



Article

“Someone Like Anyone Else”: A Qualitative Exploration of New Zealand Health Professional Students’ Understanding of Disability

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Abstract: Background: One in four New Zealanders identify as disabled. Disabled people, including Māori (the indigenous people of New Zealand (NZ)), experience health disparities. Systemic and individual health professional (HP) biases are factors that may affect health outcomes. Disability education is a means for improving attitudes and behaviors towards disabled people. The objective of this study was to explore NZ HP students’ understanding of disability and health-related concepts. Methods: HP students from one tertiary institution in NZ were interviewed through Zoom video call about their understanding of disability and health. A relativism paradigm and contextualism epistemology (underpinned by the socio-ecological model) shaped the reflexive thematic analysis. Transcripts were analyzed at a deductive and latent level. Results: Nine HP participants, from different professional courses and cultural backgrounds, were interviewed. Three main themes influenced participants’ understanding of disability: life experiences, professional education, and societal exposure. Participants who had more experience with disabled people had a deeper and more nuanced appreciation of the challenges disabled people face in accessing health services and obtaining equitable health outcomes. Cultural background also influenced the participants’ understanding of disability. Participants preferred more experiential learning methods to improve their knowledge of disability concepts. Lastly, expectations of inclusion are determined by observing social norms. Conclusion: Participants reported learning just a few models of disability. The HP students predominantly came from a perspective of ensuring equality rather than equity. There was limited recognition of the systemic biases that exist within multiple social determinants and how these perpetuate health inequities for disabled people. A socio-ecological consideration of disability throughout the curricula, self-reflection, acknowledging systemic bias, and proactively including disabled people as HP students and teachers are potential means for addressing health inequities.

Keywords: disability; indigenous Māori; health professional students; pre-registration health professionals; education; disability concepts; qualitative



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1. Introduction

Disabled people make up 15% of the world’s population [1]. In New Zealand (NZ), 24% of the population considered themselves disabled according to the 2013 NZ Disability survey [2]. Internationally, disability is more prevalent in known marginalized populations such as women, children, and indigenous populations [3]. This is also true in NZ where the NZ Disability Survey (2013) showed Māori, the indigenous people, of NZ, have a higher (age-adjusted) prevalence (32%) of disability compared to people who identify as European (24%) and Asian (17%) [2].

Disabled people experience health inequities due to barriers existing within multiple social determinants of health such as education, employment, housing, as well as bias within the health systems (e.g., access to quality health services) [4]. Disabled people who identify as Māori, and other indigenous populations worldwide, are subjected to more severe health inequities because of the effects of institutional racism, colonization, and intersectionality [3–6]. For example, the NZ Disability survey showed that 25% of disabled Māori report having insufficient income to meet their daily needs and experience inequities in accommodation, food, clothing, and other necessities compared to 8% of Māori without disability [7].

Barriers to health equality for disabled people are present due to inequitable distribution of resources and discriminatory attitudes arising from health professionals (HPs) in the health care system [8–10]. Negative attitudes and behaviors of HPs towards disabled people result in unsatisfactory health care and a reticence for disabled people to seek health care services [9,11–18]. Disabled people are twice as likely to report finding health care provider skills are inadequate to meet their needs, four times more likely to report being treated badly, and three times more likely to report being denied care [11,18]. Poor attitudes and awareness around disability, particularly towards intellectual disability from HPs, is one of the common constraints faced by disabled people in accessing health care services [13,19–21]. Recent international cross-sectional studies have also demonstrated nurses' attitudes toward adults with intellectual disability and autism were significantly less positive compared to adults with physical impairments, although the chosen methodology limits the ability to understand why or how these attitudes and behaviors exist [22,23].

Interestingly, literature reports that HP students also express negative attitudes towards disabled people, for example, using depersonalized or negative words [15,24–26]. Similar to practicing HPs, these behaviors arose from a lack of confidence with approaching disabled people and a feeling of being 'overwhelmed' due to a lack of training with positive disability-specific experiential learning opportunities [15]. Previous surveys of registered nurses have shown preparedness via upskilling and postgraduate learning opportunities is associated with more comfort and knowledge to care for people with intellectual disability and autism [27,28].

Including educational content on disability in HP education has been shown to improve attitudes of HP towards disabled people [16,21,29–35]. International studies (i.e., Australia, NZ, Hong Kong) have explored optimal and innovative ways to teach HP students about disability [9,14,16,34,35]. Experiential learning in clinical and non-clinical settings, reflective practice, and inter-professional learning have proven effective in improving attitudes towards disabled people [16,29,30]. However, the quality and breadth of disability education taught to HP students in studies varied greatly, and the influence of culture on attitudes, beliefs, and behaviors towards disabled people are rarely discussed [9,14,16,34–37]. As each student will have an individual perspective, it is important to acknowledge how their individual understanding of disability concepts with respect to health outcomes is influenced by their clinical and non-clinical experiences.

Therefore, the aim of this study was to explore how socio-ecological factors influence HP students' understanding of disability and health concepts so that we could provide insight into (1) HP students' understanding of disability and (2) HP students' knowledge of resources to advocate for and provide appropriate health care.

2. Materials and Methods

2.1. Recruitment

Following the gaining of ethical approval, the study was advertised digitally through emails and Facebook posts and physical posters circulated to all the University of Otago's campuses across NZ. A purposive sampling frame was used to guide the heterogeneity of the participants. This included HP discipline, ethnicity, and gender. Inclusion criteria consisted of being 16 years of age and over and enrolled in any undergraduate or postgraduate HP program at the institution. Interested students were emailed an information sheet

and a consent form. One student sent the information sheet, was unable to commit to the interview within the timeframe due to course assessment deadlines, and was therefore not included in the study.

2.2. Data Collection

A Zoom (Version: 5.0.2) video call was scheduled, and demographic data were collected using a Google © form for each participant. A semi-structured interview schedule with open-ended questions was developed. It evolved from background reading, understanding of the socio-ecological model, and collaborative input from the team. The research team, who we have identified by their initials, have lived experience of Te Ao Māori (Māori world view) (TI and BJ), disability (TI, BJ, MP, and SR), and interprofessional clinical and undergraduate education backgrounds in medicine, nursing, and physiotherapy (TI, BJ, and AC, MP respectively). The interview was used to explore the way in which various disability discourses in society are present in the narrative of experience and meanings ascribed to events by the HP students. Key areas covered include: personal experiences of disability (own or close others); current understanding and knowledge of cultural, social and economic deprivation experienced by people with disability, and especially Māori with disability; current understanding of health, wellness, and disability frameworks to assess service need and outcomes; and experiences of attitudes towards disability by peers, whanau (family), academic institution and teaching staff. SR tested the interview with a fellow student prior to data collection beginning. Small amendments to improve clarity were made. The interview schedule further evolved over time when responses from previous interviews indicated areas important to consider with future participants.

The interviews were predominantly facilitated by SR, who was an undergraduate 4th year Bachelor of Physiotherapy Honors student when the study was conducted. As SR had never conducted qualitative interviews before, either AC or MP, who are both experienced qualitative researchers, were also present to ensure participants felt safe and that key concepts were discussed. Interviews were conducted and recorded online via Zoom.

The interview audio, video, messages, and automated audio transcript were stored in Zoom. SR copied the Zoom automated audio transcript into a Word document and then edited this to reflect the participants' audio file verbatim, except for any identifying data, which was removed to anonymize the participants (i.e., P1, P2, etc.). The edited transcripts were reviewed multiple times by SR to check for accuracy.

2.3. Methodological Approach: Thematic Analysis

Reflexive thematic analysis, as discussed by Braun and Clarke [36,37], guided the study process (a six-phase approach) and considerations. The research and research questions were approached from a relativism paradigm and contextualism epistemology. Meaning was interpreted from a more deductive and latent perspective, with the research teams' collective experiences integral to interpretation [36]. The research team has combined research experience of more than 40 years. The concepts underpinning the analysis were the social disability model and the social-ecological framework [38,39]. Although the structure of the research process is presented linearly, it was an iterative and reflexive process occurring between phases [36].

2.3.1. Reflexivity

Prior to the analysis process, AC, MP, and SR wrote individual reflective statements about their own lived experiences of disability, their HP, and disability-related interactions, including models and frameworks around disability and health and their current viewpoint of disability theory. SR additionally kept a diary of field notes following interviews and the development of thinking through the analysis process. Both reflexivity and the more informal diary allowed for explicit consideration of perspectives, knowledge and

assumptions, and metacognition over time [36,40,41]. They also provided insight regarding the influence of prior knowledge to, and during, the interpretation of the data [36].

2.3.2. Familiarization of Data and Coding (Phase 1 and 2)

The audio interviews were listened to several times with notes on interesting points made. All the transcripts were imported into NVivo (Version 12.6.0), and each transcript was read several times, frequently in conjunction with simultaneous audio listening [36]. SR initially coded each transcript by identifying segments of data as interesting or relevant and specifically considering social-ecological factors related to the participants' responses. Then she developed theme ideas across participant transcripts looking for similarities and differences of participant thoughts and her own interpretation of that data [36]. In addition, two odd-numbered transcripts and two even-numbered transcripts were independently parallel coded by AC and MP, respectively, following the same process.

2.3.3. Generating Initial Themes, Reviewing, Refining, and Defining Themes (Phase 3, 4 and 5)

Following further reading of transcripts and re-listening to sections of relevant interview audio SR generated a theme list. AC, MP, SR met to discuss their independent interpretation (i.e., understand the meaning of the data) and considered their joint interpretation and understanding of any possible relationships between initial themes. SR, AC, and MP continued reviewing the themes by re-reading data, using memos (snapshots of thought processes during theme reviewing), and by developing a concept diagram of the initial themes. After several months of analysis, which involved reviewing each theme's meaning and reflection upon the relationships between themes, iteratively modifying the concept diagram of themes, and discussion with the research team, the themes were defined and named [36]. MP then met and discussed the refined themes and interpretation of the data with BJ and TI on three occasions and discussed their interpretation of the data and its meaning. This input further refined the interpretation and key discussion points. Health circumstances and COVID-19 restrictions had prevented a whole team meeting either face to face or via Zoom. Finally, participants were sent an overview of the results; no further refinement of the themes arose from this process.

3. Results

3.1. Demographics

Nine non-disabled HP students from a range of ethnocultural backgrounds (i.e., Māori, Samoan, NZ European, Thai, Chinese, Filipino, Indian, and Sri Lankan) participated in this study. Over half the participants had previous life experiences with disabled people (see Table 1). Interviews ranged in duration between 40 and 80 min.

Three themes were interpreted from the data: (1) life experiences, (2) professional experiences, (3) and societal exposure. Supporting quotes and all the specific health and disability models the students recalled, the modes of teaching and participant recommendations for enhancing their understanding and ability to apply their knowledge of disability and health concepts can be found in supplementary Table S1, which is found in the supplementary reading. For ease of reading, square brackets [] were used to provide additional context, and an ellipsis (. . .) was used to indicate the removal of text, which provided no additional meaning and created 'noise'.

3.2. Life Experiences

Participants shared a wealth of life experiences that shaped how they viewed concepts of health and disability and how they interacted with disabled people in a clinical and non-clinical setting. Two key factors identified were: Culturally diverse upbringing and previous experiences with disabled people.

Table 1. Participant demographic summary.

Demographic Variable	Demographics	Number of Participants
Gender	Female	8
	Male	1
Year	2nd	1
	4th	8
	MB ChB	3
Degree	BPhty	3
	BDS	2
	BPharm	1
Previous higher education degree	Yes	3
	No	6
Previous life experiences with disabled people	Yes	6
	No	3

MB ChB: Medicine and Surgery degree; BPhty: Physiotherapy degree; BDS: Dentistry degree; BPharm; Pharmacy degree.

3.2.1. Culturally Diverse Upbringing

Four participants were born and raised in countries other than NZ and the rest, while born in NZ, identified with ethnicities other than NZ European (i.e., Māori, Filipino, Indian). Participants reflected upon these formative years and particularly how their culture influenced their understanding of disability. For example, one participant described disability as a punitive ‘Act of God’, an understanding she had grown up with from her home village in Samoa, that was, “like an ancestral history thing that gets passed on from one to another” (P8). Conversely, the following participant explained a Māori perspective of ability rather than deficit and discussed the negative connotations of the term ‘patient’ from a Te Reo (the Māori language) world view, “I call them Tangata Whaiora, person that’s seeking health . . . just someone like anyone else . . . [a] more uplifting term” (P9). Participants brought up with Asian cultural values, regardless of place of birth, had a different perspective again. They mentioned discrimination and negative stereotyping, often noting that disability was a societal ‘taboo’. One participant from Singapore mentioned that, “You were just conditioned from young not to look at or engage with disabled people” (P3).

3.2.2. Experiences with Disabled People Enabled a More Nuanced Understanding of Disability

Five participants had experienced meaningful interactions with one or more disabled people. These life experiences included personal and professional relationships. Importantly, the intimacy of the relationship influenced their depth and breadth of knowledge. Participants who had close family members with disability more readily discussed the inter-dependence and importance of good service provision and support across the health and disability system to ensure equitable health outcomes than students with fewer experiences of disability. They also discussed the multiplicative effect poverty, housing insecurity, and a curtailed education have on health outcomes. However, a different participant, who had limited personal experience but greater clinical experience due to a previous HP qualification, also discussed systemic barriers across the health and education sectors, alluding to her knowledge of a social model of disability and barriers to services, “People fall between these massive gaps, and are also faced with duplication of services that are just endlessly frustrating for them” (P1). She believed that HPs needed to ensure person and whānau (extended family) centered care were delivered, no matter what formative beliefs they were brought up with, “Adapting your practice to facilitate access is our job. Not our patient or service users’ job, to make themselves fit [the system]” (P1).

3.3. Professional Education

Participants discussed how theory and experiential learning opportunities within their HP programs influenced their past understanding of disability and health. Three subthemes were identified: (1) professional education awakened students to disability; (2) theoretical knowledge provided a foundational understanding of disability concepts; (3) experiential learning deepened their understanding.

3.3.1. Professional Education Awakened Students to Disability

During their HP education, the participants recognized that they were challenged to consider different cultural health beliefs, and thus they had an opportunity to reflect upon societal values they held. This was particularly noteworthy for the international students who reflected upon the societal expectations and support for disabled people in NZ compared to that seen in their home countries. Some recognized that disabled people had different rights and opportunities for advocacy compared to their home countries. A student from Samoa highlighted this, "I wasn't really sure that I understood what disability was until I came to NZ" (P8).

Their professional education curricula provided a 'safe' place to reflect and gain insight into pre-existing beliefs, which led to the further development (reframing) of their own disability beliefs. One participant reflected on the values she held prior to beginning the course and her current beliefs, "I think that [the previous] beliefs come from not actually understanding what is wrong and why these people have these disabilities . . . So, I think fully understanding conditions helped change my beliefs and reframe that whole cultural belief" (P4).

3.3.2. Theoretical Knowledge Provided a Foundational Understanding of Disability Concepts

All participants noted that their HP programs commenced with developing theoretical and fundamental concepts related to their chosen professions prior to clinical placements (i.e., experiential learning was scheduled later in their course). The following section presents the theoretical knowledge of disability concepts and the health models participants shared.

Participants discussed the interplay between culture, health, and disability with a large component of their theoretical knowledge obtained through lectures and tutorials, while some mentioned guest lectures, workshops, and visits to a marae (a traditional Māori meeting ground). They described health as something personal to an individual but explained that disability is a term referring to an outcome created by the behavior of society. However, they would also use the terms disability and impairment interchangeably; thus, there was dissonance in their own beliefs, "Someone who isn't able to do the things that an average person would, or that the majority of people can do, like on a daily basis thing like taking care of themselves independently" (P2).

Confidence was evident when the students talked about cultural health beliefs relevant to the NZ context and Treaty of Waitangi obligations. From the theoretical content they had acquired, they understood why knowledge of Māori cultural health beliefs, epidemiological knowledge, and recognizing systemic racism was important for improving Māori health outcomes and other factors perpetuating inequity. Likewise, for Pasifika cultures. For example, the following participant discussed their knowledge on culturally safe practice by discussing the importance of developing a good rapport, "'Oh, where are you from?' and maybe we have to have a grasp of knowledge about that country . . . and maybe we have to pay a little bit more attention to them because they have a higher risk of not [accessing] the health care system compared to others" (P6).

Participants acknowledged that learning about and valuing other people's cultural beliefs abstractly was challenging, with one participant stating that it was "really hard for other people to understand what they [the teachers] are talking about" (P8). Conversely, some participants who were more aware of their own cultural health beliefs appreciated learning about Māori and other health belief models, perhaps because the spiritual and

holistic dimensions were familiar, “In [Indian] culture we’re very spiritual people, so you know if something is wrong physically, spiritually, or mentally, so I think that’s why Te Whāre Tapa Whā (the four cornerstones of Māori holistic well-being) model did resonate with me because it’s very similar to my cultural beliefs” (P4).

A strong theoretical base of disability knowledge and concepts were not, however, so evident. Few participants discussed knowledge gained from specific tutorials or lectures and often inadvertently described aspects of the social model of disability: “They just taught us how to approach people with disabilities and how we have to like work ourselves and try and evolve society” (P8).

No participants mentioned other culturally relevant terms for disabled people, such as Tāngata whaikaha or Whānau Hauā, except for one student who used the term Tangata whaiora, (someone seeking health). Some participants discussed the International Classification of Functioning, Disability and Health framework (ICF) and thought what they had learned was sufficient for application into clinical practice, “A foundation. A knowledge base that you work from, so I think they’ve done pretty well with teaching that [ICF model] to us” (P3).

Some participants had gained an awareness of legislation, policies, and funding models relevant to disability services and equipment provision. However, for equipment provision, participants could only vaguely name a potential support or funding stream. For example, students found it difficult to elaborate about the processes or practicalities of instigating support or access to modifications or equipment for someone, “I’m not too sure about government policies in NZ. There’s like ACC (Accident Compensation Corporation; NZ’s no fault insurance scheme for injury related health costs) which is like the accident-related costs. So, I think financially the government has things in place for people with disability?” (P7).

3.3.3. Experiential Learning Deepened Their Understanding

Experiential learning via practical laboratories and clinical experiences were considered especially helpful for developing and deepening understanding of disability concepts. Similarly, simulation or role-play in laboratories provided opportunities to learn about fatigue, and the burden environmental barriers may create for disabled people and thus also the physical barriers to access services, “We were told to choose an aid, like a wheelchair or crutches, or a walking stick or like a frame and go out in the community and just see how community mobility is like. It was actually quite difficult getting around. Even like ramp access! It’s actually quite hard to self-propel yourself up the slope” (P3).

Clinical placements were particularly valued and provided an opportunity for some HP students to meet a disabled person for the first time, which enabled the realization that a disabled person is a person, just like everyone else, “Just because they have a disability, they are still a person. So, first and foremost treat people as a person, like as if they were anyone else” (P2). From these clinical interactions, some participants began to appreciate some of the realities of life for some disabled people and the potential psychological effects of being ‘disabled’ by society. These experiences enabled critical thinking and reflection about policy and funding for the services a disabled person might need and also helped them appreciate the difficulties inherent in an impairment-based funding model, “I think there’s a quite a lot of criteria . . . I feel like for some people it is actually quite difficult to actually get support and get what they need to help them live a ‘normal’ or daily life” (P2).

Most participants came from a perspective of equality and discussed treating everyone equally. Rarely, however, was equity mentioned. They reflected that vicarious learning, observing a clinician, especially when students were in their earlier years of clinical training, was influential, but they gained more from being actively involved. They especially remembered encounters that had challenged their skills and where they needed to develop strategies to establish rapport and gain informed consent, especially when someone’s impairments were frightening or confronting for them. One participant recalled an encounter with a patient who was acutely distressed in the hospital environment, “I had to approach

him calmly with my [supervising clinician] and he [the patient] was able to interact with me if I spoke to him in a calm way" (P8).

Some participants noted a tension between placement constraints and the application of 'best evidence', including frameworks and models to clinical practice. Participants did not necessarily use any cultural health model, disability model, or health framework explicitly, potentially because of the present time constraints, opportunities for use inconsistent across clinical placements, and support from supervising clinicians variable. They were acutely aware of who was grading their clinical practice and if their approach to practice differed from their supervising clinicians, especially if the supervisor appeared to favor biomedical knowledge and technical skill. This participant reflected that using health models would be beneficial but that it was not realistic due to the more immediate priority of passing and thus completing her degree, "The whole health care system should be following [the health models] which is a challenge, and you have a lot of barriers like grades [in order] to finish up our degree. We're all just rushing to get our clinical requirements so that we can pass and move on to the next year" (P7).

Finally, participants who were international students were insecure about how to align what they had learned with respect to disability in NZ with clinical practice on their return home. When there was a dissonance between cultural health beliefs in their home country and their own developing beliefs, they realized that reconciling these differences might be challenging. For instance, one participant recognized that the large stigma attached to mental health disability in her own culture was not now coherent with her current understanding and beliefs around the management of mental health. She was entirely unsure what and how her role might evolve in these situations, stating, "I have no idea how to approach it" (P8).

3.4. Societal Exposure: Being Part of an Inclusive Society

The infrastructure of the University environment and social media in NZ exposed some participants to disabled people and decreased stigma, particularly if their past experiences were different from that of NZ society. Participants mentioned that the university provided opportunities for reader-writers and knew of the disability support center. At the same time, some participants believed that many environments challenged disabled people's rights and inclusion at the university. Participants with disabled friends and whānau and participants with disability-related work experience mentioned that diversity (i.e., inclusion of disabled people) in the current HP student population and the HP workforce is limited. One participant, who had a family member with a disability, discussed the inaccessibility of the building she studied in, recognizing the physical environmental barriers would place an extra burden on disabled students. However, she also noted that buildings open to the public for health-related consultations at the university were not always easily accessible either, "I [was] shadowing my doctor, I was just like the gym isn't very like disability friendly" (P5).

Although participants mentioned environmental accessibility, none of the students discussed accessible formats, that NZ Sign Language (NZSL) was an official language in NZ; or any other aspects of the social model of disability such as systemic bias, discrimination or intersectionality, including inequities which occur from within the health system in NZ.

4. Discussion

4.1. Introduction

The aim of this study was to explore HP students' knowledge and understanding of disability concepts so we could provide insight into (1) HP students' understanding of disability and (2) HP students' knowledge of resources to advocate for and provide appropriate health care. Three themes were interpreted from the data representing how students come to understand disability: (1) Life experiences (2) Professional education (3) Societal exposure. These factors are non-distinct and interdependent with each other to influence the growth of participants' perspectives and understanding of disability.

We created a model (Figure 1) that illustrates how the understanding of disability is co-dependent on intrinsic and extrinsic factors, whereby individuals developed their own nuanced understanding of disability, which is portrayed by the growth of the plant. Our conceptual model adds to the body of knowledge, showing that HPs clinical reasoning processes and attitudes are influenced by personal experiences and the physical environment [42,43].

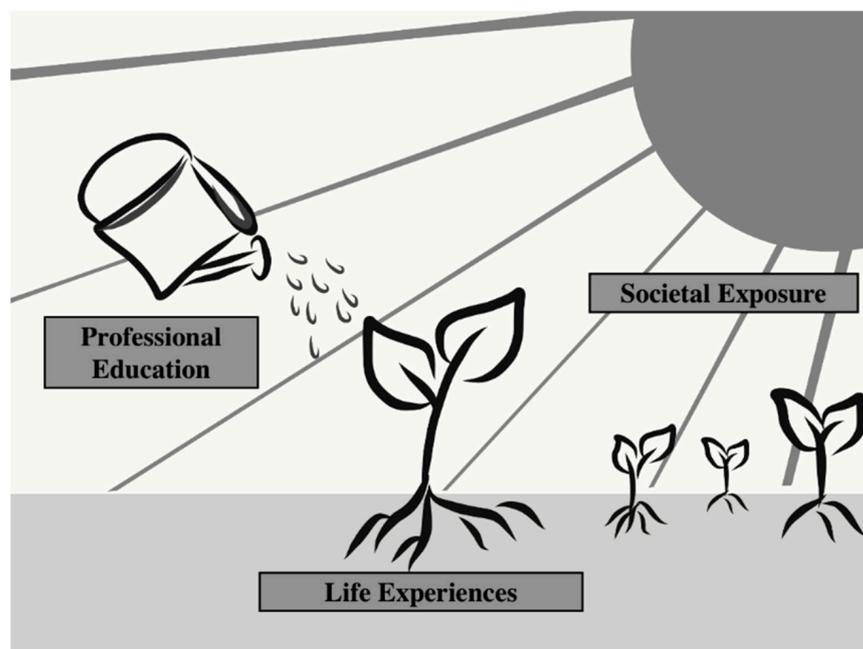


Figure 1. This figure represents participants' growth of perspective around disability. Participants' personal life experiences of disability and culturally diverse upbringing are illustrated by the root structure of the plant. Professional disability education, which is depicted by the watering of the plant, is comprised of reflection, theoretical exposure and experiential opportunity to work with disabled people in a clinical context applying learnt theory. Societal exposure to disabled people and inclusive concepts is portrayed by the surrounding plants and environment. The sun represents the macro-level (e.g., environmental accessibility, policies) that influence the participants' understanding about disability in addition to individual-level interactions with other members of society. The macro-level influences may also affect disabled people's participation and inclusion in society.

4.2. Previous Experience

Participants with more experiences with disabled people (both professionally and socially) had a more nuanced understanding of disability. A review of qualitative and quantitative studies also demonstrated more positive attitudes in HP students with previous life experiences involving disabled people [25]. Along with attitudinal differences, current literature has shown that students with more experience of disability are more comfortable with being challenged with clinical scenarios when engaging with disabled people [17,24]. This implies that additional support, guidance, and exposure for the development of positive attitudes and skills is essential when students have had limited exposure to disabled people prior to entering university.

4.3. Ethnoculture

A unique aspect of this study is the exploration of the participants' understanding of their own ethnocultural perspectives of disability and how this influenced their understanding of their role as HPs. The interview process allowed participants to self-reflect on the culture, health, and disability models they had been exposed to prior to attending their

HP training. Subsequently, some participants recognized that they had been exposed to more negative views or a stigmatized perspective of disability.

Some participants were aware of some cultural health models but were less aware of cultural disability models of care, such as Te Whare Tapa Whā (a holistic Māori cultural health model) [44] nor other terms, such as Whānau Hauā (which provides a Māori perspective on disability) [45]. Yet, participants did discuss a more holistic understanding of well-being and that all people, irrespective of impairment or ability, were entitled to strive for good health. They perceived that their role as HPs was to provide this. This concept of equality, i.e., equal service provision, has been recommended previously [26].

An 'equality' approach is, however, inadequate when a group experiences health disparity or is subject to the effects of intersectionality such as Māori, Pacific, and other indigenous and minority populations [3,4,46]. Previous studies have also found that HPs approach interactions with disabled people from an equality perspective, underpinned by a predominantly biomedical approach, rather than understanding and treating people within their own disability cultural values [47]. In our study, participants could actively discuss appropriate attitudes and behaviors but were not able to describe the accommodations they might actively provide themselves or advocate for on behalf of the disabled person they were treating to address inequity. HP students need to be aware that health disparities faced by disabled people, but especially Māori and Pacific people, arise from the conflict of paradigms between indigenous and mainstream systems and the multiplicative effect of bias on health outcomes [47]. Consequently, people who identify as disabled are likely to need additional supports or alternative accommodations via a flexible model of health service delivery to achieve the same health outcome.

Self-reflection is essential to reconcile differences in the understanding and management of disability, not just health, in NZ and similarly back in participants' home countries. Reflection could also help students recognize their implicit biases towards disabled people [48,49]. A cultural competency framework to teach disability is also recommended, which has been previously used to teach students about implicit racial bias in the United States [48]. Such frameworks acknowledge the intersection of disability and ethnicity simultaneously [3,29,50] and consider the cultural and linguistic competencies required by HPs [4,51,52].

4.4. Experiential Learning Opportunities for Student HPs

Participants in our study appreciated experiential opportunities to learn about disability concepts. Clinical placements provided space to consider concepts learned via theory and simulation. Evidence shows that experiential learning involving direct contact with disabled people provides a deeper understanding of disability concepts and a change in attitudes in student HPs [32,35,53,54]. In particular, interactions outside the clinical environment are important [15,16,34,54–57]. For example, Thompson et al. paired a medical student with a disabled person as they undertook a week-long sea voyage in a transformative learning opportunity that challenged students' previous frame of reference [35]. Furthermore, inter-professional experiential learning opportunities centered on disability concepts are helpful [56]. A longitudinal study including social work and medical students in a rehabilitation setting [55] demonstrated that social work students had different perspectives on disability. A supported interprofessional discussion with disabled people enabled a critical reflection on the merits and limitations of the social and biomedical models of disability and health [55]. For already practicing HPs, these personal and professional strategies might also prove valuable, especially for HPs who have not specialized in working with a specific disabled population (for example, intellectual disability) and who demonstrate more negative attitudes and emotions towards these people, compared to HPs who benefit from greater exposure whilst working [22,23,27,28].

4.5. Education Bias

Health inequities arise due to systemic bias. This bias is a barrier towards disabled people's inclusion not only in health but also at higher education and in employment [5,11,13]. While the participants in this study were not so aware of the effects of the social determinants of health on disability health outcomes, nor necessarily their own bias, they did discuss their observations of disability services provided by the University of Otago (e.g., disability support and environmental accessibility). These accommodations were starkly obvious, particularly for the international students in our study, as they differed from what they had observed in their home country. Thus, explicit inclusivity can shape HPs students' understanding of policy and societal barriers faced by disabled people.

Conversely, positive attitudes toward disabled people arise from a more inclusive classroom environment [57–59]. Only participants who had more intimate relationships with disabled people commented on the lack of inclusivity of disabled people in their HP course. The number of HPs with a disability is unknown as this data is not routinely collected in NZ, and consequently, the number of academic HP's teaching professional students is unknown. However, statistics demonstrate that disabled students have significantly lower course completion rates (55%) compared to non-disabled students (62%) in NZ [2]. Non-completion is thought to arise from inadequacy of disability support systems, lack of training, and negative attitudes from the staff [57–60].

4.6. Strengths

Strengths of our study include the following novel and nuanced findings: the importance of considering culturally relevant disability education and the participants' limited awareness of the need to provide equitable rather than equal service provision with service delivery. Previous surveys have reported bias and negative beliefs, attitudes, and behaviors of student HP's; the use of the qualitative methodology in this study has helped to understand why and how these may have arisen [36]. Methodological strengths include transparent methods, reflexive journaling, rich data set, sensitivity to the context, and consequently data interpretation from four experienced researchers, including three with lived experience of disability and SR, a trainee HP, who also has lived experience of disability. Other strengths include the opportunity for participant feedback to be included in the data interpretation and commitment with time spent reflecting, reviewing, and refining the themes and the model [36,41]. The results have inferential transferability because our description of the participants, including their circumstances, provides insight into which other student HPs can potentially relate [36]. In particular, the range of HP disciplines and ethnocultural backgrounds are a strength of this study.

4.7. Limitations

Our study participants appeared hesitant and insecure about their knowledge (as seen from their quotes). As this was a sensitive topic for most participants, it is likely the results were influenced by social desirability bias, the tendency of research participants to give socially desirable responses instead of choosing responses that were reflective of their honest feelings. This possibility was considered in the interpretation of the data by the authors. Some participants also found the topic challenging because of their limited clinical experience to date, which was impacted by the COVID-19 pandemic-related lockdowns and restrictions.

While there are more female, undergraduate, and fewer self-identifying disabled student HPs studying at the University of Otago, the participants in this study should not be considered representative. Their diversity (or lack) of participants, including the number of participants with lived experience of disability but not personal lived experience, limited gender diversity, the range of years of clinical experience, and mix of ethnocultures, will have influenced the data collected. Furthermore, as our results show that ethnocultural upbringing and the culture of the society where the HP institution is located influence knowledge and perceptions, transferability of the results should be approached

sensitively. Nevertheless, the results represent our interpretation of the HP students that were recruited [36]. We contend that aspects of these insights are likely not unique to this one institution.

5. Conclusions

This study explored HP students' understanding of disability concepts. Three themes influenced participants' understanding of disability: life experiences, professional education, and societal exposure. The participants demonstrated limited recognition of systemic bias with respect to disability in society, and more specifically, within the health system. Consequently, participants had limited understanding of their role in reducing health inequities experienced by disabled people. A socio-ecological consideration of disability throughout the curricula, self-reflection on individual beliefs, and developing a greater awareness of systemic bias should be explored further. The purposeful inclusion of disabled people as HP students and teachers may help develop knowledge and reduce bias.

Supplementary Materials: The following supporting information can be downloaded at: <https://www.mdpi.com/article/10.3390/disabilities2010011/s1>, Table S1: Additional supporting quotes.

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Institutional Review Board Statement: The study was conducted according to the guidelines of the Declaration of Helsinki, and approved by University of Otago Human Health Ethics committee—D19/370. In addition, Ngāi Tahu consultation was undertaken. An amendment was sought and approved by the ethics committee to advertise and recruit participants from social media platforms in March 2020.

Informed Consent Statement: Informed consent was obtained from all subjects involved in the study.

Data Availability Statement: The data presented in this study are available on request from the corresponding author. The data are not publicly available due to ethical reasons.

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