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REVIEW

Work Disability and Rehabilitation in Workers with Hearing Loss: A Scoping Review

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Abstract

Purpose As organisations increasingly prioritise inclusive employment, more people with disabilities are entering the workforce. Hearing loss, a common yet often invisible disability, presents a significant and under-recognised occupational health challenge. This scoping review synthesises evidence on how individuals with hearing loss navigate workplace demands and examines the implications for occupational health policy and practice.

Methods A scoping review of literature published between 2010 and 2025 was conducted following PRISMA-ScR guidance. Systematic searches were completed across Scopus, PubMed/MEDLINE, and Web of Science to identify studies examining hearing loss in relation to work participation and occupational health outcomes. Eligible studies were synthesised using thematic analysis.

Results Thirty-four studies met inclusion criteria across diverse countries and occupational settings. Four interrelated themes were identified: (1) individual strategies for managing hearing loss at work, including communication approaches and decisions around disclosure; (2) workplace accommodations, encompassing technological and environmental supports, training and organisational initiatives, and social connectedness, alongside persistent gaps between policy intent and practice; (3) occupational health and wellbeing outcomes, including psychosocial impacts, work-related fatigue, need for recovery, identity negotiation, and occupational stress; and (4) multi-level recommendations addressing individual, organisational, and policy domains to support sustainable employment.

Conclusion Hearing loss in the workplace presents substantial occupational health implications, including psychosocial stress, communication barriers, and increased need for recovery after work. Workplace accommodations show potential to support inclusion and improve health outcomes, yet implementation remains inconsistent. Further research is needed to rigorously evaluate occupational health interventions and accommodations, particularly within low- and middle-income contexts where evidence is limited.

Keywords Hearing loss · Occupational health · Employment · Work participation · Disability · Workplace accommodations · Psychosocial stressors

Introduction

Occupational health encompasses not only physical workplace hazards but also psychosocial stressors that affect worker wellbeing and performance across diverse employment settings. Inclusivity in organisations has been a focus of both research [1] and practice [2] for many years, driven by the need to address longstanding societal inequalities that can also manifest in the workplace [3, 4]. Alongside challenges in diagnosing and managing disabilities [5], research shows that individuals with disabilities frequently face significant barriers to employment [6, 7], despite progressive legislation.

Among workplace disabilities, hearing loss is an important yet under-researched area, with significant implications for occupational health practice and workplace safety, encompassing both physical and social dimensions of disability [8]. Its impact extends beyond auditory function; hearing loss can affect communication, educational

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opportunities, workforce participation, and employability [9–12]. Globally, approximately 1.57 billion people experience disabling hearing loss, with projections suggesting a 56.1% increase over the next 30 years [13], highlighting the urgency for comprehensive research in this domain.

Hearing loss can affect individuals of all ages [14], arising from prolonged occupational noise exposure, a recognised workplace hazard, as well as genetic factors [15, 16], ototoxic exposures [17], age-related hearing loss [18], recreational noise exposure [19], lifestyle-related factors [20], or sudden sensorineural loss [21, 22]. While there is currently no cure, interventions such as hearing aids, cochlear implants, or sign language training can support communication and functional hearing. Variations in the use of these supports may result in diverse needs and outcomes. Although policy frameworks exist to promote hearing care [23], there remains a pressing need for globally coordinated, measurable interventions that adopt a biopsychosocial approach to hearing health [24], including in professional contexts. Such interventions should avoid a one-size-fits-all approach and instead provide flexible, person-centred solutions [25]. From an occupational health perspective, addressing hearing loss requires coordinated approaches that integrate clinical intervention, workplace accommodation, and preventive strategies.

Despite the wealth of knowledge surrounding workplace disabilities, our understanding of how hearing loss affects occupational health outcomes, workplace functioning, and the effectiveness of workplace interventions remains limited and requires further investigation. This gap in the literature is particularly concerning given that hearing loss affects over 1.5 billion people globally [13] and can influence both individual and organisational outcomes. This review therefore aims to provide a comprehensive overview of these issues, highlighting key barriers, facilitators, and recommendations to support those with hearing loss in their workplace.

This review addresses a critical gap in the occupational health literature by examining hearing loss through the lens of workplace exposures, psychosocial stressors, and health outcomes. Consistent with the journal's focus on vulnerable populations and the interface between occupational health and healthcare, this review synthesises evidence from diverse international contexts to inform evidence-based practice.

Several prior studies have examined aspects of hearing loss and working life [10, 26, 27]. Notably, Granberg and Gustafsson [26] conducted a scoping review of key findings about hearing loss in working life from a wellbeing perspective, identifying themes related to participation, fatigue, and workplace support. The present review builds on and extends this evidence base by explicitly framing hearing loss as an occupational health concern, with a specific focus on workplace exposures, psychosocial stressors, and health outcomes—dimensions that have not been comprehensively synthesised in prior reviews.

Terminology

We acknowledge that individuals may use a variety of terms to describe their hearing ability, including hearing loss, hearing impairment, hard of hearing, and deaf. The choice of terminology can become internalised as part of an individual's identity; in deaf education, this is often referred to as a "deaf identity" [28], which can have important implications for psychological wellbeing [29]. Throughout this paper, 'deaf' (lower case) is used in its audiological sense to refer to individuals with hearing loss, while 'Deaf' (upper case) refers to those who identify with Deaf culture and primarily use sign language. This review focuses on the former group—individuals with audiological hearing loss navigating occupational settings through spoken communication—and does not specifically address the experiences of the Deaf sign language community.

This paper adopts a holistic perspective, integrating the social model of disability, and therefore uses the term *hearing loss* throughout. This term captures both the physical and social dimensions that may affect an individual's experience in society. According to Smart [30], hearing disability can be understood as involving loss or limitations of opportunities within societal contexts. Consistent with this approach, we also draw on the International Classification of Functioning, Disability and Health (ICF) and the Core Sets for Hearing Loss as frameworks for adopting a multifaceted perspective on assessing hearing loss [31–33].

Work Participation

Work participation is a key life indicator for both individuals and society. Those experiencing disadvantages, such as disabilities, often face greater challenges in workforce participation compared with the general population [34]. Globally, unemployment rates are consistently higher among individuals with hearing loss [27, 35, 36] and unemployment status has been linked to lower family income within this group [37].

Moreover, individuals with hearing loss are less likely to hold high-skilled positions and are overrepresented among low-income earners [35, 37]. Low-income occupations are often associated with manual or blue-collar work [38], which frequently involves high noise exposure, increasing the risk of hearing difficulties over time [39–41]. This relationship is bidirectional: early-life hearing loss may hinder educational achievement [42] and subsequent career prospects [43]. Such challenges can impact an individual's ability to remain in the workforce [44] and, in some cases, may lead to early retirement [45].

Discrimination also remains a barrier [46]. Individuals with hearing loss are less likely to be employed in high-status occupations despite having equivalent qualifications and experience [47, 48]. This discrimination can have long-term effects, including reduced job satisfaction [49, 50] and workforce dropout [51], further exacerbating employment inequalities [10]. Together, these factors highlight persistent disparities in short- and long-term employment prospects for people with hearing loss.

For those who do gain and retain employment, individuals often adopt personal strategies to maintain work performance and demonstrate their capabilities [52]. These self-management strategies, such as self-advocacy, self-accommodation, and lobbying, are considered social processes necessary for negotiating hearing loss in the workplace [52]. However, in some cases, these strategies may limit career progression by encouraging avoidance of demanding situations [53]. The mechanisms and consequences of these strategies on wellbeing at work require further investigation.

An important and often overlooked group are those who develop hearing loss over the course of their working lives. This group, which includes many workers aged 50–65 experiencing acquired and progressive hearing loss during their life course [12, 14, 18] — entered employment without hearing loss and must therefore navigate adjustments to established roles, relationships, and professional identities. Because their hearing loss develops gradually, it may go unacknowledged for extended periods, delaying the uptake of accommodations. Unlike those who enter the workforce with pre-existing hearing loss, this group may hold any type of position, across all skill and income levels, making their needs particularly heterogeneous. Understanding how acquired and progressive hearing loss affects work participation across career stages is essential for developing appropriately targeted support.

Accordingly, this review explores three key questions: (1) How do individuals navigate hearing loss in the workplace?; (2) What support mechanisms are currently in place?; and (3) What are the reported impacts on wellbeing? Based on these insights, we provide recommendations at the individual, organisational, and policy levels to support people with hearing loss in their work environment.

Methods

We conducted a scoping review following established methodological frameworks to identify knowledge gaps, set a research agenda, and determine implications for decision-making, with a core focus on navigating hearing loss in employment contexts [54]. Scoping reviews are widely considered an appropriate precursor to systematic reviews [54]. This approach aligns with best practices in occupational health research for mapping emerging evidence and identifying implementation gaps. A protocol was developed by the co-authors and is available upon request. One amendment to the protocol excluded studies focused on hearing loss prevention strategies, as these did not clarify whether participants currently had hearing loss, and thus fell outside the scope of our review question. The design, literature search, data extraction, and reporting were conducted following the PRISMA Extension for Scoping Reviews (PRISMA-ScR) guidelines [55, 56].

Search Strategy and Selection Criteria

Literature searches were conducted using keywords and Boolean operators across three electronic databases: Web of Science, PubMed/MEDLINE, and Scopus. Searches were limited to publications from 2010 to 2025 to capture the most recent evidence. The final search was conducted on 10 December 2025. Our final search string was: ((“hearing loss” OR “deaf*” OR “hard of hearing” OR “hearing impair*”)) AND (“job” OR “occupation” OR “employment” OR “employee” OR “career”)) AND (“support” OR “adjustment” OR “strateg*” OR “accomodati*”). This string was adapted for the other databases as appropriate, with searches applied to titles and abstracts only.

Studies were included in this review if they (i) explored hearing loss in work or employment settings, (ii) focused on strategies used to navigate hearing loss at work, and (iii) reported any wellbeing implications related to employment. Studies were excluded if they (i) did not focus on hearing loss in employment contexts; (ii) examined multiple disabilities without differentiating between them (e.g. deaf-blind participants) or focused exclusively on Deaf sign language communities without reference to hearing loss in occupational communication contexts; (iii) focused on children, adolescents, or students; or were (iv) grey literature (reports, working papers), book chapters, study protocols, or other review papers.

Data Management and Extraction

Full citations from the final search were imported into EndNote [57]. Title and abstract screening was conducted by TC, with a random 20% independently screened by DT to verify consistency. Full-text review was conducted by TC and verified by DT, with discrepancies resolved through discussion and consensus. Data extraction was performed by TC and checked by DT. TC and DT independently screened a random 20% sample of the full-text articles reviewed for eligibility ($n = 18$). Cohen’s kappa was calculated at $\kappa = 0.78$, indicating substantial agreement [58]. Titles and abstracts were screened to exclude studies not meeting inclusion

criteria, and full texts of remaining articles were reviewed for eligibility. Relevant data on study design, sample characteristics, country, measurable outcomes, and recommendations were extracted and entered into an Excel spreadsheet.

Database search results were reported following the PRISMA Extension for Scoping Reviews and the 2020 PRISMA guidelines [56] and are illustrated in Fig. 1. The initial search resulted in 719 publications. After removing duplicates, 433 titles and abstracts were screened, and a total of 89 studies were moved forward for a full-text review. Of these, 51 studies were excluded based on the predefined exclusion criteria. In total, 34 papers were included in this scoping review.

Thematic Synthesis

Data were synthesised thematically using an occupational health framework that examined individual-level factors, workplace-level accommodations, health and wellbeing outcomes, and policy implications. Thematic analysis followed the six-phase framework described by Braun and Clarke [59]: (1) familiarisation with the data; (2) generating initial codes; (3) searching for themes; (4) reviewing themes; (5) defining and naming themes; and (6) producing the report. Coding was conducted inductively by TC, with themes reviewed and refined in discussion with DT. Four overarching themes emerged: (i) adopting individual strategies; (ii) current workplace accommodations; (iii) wellbeing at work related to hearing loss; and (iv) recommendations for hearing loss at work.

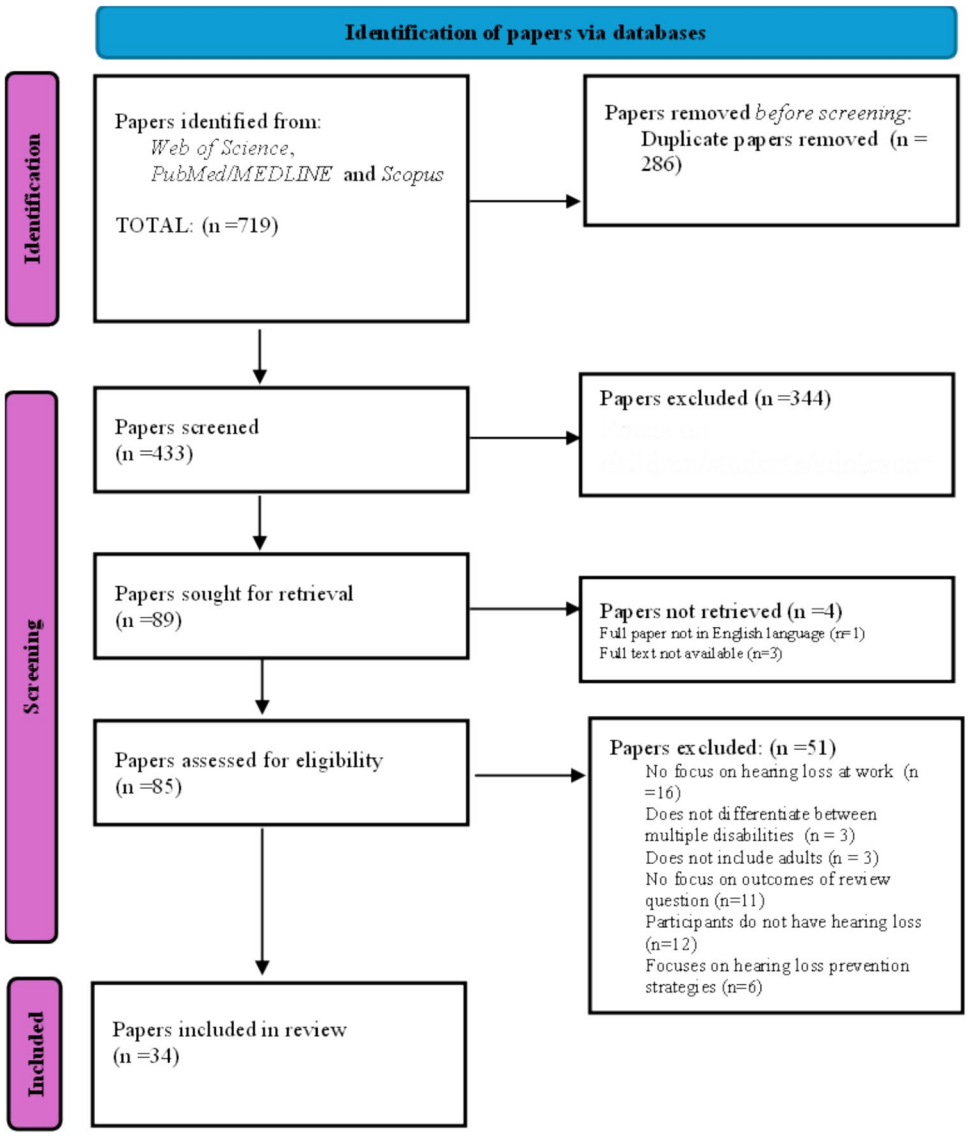

Fig. 1 PRISMA-ScR — flow of studies

Results

Sample Characteristics

The 34 studies included in this review (Table 1, supplementary material) were conducted across a wide range of countries, including the United States, United Kingdom, Saudi Arabia, Russia, Chile, New Zealand, Brazil, Canada, the Netherlands, Germany, Spain, Norway, Sweden, Italy, South Korea, Malaysia, China, Nepal, and one global study using social media data. Most studies included participants from mixed professions, although several focused on specific occupational groups such as medical professionals, dentists, construction workers, divers, farmers, logistics employees, manufacturing workers, and entrepreneurs. Methodological approaches varied: twelve studies employed qualitative methods, primarily interviews; fourteen used quantitative surveys; six adopted mixed-methods designs; one was an opinion piece; and one was a randomised controlled trial. Sample sizes ranged from small interview cohorts to over one million survey respondents, reflecting considerable diversity in study scope. The included studies were published between 2012 and 2025, with the majority appearing after 2015, highlighting a growing research interest in workplace experiences of individuals with hearing loss. The methodological insights from all studies included in our review are shown in Supplementary Table 1.

Four overarching themes emerged: (i) adopting individual strategies; (ii) current workplace accommodations; (iii) wellbeing at work related to hearing loss; and (iv) recommendations for hearing loss at work. A summary of themes and subthemes is presented in Fig. 2. The following sections describe each theme and its subthemes in turn.

Adopting Individual Strategies

Individuals with hearing loss often adopt various strategies to manage workplace challenges and maintain performance. These strategies may be personal, such as compensatory behaviours, or involve managing how and when to disclose their hearing loss to colleagues and supervisors. The following subthemes explore these approaches in detail.

Personal Compensatory Strategies

Individuals with hearing loss frequently adopt personal strategies to sustain work performance and demonstrate professionalism. Lip reading was commonly reported [60–65], often combined with moving closer to speakers [62, 64–66] or asking colleagues and stakeholders to repeat themselves when needed [64]. Anticipatory strategies, such as planning seating arrangements or knowing who would speak most frequently, were also identified [66]. Reducing background

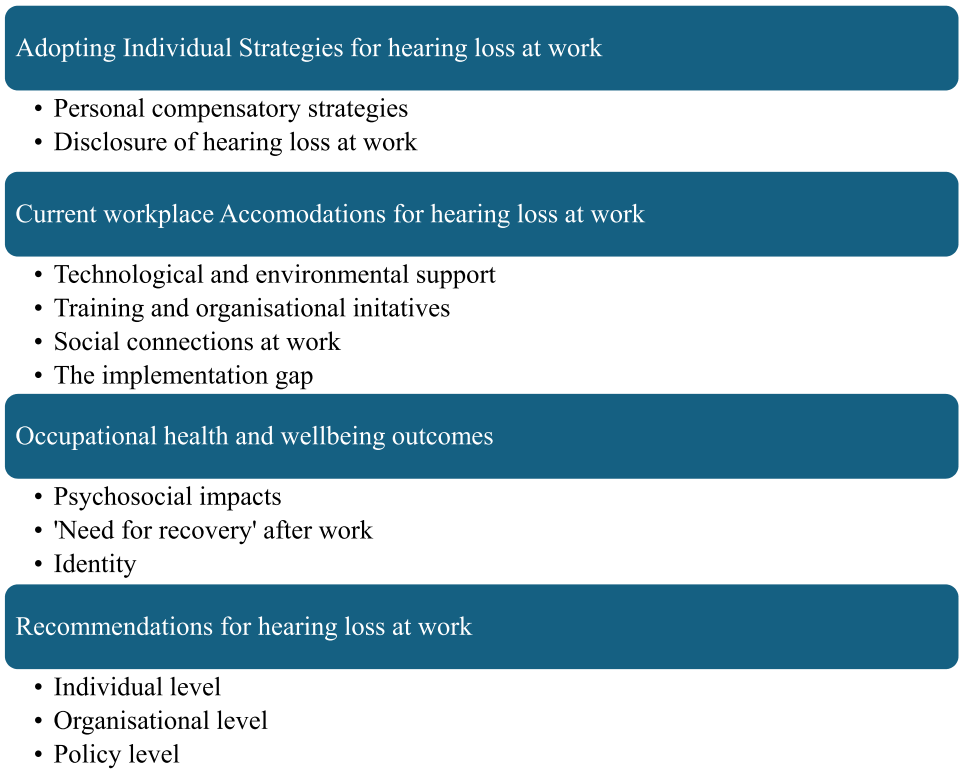

Fig. 2 Summary of themes and subthemes. Blue fields represent the four overarching themes; white fields represent the corresponding subthemes (Color figure online)

noise was important, either by entering quieter spaces or requesting others to do so [62], including moving to closed rooms in medical settings [67], or changing rooms when using the telephone [66]. Attending to body language and non-verbal cues was another key strategy [63]. In industrial and logistics contexts, alternative communication channels were critical for minimising misunderstandings and ensuring safety [68].

Disclosure of Hearing Loss at Work

For many participants, personal strategies often reduced the need to disclose their hearing loss at work, with the condition's invisible nature enabling it to remain concealed [61–63, 66, 69]. Participants navigated disclosure in different ways. Some were in denial of their hearing loss, often pretending to hear normally [61, 62]. Others adopted complex analytical strategies, using fragments of speech, intonation, and contextual cues to interpret conversations [64, 65]. In contrast, some participants avoided challenging auditory situations entirely [62, 64].

Attitudes towards hearing loss influenced disclosure and workplace engagement. Individuals with assertive attitudes communicated their needs clearly, whereas those more ambivalent were selective in seeking support during difficult communication situations [70]. Reluctance to request accommodations was linked to perceived costs, concerns about burdening others, and difficulties articulating needs, particularly among younger workers [71].

Acceptance of hearing loss was a key factor in facilitating disclosure and accommodation. Baldridge and Kulkarni [61] found that adults experiencing sudden hearing loss often concealed their condition initially and suffered in silence. Over time, those who accepted their hearing loss were able to embrace a new identity, leverage workplace adjustments, and advocate effectively for their needs.

Current Workplace Accommodations

Individuals with hearing loss often rely on workplace accommodations to perform effectively and maintain inclusion. These accommodations can take technological, environmental, or social forms and are influenced by organisational awareness, resources, and professional context. The following subthemes describe the types of support available, training and organisational initiatives, the role of social connections, and the gaps between policy and practice.

Technological Support and Environmental Adjustments

Technological adaptations were the most commonly reported accommodations. These included assistive devices such as cochlear implants [67, 72] or hearing aids [73], technical aids [68, 74], assistive listening devices (e.g. Roger pen) [64, 67, 75], adapted telephones [76], automated close captions [76], visual alert systems [77], electronic visual communication cards [78], and sign language or interpreters [63, 76, 79, 80]. In the medical context, specialist equipment such as amplified stethoscopes supported clinical practice [63, 76]. However, participants reported investing in their own technology adaptations to help them with their work [63]. A few studies identified environmental adaptations that were currently in place to support their hearing loss. These included adjustments in room acoustics [64, 65], often through furniture and flooring adjustments [81] or improving visibility and lighting [68].

Collectively, the studies highlight that technological devices and environmental adjustments are essential for supporting employees with hearing loss, yet their effectiveness often depends on contextual factors such as job type, noise levels, and compatibility with personal assistive devices.

Training and Organisational Initiatives

Training and organisational initiatives were identified as key components of workplace accommodations for individuals with hearing loss. Skill development programmes tailored to hearing-impaired employees, including training in equipment usage, safety procedures, and work strategies, were shown to enhance performance and inclusion [78]. Organisations that proactively provided awareness and training programmes specifically for employees with hearing loss fostered more supportive and inclusive environments [82].

Organisational initiatives also included environmental and procedural adjustments, such as flexible work schedules, remote working options, and allowing employees to manage oral communication situations [70, 73, 74]. Additional measures highlighted the importance of visual signalling systems, clear workplace instructions, and adapted equipment to compensate for reduced access to auditory information [68].

Social Connections at Work

At work, individuals with hearing loss may find it difficult to build and maintain forms of social connections due to struggles with communication [83], which in turn links to avoiding social situations that they find challenging [64]. Lomotey et al. [73] found that individuals reported being ignored at work. Many occupations involve social or large group situations, such as meetings or interactions with customers and stakeholders. These settings can affect professional relationships, as individuals may feel restricted in their ability to participate fully, which in turn places additional strain on them [68, 74].

The concealed nature of hearing loss can influence how individuals navigate these social dynamics. Some participants chose not to disclose their hearing loss broadly, fearing stigma or emotional discomfort, and instead adopted selective disclosure strategies—sharing information only with colleagues who were likely to respond empathetically [66]. Even when disclosure occurred, participants commonly reported the need to repeatedly remind colleagues about their hearing loss or required communication adjustments, as others frequently forgot to implement recommended behaviours [64, 65]. This ongoing burden of self-advocacy added strain and reinforced feelings of difference or marginalisation.

Despite these challenges, social support was a strong protective factor. Multiple studies described informal "buddy systems", where trusted colleagues provided clarification, assisted with communication breakdowns, or defended the employee with hearing loss when needed [61, 63, 66]. Positive social connections also facilitated opportunities for education and awareness-raising. Some participants took an active role in teaching colleagues about their hearing loss, explaining how communication could be adapted in specific situations and helping others understand the implications for everyday interactions [61, 66]. Moreover, supportive colleagues were usually found to defend the colleague with hearing loss [66] or provide feedback and practical help [75]. Hintermair et al. [84] further argued that explicitly communicating one's needs can minimise limitations in workplace participation; however, this relies on colleagues and supervisors being willing and able to respond appropriately. Indeed, other studies reported that colleagues would often forget, and individuals would have to continually remind them about their hearing loss [64, 65].

The Implementation Gap

A consistent pattern across the studies was the gap between the accommodations theoretically available to employees with hearing loss and the extent to which these supports were implemented in practice. Although formal policies or national programmes were in place in several contexts, they were often insufficient, narrowly defined, or poorly operationalised. For example, O'Connell et al. [80] reported that the Work and Access programme in Ireland included hourly caps and categorised Irish Sign Language (ISL) merely as 'communication support', resulting in insufficient provision for employees' day-to-day needs. Similarly, Wang [85] reported that while deaf cafés implemented front-facing visual cues, such as sign language menus and signage to support customer communication, they offered limited systemic support for their staff. Staff with hearing loss had minimal access to managerial inclusion or organisational-level adjustments, illustrating how environments designed to appear accessible may still lack the structural capacity required for genuine workplace inclusion [85].

Limited organisational awareness of hearing loss frequently led to ad hoc or reactive approaches rather than proactive accommodation planning [68]. Loynes and Rao [67] highlighted this issue in a medical context, where recommendations from occupational health (e.g. buddy systems, clear visors) were rejected by senior consultants as incompatible with the clinical environment. Similar constraints were identified in other medical settings, where essential adjustments such as lowering masks to facilitate lip reading were prohibited due to infection control guidelines, leaving redeployment as the only option for some employees [63].

The importance of collaboration between professionals, managers, audiology-trained personnel, physiotherapists, and psychologists to ensure sustainable work participation for employees with hearing loss was highlighted by Svinndal and colleagues [70]. However, gaps in training meant that key actors were often ill-equipped to provide appropriate support. Audiologists received limited training on work-related accommodations [75], while supervisors and colleagues lacked awareness of safety procedures and communication strategies needed to support employees effectively [68]. A manager's willingness to implement accommodations was found to be a significant facilitator, signalling acceptance and reducing perceived stigma [65, 70].

The burden of securing accommodations frequently fell on employees themselves. Several studies reported that individuals with hearing loss were required to specify, justify, and organise their own adjustments, often using personal time to arrange them [66], sometimes up to ten hours per week [76]. In addition, repeated reminders to colleagues about communication needs were commonly necessary [64, 65], placing ongoing emotional and administrative strain on the individual.

Finally, one study reported no need for accommodations among bricklayers [86] highlighting that accommodation requirements vary substantially by profession. Roles with minimal verbal communication demands may not necessitate extensive adjustments, highlighting the importance of occupation-specific approaches rather than universal assumptions about workplace needs.

Occupational Health and Wellbeing Outcomes

The occupational health implications of hearing loss at work extended across multiple domains, including psychosocial wellbeing, work-related fatigue, and sustainable employment. The following sections examine these health outcomes in the context of workplace exposures and organisational factors.

Wellbeing emerged as a central theme across the reviewed studies, with hearing loss affecting employees

in multifaceted and often cumulative ways. The literature consistently highlights that the demands of communication-intensive workplaces, combined with insufficient accommodations and persistent implementation gaps, place substantial psychological, emotional, and physical burdens on individuals with hearing loss. These challenges manifested not only in day-to-day strain but also in broader impacts on recovery, work–life balance, and professional identity.

The following subsections outline these dimensions of wellbeing, including psychosocial impacts, the emerging concept of the need for recovery after work, and how individuals negotiate their identities in the context of hearing loss in the workplace.

Psychosocial Impacts

The psychosocial consequences of hearing loss at work were widely documented, with studies highlighting how elevated listening demands and communication barriers contribute to emotional strain and reduced psychological wellbeing. Fatigue and exhaustion, both physical and mental, were the most frequently described impacts, commonly attributed to the increased and sustained listening effort required in challenging work environments [62, 64, 75, 81, 87, 88]. High levels of stress [88], anxiety and depression [62–64], frustration [62, 87, 88], and generally low psychological wellbeing [88] were also documented.

Several studies highlighted the effects of social isolation and loneliness. Individuals with hearing loss often feel restricted in interacting with colleagues during the workday and in social activities outside work, contributing to a sense of exclusion [62, 64, 69, 74, 75]. Canton and Williams [62] further identified reduced productivity, stress, and negative self-image as additional consequences affecting wellbeing. Negative self-perceptions were also reported where the disclosure of hearing loss led individuals to feel overly visible or different from colleagues, generating discomfort and drawing unwanted attention [65].

Båsjö et al. [75] noted that some participants feared job loss as a direct consequence of their hearing loss, highlighting the link between insecure working conditions and deteriorating wellbeing. Moreover, insufficient organisational support, whether in the form of inadequate adjustments or limited managerial understanding, can contribute heightened stress, uncertainty, and reduced confidence among employees with hearing loss [80].

These findings align with established occupational health frameworks recognising communication barriers and elevated cognitive demand as workplace stressors that affect employee health and performance. Together, the evidence shows that the psychosocial burden of hearing loss extends well beyond communication difficulties, affecting emotional wellbeing, workplace engagement, and overall quality of working life.

'Need for Recovery' After Work

An emerging concept in the literature is the 'need for recovery' after work. Due to the cognitive and communicative strain associated with many work environments, individuals with hearing loss often require substantially more time to recuperate following the working day. Across the reviewed studies, five explicitly examined need for recovery [64, 75, 87, 89, 90].

Van der Hoek-Snieders et al [87, 89, 90] conducted several empirical investigations specifically focused on this construct. One study demonstrated that aural rehabilitation programmes may reduce the need for recovery following work [90]. In contrast, communication group training programmes showed limited effectiveness in reducing the need for recovery, although they were beneficial in supporting personal adjustment and communication strategy development. Additionally, elevated fatigue often led participants to restrict their social engagement outside of work, which contributed to poorer work–life balance and additional psychosocial strain [75].

Identity

The literature also showed that workplace experiences shape how individuals understand and negotiate their personal and professional identities in the context of hearing loss. Identity reconstruction emerged as an important dimension of how individuals navigate hearing loss at work. Baldridge and Kulkarni [61] found that adults who acquired hearing loss mid-career initially experienced denial and uncertainty. Over time, however, they reconstructed multiple identities, such as a disability identity and a professional identity, which they used to reframe their work roles and, in some cases, leverage their hearing loss as a source of capability rather than limitation. This reframing demonstrates that, when provided with appropriate opportunities and organisational support, hearing loss can be repositioned from an impairment to a valued dimension of professional contribution [61].

Hintermair et al. [84] similarly reported that individuals with successful careers were those whose supervisors viewed them primarily as employees, rather than as workers defined by disability. Conversely, fear of being perceived as incompetent, particularly due to communication challenges, was shown to threaten individuals' work identity [75].

Identity was also shaped by the ways organisational provisions were framed and delivered. Misclassification of linguistic accommodations, such as sign language, could diminish the cultural and linguistic identity of employees with

hearing loss and influence both self-perception and workplace perception [80]. Furthermore, when individuals were used symbolically as markers of organisational inclusivity, their professional and personal identities became constrained by tokenism [85]. In such circumstances, employees' skills and agency were subordinated to symbolic representation, thereby shaping how they perceived themselves and how they were perceived within their organisations [85].

Recommendations

Across the reviewed studies, recommendations were identified at individual, organisational, and policy levels. These are described in turn below.

Individual Level Recommendations

At the individual level, recommendations focused on strategies to manage daily challenges and enhance career success. Building and utilising social support networks was emphasised as critical for coping with work-related frustrations and to sustain professional engagement [84]. For Loynes and Rao [67], recommendations were centred around speaking to employers as early as possible to ensure appropriate provisions can be put in place, alongside maintaining an open-minded approach to trialling new strategies or accommodations. However, this can be difficult for individuals who are unaware of their rights or available funding provisions for accommodations [80]. Jennings et al. [66] further contend that implementing such strategies often involves a process of trial and error, which takes time across different work situations.

Personal competencies, such as maintaining a positive attitude, self-confidence, curiosity, and resilience, were identified as important mediators of success [84]. Self-awareness of limitations, recognition of strengths, and acceptance of hearing loss were further highlighted as key to effectively navigating the workplace. Social competencies, including the ability to negotiate communication strategies and collaborate effectively, were also linked to positive career outcomes [84]. Additional recommendations included enhancing self-efficacy, developing coping skills, and implementing rest strategies to mitigate fatigue from sustained listening effort [75].

Overall, the evidence indicates that while individual strategies and competencies can enhance resilience and career sustainability, their effectiveness is contingent on access to information, supportive environments, and opportunities to safely disclose hearing loss.

Organisational Level Recommendations

As our review focused on navigating hearing loss in the workplace, most of the papers reviewed had a wealth of organisational recommendations. First, there was a consensus that workplace accommodations and support require multiple professionals, and the onus should not fall specifically to the individual with hearing loss or the direct manager [63, 65, 66], but putting the person at the centre of the accommodation was paramount [76, 83, 85, 91]. Important personnel to support the provision of accommodations should include occupational health professionals, psychologists, and audiologists [63, 64, 66, 70, 88, 91]. The support must also be ongoing and reassessed at regular intervals, as individual needs may change or need to be further adapted [64, 76, 83].

Education and training were frequently recommended to improve understanding of hearing loss and support effective communication strategies [63, 66, 70], such as for managers to use educational expertise for implementing specific accommodations for those with hearing loss, and if necessary, update their knowledge of hearing loss [75]. Workplace training should be centred around inclusivity to improve understanding and communication around hearing loss [68] and this should be for all staff who work with hearing-impaired individuals [78].

Some of the studies outlined that there is a need for workplaces to demonstrate their support by providing accommodations [71, 75], through an environment where individuals can freely exchange information and for individuals to be seen primarily as an employee, rather than defined solely by their hearing disability [84]. Similarly, inclusion of people with hearing loss in the workplace should not be a symbolic representation of inclusion. Organisations should look to provide managerial roles, decision-making participation, and professional development opportunities**,** ensuring employees with hearing loss can contribute substantively rather than merely symbolically [85].

Some studies recommend creating an open dialogue through group situations may increase uptake of accommodations and communication strategies (accessible meeting formats, written summaries, opportunities to follow up) that individuals can utilise at work to help them [75, 89]. Other initiatives include organisations adapting vocational rehabilitation programmes [92], which may enable individuals to be more open about their hearing loss and their specific needs. Being attentiveto individual needs should enable an increased uptake of workplace accommodations [83].

Finally, a number of the studies we identified also focused on generic reasonable adjustments, including ensuring provisions are in place before individuals start work [63]; allowing flexible working hours and providing technical

assistance [84], such as assistive listening devices [64]; providing social support [81]; and where necessary providing adequate sign language support to ensure flexible access to interpretation services for meetings and daily work activities [80]. Where generic technology is used, these should embed accessibility features [78]. Recommendations for environmental adjustments were also considered as appropriate organisational recommendations, including the arrangement of furniture to improve room acoustics [64, 81] and visual cues and auxiliary technologies in safety–critical environments [68]. Another study recommended that the implications of hearing loss need to be considered on a larger scale, such as how it impacts fatigue and how this can be mitigated appropriately in the organisational setting [65].

Policy Recommendations

Policy-level recommendations highlighted the need for systemic and structural reforms to support equitable employment for individuals with hearing loss. For entrepreneurs, integrating social entrepreneurship programmes was suggested to support inclusion [60]. In the UK context, aligning organisational practices with the Equality Act 2010, increasing technological solutions, funding basic accommodations, and providing deaf awareness training were recommended [63].

Developing occupation-specific aural rehabilitation programmes and vocational rehabilitation tailored to cultural and individual needs was emphasised [64, 81]. Developing occupation-specific aural rehabilitation programmes for any level of hearing loss is paramount. Some studies highlighted the importance of various stakeholders, including policy makers, and individuals with hearing loss themselves, such that they need to work together to identify the communication needs of workers with hearing loss so that solutions can be identified and fed back into organisations to enable implementation [66, 80].

Skilton et al. [69] argued that there needs to be a change in societal attitude that normalises hearing loss in employment settings, and this should translate to a systemic reform to create equitable and sustainable employment that embeds genuine structural inclusion in workplaces [85]. Finally, some studies recommended developing standards or guidelines to understand hearing health [68, 75, 90]. For example, van der Hoek-Snieders et al. [90] recommended a need for the development of standards or guidelines to understand hearing health of employee so hearing loss interventions can be tailored to understand individual personal needs, especially for NFR at work. This was reiterated by Båsjö et al. [75] who highlighted that policies should also consider non-auditory impacts such as fatigue, isolation, and stress, not just the provision of devices. Where existing policies exist, reforms may be required to ensure alignment with international human rights principles and equitable access, such as lifting caps on sign language and interpretation services [80].

Discussion

Main Findings

This scoping review synthesises evidence on how individuals with hearing loss navigate occupational environments and identifies substantial implications for occupational health practice and policy. While previous reviews have examined hearing loss and employment broadly, this review makes a novel contribution by explicitly framing hearing loss as an occupational health concern with implications for workplace exposures, psychosocial stressors, and health outcomes. This perspective aligns with recent calls for biopsychosocial approaches to hearing health [93] while extending the occupational health literature on disability and work [94, 95].

Four key findings emerge with direct relevance to occupational health: (1) employees with hearing loss adopt extensive individual compensatory strategies that may function as unrecognised workplace stressors; (2) despite available accommodation frameworks, substantial implementation gaps persist across occupational settings; (3) hearing loss is associated with elevated psychosocial stress, work-related fatigue, and increased need for recovery; and (4) the burden of securing and maintaining workplace accommodations falls disproportionately on individual employees rather than being systematically embedded in organisational practice.

Occupational Health and Rehabilitation Implications

The findings have several important implications for occupational health practice. First, the reliance on individual compensatory strategies, while demonstrating employee resilience, may mask inadequate organisational responses and contribute to cumulative work-related stress. From an occupational health perspective, communication barriers function as psychosocial stressors that elevate cognitive demand and reduce recovery capacity [96]. Second, the documented implementation gap between policy and practice represents a failure of the hierarchy of controls, with organisations defaulting to individual-level interventions rather than systematic workplace modifications. Third, the elevated need for recovery among workers with hearing loss suggests that current approaches to workplace accommodation may be insufficient to address the physiological demands of sustained listening effort in occupational settings.

Moreover, this review highlights that people with hearing loss experience systematic disadvantages in workforce participation, including lower employment rates, reduced access to high-skilled positions, and barriers to career progression. The international scope of included studies, spanning high-income and low-to-middle-income countries, reveals both universal challenges and context-specific barriers. However, the underrepresentation of research from low- and middle-income countries represents a critical gap, given the higher prevalence of untreated hearing loss and potentially greater workplace barriers in these settings.

In addition, this review demonstrates the need for integrated approaches that bridge occupational health and healthcare practice. Effective workplace inclusion requires coordinated input from audiologists, occupational health professionals, psychologists, and workplace supervisors. However, gaps in training, particularly among audiologists regarding workplace accommodations and among occupational health practitioners regarding the specific needs of workers with hearing loss, limit the effectiveness of current approaches. These gaps in professional training and coordination highlight the importance of interdisciplinary collaboration at the interface of occupational health and healthcare practice.

Across the included studies, individuals were frequently required to advocate for themselves and adapt their behaviour to sustain employment. Strategies such as managing communication environments, selectively disclosing hearing loss, and relying on informal social support were commonly reported [61, 61, 62,65,66]. While these strategies demonstrate resilience and agency, they often place a disproportionate burden on individuals, particularly in organisational contexts where accommodations are inconsistently implemented or poorly understood. The findings reinforce that navigating hearing loss at work is not solely an individual responsibility but is shaped by workplace culture, managerial attitudes, and systemic provision of support [63].

Importantly, the cumulative impact of these challenges on wellbeing was evident across the literature. Sustained listening effort, communication strain, and social exclusion were associated with fatigue, stress, anxiety, reduced psychological wellbeing, and increased need for recovery after work [75, 88, 89]. Emerging research on the 'need for recovery' [64, 75, 87, 89, 90] highlights the longer-term consequences of unmanaged workplace demands, with implications for work–life balance and sustained employment. Together, these findings reinforce that hearing loss at work should be understood as both an occupational and public health issue.

Implications for Research, Health Policy, and Organisations

For occupational health practitioners, the findings suggest several evidence-based recommendations: (1) systematic workplace assessments should identify communication barriers as occupational stressors requiring organisational-level intervention; (2) occupational health surveillance should include monitoring for elevated need for recovery and work-related fatigue among employees with hearing loss; (3) workplace accommodations should be proactively implemented rather than requiring individual employees to identify and request adjustments; and (4) interdisciplinary collaboration between occupational health professionals, audiologists, and workplace supervisors should be embedded in organisational systems.

For policymakers, the findings highlight the need for: (1) strengthened regulatory frameworks that mandate proactive workplace accommodations; (2) training requirements for occupational health professionals and workplace supervisors regarding hearing loss; (3) expanded research funding for occupational health interventions, particularly in low- and middle-income countries; and (4) accountability mechanisms to reduce implementation gaps between policy intent and workplace practice.

As highlighted throughout this review, further empirical attention is required across diverse occupational settings, cultural contexts, and national policy environments [64, 66, 75, 83]. Workplaces differ substantially in their communication demands, safety requirements, and accommodation feasibility; therefore, findings from one occupational context (e.g. healthcare or academia) may not readily generalise to others, such as retail, manufacturing, or logistics [62, 67, 68, 83]. Greater sensitivity to occupational specificity is needed when designing and implementing workplace accommodations.

Although many countries have legislation governing reasonable adjustments, the findings suggest that these often require adaptation to meet individual needs in practice. Accommodations may involve iterative trial-and-error processes, particularly as job roles change or individuals progress in their careers [62, 64, 66]. Importantly, responsibility for implementing accommodations should not rest solely with the individual or their direct line manager. Instead, organisations should draw on trained professionals, such as occupational health specialists, audiologists, and psychologists, who are better positioned to identify appropriate and sustainable support [63, 70, 88].

The ways individuals navigate hearing loss also have implications for colleagues and organisational functioning. Several studies demonstrated that educating colleagues about hearing loss can improve communication, reduce stigma, and strengthen workplace relationships [61, 71,

84]. Social support not only benefits individuals with hearing loss but also fosters more inclusive and cohesive work environments. Managers play a key role in initiating access to support services, particularly where individuals may be reluctant to disclose their hearing loss [61, 70].

Training initiatives were repeatedly identified as beneficial, particularly when focused on inclusive communication practices and awareness of hearing loss [68, 78]. Such training should be embedded across organisations rather than limited to individual teams [64, 70, 83]. Additionally, accommodations should be reviewed regularly to ensure they remain appropriate as roles evolve or career aspirations change.

Finally, the review highlights the importance of co-produced research with individuals with hearing loss, including those who are unemployed or seeking work. Incorporating lived experience perspectives would help identify overlooked challenges and avoid tokenistic approaches to equality, diversity, and inclusion. Without meaningful evaluation, implementing work-based accommodations risk becoming symbolic rather than effective [85].

Limitations

This scoping review has several limitations that should be acknowledged. First, the search was limited to three databases (Scopus, PubMed/MEDLINE, and Web of Science) and English-language publications, which may have excluded relevant studies published in other languages or indexed elsewhere. Second, the heterogeneity of study designs, populations, and outcome measures limited the extent to which findings could be directly compared or synthesised quantitatively. Third, the included studies predominantly focused on high-income countries, potentially limiting generalisability to low- and middle-income settings where workplace accommodations and support structures may differ substantially. Fourth, the reliance on self-reported data in many studies may have introduced recall or social desirability bias. Finally, the rapid pace of technological development means that some accommodations discussed may already be outdated, while newer solutions may not yet have been evaluated.

Concluding Remarks

This scoping review synthesised evidence on the multifaceted impact of hearing loss on employability and work participation. By focusing specifically on hearing loss, it identified distinct challenges related to individual coping strategies, social connections, workplace accommodations, and overall wellbeing. Two key contributions emerge. First, the review integrates public health and occupational health perspectives, framing hearing loss at work as a societal and organisational issue rather than solely an individual limitation. Second, it establishes an evidence base highlighting the need for greater empirical attention to hearing loss in employment settings, particularly across diverse occupations and national contexts.

Several priorities for future occupational health research are evident. First, rigorous evaluation of workplace interventions using experimental or quasi-experimental designs is needed to identify evidence-based best practices. Second, longitudinal studies examining long-term health and work outcomes associated with different accommodation approaches would inform sustainable employment strategies. Third, research from low- and middle-income countries is urgently needed to understand context-specific barriers and develop culturally appropriate interventions. Fourth, studies evaluating the effectiveness of interdisciplinary approaches that integrate occupational health and clinical perspectives have the opportunity to advance practice at this critical interface. Finally, economic evaluations of workplace accommodations would support informed policy development and resource allocation.

By advancing this evidence base, organisations, policymakers, and practitioners can more effectively address the persistent inequalities faced by individuals with hearing loss in the workplace.

Given that this scoping review has mapped the breadth of evidence on hearing loss and work participation, a logical and important next step would be a systematic review focused on the effectiveness of specific workplace accommodations and occupational health interventions for employees with hearing loss. Such a review should adopt a narrower, pre-specified review question, apply rigorous quality appraisal of included studies, and prioritise outcomes including work participation, psychosocial wellbeing, need for recovery after work, and return-to-work rates. Particular attention should be given to the comparative effectiveness of technological, environmental, and organisational interventions and to subgroup analyses by occupation type, degree of hearing loss, and national policy context.

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Declarations

Competing interests The authors declare no competing interests.

Ethical approval This study is a scoping review that synthesises information from previously published sources. It did not involve the collection of primary data from human participants. Ethics approval: not applicable.

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