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Exploring the job resources experienced by employees with hearing impairment in South Africa

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Orientation: The United Nations Agenda of Sustainable Development Goal (SDG) number 8, and specifically target 8.5, highlights the employment of people with disabilities (PWD). The current study sheds light on job characteristics that employees with hearing impairments (EwHIs) experience as job resources.

Research purpose: This study aimed to explore the aspects that EwHIs might regard as job resources within the South African context.

Motivation for the study: The paucity of research in South Africa on disability matters in the workplace, and EwHIs in particular, served as motivation for this study.

Research approach/design and method: This study used an exploratory, qualitative research approach and the social constructivism paradigm to explore the job resources of EwHIs in South Africa. In addition, a descriptive phenomenological design was used to deeply understand the participants' lived experiences. Participants (N = 14) were identified with a purposive sampling technique and data were collected with open-ended, deaf-friendly questionnaires. Inductive qualitative content analysis was used to analyse the data.

Main findings: Firstly, EwHIs learn from subordinates and work associates. Secondly, constructive social affiliation, learning and challenges seem to motivate EwHIs. Lastly, task accomplishment is facilitated by adequate communication, orientation and assistance.

Practical/managerial implications: The findings of the current study have implications for policy, practice and decision-making. Broadly stated, the learning, motivation and task completion of EwHIs are functions of social integration and effective communication in the workplace.

Contribution/value-add: This study is the first of its kind in South Africa and provides insight into job characteristics that EwHIs regard as job resources.

Keywords: deaf; disability; employee; hard-of-hearing; hearing-impaired; job resources.

Introduction

Orientation

The United Nations' (UN) 2030 Agenda for Sustainable Development (UN, 2015) accentuates bold and transformative steps for directing the world towards sustainability. The agenda includes Sustainable Development Goals (SDGs) concerning decent work, shared prosperity and the realisation of human rights for vulnerable groups.

While the 2030 Agenda was put forward some years ago, people with disabilities (PWDs) in South Africa still experience challenges to thrive and to participate as equal citizens (RSA Department of Women, Youth and Persons with Disabilities, 2023). In addition, South Africa's slow economic growth is not creating sustainable jobs for the most vulnerable such as PWDs (RSA Department of Employment and Labour, 2023a).

Across their life span, people with hearing impairment have higher rates of depression and report lower quality of work life in comparison to their hearing peers (Granberg et al., 2024; World Health Organization [WHO], 2021). While people with the same clinical profile may have significantly different day-to-day support needs, culturally sensitive scientific insight for effective intervention and management is lacking (WHO, 2021). Specifically, the experiences of employees with hearing impairments (EwHIs) regarding aspects that impact their quality of work life are poorly understood (Granberg & Gustafsson, 2021).

Research purpose and objectives

The purpose of the study was to qualitatively explore the job resources experienced by EwHIs in South Africa. To reach this purpose, the following research objectives were set: (1) Determine which job characteristics assist EwHIs to learn; (2) Determine which job characteristics motivate EwHIs and (3) Determine which job characteristics help EwHIs to complete tasks.

Literature review

The United Nations' 2030 agenda for sustainable development

The 2030 Agenda (UN, 2015) is comprised of 17 SDGs and 169 subsequent targets which came into effect on 01 January 2016 as decision-making guidelines for the 15 ensuing years. Sustainable Development Goal number 8 highlights the promotion of inclusive and sustainable economic growth, full and productive employment and decent work for all, while target 8.5 speaks directly to the employment of PWDs. Recognising that each country has its own unique context, the UN (UN, 2015) called on each member state to drive its own proactive strategy.

Hearing impairment

Standard hearing capacity typically refers to hearing thresholds of 20 decibels (dB) or less in both ears (WHO, 2021). *Hearing impairment* refers to hearing capacity outside the standard range (Edwards & Crocker, 2012). Therefore, hearing impairment limits an individual's reception of auditory information to an explicitly noticeable extent (Vaccaro, 2016). In South Africa, approximately 3.3% of the population (5 years and older) have a hearing impairment (Statistics South Africa, 2024). Since hearing is a key component of communication and engaging with others, any decline in hearing capacity can have an adverse effect on day-to-day life if not adequately addressed and/or accommodated (WHO, 2021). The three sub-categories of hearing loss include *conductive hearing loss* (i.e., because of impaired audio transmission in the outer ear and/or the middle ear), *sensorineural hearing loss* (i.e., as the result of damage to the inner ear or cochlea and/or the peripheral auditory nerve) and *mixed* (including both conductive and sensorineural elements) (Cunningham & Tucci, 2017; Dal et al., 2023).

Acquired hearing loss tends to be a gradual process (Bist et al., 2017; Lin, 2024). Going from mild to moderate hearing impairment is likely to infer a transition period. Along with becoming aware of their new accommodation needs, individuals will also need orientation to operating in their new context (Lin, 2024). This can be quite a straining process, particularly when the person's work requires their prior hearing capacity.

Employee with hearing impairment

The term *EwHI* refers to an individual with a hearing impairment who works for or renders a service to another party, notwithstanding the type of employment contract (Chelius et al., 2022). Although hearing impairment may be considered a hindrance in some jobs, it may be an advantage in others (RSA Department of Employment and Labour, 2023b). Correspondingly, Svinndal et al. (2018b) postulate that EwHIs may be less prone to certain types of distractions and, in the right placement, they may maintain more work focus than hearing colleagues. However, EwHIs in South Africa generally find employment in low-status, low-paying positions such as domestic work, packing, technical computer application and administrative work (Naudé, 2002). Likewise, EwHIs in Norway mostly perform clerical work, possibly because it requires less verbal communication (Svinndal et al., 2018b). Higher-status positions in education, information technology and law, as reported by Chelius et al (2022), are more likely the exception than the rule. Relatedly, hearing loss is found to be negatively associated with sustainable employability of teachers in the Netherlands (Schriemer et al., 2021). Teachers with hearing impairments find it challenging to appropriately apply their knowledge and skills as well as setting suitable goals at work (Schriemer et al., 2021). To this end, accommodation for EwHIs in the workplace will enhance their employability (Svinndal et al., 2018a). Accordingly, an employee whose hearing loss is severe, or profound, will need more time to adapt and will require support (Svinndal et al., 2018a).

Job resources

The job demands-resources (JD-R) model describes job characteristics that positively or negatively affect work engagement in the form of job demands and job resources (Chen, 2024). The JD-R model is often used to predict employee performance, well-being and work-behaviour (Bakker & Demerouti, 2024). *Job demands* denote physical, social and organisational facets of the job that necessitate continual physical or mental exertion (Bakker et al., 2005) *Job resources* are physical, psychological, social and organisational features of the job that assist in achieving work goals, stimulate personal development and reduce job demands (Bakker & Demerouti, 2007, 2018; Bakker et al., 2005, 2023). Examples of job resources are autonomy, goal clarity, innovative climate, participation in decision-making, quality work relationships and social support (Demerouti & Bakker, 2023; Schaufeli & Taris, 2014).

Simply knowing that a resource will be available, such as social support, provides an employee with sufficient reassurance (i.e., psychological safety) to approach and handle job demands confidently (Boyd & Tuckey, 2014). Moreover, job resources are associated with work engagement (Bakker et al., 2023), Therefore, job resources promote the construction of positive meaning towards the work environment and job performance (Bakker & Demerouti, 2018; Bakker et al., 2023; Demerouti & Bakker, 2023).

The motivational effect of job resources is strongest when coupled with significant job demands. Though, the strain-inducing effect from job demands is reported most when job demands are coupled with low or insufficient job resources (Demerouti & Bakker, 2023). When apt job resources are lacking, work thwarts the fulfilment of innate psychological

needs and starts to lose its intrinsic meaning to an employee; an employee is likely to become less motivated and can eventually become fatigued (Bakker & De Vries, 2021; Demerouti & Bakker, 2023). The more demanding a work scenario, the more job resources will be required (Sonnetag & Zijlstra, 2006). For employees who typically experience insufficient levels of job resources, it would not be surprising to find them holding a pessimistic outlook towards their work (Bakker & Demerouti, 2007). Insufficient job resources will eventually result in exhaustion and can eventually lead to self-undermining behaviour (Bakker et al., 2023). Daniels and De Jonge (2010) argue that employees' coping with job demands will depend on their access to appropriate job resources. However, while some job resources are commonly found across workplaces (e.g., social support), more unique cases do exist (Bakker et al., 2023).

Job resources are often regulated and line managers play a key role in the adequate distribution of job resources such as skill development and changing the architecture of the work environment (Bakker et al., 2023).

Job resources of employees with hearing impairments

Higher levels of job performance and career satisfaction among EwHIs is associated with fitting work-related accommodation (Punch, 2016). To implement appropriate work-related accommodation, proper needs assessment of and consultation with EwHIs is essential (Abbas et al., 2019; Svinndal et al., 2018a). Correspondingly, the sick leave of EwHIs is positively related to unsatisfactory work climate and work content (Granberg et al., 2024).

Currently, the job resources of EwHIs can be categorised as: promotion of communication and access to information: understanding of hearing loss and support in the work environment.

Promoting EwHIs' communication is positively related to job satisfaction (Geyer & Schroedel, 1998). Relatedly, EwHIs' ability to maintain control in communication situations in the workplace, relates significantly to reducing their stress levels (Lund, 2015). In addition, EwHIs report that they are energised when interacting with other people (Lund, 2015).

Employees with hearing impairments generally depend on colleagues' support for work-related information (Van Gils et al., 2010). The researchers report that hearing team members' ability to communicate through sign language, enabled 43% of the EwHIs in the transfer of work-related information and that they find person-to-person interaction extremely helpful (Van Gils et al., 2010). In addition, these scholars posit that equality regarding access to information is facilitated by technological development. Similarly, Beha et al. (2022) conclude that it is not uncommon for the lack of information to be a root cause of mistakes made in the workplace by an EwHI. It is therefore not surprising that Svinndal et al. (2019) recommend that access to information is imperative to workplace adjustments for EwHIs.

Adjustments in the workplace, for example, acoustic and technical modifications to the work environment; colleagues' understanding and support, contribute to the job resources of EwHIs (Dong et al., 2023; Granberg & Gustafsson, 2021; Hua et al., 2015). Correspondingly, EwHIs value colleagues' understanding, acceptance and acknowledgement as well as management's support to help them adapt to the work environment (Detaille et al., 2003; Punch et al., 2007). Consequently, the shared responsibility of colleagues and management, to seek positive employee outcomes for EwHIs, is emphasised (Lund, 2015; Svinndal et al., 2018a).

Research design

Research approach

An exploratory, qualitative research approach and constructivist paradigm were used in this study. Moreover, a descriptive phenomenological research design was used to explore the job resources of employees with hearing-impairment in South Africa.

The researchers acknowledge that subjective meaning is formed through interaction with other people, and historical and social norms in the lives of individuals (Braun & Clark, 2022). Accordingly, social constructivism was chosen as the paradigm for this study.

Research strategy

An interpretive descriptive research design was used in this qualitative study. Interpretive description is demarcated as a design that provides methodological direction to researchers of applied sciences through focussing on practical issues; entry into a field in a rational, systematic and acceptable manner; and data analysis that allows for the interpretation of a phenomenon beyond the obvious (Teodoro et al, 2018). An interpretive description is established within predominant knowledge (Mitchell & Cody, 1993). Thus, an existing knowledge base – whether clinical or rooted in research – forms the basis of a new inquiry (Thorne et al., 1996). The argument can be extended to the present study, to suggest that what employees with hearing-impairment know, by virtue of their practical experiences, should be sufficient to describe aspects in the environment that can be regarded as job resources.

Research method

Research setting

Various work environments that include EwHIs formed the research setting. These environments ranged from workplaces where EwHIs constituted most of the workforce, to workplaces where the study population sample was in the minority. The researchers made use of self-administered, open-ended qualitative questionnaires over five consecutive workdays to collect data. Two modes (online or a Microsoft Word document) were available for data collection, and the utilised mode per respondent was based on each participant's preference.

Entrée and establishing researcher roles

A coordinating organisation, with access to the email addresses of EwHIs, disseminated the invitation to participate in the study to potential participants. Individuals who accepted the invitation then contacted the researchers through email.

The questionnaires were distributed to participants individually. In addition to textual format, questionnaires were accessible in South African sign language (SASL). An accredited SASL interpreter validated the content of the open-ended questionnaires and the SASL interpretations. Daily reminders to return the completed questionnaires were sent to the participants.

The researchers shared roles and responsibilities from the conception of the design to writing the final research report. For a more detailed breakdown of the role of the researchers, kindly refer to the section, 'Authors' contributions', towards the end of this article.

Research participants and sampling methods

Employees with hearing impairments in South African economic sectors participated in this study. A purposive sampling technique was employed to select participants. Inclusion criteria were:

- individuals who were hearing-impaired
- employed in South Africa.

The sample comprised of eight pre-lingually deafened employees, four post-lingually deafened employees and two hard-of-hearing employees ($N = 14$).

Data collection methods

A demographic questionnaire was used to describe the characteristics of the sample. Participants were asked about their age group, gender, home language, highest level of formal education, area of tertiary qualification, industry, job title and period in current job. In addition, the participants could indicate if their current workplace predominantly comprised of hearing people. Furthermore, participants were asked to indicate through a questionnaire item whether they are an employee as defined by the *Labour Relations Act 65 of 1995* of South Africa. Moreover, participants were asked about their hearing loss category, hearing loss permanency, hearing loss laterality, hearing loss symmetry and stage of onset of hearing loss.

A self-administered, open-ended, qualitative questionnaire was used to gather rich data about the job resources of EwHIs in South Africa. The decision to employ a qualitative questionnaire, as opposed to interviews, was informed by practicality and ethical considerations. The researchers are not fluent in SASL and coopting a sign language interpreter could pose ethical risks related to guaranteeing confidentiality and privacy. Therefore, using qualitative questionnaires were deemed a suitable data gathering technique for the current study.

Data collection questions in textual and South African sign language format

Workday 1 to 4: The following questions were asked to gather information on experiences gained while at work:

1. When thinking about all of the things that happened to you today while at work, what are the experiences via which you learned? Please list all of the cases and explain each in detail.
2. When thinking about all of the things that happened to you today while at work, what are the experiences that made you feel excited or motivated? Please list all of the cases and explain each in detail.
3. When thinking about all of the things that happened to you today while at work, what are the experiences that assisted you to complete the tasks that were required? Please list all of the cases and explain each in detail.

Workday 5: On day 5, a summary of the previous 4 days was returned to each participant and the following questions were asked to gather information on job resources over a longer period:

1. Please tell us about any other work experiences from the last 6 months that you learned from. In the box below, please list all of the cases and explain each in detail.
2. Please tell us about any other work experiences from the last 6 months that made you feel excited or motivated. In the box below, please list all of the cases and explain each in detail.
3. Please tell us about any other work experiences from the last 6 months that assisted you to complete the tasks that were required. In the box below, please list all of the cases and explain each in detail.

Equivalent questions were also available in SASL and provided to participants through hyperlinks.

Prior to the main data collection phase, a pilot study was launched to ensure that all questions were clearly understood. No anomalies were encountered and the researchers proceeded to the main data collection phase.

Data recording

A new questionnaire was sent to each participant on each day of the data collection process. Each participant typed their response to the day's open-ended questions and emailed their completed copy to the researchers. Final copies of each participants' textual responses were transferred to a Microsoft Word file that resembles the original textual data exactly. All data files were securely stored on the researchers' laptops with encrypted passwords.

Strategies employed to ensure data quality and integrity

The trustworthiness of the data was ensured by applying the strategies recommended by Teddie and Tashakkori (2009) and Shenton (2004), which are discussed next:

Credibility: Prolonged engagement with the participants, acquiring rich descriptions of experiences associated with job resources, providing quotations from EwHIs and by employing a co-coder enhanced the credibility of this study.

Confirmability: Findings and conclusions that accurately represent the data were reached through member checking of the transferred responses, frequent meetings among the researchers, documentation, and declaring the limitations of the research.

Dependability: The consistency of findings across contexts and over time was achieved by providing clear and in-depth descriptions.

Transferability: The extent to which the findings can be applied to other contexts was realised by a detailed discussion of participant characteristics and the research process.

Data analysis

Inductive qualitative content analysis was used to analyse the data. The five phases recommended by Elo and Kyngäs (2008) are briefly outlined as follows:

Preparation: The researchers read through the textual responses several times to familiarise themselves thoroughly with the data.

Open coding: A list of potential labels were created to describe pieces of text through the brainstorming technique.

Creating categories: The researchers merged similar codes and grouped others that are related to create a structure of overarching themes and sub-themes.

Abstraction: Themes and sub-themes were inductively assigned titles with no obligation to acknowledge established categorisations.

Reporting: The researchers provided a thick narrative discussion about the data analysis process.

Reporting style: Themes and sub-themes that emerged from the data analysis are outlined in the results section of this article. More particularly, in the form of a qualitative narrative; providing a rich and thick description of the job resources experienced by EwHIs in South Africa. This narrative is supported by quotations from the participants.

Ethical considerations

Ethical approval to conduct this study was obtained from the North-West University's Faculty Research Meeting at the Faculty of Economic and Management Sciences (EMSMHW16/06/10-01/05).

Results

The sample was mostly comprised of employees who were deaf (86%). Hearing impairment was experienced in both ears by 79% of the participants. For 50% of the participants, the hearing loss was equal in both ears. The majority (64%) of participants' hearing loss onset occurred prior to learning a verbal language. Males were slightly higher represented (57%) and the sectors where the participants worked were education (36%), information technology (14%) and law (14%).

The research objective of this study was to determine job characteristics that EwHIs in South Africa experience as job resources. Results are presented in table format, including the main themes, sub-themes and direct quotations from the EwHIs to substantiate the derived themes. Readers will observe grammatical errors and that language usage may seem underdeveloped in some instances. This is not uncommon among cases where hearing loss occurred before communication (verbal and written) was properly developed (Edwards & Crocker, 2012).

Category 1: Job resources resulting from learning experiences

Employees with hearing impairments were asked to describe their experiences at work through which they learned. Three themes and 10 sub-themes emerged from the data as presented in Table 1.

As evidenced from Table 1, EwHIs indicated that job resources associated with learning include learning from subordinates and learning from work associates and academic exposure were job resources associated within learning.

Category 2: Job resources resulting from motivational experiences

Employees with hearing impairments were asked to elaborate on work-related experiences that motivated them. Five themes and 14 sub-themes were extracted from the data. Table 2 provides a summary on the results.

As can be seen in Table 2, participants indicated that job skill acquisition, practical illustration, learning to work with people and support from an overseeing party were motivational to them. Similarly were cases of delegation that promotes academic inquiry, informant orientation, technology orientation and exposure through analysis.

Category 3: Job resources associated with task completion

Employees with hearing impairments were also asked about work-related experiences that assisted them to complete required tasks. Four themes and 13 sub-themes emerged and are presented in Table 3.

TABLE 1: Job resources resulting from learning experiences by employees with hearing impairments in South Africa.

Theme	Sub-theme	Response
Learning from subordinates	Exposure to social diversity	'I had this new experience at work [*which*] is that I work with different learners from different backgrounds … '. (P1, Female, Deaf, Education) 'I learn many things every day, because I work with learners and learners are different'. (P3, Female, Deaf, Education)
	Expanding vocabulary	' … especially when I learn new different sign language from each learners … '. (P1, Female, Deaf, Education) 'I learnt new words when the learner gives his own presentation of the task I gave'. (P9, Male, Deaf, Education)
Learning from work associates	Job skill acquisition	' … Dealing with deadline pressure. Learned new things that I [*can*] developed my skills'. (P2, Male, Deaf, Education) 'I share with my artisan. They are good teamwork. I learn some [*things*] from them like fitter and boil maker … I love to learn something new ... Let me improve my level of quality'. (P8, Male, Deaf, Mining)
	Practical illustration	' … help my boss to remove security bar for PC from table'. (P4, Male, Deaf, Food industry) 'Hands-on learning is a form of experience learning'. (P10, Male, Deaf, Law)
	Learning to work with people	'Teach me about the value and challenges of working with others'. (P2, Male, Deaf, Education) 'I learnt from other that I must be patient with people or boss or learners ... '. (P3, Female, Deaf, Education)
	Support from overseeing party	'Facilitators show me how to reduce stress from workload'. (P2, Male, Deaf, Education) ' … if any problem and I don't know about it and I always ask my foreman or artisan to help or advice'. (P8, Male, Deaf, Mining)
Academic exposure	Delegation that promotes academic inquiry	'New challenges I faced … Updating all weekly plans was convenient for me to allocate and complete the tasks. To prompt, assess, encourage and guide the learners to achieve the learning outcomes. To provide feedback on the learners' progress towards achieving the learning outcomes. I had designed the assessment tasks'. (P2, Male, Deaf, Education) 'I have a job that requires researching of assets and their applications as well as the industry to which they pertain, so I am constantly learning every day'. (P5, Female, Hard-of-hearing, Financial Services)
	Informant orientation	' … better understanding of how company work like to give deaf employee a completed company policy handbook and allow to read careful each pages, ask them questions if not understand'. (P7, Male, Deaf, Power Solutions) ' … if any problem and I don't know about it and I always ask my foreman or artisan for advice'. (P8, Male, Deaf, Mining)
	Technology orientation	'For the last six months I've experienced a lot through computer, especially movie editing and also did animation too'. (P6, Male, Deaf, Hospitality) 'Visio [*visual illustration computer application software*]'. (P11, Female, Deaf, Law)
	Exposure: Analysis	'A moderator's clear explanation strike me. I learn a lesson to make much pressure to complete the tasks'. (P2, Male, Deaf, Education) 'I have a job that requires researching of assets and their applications as well as the industry to which they pertain, so I am constantly learning every day'. (P5, Female, Hard-of-hearing, Financial Services)

P, participant.

TABLE 2: Job resources that employees with hearing impairments experience as motivational in South Africa.

Theme	Sub-theme	Response
Constructive social affiliation	Respect towards hearing impairment	'I am fortunate that my team know that I can only hear on the right- hand side, and they normally conduct the traffic that side'. (P5, Female, Hard-of-hearing, Financial Services) 'I have lots of motivation because they do respect with me. They believe that [*being*] deaf is nothing wrong'. (P8, Male, Deaf, Mining)
	Being part of a work team	'I enjoyed [*to be*] here with my work team'. (P10, Male, Deaf, Law) 'Work with [*my*] team'. (P12, Female, Deaf, Law)
	New social contact	'I facilitated new learners'. (P2, Male, Deaf, Education) ' … meeting new people … '. (P6, Male, Deaf, Hospitality)
Learning	General skill improvement	'I'm getting better, which makes me even more excited'. (P6, Male, Deaf, Hospitality) 'Let improve my level of quality'. (P8, Male, Deaf, Mining)
	Communication skills	'I feel motivated to learn something new about communication'. (P3, Female, Deaf, Education) 'I have [*been*] excited [*about*] professionalism, communication and PowerPoint'. (P11, Female, Deaf, Law)
	Computer application functional to job	'Drawing with Draft Sight'. (P4, Male, Deaf, Food industry) 'I [*was*] excited for PowerPoint and email'. (P11, Female, Deaf, Law)
	Constructive feedback	'Moderator provided more positive feedback to me'. (P2, Male, Deaf, Education) 'I learnt a lot when I got several troubles … I know what company expects me to do'. (P7, Male, Deaf, Power Solutions)
	New exposure	'I love to learn something new'. (P8, Male, Deaf, Mining) '… learning different things at work …'. (P5, Female, Hard-of-hearing, Financial Services)
Constructively influencing	Learners	'I coached the learners to improve their learning abilities and an air of confidence'. (P2, Male, Deaf, Education) 'Give them [*learners*] activity such as drawing on A3 paper and empowering them to give them presentation'. (P9, Male, Deaf, Education)
	Team	'I feel motivated by leading a team and helping colleagues grow'. (P2, Male, Deaf, Education) 'Motivate help team work, we could achieve together, celebrate our success'. (P3, Female, Deaf, Education)
Holding responsibility	Leading and/or facilitating	'When I learned more about the learners and their background during the training and they inspired me to work with them and also motivates me to teach and encourage them to achieve what they want. And also it motivates me to help them to reach their goal'. (P1, Female, Deaf, Education) 'By facilitating 47 learners, I enjoy great challenges'. (P2, Male, Deaf, Education)
	Deadlines	'Meeting deadlines keeps me motivated to continue to exceed expectations'. (P2, Male, Deaf, Education) 'Motivate deadlines, work well on schedule. Meeting a deadlines help me to feel like I have accomplished a goal'. (P3, Female, Deaf, Education)
Challenges	Challenges in general	'By facilitating 47 learners, I enjoy great challenges'. (P2, Male, Deaf, Education) 'I have a lot motivated at mines. They have many challenged [*challenges*]'. (P8, Male, Deaf, Mining)
	New area(s) of challenges	'…I enjoyed work every day, because there are always new challenges'. (P6, Male, Deaf, Hospitality) '… new challenge way forward'. (P13, Male, Hard-of-hearing, Education)

P, participant.

TABLE 3: Job resources which employees with hearing impairments experience as assisting task completion in South Africa.

Theme	Sub-theme	Response
Communication adequacy	Communication efficiency	'[*Communication*] was not good enough to help when I needed [*it*]. So now [*it is*] most better, because communication improved'. (P3, Female, Deaf, Education) 'Communicate, it's no problem.' (P8, Male, Deaf, Mining)
	Textual communication	'Easier communication can be written on paper or via phone from another person'. (P6, Male, Deaf, Hospitality) '… need to give me written job cards all the time and I can [*find it*] easy to follow instructions … also better understanding of how company work like to give deaf employee a completed company policy handbook and allow to read careful each pages'. (P7, Male, Deaf, Power Solutions)
Adequate orientation	Task orientation	'I always place my client on my right- hand side so that I can get the information clearly'. (P5, Female, Hard-of-hearing, Financial services) 'It can give me some idea of what I am supposed to be doing'. (P10, Male, Deaf, Law)
	Organisation of tasks: Own input	'Updating all weekly plans was convenient for me to allocate and complete the tasks'. (P2, Male, Deaf, Education) 'I am an extremely organised person and do my job according to priorities and this allows me tackle my workday in a scheduled manner'. (P5, Female, Hard-of-hearing, Financial services)
	Relevant information source	'I have access to the necessary equipment to fulfil my tasks as well as the necessary research engines'. (P5, Female, Hard-of-hearing, Financial services) 'Luckily, I know what [*is*] going on. I got all the information from the foreman and paper'. (P8, Male, Deaf, Mining)
Assistance	Task orientation guide	'… if [*I have*] any problem and I don't know [*something*] about it, I [*can*] always ask my foreman or artisan to help or advise [*me*]'. (P8, Male, Deaf, Mining) '… need to have some guidance/guideline …'. (P14, Female, Deaf, Education)
	Work partner	'I do like to have [*someone who*] assisted me to do the [*task*] complete, but my boss did not have enough time with me'. (P4, Male, Deaf, Food industry) 'One of my co-workers helped and worked with me all the time'. (P6, Male, Deaf, Hospitality)
	Sharing work experience	'Staff shared work experiences with me in order to make sure I could complete the tasks easily'. (P2, Male, Deaf, Education) 'We share our experiences, which helps us complete tasks'. (P5, Female, Hard-of-hearing, Financial services)
	Team support	'If I do not understand the tasks then I would ask my team [*about the*] work or … to explain again to [*help me*] understand'. (P3, Female, Deaf, Education) 'I am surrounded by a team who motivates and assists where needed'. (P5, Female, Hard-of-hearing, Financial services)
	Supervisor support	'My supervisor assisted me to learn [*by providing*] training about the scanner and checking files'. (P10, Male, Deaf, Law) 'Yes, [*name of supervisor*] supported me.' (P11, Female, Deaf, Law)
	Management support	'Training manager helped [*to*] alert me to be aware of the task I forget to complete'. (P2, Male, Deaf, Education) 'Moderator and IT Management help me to improve my communication at work'. (P3, Female, Deaf, Education)
Time consideration	Time management	'… manage time to make sure the tasks are completed …'. (P2, Male, Deaf, Education) 'Time management is required to complete all the tasks'. (P14, Female, Deaf, Education)
	Time accommodation	'Allocate time for learners to complete the tasks'. (P2, Male, Deaf, Education) 'Find time to learn to understand'. (P3, Female, Deaf, Education)

P, participant.

As stated in Table 3, adequate communication, adequate orientation, assistance and time consideration were resources for EwHIs that enabled task completion.

Discussion

Outline of the results

The objective of the study was to explore the experiences of EwHIs which manifested as job resources. Three sub-categories of job resources are outlined in literature: (1) workplace characteristics from which employees *learn* (Bakker & Demerouti, 2017), (2) aspects that help *motivate* employees (Schaufeli & Bakker, 2004), and (3) characteristics that assist employees with *task completion* (Xanthopoulou et al., 2007). Each of these subcategories were investigated in the present study.

To explore job characteristics *from which EwHIs in South Africa learn*, questions were posed to the respondents about such experiences. Three themes were identified and are discussed in more detail next.

Learning from subordinates

Hearing impairment in South Africa has been significantly associated with social isolation (Peer, 2015) which may explain why *exposure to diverse peoples* was regarded as a job resource through which EwHIs learned. In addition, participants explained that interaction with subordinates helped to expand their *vocabulary*. This concurs with Chaudhuri and Chosh (2012) who report that reverse mentoring can function as a social-exchange tool that guides generations to exchange intellectual capital.

Learning through work associates

Employees with hearing impairments indicated that, collaboration with work associates gave them the opportunity to *acquire new job skills*. This finding is supported by Moore (2001) who reports that on-the-job training of EwHIs results in elevated competence levels. Moreover, participants pointed out that interaction with work associates helped enlighten them about the *ways to work with people*. Such interaction is suggested to empower the EwHIs' learning in the long term. Correspondingly, Cawthon et al. (2015) pointed out that social skills positively predict EwHIs' learning for up to 10 years. Also, respondents of this study indicated that *support from an overseeing party* significantly enhanced their learning in the workplace. This finding is supported by Sarti (2014) who reports a positive relationship between supervisor support and employees' learning. Relatedly, the training of supervisors to provide resources for their subordinates are effective interventions (Bakker & Demerouti, 2018). A *collaborative social system*, in the work environment, can assist in creating both procedural and declarative knowledge (Kimmerle et al., 2010). Findings of this study suggest that such a collaborative system heightened EwHIs' learning.

Academic exposure

It appears that EwHIs' *delegation* of tasks led them to engage in reasoning and activities that urged them towards *academic inquiry*. *Informant orientation* is indicated to be complementary to the latter. Such empowering leadership assist recipients' psychological autonomy (Fong & Snape, 2015) and career self-management (Coetzee & Schreuder, 2024).

To explore job characteristics that *motivate EwHIs in South Africa*, this study inquired about the work experiences that made these employees feel excited or motivated. Several themes and sub-themes emerged from the data. Three themes are discussed in more detail.

Constructive social affiliation

Employees with hearing impairments reported that *respect towards hearing-impairment*, exhibited by understanding behaviour and not viewing hearing-impairment in a negative light, made then feel part of the team. This finding demonstrates that the outlook of colleagues and management towards an EwHI, meaningfully shapes the identity of that person (Lund, 2015). Moreover, social affirmation of EwHIs will enhance their self-authenticity and well-being (Didonato & Krueger, 2010). Similarly, participants in the present study indicated that *being part of a work team* can motivate them. Detaille et al. (2003) report that EwHIs value understanding, acceptance and acknowledgement in the workplace. Furthermore, this study found that EwHIs associate *new social contact* positively to their motivation. Correspondingly, Lund (2015) reports that social interaction energises EwHIs.

Learning

General skill improvement was found to empower EwHIs and enhanced their productivity. The skill improvement was reported to strengthen their motivation. This finding is supported by Ryan and Deci's (2000) assertion that personal competence enhances personal motivation. *Developing communication skills* was another motivation-related sub-theme that was extracted from the data. Specifically, the improvement of communication insight and professional conduct were related to motivation. Learning is a job resource and is positively related to employees' motivation (Bakker & Demerouti, 2018). Likewise, *learning to operate computer applications* that are functional to the job, was found to strengthen EwHIs' motivation. A possible explanation for this is that technologies are creating more equal opportunities for EwHIs (Van Gils et al., 2010). In addition, learning through *constructive feedback* was found to motivate EwHIs. This corresponds with findings of coaching positively and directly, resulting in positive emotions among employees (Xanthopoulou et al., 2012). Moreover, *learning new things* was found to enhance EwHIs' motivation. Personal growth, through learning, is reported to be inherently motivational to employees (Jha, 2010).

Challenges

Two sub-themes emerged from the data, namely, *challenges in general* and *new area(s) of challenge*. Employees with hearing impairments reported that they experienced job characteristics that are constructively demanding which positively influenced their work motivation. An explanation for this finding could be that EwHIs experienced a sense of accomplishment, when meeting work challenges, which in turn bolstered their intrinsic motivation (Gómez-Miñambres, 2012).

To explore the job resources that *EwHIs in South Africa find to help them accomplish their tasks*, several themes and sub-themes emerged from the data. Three themes will be discussed in more detail next.

Adequate communication

Two sub-themes were identified namely *communicating effectively* and *textual communication*. Employees with hearing impairments indicated that effective communication was a requirement for successful task completion. In support of this finding, Hua et al. (2015) stressed the importance of effective communication strategies for EwHIs to cope with the demands at their workplaces. Relatedly, textual communication was found to make communication easier for EwHIs to complete their tasks. A possible explanation for this is that textual communication bridges the potential communication divide between EwHIs and employees without hearing impairments in the workplace.

Orientation

Employees with hearing impairments indicated that their orientation to task-related processes was key to their task completion. This finding corresponds to Coniavitis et al. (2004) who stress that adequate orientation of an EwHI, to fully understand the task, is crucial. However, Punch et al. (2007) report that EwHIs rate meetings as problematic more often than hearing employees. In this study, *own contribution to organising tasks* implies weekly planning as supplementary to the tasks' allocation and completion. In addition to the above, prioritising such assignments is denoted as essential for successful task completion. In support of these findings, scholars recommend that EwHIs should be allowed to have some control over their work settings to manage their well-being (Lund, 2015; Van Gils et al., 2010). Therefore, employees' well-being is precedent to their performance (Bakker & Demerouti, 2018). In this regard, Kramer et al. (2006) report that EwHIs who demonstrate more control in their tasks were more likely to be permanently employed, possibly because of higher productivity. Moreover, EwHIs indicated that having access to sources resulted in more effective task completion. Likewise, Van Gils et al. (2010) found that more than 50% of EwHIs depend on the support from co-workers for work-related information. Consequently, the scholars posit that technological advancement promotes EwHIs' equality because it provides them access to information about their work.

Assistance

Employees with hearing impairments suggested *task-orientation guides* to help them complete their tasks. In addition, the participants stated that a *work partner* could serve the same purpose, as well as co-workers who are willing to *share their work experience*. These job resources are supported by Van Gils et al. (2010) also who reported that more than 50% of EwHIs rely on colleague support for work-related information. Detaille et al. (2003) stated that EwHIs value mutual understanding among colleagues to simplify matters for them in the workplace.

Practical implications

Through the in-depth insight on the work-related experiences that EwHIs regard as job resources, the following practical implications can be highlighted: EwHIs' learning, motivation and task completion relate to a work setup that encourages social interaction and promotes communication. Likewise, a respectful attitude and considerate behaviour towards EwHIs enhance their general well-being. In addition, the findings of this study suggest that investing in technology-related skill training can foster feelings of competence in EwHIs which is comparable to hearing colleagues. Acquiring such skills can therefore be regarded as an equalising strategy in the career development of EwHIs. Moreover, EwHIs are motivated when they can take responsibility, meet a deadline and be challenged by a work-related task. It is however critical that textual communication, manuals or written guides, and adequate task orientation be provided from onset to drive EwHIs towards reaching the sought end.

The JD-R model proved to be a reliable framework for exploring the experiences of EwHIs' job resources. Therefore, this study's findings may stimulate further research, policy development and best practices pertaining to EwHIs in South Africa.

Limitations and recommendations

Firstly, the present study used a qualitative research approach implying that findings are not generalisable to the entire population of EwHIs in South Africa. However, the aim of this exploratory study was to comprehend the experiences of EwHIs in the workplace that can be regarded as resources. Furthermore, detailed descriptions of the participants' characteristics, the research process and findings should aid researchers to transfer the insights gained from this study to other settings. Future studies could follow a quantitative approach to validate the findings. In addition, longitudinal studies can be used to investigate the cause-and-effect relationship between job resources and other constructs such as career adaptability, career agility and flourishing of EwHIs over time. Secondly, the sample consisted mostly of employees who are deaf (86%), leaving employees who were hard-of-hearing underrepresented (14%). Future studies could employ a stratified sampling technique to correct this imbalance. Finally, the majority of participants (64.3%) were between 30 and 39 years old. Future studies can aim to include a more evenly spread of younger and older employees by using a stratified sampling technique.

Conclusion

This qualitative study gives practical insight into job characteristics that EwHIs in South Africa experience as job resources. The main categories that emerged include learning from subordinates, learning from work associates, academic exposure (learning experiences), constructive social affiliation, learning, constructively influencing, holding responsibility, challenges (motivational experience), communication adequacy, adequate orientation, assistance and time consideration (experiences that assisted task completion). While these categories correspond with the job resources themes of physical, psychological, social or organisational (Bakker & Demerouti, 2007, 2018; Bakker et al., 2023), this study's findings provide insight into particulars of how such job characteristics themes can be leveraged for workplace setups that promote quality of work life and realisation of human rights for this vulnerable population group. Thus, results of this study provide organisations with valuable information that can inform and/or enhance practices, decision and policy relating to EwHIs.

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Competing interests

The authors declare that they have no financial or personal relationships that may have inappropriately influenced them in writing this article.

Authors' contributions

S.C. has made a significant contribution to the conceptualisation and design of the study, and acquisition, analysis and interpretation of the data. S.C. also critically reviewed the intellectual content of the article and approved the final version of the article to be published. B.E.J. made a substantial contribution to the conception and design of the study. B.E.J. also contributed to the analysis and interpretation of the data. Furthermore, B.E.J. drafted the article, critically revised its intellectual content and approved the final version thereof to be published. M.B. made a substantial contribution to the conception

and design of the study, analysis and interpretation of the data and critically revised the article for important intellectual content. In addition, M.B. approved the final version of the article to be published.

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Data availability

The data that support the findings of this study are available upon written and reasonable request to the corresponding author, B.E.J.

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