly significant in collectivist or highly relational work cultures where belonging and group integration is an important part of the work identity. Developmental exclusion can be more visible in competitive or individualised organisational cultures, where visibility in the digital realm can be associated with recognition or promotion. There may also be increased vulnerability to FDE for

occupational roles that are highly interdependent, have rapid information flow, or are heavily reliant on digital monitoring.

Summary

The adjacent literature that is available in the vicinity indicates that FDE is a construct that is plausible and organisationally relevant, but has not yet been fully validated empirically. The proposed relationships should be tested in future studies with validated measures and longitudinal designs.

Theoretical and Practical Implications

The suggested framework contributes to the fields of organisational behaviour theory, work psychology, human resource management and digital workplace practice. Its main contribution is to present FDE as a psychological and organisational state that is created by the digital infrastructures, cultural expectations, leadership practices and inequalities in resources.

Theoretical Implications

First, this paper adds to the technostress literature by introducing and identifying FDE as a new technostressor. Research work has already been done on the concepts of overload, complexity, uncertainty, invasion, insecurity and technology anxiety (Ayyagari et al., 2011; Ragu-Nathan et al., 2008). In this paper, FDE builds on this literature by examining the perceived implications of being digitally absent, less visible or not sufficiently connected in organisational systems. It thus brings about a change of focus from technology use to the organisational significance of digital participation.

Second, the paper builds on the existing FoMO literature in the workplace by laying out how the exclusion fears manifest in digitally mediated work. Workplace FoMO is the fear of missing information, relationships, or opportunities related to work, while FDE is the same fear in a structural context of organisational digitalisation (Budnick et al., 2020). It argues that a sense of exclusion is not just the result of social anxiety, but because digital platforms are becoming more and more important in the ways in which information, belonging, recognition and career development are accessed.

Third, the proposed tripartite classification of FDE-informational, relational and developmental exclusion provides a more specific conceptual language for future studies. The dimensions enable researchers to investigate the question of whether the types of FDE differ in the way they are caused, how they operate, and their consequences. For instance, informational exclusion is more likely to be correlated with cognitive anxiety and compulsive checking, while developmental exclusion is more likely to be correlated with career anxiety and impression management.

Third, Affective events theory, conservation of resources theory, and job demands–resources model are integrated to give a multi-level explanation of FDE. The affective events theory describes the relationship between certain digital incidents and anxiety, the conservation of resources theory describes the link between perceived FDE and valuable resources, and the job demands–resources model describes the buffering or exacerbating relationship between organisational resources and FDE. This holistic perspective allows for the linkage of the micro-level emotional processes to the meso-level organisational processes and technological processes.

Lastly, the framework plays a role in discussions about digital inclusion, going beyond the narrow focus on access to devices, platforms, or technical skills. Psychological safety, equitable visibility, fair recognition, accessible communication and the validation of diverse work styles are also elements of digital inclusion in organisations. This view sees digital inclusion as a condition of the organisation and relationships, and not only a technical or personal skill.

Practical Implications

The framework also has implications for organisations who want to decrease anxiety in the workplace in digital environments. Solving FDE is not just about giving technology and giving simple digital literacy training. It demands organisational approaches to minimise uncertainty, enhance equity and foster safe digital cultures. The importance of organizational measures like reachability management, employee participation, training, communication policies, technical support, and leadership involvement in the prevention of technostress is highlighted in the research on technostress prevention (Berger et al., 2024).

First, organisations need to regularly audit digital inclusion. These audits should determine if employees have an equal opportunity to use platforms, hardware, connections, training, support, and key information streams. They should also investigate if there are systems that exclude some employees or groups from digital channels, informal networks or systems that fail to be seen. This kind of audit can be useful in determining structural risks that may not be apparent in a general employee engagement survey.

Second, norms should be established for digital communication within the organisation. When employees understand where critical information will be communicated and how, and who and how to contact in emergencies, when is the response time they will need and whether they will need to engage

via digital means after hours, they are less likely to suffer FDE. Establishing clear norms can help to alleviate uncertainty and stop workers from having to constantly oversee all platforms.

Third, leaders need to adopt multi channel communication practices. Important information shouldn't be limited to closed or informal digital environments that might leave out some employees. Leaders can minimise informational exclusion by providing multiple and easy to access channels for important information, decisions and opportunities. This is especially crucial in hybrid and remote organisations where digital channels can be the most important infrastructure in the organisation.

Fourthly, psychological needs as well as technical needs should be addressed in digital training. There are aspects of confidence, anxiety, visibility, and belonging which are also part of the traditional digital literacy programmes as well as the platform functions. Training should therefore also involve guidance on how to manage notifications, how to set boundaries, how to seek help, how to deal with digital ambiguity and how to be aware of unhealthy patterns of compulsive checking and performative digital participation.

Fifth, improve the digital psychological safety of organisations. Staff should be able to say they don't know, ask questions, seek help with different ways of talking and turn off when they need to without embarrassment or consequences. Leaders and managers are central to this safety, as they set a good example of using the digital world in a balanced way; they do not use the digital world after hours for non-work activities; they make a clear statement that digital visibility does not imply commitment or achievement.

Sixthly, performance and recognition systems should not be dependent on digital visibility. Be careful not to take the activity or the speed of responses on platforms as indicators of productivity or engagement in the organisation. These practices can exacerbate FDE and be detrimental to workers whose work is more substantive but less digitally visible. Supporting systems should be fair and take into account the quality of the output, collaborative work, creativity, reliability and contribution in both digital and non-digital work.

Lastly, organisations should consider FDE as an integral element of employee wellbeing and inclusion strategies. The true scale of digital transformation should not be judged by the efficiency or reach of its adoption, or even by the amount of investment in technology. It should also be evaluated on psychological sustainability, equity, independence, and work-related human connection. A truly

inclusive digital workplace is a place where workers can play an active role without being required to be "always on" or "always available."

Research Agenda and Conclusion

Research Agenda

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Digital exclusion is a construct that needs to be systematically theorised and empirically tested. Literatures from nearby fields, such as technostress, workplace FoMO, digital overload, workplace loneliness, and digital surveillance, provide valuable bases for future research; however, FDE should be studied directly as a multidimensional phenomenon. Table 2 summarises the proposed research agenda.

Table 2

Proposed Research Agenda for FDE

Research Priority	Focus of Inquiry	Recommended Approach
Measurement development	Develop and validate FDE as a multidimensional construct covering informational, relational, and developmental exclusion.	Scale development; exploratory and confirmatory factor analysis; reliability and validity testing.
Construct differentiation	Establish how FDE differs from technostress, workplace FoMO, technology anxiety, and digital overload.	Discriminant validity testing; structural equation modelling.
Longitudinal dynamics	Examine whether FDE predicts workplace anxiety, burnout, and wellbeing over time.	Longitudinal panel studies; diary studies; experience sampling.
Psychological mechanisms	Test whether resource depletion and cognitive rumination explain the FDE–anxiety relationship.	Mediation analysis; longitudinal mediation designs.
Boundary conditions	Identify when FDE is most harmful and which employees are most vulnerable.	Moderated mediation models; multi-group analysis.
Organisational context	Examine how digital culture, leadership practices, and communication norms shape FDE.	Multi-level studies; organisational case studies; mixed methods.
Digital psychological safety	Assess whether digital psychological safety buffers the effect of FDE on workplace anxiety.	Intervention studies; quasi-experiments; randomised controlled trials.

Research Priority Focus of Inquiry		Recommended Approach
Algorithmic management	Investigate how algorithmic visibility, digital surveillance, and AI-mediated evaluation influence FDE.	Mixed-methods research; algorithmic audits; qualitative interviews.
Equity and inclusion	Examine how FDE intersects with age, gender, disability, ethnicity, socioeconomic status, and employment arrangement.	Intersectional analysis; cross-cultural and comparative organisational studies.
Intervention effectiveness	Evaluate which organisational interventions reduce FDE most effectively.	Field experiments; implementation science; longitudinal evaluation.

Table 2 provides an overview of the proposed research agenda, and several priorities are emphasised here. First, some attention should be paid to the development of measurements in future research. There is a need for scale specific to the informational, relational, and developmental exclusion fears, as well as reliability, construct and discriminant validity from related concepts like technostress, workplace FoMO, technology anxiety, and digital overload. Empirical studies on FDE will not be conceptually coherent without an instrument for measurement.

Second, longitudinal and experience-sampling designs should be used to better understand temporal relationships. Cross-sectional studies are able to detect relationships between digital work demands and anxiety, but they are not able to identify whether digital work demands cause anxiety over a period of time, whether anxiety leads to a higher risk of digital work demands, or whether the digital work demands and anxiety are influenced by the digital culture in an organisation. Longitudinal designs would also be used to determine if FDE increases during technological changes, restructuring, transition to remote work, or the implementation of algorithms.

Thirdly, future studies should validate the psychological mechanisms suggested in this paper. Theoretically, FDE could be linked with workplace anxiety by resource depletion and/or cognitive rumination, which needs to be directly examined. It is also suggested that the association of FDE with digital self-efficacy, organisational support, job autonomy, leadership inclusiveness and digital psychological safety be explored as buffers in the research.

Fourth, more focus needs to be paid to algorithmic and AI-driven exclusion. Research on AI resistance also suggests that employees may respond to workplace AI through fear, perceived inefficacy, and mistrust, particularly when implementation limits participation, transparency, or human support

(Golgeci et al., 2025). With the increasing dependence on AI-powered tools for task assignments, performance tracking, recruitment and promotion, and employee analytics, employees might not just lose their access to human networks, but also to visibility or even a disadvantage in opaque digital processes. Future studies could explore the potential of lowering such fears through algorithmic transparency, employee voice, and human oversight.

Fifth, FDE should be viewed from equity and inclusion perspective. The FDE does not impact all employees in the same way. The group of people who are particularly vulnerable may include older workers, employees with disabilities, those who work remotely, lower status occupational groups, employees with caring responsibilities, and people with limited access to digital resources. There is also a need for cross cultural studies to explore the impact of national culture, communication norms, power distance and work-life expectations as influencing factors on FDE experience.

Last but not least, intervention research is needed. Organisations need evidence around what practices will minimise FDE and workplace anxiety the most. Digital inclusion audits, multi-channel communication policies, digital boundary training, leadership development, digital psychological safety interventions and equitable access programmes should be assessed in future studies. This work would take the field from the conceptual stage to evidence-based organisational practice.

Conclusion

This paper has developed a conceptual framework for understanding FDE and its relationship with workplace anxiety in contemporary organisations. It has contended that FDE is a technology-driven job demand that must be understood in a multidimensional framework because it is triggered by the fear of being excluded from digitally-mediated information, relationships, recognition and career opportunities. FDE is different from general technology anxiety or technostress which focuses on the organisational implications of digital absence, invisibility and inadequacy.

The paper drew inspiration from affective events theory, conservation of resources theory, and the job demands–resources model, and suggested that resource depletion and cognitive rumination could be pathways through which FDE could lead to workplace anxiety. It also suggested that the impact of FDE might be contingent upon individual, technological and organisational factors such as digital self-efficacy, platform design, digital culture, leadership practices, job autonomy, organisational support and digital psychological safety.

The main message is that FDE is not just an "access" or "technical" problem. Digital systems are becoming more and more the basis for organising who gets information, who becomes visible, who is engaged in networks, and who is given opportunities in today's organisations. Digital literacy training is not enough when addressing FDE. It needs inclusive digital culture, clear communication standards, just recognition frameworks, a sense of psychological safety, and equal access to digital resources.

With digital transformation continuing to transform the nature of organisational life, it is not enough to make the workplace more technologically advanced, it must also be psychologically sustainable and socially inclusive. An employee-centred digitalisation approach should take into account that workers require not only training and tools but also confidence, belonging, autonomy, and security that they will not be diminished or demeaned to constant visibility in the digital world. Organisations can design digital workplaces that connect and create opportunities while reducing anxiety, exclusion, and inequity, through future research on FDE.

Declarations

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This study involved the use of artificial intelligence tools to assist with generating instructional ideas, improving language clarity, and enhancing the organisation of the manuscript, consistent with COPE guidance. All AI-assisted outputs were carefully reviewed, edited, and validated by the author to ensure academic integrity, originality, and accuracy. The author takes full responsibility for the content of the manuscript.

Conflict of Interest

The author declares that there is no conflict of interest regarding the publication of this paper.

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