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Salud móvil frente al mobbing: revisión de la evidencia y diseño del programa Work4Serenity

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RESUMEN

El acoso laboral (*mobbing*) se ha convertido en un problema relevante de salud pública, con consecuencias graves para la salud mental de las personas trabajadoras, como la ansiedad, el estrés y la depresión. Paralelamente, la salud móvil (mHealth) y las prácticas de mindfulness ofrecen soluciones accesibles y escalables. Este trabajo continúa el análisis estadístico de un ensayo controlado aleatorizado realizado con estudiantes universitarios durante la pandemia de COVID-19 (Karing, 2024) y tiene por objetivo sintetizar la evidencia científica sobre las aplicaciones móviles de mindfulness para fundamentar una intervención dirigida a las víctimas de acoso laboral. Metodológicamente, se trata de una revisión narrativa, apoyada en una búsqueda bibliográfica estructurada y replicable, de la literatura sobre ansiedad, preocupación, estrés, satisfacción laboral y resiliencia, puesto que ningún estudio ha evaluado hasta ahora estas aplicaciones en víctimas de *mobbing*. Las aplicaciones de mindfulness se asociaron con reducciones de la ansiedad, la preocupación y el estrés en poblaciones relacionadas, así como con un aumento de la conciencia interoceptiva, si bien se trata de evidencia indirecta, procedente de estudios heterogéneos y no de víctimas de mobbing. Los factores de éxito identificados fueron la usabilidad elevada, la finalización de más del 75 % de los módulos, el diseño centrado en la persona usuaria y la recomendación profesional activa, asociada con unas probabilidades (odds) de uso casi tres veces mayores en una encuesta a veteranos estadounidenses. A partir de estos resultados, se presenta Work4Serenity, un programa de ocho semanas que dispone ya de un prototipo funcional, como propuesta complementaria y medible, fundamentada en evidencia indirecta y pendiente de evaluación empírica, para apoyar a las víctimas de acoso laboral.

Palabras clave: mindfulness, aplicaciones móviles (mHealth), mobbing, acoso laboral, salud mental

Los autores declaran no tener conflicto de intereses.
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Mobile Health against Mobbing: Evidence Review and Design of the Work4Serenity Programme

ABSTRACT

Workplace harassment (mobbing) has become a major public health problem, with severe consequences for workers' mental health, including anxiety, stress, and depression. In parallel, mobile health (mHealth) and mindfulness practices have converged to offer accessible and scalable solutions. Continuing a previous statistical analysis of a randomized controlled trial conducted with university students during the COVID-19 pandemic (Karing, 2024), this work synthesizes the scientific evidence on mindfulness mobile applications to inform an intervention aimed at victims of workplace harassment. Methodologically, it is a narrative review, supported by a structured and replicable search, of the literature on anxiety, worry, stress, job satisfaction, and resilience, since no studies to date have specifically evaluated mindfulness apps in mobbing victims. Mindfulness apps were associated with reductions in anxiety, worry, and stress in related populations, along with a reported increase in interoceptive awareness; this evidence is indirect, comes from heterogeneous studies, and does not involve mobbing victims. Success factors identified across studies included high usability, module completion above 75%, user-centred design, and active professional recommendation, which was associated with nearly three times higher odds of app use in a survey of US veterans. Building on these findings, Work4Serenity, an eight-week programme with a functional prototype, is presented as a scalable and measurable proposal, informed by indirect evidence and pending empirical evaluation, to complement traditional approaches to helping mobbing victims.

Keywords: Mindfulness, mobile applications (mHealth), mobbing, workplace harassment, mental health

The authors declare no conflict of interest.
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INTRODUCTION

Workplace harassment, or mobbing, has become a serious public health problem, with devastating consequences for workers' mental health: anxiety, stress, and depression. In parallel, mobile health (mHealth) and mindfulness practices have converged to offer accessible and scalable solutions. This review synthesizes that evidence to build a new intervention framework aimed at victims of workplace harassment.

This article continues the line of research opened by Nieto Ferrer (2026), who statistically analysed the randomized controlled trial by Karing (2024), conducted with university students during the COVID-19 pandemic, and first outlined the Work4Serenity application. The present work broadens that evidence base beyond a single trial and develops the complete intervention programme.

The phenomenon was characterised systematically by Leymann (1996), who documented the content and development of mobbing at work and established it as a process rather than an isolated event. Einarsen and Skogstad (1996) subsequently mapped its prevalence and identified the occupational groups at greatest risk, while Einarsen (2002) documented the relationship between exposure to workplace bullying and psychological and psychosomatic health complaints, moderated by negative affectivity and generalised self-efficacy.

Recent experimental evidence in mice has shown that acute stressors activate GABAergic neurons in the interpeduncular nucleus and that coping behaviours reduce this activation and exert an anxiolytic effect (Klenowski et al., 2023); animal findings cannot be transferred directly to people, but they point to a neuronal basis for the link between stress and anxiety that is relevant to interventions aimed at stress regulation. If mobbing produces a picture dominated by stress and anxiety, as described in Nieto Ferrer (2026), and mindfulness has shown benefits in other populations with these symptoms, mobile applications may represent a suitable delivery medium: accessible, scalable, low-cost, and often anonymous.

This reasoning requires caution, however. Karing (2024) studied university students during the COVID-19 pandemic, not workers exposed to harassment, and the remaining studies reviewed here concern

adults with anxiety disorders, adolescents, veterans and women with infertility. Mobbing differs from these contexts: it is a sustained process rather than an isolated event (Leymann, 1996), embedded in an organisational setting and often marked by an asymmetry of power, which may alter both the clinical picture and the response to self-guided practice. The specific justification for a tool aimed at this population rests, on the one hand, on the documented psychological burden of exposure (Einarsen, 2002) and, on the other, on the absence of evaluated digital interventions tailored to it. The evidence reviewed therefore supports a plausible rationale for such an intervention, not a demonstrated effect.

Structural context: precariousness and organisational conditions

Harassment does not arise in a vacuum. Bauman's (2000) account of liquid modernity describes contemporary social arrangements as transitory and lacking fixed structures, a condition he extends to employment: extreme flexibility, ease of dismissal and the resulting job insecurity generate anxiety and unfair competition between workers (Bauman, 2005). Where workers are treated as interchangeable, the organisational cost of tolerating harassment falls, since the person harmed is more readily replaced than protected.

Attributing harassment entirely to the disposition of an individual perpetrator offers an apparently straightforward remedy, but it proves inadequate where the practices and incentives that permitted the conduct remain in place. Rasool et al. (2020) provide empirical support for the organisational level of analysis, showing how workplace violence and occupational stress jointly shape sustainable work performance. The implication for the present proposal is a limiting one: a digital intervention operates on the consequences borne by the individual, not on the organisational conditions that produce them. It is therefore necessarily complementary to legal remedy and organisational change, never a substitute for either, in line with the systems-thinking view that complex problems cannot be addressed through isolated interventions (Voulvoulis et al., 2022).

Legal and institutional context

Workplace harassment is also a legal category with consequences for employers. ILO Convention 190 and its accompanying Recommendation 206 established the first international instrument addressing

violence and harassment in the world of work. Velázquez Fernández (2019) highlights its single concept of violence and harassment, the breadth of its personal and spatial scope, its integration of harassment into occupational risk prevention, and the role it assigns to company policies and to public authorities in promotion, inspection and enforcement. The Convention entered into force in Spain on 25 May 2023. Its force nonetheless depends on the adaptation of national frameworks and on enforcement capacity: an effective labour inspection system is essential at every stage of economic development (Casale and Fasani, 2013), yet psychosocial risk is harder to inspect than a physical hazard. In this setting, a preventive digital tool may be relevant to employers' preventive policies, although it cannot discharge their duties.

METHODOLOGY

Rationale and hypothesis

The "Work4Serenity" application is proposed as a response to the existing gap in the availability of therapies specifically designed for mobbing. Its rationale and design, including the emphasis on formal practice over passive use, are described in Nieto Ferrer (2026).

Hypothesis: mobile mindfulness application-based interventions may constitute a useful and accessible strategy to reduce the adverse psychological effects (anxiety, worry, emotional dysregulation) derived from mobbing; this hypothesis has not yet been tested in victims of mobbing.

Review design

Methodologically, this work is a narrative review, not a systematic one, of the scientific literature on mindfulness mobile applications and mental health, synthesizing available evidence from related studies (anxiety, stress, worry, job satisfaction, and resilience) to inform the design of the Work4Serenity intervention proposal, since no studies to date have specifically evaluated mindfulness apps in mobbing victims. The sources were identified through a structured and documented literature search, reported in the following subsections so that it can be replicated. The review remains narrative rather than systematic because no formal risk-of-bias appraisal was performed and the evidence was synthesised thematically.

Search strategy and sources

The bibliographic search focused on the relationship between workplace mobbing or bullying and its psychological consequences, and on mindfulness-based interventions, mobile health applications (mHealth), digital mental-health interventions, anxiety, stress, worry, resilience and related psychosocial outcomes. It was developed progressively using Mendeley Reference Manager, Dialnet and PubMed, complemented by academic journals and databases linked to the bibliographic records incorporated into Mendeley. The principal search terms were combinations of mobbing, workplace bullying, workplace, mindfulness, mental health, stress, anxiety, mobile health applications, mHealth, SDGs/ODS, sustainable development and Bauman, joined with the Boolean operator AND where appropriate. The searches were run between 18 April and 8 May 2025; the date, keywords and number of records for each source are given in Table 1.

Eligibility criteria

The following inclusion criteria were applied during screening: (1) studies addressing workplace mobbing, workplace bullying, harassment, occupational psychosocial risks, or populations exposed to comparable psychological stressors; (2) studies addressing mindfulness-based interventions, mindfulness training, mobile mindfulness applications, mHealth interventions, digital mental-health interventions or related technological approaches; (3) studies examining anxiety, stress, worry, emotional regulation, psychological wellbeing, resilience, job satisfaction, interoceptive awareness or other psychological outcomes relevant to workplace harassment; (4) academic publications addressing the theoretical development of mobbing, workplace violence and harassment, sustainable work, psychosocial risks, the applicable legal framework and the relationship between these issues and the Sustainable Development Goals; and (5) peer-reviewed journal articles, systematic reviews, empirical studies, academically relevant books or book chapters, and authoritative institutional or legal sources where required for the legal and normative framework. Publications were excluded when they were unrelated to the research question, did not contribute relevant evidence to the conceptual or

intervention framework, were duplicate bibliographic records, or did not provide enough information for identification and verification.

Screening and synthesis

Records from the different sources were screened against these criteria and consolidated in Mendeley Reference Manager, which also served to identify and remove duplicates. The flow of records is summarised in Table 2: the searches identified 38,070 records in databases and repositories, 38,056 were excluded (not relevant, duplicates or insufficient data) and 22 were included, 14 from databases and 8 from other sources (journals recorded in Mendeley, not quantified). All included sources can be traced to the complete reference library, which was exported in full for verification. The evidence was synthesised along the dimensions relevant to the research question: workplace mobbing and its psychological consequences; mindfulness-based interventions; mobile and digital mental-health interventions; anxiety, stress and worry; usability and engagement with mobile applications; and the legal, occupational and Sustainable Development Goals framework. Where direct evidence on mobbing victims was unavailable, studies on related populations and intervention contexts were considered when their outcomes were relevant to the proposed intervention. The search underpins the evidence base of the doctoral research from which this article derives; the studies analysed here are characterised in Table 3.

Table 1. Sources and search methods

Source	Search date	Keywords	Type of results	Records	Final refs.
Mendeley Reference Manager	18 Apr 2025	Bauman, Zygmunt	Book section	499	5
Mendeley Reference Manager	18 Apr 2025	Mobbing	Journal	11	0
Mendeley Reference Manager	18 Apr 2025	ODS / SDGs	Journal	4,849	4
Mendeley Reference Manager	18 Apr 2025	Mobbing / ODS-related literature	Journal / related literature	32,685	2
Dialnet	7 May 2025	agenda AND sustainable AND	Documents found	4	1

Source	Search date	Keywords	Type of results	Records	Final refs.
		development AND Bauman			
PubMed	8 May 2025	mobbing AND workplace	Documents found	22	2
Academic journals and databases recorded in Mendeley	8 May 2025	mindfulness; mobile health apps; anxiety; stress; mental health; workplace bullying	Journal articles, systematic reviews and intervention studies	—	8
Total				38,070	22

Source: own elaboration based on the bibliographic search records and references managed through Mendeley Reference Manager.

Table 2. PRISMA 2020 flow of the study selection process

Stage	Records
Identification	Databases and repositories: 38,070 records (Table 1). Other sources (journals recorded in Mendeley): not quantified.
Screening	Records screened: 38,070. Records excluded (not relevant, duplicates or insufficient data): 38,056.
Included	Included from databases: 14; from other sources: 8. Total included: 22.

Source: own elaboration based on the bibliographic search records and references managed through Mendeley Reference Manager.

Outcome measurement

Any intervention proposal must specify how its effects would be assessed, and harassment research offers two distinct families of instrument. The first measures exposure to harassing conduct: the Negative Acts Questionnaire–Revised (NAQ-R), the Leymann Inventory of Psychological Terrorization (LIPT-60), the Escala de Abuso Psicológico Aplicado en el Lugar de Trabajo (EAPA-T) and the Cisneros questionnaire. The second measures psychological consequence: the Perceived Stress Scale (PSS-10), the Generalized Anxiety Disorder scale (GAD-7), the Patient Health Questionnaire (PHQ-8) and the Kessler Psychological Distress Scale (K10). A digital mindfulness programme is not expected to reduce exposure to harassing conduct, which depends on organisational and legal remedies; what it may plausibly modify is the psychological consequence of that exposure.

Outcome evaluation should therefore rely primarily on the second family, while the first serves to characterise the population and to control for the possibility that an observed improvement reflects a change in exposure rather than an effect of the intervention. The instruments cited in Table 4 (GAD-7, PSWQ for worry and MAIA for interoceptive awareness) also belong to the second family, which keeps the proposed evaluation coherent with the evidence reviewed.

Planned pilot evaluation

The evaluation proposed for Work4Serenity is a pilot feasibility study with a sequential exploratory mixed-methods design (qualitative phase followed by a quantitative phase). The qualitative phase involves 25 adults, through cognitive interviews and online focus groups, to refine the instruments; the quantitative phase involves 50 participants, an experimental group and, where feasible, a control group, who complete pre–post questionnaires and whose adherence and formal practice are recorded. Participants must be adults (18 years or older) with experience of work stress or mobbing, validated with the Negative Acts Questionnaire (NAQ) and clinical safety criteria, who own a smartphone and can commit to eight weeks of the programme. The outcome instruments are the PSS-10 (stress), the GAD-7 (anxiety) and the PHQ-8 (depression), together with engagement variables: percentage of modules completed, duration and frequency of meditations, and an ecological mood log. The procedure has four phases: recruitment and screening (online information, NAQ and online tests, verification of the inclusion criteria); informed consent; application of the programme with professional supervision and progress logging; and evaluation and closure (focus groups, cognitive interviews and integrated analysis). Qualitative and quantitative results are integrated through building and connecting strategies and reported by themes: comprehension of the modules, impact on emotional regulation, barriers, and perceived safety and privacy. The protocol requires explicit consent, anonymised data and compliance with the GDPR and the EHDS, and it anticipates that symptoms requiring clinical referral may be identified.

RESULTS AND DISCUSSION

Effectiveness of mindfulness app interventions

The "Unwinding Anxiety" app (Nardi et al., 2022) exemplifies a digital intervention that integrates psychoeducation, formal/informal practice, and real-time self-assessment tools. Table 3 summarizes the characteristics of the studies reviewed and Table 4 the magnitude of the effects they report.

Table 3. Characteristics of the studies reviewed

Study	Population	Design	Sample	Intervention	Outcomes	Main result
Karing (2024)	University students (COVID-19 pandemic)	RCT, four arms, 12-month follow-up	177 (42/44/45/46)	Face-to-face mindfulness course; 7Mind app; both combined; active control (communication training)	Mindfulness, emotion regulation, stress, attention	No superiority over the active control at any time point; greater app use predicted higher stress
Nardi et al. (2022)	Adults with generalised anxiety disorder	Secondary analysis of a stage 1 RCT (exploratory)	32 in the app arm (65 randomised)	Unwinding Anxiety app (30 modules, 2 months)	GAD-7, PSWQ, MAIA	−0.62 GAD-7 points per log unit of meditations (P=.005)
Kundarti et al. (2023)	Women with infertility	Systematic review	9 studies	Mindfulness-based interventions (MBSR, MBCT); not app-based	Mental health: stress, anxiety, depression	Reduced mental health problems; MBSR mainly targeted stress and anxiety, MBCT depression
Høgsdal et al. (2023)	Adolescents	Cross-sectional user surveys	45 tested (Opp 30, NettOpp 15); 42 analysed	Opp and NettOpp apps, 3 weeks	Usability (SUS) and perceived quality	SUS 80.37 (Opp) and 80.33 (NettOpp)
Hogan et al. (2022)	US military veterans (VHA)	Cross-sectional survey	1,259 (care-team encouragement item)	None; health apps in general	Self-reported app use	Care-team encouragement: OR 2.7 (95% CI 2.1–3.4)

Source: own elaboration based on the cited studies. Gotink et al. (2016), Isbel et al. (2020), Klenowski et al. (2023) and Laranjo et al. (2018) are cited as background and are not included in this table.

Table 4. Effectiveness of mindfulness app interventions

Variable	Magnitude / Evidence
Anxiety	Nardi et al. (2022): −0.62 GAD-7 points per log unit (P=.005)
Worry	Nardi et al. (2022): −11.6 PSWQ points (>75% modules) (P=.01)
Stress	Kundarti et al. (2023): reduction of stress in infertile women with MBSR (not app-based)
Interoceptive awareness	Significant increase. Nardi et al. (2022): +22.6 MAIA points (P=.01)
Job satisfaction	Not assessed in the studies reviewed (Høgsdal et al., 2023, evaluated usability, not job satisfaction)
Resilience	No resilience outcome could be confirmed in the sources reviewed (Kundarti et al., 2023)

Source: own elaboration based on the cited studies.

Success factors

High usability (SUS > 70): score of 80.37 for the Opp app (Høgsdal et al., 2023, adolescents' ratings of two mental health–promoting apps).

Module engagement (>75% completion): associated with significant clinical improvements (Nardi et al., 2022).

User-centred design: with brief, frequent interventions (Kundarti et al., 2023).

An app recommendation from a healthcare team was associated with nearly three times higher odds of self-reported use (OR 2.7; Hogan et al., 2022, a cross-sectional survey of US veterans on health apps in general), an indicative data point for Work4Serenity's supervised intervention model.

Neurobiological correlates

The effectiveness of mindfulness is not limited to self-reported symptomatic improvement; it also has a documented neurobiological substrate, although this evidence comes from non-mobbing samples and from face-to-face programmes. The systematic review by Gotink et al. (2016) showed that an eight-week Mindfulness-Based Stress Reduction (MBSR) programme produces functional and structural changes in the prefrontal cortex, cingulate cortex, insula and hippocampus that are similar

to those described in traditional meditation practice, together with amygdala changes (earlier deactivation, less grey matter and better connectivity) consistent with improved emotion regulation. Isbel et al. (2020), using high-density electroencephalography in older adults, found that after six months of mindfulness training participants showed greater neural activation during sensory encoding and perceptual processing, accompanied by improvements in attentional performance that were not observed in physical-training or relaxation conditions. These findings suggest that the benefits of mindfulness may consolidate when practice is sustained, which is consistent with Work4Serenity's emphasis on formal and structured practice; they do not show, however, that the same holds for app-delivered practice or for people exposed to harassment.

Digital delivery and supervision

The digital modality on which Work4Serenity is based has a growing but heterogeneous evidence base. Laranjo et al. (2018), in a systematic review of conversational agents in healthcare, documented their feasibility and acceptance for health communication while highlighting heterogeneity in evaluation measures and the need for more rigorous studies. This work concerns conversational agents rather than mindfulness apps for victims of harassment, so it supports the plausibility of a supervised model, in which professional support complements the scalability of the digital tool and helps prevent the risks of unguided use, rather than its effectiveness.

Limitations and transferability of the evidence

The evidence summarised above cannot be transferred directly to victims of mobbing, for several reasons. First, none of the studies reviewed included people exposed to workplace harassment: Karing (2024) studied university students during the COVID-19 pandemic and found no superiority of the mindfulness course or the app over an active control; Nardi et al. (2022) reported an exploratory secondary analysis of a stage 1 trial in adults with generalised anxiety disorder; Kundarti et al. (2023) reviewed mindfulness interventions, not app-based, in women with infertility; Høgsdal et al. (2023) surveyed adolescents on usability; and Hogan et al. (2022) surveyed US veterans in a cross-sectional design. Second, the designs differ (randomised trial, systematic review, user surveys), and usability and

adoption data say little about clinical effectiveness. Third, mobbing involves a sustained interpersonal stressor embedded in an organisational setting; unlike the stressors in the populations reviewed, it cannot be resolved through individual coping alone, so self-guided practice may prove insufficient if the exposure continues. Fourth, although the search is documented and replicable, no formal risk-of-bias appraisal was carried out and selection bias cannot be ruled out. Finally, Work4Serenity has not been empirically evaluated; any claim about its effectiveness requires a controlled study in victims of mobbing using validated instruments.

Eight-week intervention programme

The programme is structured progressively over eight weeks, building skills sequentially and sustainably, as detailed in Table 5.

Table 5. Work4Serenity intervention programme: eight-week implementation design

No.	Main component	App elements	Evidence	Time	Objectives	Progress indicators
1	Mindfulness foundations	Psychoeducational videos and basic mindfulness; 5-minute breathing meditation	Høgsdal et al. (2023)	15–20 min/day	Basic conceptual understanding; establishing a regular practice	Baseline questionnaires and daily mood log; understanding of basic concepts; initial adherence to practice
2	Mindfulness / Body awareness and sensations	Guided 10-minute body scan; log of bodily sensations and physical symptoms; adherence to practice	Kundarti et al. (2023)	20–25 min/day	Recognising bodily signals of stress; body–mind connection	Physical symptom log and adherence to practice; improved sensory recognition; reduced bodily tension
3	Emotional regulation: observing thoughts and emotions	RAIN practice (Recognize, Accept, Investigate, Note); emotional check-ins;	Nardi et al. (2022)	25–30 min/day	Managing emotional reactivity; recognising emotional patterns	Reduced reactivity; improved emotional identification; therapist

No.	Main component	App elements	Evidence	Time	Objectives	Progress indicators
		rumination questionnaire				feedback on the logs
4	Stress management / Communication	Four-Sides Model; adapted MBSR; 15-minute meditations	Kundarti et al. (2023)	30–35 min/day	Lower cortisol levels; developing coping techniques	Reduced perceived stress; improved coping strategies
5	Communication I / Mindful	Role-playing exercises; guided dialogues	Consolidated evidence	25–30 min/day	Improved assertiveness; fewer interpersonal conflicts	Improved communication skills; fewer conflicts
6	Communication II / Work resilience. Integration: mindfulness in everyday working life	Mobbing case studies and preparing difficult conversations; positive visualisations; log of technique use in real situations	Consolidated evidence	30–35 min/day	Personal strengthening; developing inner resources	Increased resilience; better coping with adversity; therapist feedback on the logs
7	Self-compassion / Active coping: constructive criticism and boundaries	Loving-kindness meditations; acceptance exercises; adherence to the communication modules	Consolidated evidence	25–30 min/day	Reduced self-criticism; developing compassion	Less self-criticism; greater self-compassion
8	Integration and maintenance. Consolidation and future plan: review and maintenance plan	Personalised maintenance plan; continuity resources; final questionnaire	Consolidated evidence	20–25 min/day	Sustained benefits; relapse prevention	Establishing autonomous practice; maintained benefits; therapist feedback on the logs and results report for the user

Source: own elaboration.

Data protection and regulatory design

Because the programme records health-related data, privacy by design is a core requirement of the system. The architecture is intended to comply with the General Data Protection Regulation (GDPR)

and its Spanish implementation, to anticipate interoperability with the European Health Data Space (EHDS) and to meet the transparency obligations that Regulation (EU) 2024/1689 sets for high-risk artificial-intelligence systems in health. Although the GDPR firmly protects personal data in Europe, citizens have had significant difficulty exercising their rights over electronic health data, which explains the need for a more specific framework (Cathaoir, 2025). The EHDS responds to that need by linking health datasets and making them more accessible within the European Union under common rules and governance structures (Slokenberga et al., 2025; Svingel et al., 2025). Clear information on how data are collected, stored and used is therefore a constant requirement of the system (Cathaoir, 2025).

Functional application and industrial property status

Based on this review, a fully operational functional prototype of "Work4Serenity" has been developed, publicly available at https://serenity-b60b80e8.base44.app/, featuring a patient dashboard, professional monitoring for therapists, progress visualization, and guided-practice modules.

As a direct outcome of this research on mobbing, the prototype's technical documentation has been prepared as the basis for a future patent application. As of this manuscript's date, that application has not yet been filed with any patent office (OEPM/EPO); its filing is planned, and management through the technology transfer office of the Universitat Autònoma de Barcelona (UAB) is also being considered.

CONCLUSIONS

Evidence from related populations suggests that mindfulness-based mobile applications have potential as a strategy for mitigating the psychological effects of mobbing, provided they are integrated into a cross-cutting support ecosystem: high usability, active professional recommendation, and a design centred on formal practice over passive use. Nevertheless, no study has yet evaluated these applications in victims of mobbing, so their specific effectiveness cannot be concluded; a controlled evaluation in this population is the necessary next step. Such tools should be regarded as a complement to, not a substitute for, legal remedies and organisational measures. Since ILO Convention 190 situates harassment within occupational risk prevention (Velázquez Fernández, 2019), such tools may fit within

employers' preventive policies; yet harassment is produced by organisational conditions, and an application acts only on what the individual is left carrying. "Work4Serenity" translates these findings into a measurable, evidence-informed digital intervention proposal.

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