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Employees with hearing impairment. A qualitative study exploring managers' experiences

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ABSTRACT

Purpose: Explore managers' experiences regarding employees with hearing impairments.

Materials and methods: Individual interviews with ten managers having employees with hearing impairment. The interviews were analyzed using Systematic text condensation.

Results: The managers felt great responsibility for their employees' functioning, but hearing loss issues were easily forgotten. They found access to information as imperative to secure workplace adjustments, and temporary needs, rather than permanent ones, were easily met. Despite their challenging nature, meetings were not accommodated to meet hearing loss needs. Support in accommodation processes at the workplace was not requested since minor adjustments were perceived as sufficient.

Conclusion: The results show that there are barriers towards developing less strenuous working conditions for employees with hearing impairments. The implications of hearing loss should be recognized as risk factors for fatigue and treated accordingly. Appropriate services are necessary to support the stakeholders at the workplace and utilize the room for manoeuvre in the accommodation process. Further studies should identify how such services can accommodate both the employees, and managers' needs.

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KEYWORDS

Hearing impairment; work; participation; employer; manager; rehabilitation; support

► IMPLICATIONS FOR REHABILITATION

- Hearing loss as a risk factor for fatigue needs to be addressed by rehabilitation professionals.
- Vocational rehabilitation professionals are needed to support employees with hearing loss and their employers in making adjustments at the work place.
- Occupational rehabilitation professionals and professionals targeting hearing impairments are both needed in the process.

Introduction

Work has a dual function—to procure income and to be a means to know who we are and how and where we belong [1]. Thus, lack of work participation might have a broad impact on individuals. People with disabilities continue to have a lower level of work participation than the population at large despite multiple efforts to increase their participation rate [2]. A lower work participation rate has also been found among people with hearing impairments [3–5] together with an increased risk of sickness absence [6] and disability pension [7].

High prevalence of fatigue or need for recovery after work in persons with hearing impairments has been established earlier [6,8–10]. Hearing loss affects verbal communication with an impact on the ability to follow a conversation, particularly if unstructured and in background noise. Moreover, individuals with hearing loss tend to experience noise as a larger burden compared to their normal-hearing colleagues [6,11]. Hearing aids do not restore hearing to normal, and the major efforts needed to compensate for the communication barriers, which a hearing loss often causes is associated with the increased risk of fatigue [12,13].

Workplace accommodation for persons with hearing impairments might improve their working situation and reduce the risk of fatigue. One study showed that employees with hearing loss perceived accommodation such as telephone aids, coworker assistance, and electronic communication as important, and used them frequently to perform work tasks [14]. However, a recent cross-sectional study showed that 30.7% of employees with hearing impairment reported needs for accommodation, without receiving them [10].

Employees with hearing impairments have been found to use a variety of strategies to sustain work performance [15]. The strategies used were self-accommodation, self-advocacy, self-management, and lobbying. This means that the measures were limited to individual initiatives, although happening within an interpersonal context. Employees with hearing impairment often experience it as a nuisance that they repeatedly have to remind colleagues and managers of their hearing related communication demands [15–17]. Being the sole person responsible for a good working situation with hearing impairment was described as an important contributor to strenuous working conditions [17]. Besides, employees might find it difficult to

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Table 1. Characteristics of participants and enterprises.

Variables	Sample
Number of participants	10
Age, mean (range)	47 (37–60)
Gender	
Females	7
Sector	
Service industry	3
Educational sector	4
Health care sector	2
Government administration	1
Size of enterprise	
Small (50–100 employees)	4
Medium (150–700 employees)	3
Large (1000–10 000 employees)	3
Leadership ^a	
Head of enterprise	3
Head of section	7
Everyday responsibility	8
Managerial responsibility of human resources	2
Available support ^a	
Human resources department	10
Occupational health services	9
Inclusive Workplace agreement	9

^aInclusion in multiple categories possible.

request accommodation, particularly when the measures favour them over their colleagues [18]. Employees with hearing impairment have been found to withhold requests for accommodation depending on potential advantages and disadvantages [19,20]. In particular, it is perceived as difficult to request recurring accommodations [19]. Monetary costs and impositions on others have a negative influence on the likelihood of requesting accommodation for recurring needs.

Negative attitudes, misconceptions, or prejudices against the abilities of people with disabilities have been given as reasons for their disadvantages in the labour market [2]. However, it has been suggested that experience with disabled employees can change such attitudes. This was confirmed by the Work Research Institute in Norway [21]. They found that the managers in one fourth of the enterprises believed that people with disabilities would increase sickness absence and decrease productivity. However, such attitudes changed when employers' gained experience with employees with disabilities [21]. Among Norwegian enterprises committed to be inclusive workplaces, 60% of the employers reported not being reluctant towards hiring individuals with disabilities [22]. Employers also gave priority to accommodate for the employees already hired over recruiting new employees with disabilities. Three key characteristics of employers open to inclusion of people with disabilities have been identified: the work culture, job match, and experience and support [23]. The authors claimed that a better understanding of employers and work environments might reduce the barriers to employment for people with disabilities.

Through the last 50 years, the Norwegian labor market has been influenced by what is labeled "the Norwegian model" [24]. The model is characterized by a high degree of employee involvement and co-determination both in decision-making and in daily work. In 2001, the three stakeholder parties in the labor market, employer's organizations, labor organizations, and the State, signed an agreement of Inclusive Workplace (IA-agreement). The aim was to decrease sickness absence, increase the participation rate among people with disabilities, and increase work participation among senior workers. Enterprises signing an IA-agreement access tools and measures contributing to reaching the goals. People with hearing impairment are at risk when it comes to long-term sick leave and early retirement, and thus, all three goals

in the IA-agreement are important in the attempts to prevent disconnection from the labor market.

With or without an IA-agreement, the respective employer of the enterprise is a key to inclusion and participation. However, to our knowledge no studies have addressed the employer perspectives on management of individuals with hearing impairment. Increased knowledge on the subject could shed light on barriers and facilitating factors in maintaining work participation. Thus, the aim of this study was to explore managers' experiences regarding employees with hearing impairment.

Methods

This was a qualitative study based on individual interviews with managers who have employees with hearing impairments.

Participants

Eligible participants were managers who had employees with hearing loss. To make sure the managers had the right experience, they were recruited through employees with hearing impairments who had participated in a previous study [17], thus constituting a convenience sample. We asked the employees who took part in the previous study whether their employer could be invited to participate in a similar interview. Seventeen employees consented and a purposive sampling was conducted. We aimed to include managers in various work areas and different kinds of positions. No particular exclusion criteria were stated. The employers taking part in the present study are referred to as managers.

Ethics

The study was approved by The Norwegian Centre for Research Data, NSD (ref.no. 47760, 18.04.2016). All managers gave informed consent in advance.

Data collection and analysis

Semistructured interviews [25] were conducted based on an interview guide including subjects on expectations, responsibility, accommodation, and participation issues. The intention was to explore the managers' ways of working with accommodation, thinking about inclusion, and what kind of experiences they had with this kind of work. The interviews lasted from 40 min to 1 h and 10 min and were transcribed verbatim. All interviews were conducted at the premises of the enterprises.

Systematic text condensation (STC) was chosen as method of analysis [26]. STC is a descriptive and pragmatic approach, elaborated from Giorgi's psychological phenomenological analysis [26]. The method was chosen as a structured and transparent approach, which is particularly suitable for analyzing the participants' experiences. Analysis and interviewing is conducted stepwise. The analysis procedure consists of four steps, where the first step is to get a total impression of the data and search for themes. Five interviews were read initially by the first author (E.V.S.) identifying four preliminary themes.

The second step is to identify and sort meaning units into codes. Meaning units are fragments of the entire text with information about the research question [26]. A code list was produced based on the first five interviews. Separately, the last author (M.B.R.) identified four themes based on two of the interviews and coded a third interview. Similarities and differences found by the two authors were assessed before the first author (E.V.S.) coded the remaining interviews. The procedure produced a code list, which was organized hierarchically in codes and subcodes, and subsequently in code groups according to their

content. The coding process was highly inductive and flexible in nature [26]. The third step involves condensation, which implies a cross-case systemizing of meaning units within code groups. Condensates were produced according to the code groups, and they were assessed and rearranged where appropriate. Finally, the fourth step consists of constructing a synthesis based on the condensates. A synthesis was developed and constituted the results from the analysis.

Results

Ten managers—seven women and three men—in the age range 37–60, were interviewed. The managers represented small (50–100 employees), medium (150–700), and large (1000–10000 employees) enterprises. However, the number of employees of whom the manager was in charge were from 6 to 60. A description of the participants is displayed in Table 1. Among the 10 enterprises represented in this study, 9 of them had signed an Inclusive Workplace (IA) agreement. Seven of them considered themselves to have a major responsibility to include people with reduced workability and worked actively on the issue through vocational trainee positions, hiring individuals with impairments, or to work actively with the IA-agreement. All participants had experience with supervising one or two employees with hearing loss.

The managers' way of thinking about vocational participation in general, and their experiences with employees with hearing loss in particular, evolved around six main categories. These were 1) "the observant facilitator," 2) "bypassing nonmanifested challenges," 3) "the imperative of information," 4) "temporary tailoring easier than permanent adjustments," 5) "unaccommodated meetings despite positive inclination," and 6) "self-sufficient accommodation processes for hearing loss issues." The categories are presented below with examples and citations for illustration. All citations are marked with participant ID, age, and size and type of enterprise.

The observant facilitator

Most managers expressed a considerable responsibility towards the function and well-being of their employees. In their experience, most employees had various needs at work disregarding their health status, and managers needed to be attentive to these needs. One manager described herself as the "caretaker" of her employees where she ensured access to what they needed so that they could do a good job. According to her, trust between manager and employee was the most important tool to make sure the employees would inform her about their needs. Some of the managers emphasized the importance of being observant in their role as leaders. The purpose of this capacity was to detect difficulties early and then contribute to finding a solution. According to the managers, interest, consideration and engagement from them as leaders would make the employees feel seen.

To spot that someone strains or someone is about to get ill, or, for some reason—that is a major part of being ahead—to accommodate in advance and not only afterwards when they have become ill, right. It's about paying attention and watching, and talk to people—to be close as well. (No. 4, aged 60, small enterprise, educational sector)

Most managers described both formal and informal dialogue as an important measure to accommodate for an environment inspiring confidence. In their opinion, creating the trust needed to obtain dialogue was their responsibility. An "open door" policy was the most commonly described way to succeed. Several

managers said that they explicitly invited their employees to discuss various subjects, and some actively sought employees and groups out for discussions. Formal dialogue such as discussions on personal development was appreciated, but they tended to treasure the informal day-to-day contact the most.

Several managers expressed having a social responsibility on behalf of the enterprise. A national private enterprise worked, according to the manager, systematically and continuously with a positive work place culture to include vulnerable and disabled employees. Management and staff had regular discussions, with assistance from their "inclusive work place contact" (State representative for enterprises with IA-agreement), on how to deal with differences in individual capacity. The staff and management had reached a mutual understanding for the necessity of differentiated workload to avoid sick leave.

We shall accept the fact that we are different. These are things we talk about on the team [...] "Is it ok that someone comes to work and does half, and then the rest of us do what we usually do—is that ok?" Unanimously: "Yes!" We will rather that someone comes around and takes 10 phone calls instead of 50, in that way we keep in touch. (No. 6, aged 38, large enterprise, service industry)

Bypassing nonmanifested challenges

All but one manager said that they had talked about the hearing loss with their hearing-impaired employee. The managers described a varying understanding for difficulties that might emerge from hearing loss, such as participation in meetings, difficulties in noisy surroundings and social settings, and the tiredness that might follow. However, the managers generally perceived hearing loss as a minor challenge at the work place and for the specific position. This was in particular the case when the hearing loss was moderate, while severe hearing loss was associated with increased challenges. Managers who had experience with employees with severe hearing loss described tasks that they found very difficult to accommodate. Such tasks were normally removed from these employees. The managers said that they were aware of oral communication difficulties. Nevertheless, their employees with hearing loss were seen as very well-functioning, and thus their communication needs were easily forgotten. A manager with long-term experience with the employee with hearing loss doubted that they would ever manage to remember to be considerate in all situations due to the employee's non-manifested needs.

In the beginning, she got very tired because it takes a lot of energy to concentrate on what everyone says when we are talking together. Then she ended up turning her back on us and started to work. It took us a while to understand that it wasn't because she wasn't interested, it was simply because it became too tiresome—she couldn't follow, right. So, it has been a small adaptation process for us too. And we do remind each other about it all the time—because if one hadn't known she was hearing impaired, I would never have thought about it really. We often forget about it (No. 7, aged 37, medium enterprise, service industry)

Severe hearing loss was easier to remember since malfunctioning communication was easier to observe. Thus, change of communication habits was more likely to happen. Lunch and other social situations were recognized as potentially difficult, and the managers appreciated having a responsibility to enable social participation. However, several managers emphasized that their employees with hearing loss were of a social disposition, and consequently lack of social participation was, according to the managers, a minor problem. Social participation was rarely addressed in the dialogue between the managers and their employees with hearing loss, and some found the subject difficult to talk about

with the employee. Two managers had observed social withdrawal. Both of them recognized this as an unfortunate situation, but neither of them saw any solution to the problem.

That's where my heart bleeds a bit, because it is so important to us all our life—the social aspect—and that is what they feel a bit as well, that's my impression. When they don't quite catch something or don't catch what the one at the end of the table is saying, or ... and they don't say anything either, because they don't want to be the one who ... It's a part of all of us, isn't it? A wish to be like everyone else [...] Of course, we have a responsibility, I guess we have a responsibility for everyone (pausing) I haven't thought about anything in particular that we could have done, or anything, I haven't done that. [...] But I know that there has been particularly difficult situations where everyone has come together [...] I know I have had some talks about why they haven't showed up on such occasions, and that it is ok. Instead we can talk about it if there was something in particular that happened or something they should know about (No. 6, aged 38, large enterprise, service industry)

The imperative of information

The managers said that they would expect their employee to communicate with them about their hearing loss. This was the only way they could accommodate for their situation. Additionally, one manager feared he might misinterpret unaccommodated needs with lack of motivation, which could potentially result in unfortunate situations. A manager, who had not been informed about the implications of the hearing loss by his employee, interpreted the lack of information as the working situation being acceptable. An additional reason for demanding information was a lack of time to be sufficiently attentive to the needs.

Some managers expressed such positive experiences with employees with hearing loss that they would not hesitate to employ others, and some had already done so. However, most of the managers said that they, already in the recruitment process, would appreciate being informed about the hearing loss. None of them expected to receive the information in the application, but rather during the interview. Some managers perceived withheld information as a lack of trust in the potential manager from the new recruit, even though they could understand a perceived need to limit such information. Other managers did not expect any information, especially if it was not directly relevant to the task performance. The most important factor for the managers was that potential applicants applied for positions they were capable of performing.

A manager from the educational sector, who were committed to inclusive workplaces, told how her understanding of the impact of hearing loss had increased after listening to a presentation held by an employee with hearing loss. The presentation included an audio presentation of her hearing capacity and specific information on the impact it had on her at work. The increased understanding made the manager more prone to remember the accommodation measures.

One thing is to know that someone has a visual impairment or impaired hearing, or whatever it might be, but what was incredibly good about [what the employee with hearing loss presented]—she had some stuff that she presented, which resulted in a much firmer understanding. It was easier to understand, and when you understand more, it is easier to take the necessary considerations. Because I see that it is easily forgotten. For instance, when we are in the auditorium and the microphone is passed around, many people say "No, I have such a loud voice. I can speak without". (No. 9, aged 42, medium enterprise, educational sector)

Temporary tailoring easier than permanent adjustments

All but one manager had taken steps to accommodate for the employee's hearing loss. The most common measures they described were work site adjustments, such as catering for a cubicle or reducing noise in open-plan offices. Equally common was alteration of tasks, temporarily or permanently, for example, removing communication demanding tasks. Most managers expressed that they had good possibilities to adjust the work situation. They were specifically flexible on adjusting work tasks, working hours, and reorganizing resources. A manager within the health sector perceived her possibilities for adjusting the work situation for employees on sick leave as bigger than the employees usually allowed her to do. Within the educational sector, one manager found many ways of accommodating a position for her employee with hearing loss, while another saw very few possibilities in a similar position. The latter was the only manager who perceived economic limitations as an excessive restriction for implementing accommodation measures. Several managers reported making fair use of the grant scheme available to them through the IA-agreement to be able to add resources for a period.

The flexibility that the managers described tended to occur within a restricted period. Particularly alternative tasks were often only available as projects or as lags in the organization, thus not representing stable and predictable working situations. Rearrangement of working hours and adding human resources implied additional costs and would be difficult to maintain past the grant period. Moreover, some managers expressed accommodation difficulties when demanded measures would affect the responsibility embedded in the positions. For instance, a manager within the health sector described how a nurse with hearing loss wanted to reduce her field of responsibility because her working situation had become too strenuous. The manager explained that the nurse found it difficult to deal with the unpredictable situations created by demanding communication situations. They would often occur during the shift, and, according to the manager, the nurse found it stressful being responsible for the actions taken without being sure if she had perceived them accurately. Furthermore, the nurse found the frequent use of substitutes an additional burden since she had to inform about her needs every time there was a substitute at the shift. The manager could not see how she could reduce the responsibility within the frame of the position.

Sometimes [the employee with hearing loss] finds the situation strenuous. She could maybe want less responsibility at work and maybe more accommodation during weekends and so on. It is difficult since she is employed as a nurse, and then you have a role to fill. That would be for us like not having a nurse. So it is somewhat limited how much we can accommodate (No. 3, aged 52, medium enterprise, health care sector)

Some managers had experienced having employees with hearing loss, where the work situation was no longer manageable. According to the managers, the employees had become exhausted, which led to sick leave. Internal transfer had been the solution in most of these cases, while one case had ended with disability pension.

Unaccommodated meetings despite positive inclination

The managers recognized meetings of a certain size as difficult for employees with hearing loss. However, most managers assessed their meetings as being manageable for their employees because they were limited in either time or size, or were sufficiently structured. Some work places had worked on improving

their meeting culture as an important measure to the entire staff. One example of a step taken was introduction of a moderator in charge of the structure. Generally, the managers did not perceive unstructured meetings as appropriate.

Managers found it impossible to accommodate meetings involving different locations, which implied communication through audiovisual or audio transmittance only. In general, the managers had limited experience with assistive listening devices, that is, amplification additional to hearing aids. In cases where such devices were used, the manager had not taken an active part, neither prior to the acquisition nor during implementation. Only one manager had experience with using microphone systems (i.e. multiple, often hand-held, microphones) in meetings. This was not successful due to a lack of confidence in use and inefficient communication with 10 colleagues sharing one hand-held microphone. All managers expressed a positive inclination towards using a microphone system in meetings, and they regarded it a feasible measure. They rarely envisioned a potential loss of spontaneity a negative effect. At the contrary, several managers saw a potential positive effect from such use due to the demands of a good meeting structure leading to increased quality of the discussions.

So far, [the employee with hearing loss] hasn't said that it would be necessary to use [a conference system]. We have used the one microphone, which has been placed in the centre of the table. Then she moves it occasionally. But we can use several if that would be appropriate. I can't see why we shouldn't be able to manage that. [...] And if flexibility isn't one of the main issues that we succeed in, then I believe that we would struggle with many of the things we work with (No. 2, aged 53, large enterprise, health care sector)

Self-sufficient accommodation processes for hearing loss issues

In general, few managers described needs for support in their accommodation attempts towards employees with hearing loss. In their opinion, it was usually sufficient with minor adjustments, and the employee him- or herself would express what these needs would be. A manager in a communication-demanding field had an employee with a recently acquired severe hearing loss, which was medically unclarified. The manager and the employee discussed accommodation possibilities, resulting in mainly task limitations and noise reduction. Assessment of assistive listening devices was considered, but temporarily rejected by both until further hearing correction measures were considered.

I have spoken to my boss and to [the employee with hearing loss] if there is anything technical we can do. Particularly now after the last few years when his hearing has become so much worse. We have agreed to wait until after the operation. But we will definitely do it if it can be of any help [...] I don't know if we have talked about it or if I have only thought about it, if there is a possibility for him to come back and attend workshops with customers if we do something like that. If there are things he can bring along, like microphones (No. 1, aged 51, small enterprise, service industry)

The managers described how they perceived the human resources (HR) department and the occupational health services (OHS) as competent and useful resources in their daily work with employees with various needs. They would use them to seek advice, discuss, and receive suggestions. Even though most managers reported having used the HR-department in employee issues, only one had used this resource in relation to hearing loss matters. Equally, most managers said that they had used the OHS, for example, for ergonomic measures, noise assessment, and conflicts at work, but only one had contacted the OHS in an assessment process with hearing loss. The manager said that they had

been unfortunate and received little assistance due to lack of staff at that moment, and she perceived the process as being unnecessarily prolonged. Thus, most of the managers expressed a positive attitude towards receiving assistance in accommodation matters. However, as long as they had not received explicit descriptions of needs regarding hearing loss requiring such assistance, they did not consider requesting services.

But who we should turn to... I guess I would have contacted the occupational health services and asked them to look into the case for me—and consider what—who do we need to assist us in order to have this done in the best way. Then I would have expected that they had more knowledge of this than I need to have (No. 2, aged 53, large enterprise, health care sector)

Few managers reported having had assistance from the technical aids center (part of the Norwegian Welfare Services (NAV)), which can offer assistive listening devices at the work place free of charge. Those with such experience described only few measures resulting from such visits, and the manager had not been involved in the assessment. The managers mostly perceived technical aids as the responsibility of the employee.

Discussion

The aim of this study was to explore managers' experiences regarding employees with hearing impairment. The managers felt great responsibility for their employees' functioning, but hearing loss issues were easily forgotten. They found access to information as imperative to secure workplace adjustments, and temporary needs, rather than permanent ones, were easily met. Despite their challenging nature, meetings were not accommodated to meet hearing loss needs. Support in accommodation processes at the workplace was not requested since minor adjustments were perceived as sufficient.

A constructive framework

The present study found that the managers had an overall positive inclination towards hearing impairments and contribution to inclusive workplaces, where they recognized an extensive responsibility towards all employees and their needs. Manager attitudes towards hearing impairments have to our knowledge not previously been studied, but a positive attitude towards disabilities in general has been found among a majority of managers [27]. Manager attitudes in the present study corresponded to the characteristics of managers open to include employees with disabilities identified by Gilbride et al. [23]. Gilbride et al. organized the characteristics in three categories: "work cultural issues," "job match", and "employer experience and support." They consisted of attributes such as an egalitarian attitude where diversity was valued, a flexible management style, focus on performance rather than the disability, and provision of accommodation to all employees if needed. Further salient characteristics were having focus on capabilities and finding a good job match, obtaining input from the employees with disabilities and discussing accommodation with them, and that managers would view rehabilitation programs as a support resource [23]. Norwegian leaders have been shown to be generally concerned about the well-being of their staff and spending much time on communicating with them [28]. Thus, the manager features found in the present study correspond with common features of leadership in Norway and with characteristics of managers open to inclusion of people with disabilities at the workplace. This situation constitutes a constructive

framework of possibilities to create sustainable working situations for employees with hearing loss.

Room for improvement

The present study showed that, despite a positive inclination and benevolence towards accommodation, most managers saw moderate hearing loss as a minor challenge, and the particular needs of employees with hearing impairments were easily forgotten. Viewing hearing loss as a minor challenge has a positive implication for future recruitment, where hearing loss is not considered to affect workability. Employers' views on the employability of people with disabilities have been described as multifaceted containing different views on their employability, that is, their employability being constrained by or independent of disability, or conditioned by aspects internal or external to the individuals with disabilities [29]. Employers considering employability independent of disabilities regarded employees with disabilities as assets and contributors [29]. However, viewing hearing loss as a minor challenge may be a barrier to workplace accommodation. Even mild and/or moderate hearing loss may cause difficulties at work. Employees with mild to moderate hearing loss were found to use more energy in noise typical to open plan offices than their normal-hearing peers [30]. Moreover, moderate hearing loss was negatively associated with workability and fatigue in a cross-sectional study in Norway [10]. Compared to mild hearing loss, moderate hearing loss was associated with an increased risk of a high fatigue score, high hearing disability score and a low workability score. Furthermore, the use of accommodation measures was rated as important by employees with mild/moderate hearing loss, but they were less satisfied with their accommodation than employees with profound hearing loss [14]. Thus, workplace accommodation needs might be present regardless the degree of the loss, an issue that can be difficult to convey when managers pay little attention to the condition. Moreover, regarding moderate hearing loss as a minor challenge may jeopardize an early initiation of workplace adjustments and finding adequate accommodation measures to prevent fatigue.

The present study also found that the reported flexibility by the managers tended to comprise accommodation measures on a temporary, rather than permanent basis. With chronic situations like hearing loss, permanent measures are needed to prevent exhaustion. An evaluation of the Norwegian IA-agreement [22] found that the enterprises' main reason for signing the agreement was to reduce sickness absence (63%), while only 5% had signed to be able to include people with disabilities. However, enterprises invested effort in retaining employees with disabilities, but few enterprises had developed explicit activity goals for their follow-up and accommodation efforts for employees with reduced workability. Thus, it seems that enterprises concentrate on sickness absence issues rather than disability needs, and that their effort on retention of employees with disabilities is neither planned nor purposeful. Furthermore, colleagues' and manager's lack of knowledge were found to constitute a barrier to involvement for employees with hearing loss [17]. Employees had to repeat their specific communication needs regularly, a situation which they found tiresome and lonely. Punch [12] argued that people with hearing loss might feel unsupported by colleagues and managers due to a lack of understanding of the impact of hearing loss. Thus, even though accommodation measures are accessible on a temporary basis, issues specific to employees with disabilities might not get the necessary attention. Increased

attention on the specificities of disability needs at work would be necessary to improve the accommodation processes.

In the present study, the managers acknowledged that the employees found complex communication situations and unstructured settings, such as lunch breaks, difficult. Nevertheless, accommodation measures were not assessed for these situations. Oral-aural demands are important factors in working life trajectories with hearing loss, leading towards sustainable participation or disconnection [17], and group interactions, such as meetings and work related social functions, have been identified as particularly difficult [12]. A large proportion of the unmet needs previously identified concerned hearing in meetings [14]. Moreover, a low use of assistive listening devices has been found [10,14]. This situation indicates that complex communication situations to a small extent are accommodated to suit hearing loss. Thus, there is a need for further initiatives from the managers since there is a risk for withholding accommodation requests when the needs are recurrent [19,20]. An acknowledgement of difficulties is insufficient for fatigue prevention. The acknowledgement needs to be transformed into more measures considered or taken.

Barriers to improvement

The present study showed a discrepancy between the benevolent manager attitude towards inclusion and the lack of significance they put on hearing loss issues. This may partly be explained by the lack of competence and understanding concerning impairments as described by Anvik et al. [31]. It may also be associated with a frequent lack of knowledge about the impact of hearing loss on daily life found among employees with hearing impairments [17]. Previous studies have identified a prolonged process before seeking help for hearing difficulties, and before reaching acceptance for the condition [32–34]. The prolonged processes were explained as complex, involving the individual and its surroundings. Additionally, having reached acceptance does not necessarily give the knowledge necessary to see the long-term impact and the need for prevention of negative consequences [17]. Without this knowledge, the employees have few prerequisites to request accommodation measures adequate for preventing future fatigue. Thus, the information they pass on to their managers would not fully cover the situation in which they find themselves. When managers receive incomplete information and do not request professional support, the situation is not sufficiently enlightened and accommodation measures are delimited to what the employee with hearing loss currently perceive as not manageable. Furthermore, the risk of withholding accommodation requests would increase when the needs are recurring and they impose actions on others [19]. An ambivalent or negative attitude towards ones' own hearing loss might evoke uneasiness when the hearing loss become visible [17]. Assistive listening devices would be such a visible cue, and might explain the limited use of assistive listening devices found in studies such as Haynes and Linden [14] and Svinndal et al. [10]. Accommodation measures in complex communication situations, such as meetings, would constitute a recurring situation with increased visibility, and imposing action on others if a microphone system is the most adequate measure. Thus, the situation would constitute a high risk of withholding such requests.

Further, hearing loss is a highly invisible impairment, and the present study found that managers tend to forget about the condition. The extent to which a disability is hidden or apparent to others has been addressed in the model of Stone and Colella [35]. The model concerns factors affecting the treatment of disabled

individuals in organizations. They hypothesize that negative categorization and affective reactions from others increase proportionally with the increase of visibility of the disability. Such a mechanism might be the reason for the perceived need to conceal the impairment among employees with hearing loss. Although the benevolent attitude found among managers in the present study does not support this hypothesis, the concealability is a possible reason for their lack of attention to hearing loss. As long as the impairment is invisible, it is easily forgotten. There is a need for future studies investigating how shared responsibility between the manager and the employee on hearing loss accommodation could decrease the need for concealing the hearing loss and increase the initiatives from the manager. A more pronounced initiative could reduce barriers towards making accommodation requests.

Support towards improvement

The present study found that the managers used support services for various reasons, but not for hearing loss issues. At the same time, they had identified challenging working situations where it was difficult to find solutions. Support has been identified as important to the employability of people with disabilities [29]. Viewing rehabilitation programs as a support resource was an important characteristic of managers open to include employees with disabilities [23]. Svinndal, Jensen [17] found that the contribution from various service providers was important in working life trajectories of employees with hearing loss. Having access to support contributed to trajectories maintaining work participation, while limited access to information and unsupportive service providers contributed to trajectories towards disconnection. In Norway, there are few service providers with audiological competence dedicated to work-related support. Punch [12] suggested that human resource professionals, together with organizations and managers, must acknowledge a responsibility in order to foster supportive working environments. Thus, there is a need for an enforced initiative to increase the knowledge of hearing loss implications among both employees with hearing loss and their managers. The latter need sufficient knowledge of the subject to request support from professionals with a transdisciplinary approach to workplace accommodation, while the former need enough knowledge to request both accommodation and support.

The exact measures appropriate in a specific situation will vary and depend on the characteristics of the workplace and the employee. In some situations, technical assistance can effectively make a work task feasible, while in others more extensive measures will be needed. Based on the results from the present study, we argue that support capable of embracing this need for variety calls for assessments done at the work site. Most work situations could probably be improved to prevent fatigue, given a multidimensional approach and a manager being apt to use their room for manoeuver.

Strengths and limitations

The strength of this study is that all the managers had prior experience of having employees with hearing loss, thus giving accounts from actual situations. However, this criterion may have restricted the variety of participants. The sample represents managers mainly positive to inclusion of employees with disabilities, which might not be the case for all managers. The enterprises represented in the study are situated in different geographical regions and in both urban and rural areas. They are mainly of

medium or large size, and manual labour enterprises are not represented. All but one of the enterprises had signed an IA-agreement implying a commitment to work with inclusion issues. Whether the perspectives of managers in small enterprises without an IA-agreement differ from those found in the present study must be described in future studies.

The managers interviewed knew that the interviewer already had spoken to their employee with hearing loss. Potentially, this may have influenced their account of the experiences, that is, withholding difficulties or being focused on conveying an account in accordance with that of the employee. However, the managers were told in advance that a comparison was not the aim of the project, but rather their perspective on hearing loss matters. Moreover, there was a majority of female managers in our sample. Although there was no indication of a difference in attitudes or ways of working with hearing loss matters based on gender, the representation of more male managers might have given different results. Less male representation together with less manual labour representation might have resulted in an additional positive attitude among the managers.

The strength of the study is the data having been analyzed by two researchers. The first author is a trained educational audiologist with an informed outsider perspective. No prior connection to the managers or the enterprises existed in the research group.

Within the subject of work participation and disabilities, the present study is delimited to mainly describe retention matters. A thorough investigation of recruitment matters must be covered in future studies. Additionally, the study was performed within a Norwegian context, influenced by a high degree of employee involvement and co-determination, which may influence the applicability to other countries' working life contexts.

Conclusion

The results from this study suggest that there are barriers to develop less strenuous working conditions for employees with hearing impairments, even when the managers have a positive inclination towards accommodation and inclusion. The implications of hearing loss need to be recognized as risk factors for fatigue and treated accordingly. There seems to be a lack of prerequisites for exploiting the managers' room for manoeuver in the process of making adjustments in the workplace. Appropriate services and professional support are necessary to support the stakeholders at the workplace. Further studies are needed to identify how such services can provide for both employee and manager needs in their efforts for sustainable work participation for employees with hearing impairments.

Disclosure statement

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