BMC Health Services Research

RESEARCH

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Understanding the complexities of recruitment and retention of allied health professionals in rural health settings across Aotearoa: a qualitative study

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Abstract

Background Rural and remote communities in Aotearoa New Zealand face significant challenges in recruiting and retaining Allied Health Professionals (AHPs). While targeted investment exists to increase the numbers of doctors and nurses entering the rural workforce, comparatively little attention has been given to Allied Health Scientific and Technical professions. This study aimed to explore what matters to AHPs' in rural contexts and how these insights could inform recruitment and retention practices.

Methods Drawing on Interpretive Descriptive methodology, semi-structured interviews were conducted with 18 AHPs from diverse professions, ethnicities and geographical locations across Aotearoa who had experience working in rural and/or remote settings. All participants were female, ranging in age from 23 to 63 years, representing seven allied health professions; social work ($n=7$), physiotherapy ($n=4$), occupational therapy ($n=2$), music therapy ($n=2$), psychology ($n=1$), dietetics ($n=1$), and pharmacy ($n=1$). Participants identified as Pākehā | New Zealander ($n=11$), Māori ($n=4$), Samoan ($n=1$), and beyond the Pacific ($n=2$). Interviews explored career journeys, rural practice experiences, and employment decision factors. Data were analysed using six-phase Reflexive Thematic Analysis with ongoing researcher reflexivity and supervisory input.

Results Three key themes were constructed: (1) **Sense of Connection and Belonging**, highlighting the importance of feeling connected to teams, community and place; (2) **Safe and Supported Practice**, emphasising appropriate resources, professional development, and leadership relationships; (3) **Creating Roles People Want to Come For**, encompassing recruitment experiences, variety of work, growth pathways and scope of practice. These themes were infused with a cross-cutting concept of 'Fit', a felt sense of being in the right place, personally and professionally that emerged as a protective factor during challenges and key element for retention decisions.

Conclusion Successful recruitment and retention requires attention to both professional and personal factors, with particular emphasis on creating environments where AHPs feel valued, supported to develop their practice, and connected to their communities. The Fit concept offers a novel framework integrating professional, personal and

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place-based elements for understanding rural workforce retention. These insights provide evidence-based guidance for health policy makers, rural health organisations, professional bodies and tertiary education providers seeking to address persistent rural workforce shortages.

Keywords Allied health professionals, Rural health, Recruitment, Retention, Workforce, Aotearoa New Zealand

Background

Rural health workforce challenges represent a global concern, with Allied Health Professionals (AHPs) particularly affected by recruitment and retention difficulties. This study presents the first comprehensive qualitative exploration of factors influencing AHP workforce decisions in rural Aotearoa, New Zealand. Drawing on interviews from 18 rural AHPs across seven professions, this research identifies three interconnected themes that illuminate what attracts and retains AHPs in rural practice, introducing the novel concept of fit as a framework for understanding rural workforce retention.

The findings contribute to the rural health workforce literature by providing evidence-based insights from AHP perspectives, challenging assumptions about rural recruitment, and offering practical implications for health policymakers, rural organisations, and professional bodies. The research has relevance for rural health systems globally, particularly those seeking to move beyond anecdotal approaches to workforce development.

The health workforce is stretched to its limits in Aotearoa New Zealand and internationally. Rural and remote communities, which are often the first to be impacted by workforce shortages, struggle to recruit and retain staff [1–3]. While targeted investment in academic, political and financial strategies has aimed to increase the numbers of doctors and nurses entering the rural workforce and support them to stay, comparatively little has been done for the professions that make up the Allied Health Scientific and Technical (AHST) collective in Aotearoa [4].

AHPs are clinicians, scientists, therapists and technicians who possess their own unique and specialised expertise in preventing, diagnosing and treating conditions and illnesses [5]. In Aotearoa there are more than 40 professional groups included within this broad category [6], regulated by the Health Practitioners Competence Assurance Act (2003) [7], the Social Workers Registration Act (2003) [8] or through self-regulation [9].

International context and strategies

Internationally, various strategies have been implemented for rural AHP recruitment and retention with mixed success across different jurisdictions. Australia's Allied Health Rural Generalist pathway provides structured postgraduate training and career pathways [10], while the United States has implemented financial incentives and loan forgiveness programmes [11]. Technology-enabled support, such as tele-mentoring and remote supervision, has also been trialled across multiple settings [12].

However, systematic evaluation of these approaches has been limited, and their effectiveness varies significantly across different health contexts and professional groups [13, 14]. This variability suggests that successful rural workforce strategies require careful attention to local context, professional characteristics, and health system structures rather than simple replication of models from other settings, or professions.

The Aotearoa context

Within Aotearoa, workforce development efforts have traditionally focused on medical [15] and nursing [16] professions, with more recent recognition of AHP workforce challenges. Policy-level initiatives now include adoption of the UK Calderdale Framework [17] for workforce development, HealthPathways integration for allied health services [18], and establishment of Chief Allied Health Officer roles in Manatū Hauora | Ministry of Health and Te Whatu Ora | Health New Zealand. The inaugural Rural Health Strategy [19] acknowledges rural workforce issues broadly, though specific AHP focused strategies remain underdeveloped compared to international jurisdictions. Educational institutions are also exploring expanded scopes of practice and rural focus training, though these remain in developmental stages. These developments represent important progress, yet they remain in early stages compared to the established rural pathways available for medical and nursing professions.

The research imperative

The challenges facing rural health providers in recruiting and retaining AHPs have been well documented internationally [20–22], but there is limited research specific to the Aotearoa New Zealand context [4, 23]. In the absence of research exploring factors contributing to the challenges in recruitment and retention of AHPs, organisations have invested in strategies informed by anecdotal "evidence", individual viewpoints, or have drawn on data derived in the context of the nursing or medical workforce. Drawing on data from different professional contexts, with different training pathways, regulatory frameworks and scopes of practice presents significant challenges for developing strategies that address the unique needs and perspectives of AHPs.

This research aimed to explore what matters to AHPs in rural and/or remote contexts and how these insights could inform recruitment and retention practices for rural and/or remote health settings. By understanding the attractive aspects of living and working rurally for AHPs, this study sought to develop knowledge that could be applied to strengthen the rural AHP workforce in Aotearoa New Zealand, with potential application for rural health systems globally.

Methods

This study employed an Interpretive Descriptive methodology, a qualitative approach developed to support researchers exploring practice-oriented phenomena [24]. This methodology was chosen for its pragmatic approach to examining challenges within practice settings, with an explicit focus on generating knowledge applicable to real-world clinical settings. The analysis was informed by Reflexive Thematic Analysis [25], which enabled identification of patterns of meaning within the data.

Researcher characteristics and reflexivity

The primary author (JG) was an Allied Health leader working in a rural location at the time of the research, which provided both insights and potential subjectivities. The researcher engaged in reflective practice throughout the study, examining how her disciplinary background (social work), leadership role, and rural connections influenced her engagement with participants and analysis of data. The researcher's professional role also presented potential conflicts with some participants, which were managed through use of independent interviewers where needed. The research team also included two experienced allied health researchers who served as supervisors: NK, a psychologist and Professor with extensive qualitative and allied health research experience and lived rural experience; and PL, a physiotherapist and Associate Professor with mixed methods and allied health research expertise. Both supervisors contributed to research design, ongoing analysis discussions, and interpretation of findings, bringing complementary perspectives that enhanced the rigour of the research process.

Sampling and recruitment

Participants were eligible if they were a registered AHP and self-identified as having worked in a rural or remote setting within the last five years, were currently working in such a setting, or were actively seeking to work in one. The decision to use self-identification rather than a formal geographic classification system was deliberate for several reasons. First, at the time of recruitment (2019), the now-established Geographic Classification for Health [26] had not yet been developed. Second, self-identification allowed participants to articulate their own lived experience of rurality, acknowledging that the experience of rural practice encompasses more than geographic distance alone and includes factors such as service availability, professional isolation, and community context. Third, this approach reduced potential barriers to participation by eliminating the need for participants to disclose specific workplace locations during initial recruitment. This was important for maintaining confidentiality in small rural health networks where individuals might be easily identified.

A purposive sampling approach was used to ensure diversity across professions, geographical locations, ethnicities, and career stages. Potential participants were recruited through multiple channels including social media, organisational newsletters, professional networks and word of mouth. Information about the study was distributed through AHP professional bodies and rural health networks. Potential participants responded to the invitation to take part by completing a brief expression of interest via an online survey which captured key demographic information to support the sampling process.

Data collection

Semi-structured interviews were conducted between July 2019 and December 2021. They were conducted via videoconferencing due to geographical dispersion and the impact of the COVID-19 pandemic, which allowed participants to engage from their preferred location. The interview guide explored participants' career journeys, experiences of rural practice, and factors influencing their employment decisions [27]. Specific topics included how participants chose their profession, what attracted them to rural practice, experiences of working in rural settings, perspectives on professional development and support, and suggestions for improving recruitment and retention.

Interviews were conducted by the primary author, except where participants were known to the researcher in her professional capacity, in which case they were conducted by NK. Interviews were audio-recorded and lasted between 45 and 60 min.

Data analysis

Interviews were transcribed verbatim and analysed using Reflexive Thematic Analysis [25]. This approach was selected for its compatibility with Interpretive Descriptive Methodology [24] and its emphasis on researcher reflexivity in the analytical process. Analysis followed six phases: familiarisation with the data, generating initial codes, identifying themes, reviewing themes, defining and naming themes, and reporting. Initial coding was conducted manually on printed transcripts, followed by use of NVivo™ software to organise and visualise data patterns.

The analytical process was both individual and collaborative. While initial coding was conducted by the primary author (JG), interpretation and theme development involved iterative discussions with the supervisory team (NK and PL). This approach maintained the primary author's deep engagement with the data while benefiting from multiple analytical perspectives. Regular supervision meetings provided opportunities for collaborative analysis, where emergent codes and preliminary themes were discussed, challenged, and refined. The supervisory team's diverse disciplinary backgrounds (psychology and physiotherapy) and extensive experience in qualitative and allied health research enhanced analytical rigour while preserving the interpretive coherence essential to Interpretive Descriptive methodology [24, 25].

To enhance rigour further, the primary author engaged in ongoing reflection through journaling, moving iteratively and recursively between individual transcripts, coding structures and emerging thematic patterns. This reflective process, consistent with Interpretive Descriptive principles, ensured that analysis remain grounded in participant experiences while developing conceptual insights applicable to practice settings [24].

Ethical considerations

Ethical approval was obtained from Auckland University of Technology Ethics Committee (AUTEC 18/424). Informed consent was gained through a two-phase process: initially via the online recruitment survey, and then verbally at the beginning of each interview. Particular attention was paid to managing potential conflicts of interest where participants were employed by the same organisation as the researcher.

Protecting participant identity was paramount given the small size of rural allied health networks in Aotearoa. Anonymity and confidentiality were maintained through removal of identifying information from transcripts, secure data storage, and specific strategies to prevent identification. All specific location names were replaced with generic terms ([town], [base hospital]), gender-neutral pronouns (they/them/their) were used throughout, and participants were assigned numerical identifiers (P1, P2, etc.) rather than pseudonyms to avoid cultural appropriation or misgendering risks. Additional demographic details beyond those essential for understanding findings were deliberately excluded from quote attributions to prevent intersecting identifiers that could compromise anonymity in small professional networks.

Results

Forty-five people initially expressed interest via the online recruitment survey. The final sample of 18 participants were selected to ensure diversity across key characteristics. All participants were female, ranging in age from 23 to 63 years, with most being either 20–30 years ($n=6$) or over 50 years ($n=6$). Participants identified as Pākehā / New Zealander ($n=11$), Māori ($n=4$), Samoan ($n=1$), and from beyond the Pacific ($n=2$). They represented seven Allied Health professions including social work (m = 7), physiotherapy ($n=4$), music therapy ($n=2$), occupational therapy ($n=2$), psychology ($n=1$), dietetics ($n=1$) and pharmacy ($n=1$). Participants were geographically spread throughout Aotearoa, representing areas of differing rurality and with varying proximity to urban centres.

Three interconnected themes that capture what attracts and retains AHPs in rural practice were constructed through analysis. These were **Sense of Connection and Belonging**, **Safe and Supported Practice**, and **Creating Roles People Want to Come For**. These themes were infused with a cross-cutting concept of **Fit**; a felt sense of being in the right place, professionally and personally. The themes, and their sub-themes are visually represented in Fig. 1.

As Fig. 1 illustrates, these themes are interconnected and mutually reinforcing with overlapping elements that reflect the complex, multi-faceted nature of rural AHP workforce experiences.

Theme 1 Sense of connection and belonging

The relationships AHPs form with their teams, their communities, and their environment emerged as fundamental to their experience of rural practice. Participants consistently described how these connections acted as critical determinants of their decision to remain in or leave rural roles. "Both teams I work in have been really really good, and again it's probably part of the reason I've stayed… and so again, those connections and that support is there" participant 6 acknowledged. Connection and belonging function not merely as pleasant additions to workplace satisfaction but as essential components of professional sustainability in rural contexts.

Participants described the reciprocal nature of rural relationships where they both received and provided care within their communities. This extended beyond formal professional roles into genuine community membership. As one participant explained, "I can talk to them about you know, how there is no grass growth and have they had to sell off their stock, and it's um, it's a world I am interested in" (P1). This directness and mutual support created working environments where people felt they belonged.

The multi-dimensional sense of belonging encompassed recognition as individuals with unique circumstances, genuine community relationships, and opportunities for meaningful service beyond professional expectations. Table 1 illustrates these subthemes with

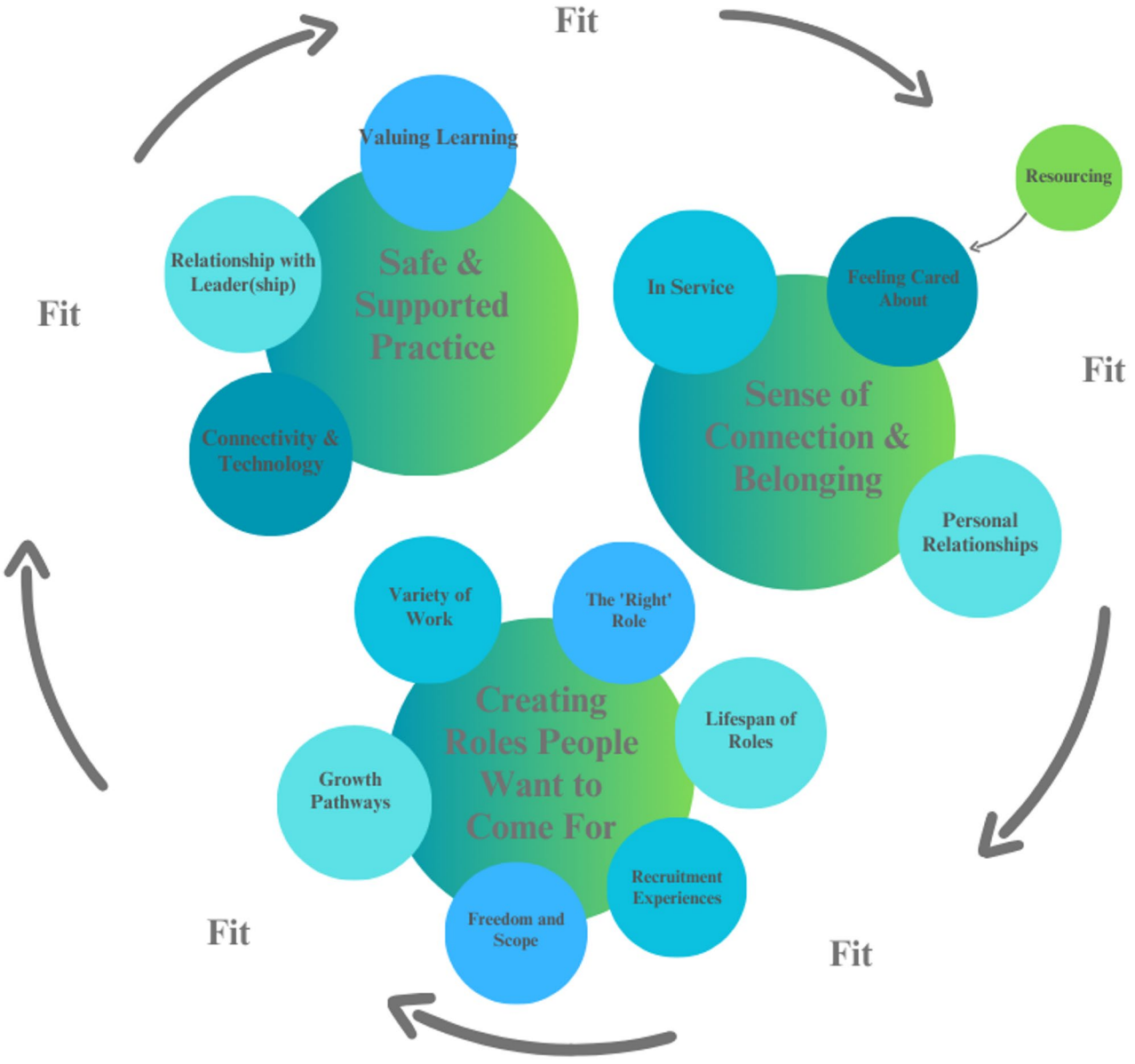

Fig. 1 Research themes and sub-themes [27]

Table 1 Sense of connection and belonging sub-themes

Subtheme	*Description*	*Illustrative Quote*
Feeling Cared About	Being recognised as individuals with unique circumstances and having personal needs acknowledged by colleagues and leaders	"They gave me bereavement leave for my two days off. I'll never forget that. For a dog." (P1)
Personal Relationships	Forming genuine connections within rural communities that provide balance against the 'always on' nature of rural practice	"We ended up all getting together coz we were all new to town … it was really neat to have this group of people" (P16)
In Service	Contributing to communities beyond professional roles through volunteering and civic engagement	"I feel like I owe people at home something and that's quite a motivating factor." (P5)

their key characteristics and representative participant voices.

These subthemes were deeply interconnected in participants' experiences. **Feeling Care About** extended beyond professional recognition to encompass understanding of personal circumstances and life contexts. Participants valued leaders and colleagues who recognised their individual situations and responded accordingly. **Personal Relationships** provided essential balance against the intensive nature of rural practice,

where professional boundaries can become blurred due to small community dynamics. The **In Service** dimension reflected participants' desire to contribute meaningfully to their communities beyond their paid roles, with this service often strengthening their sense of connection and belonging.

The interconnected nature of these elements meant that when one dimension was strong, it could compensate for challenges in others. Conversely, when connection and belonging were compromised across multiple areas, participants described feeling isolated and questioning their rural practice decisions.

Theme 2 Safe and supported practice

Safety and support for rural AHPs extend well beyond traditional risk management frameworks. Participants described multi-layered concepts of safety that encompass not only physical wellbeing, but also professional practice, wellbeing and development. One participant described their experience when these components were missing for advanced practitioners; "it's kinda like that negative cycle where the more that you want and the more that you can do, the more specialised you get the more loaded you get, because there's no one else to do it and you have to travel, and "can you train this new person"" (P14). For rural practitioners, particularly those working as sole clinicians in geographically isolated areas, these dimensions took on heightened significance.

Participants reported inequities in how professional development was funded across different professional groups. One participant described how AHP training became more readily funded when it served medical priorities: "Of course, the minute you're freeing somebody from being in a clinic when they could be doing some theatre time, the [organisations] turns out to be quite happy to pay for you to go on a course" (P5). This highlighted how professional development access followed organisational hierarchies that privileged medical workforce needs.

These experiences created frustration and reinforced perceptions that AHP contributions were undervalued. Three critical foundations emerged for enabling safe and effective rural practise, as illustrated in Table 2:

Theme 3 Creating roles people want to come for

In the competitive landscape of health workforce recruitment across Aotearoa, participants highlighted that rural roles needed to offer more than financial incentives to be considered worthwhile. They described a complex interplay of factors that collectively made a position 'worth it' in terms of personal and professional satisfaction, challenging assumptions that monetary rewards were primary motivators for rural practice. Participants articulated that fulfilling roles needed to offer professional growth, intellectual stimulation, autonomy and alignment with personal circumstances. The variety of rural practice emerged as particularly attractive: "You get the opportunity to train not only with adults but also with young people… and you get the opportunity to do leadership if that's what you want to do. Being able to have different roles within the team I think helps keep it interesting but also challenging for people" (P3). This professional diversity contrasted with urban specialisation and created opportunities for continuous learning.

Creating attractive roles required transparent recruitment processes, visible career pathways, and organisational cultures that recognised AHP scope of practice. When these elements aligned with personal circumstances and values, rural roles became preferred career choices rather than acceptable alternatives. Table 3 offers descriptions and illustrative quotes from participants for each of these elements.

Fit: a cross-cutting concept

Weaving through all three themes was the concept of **Fit**, a felt sense of being in the right place at the right time. This encompassed alignment with personal values, connection to community, sustainability of the role to career stage and goals, and compatibility with lifestyle preferences.

It's a dream job for … someone like me. (P2)

While being born rurally or trained rurally does increase the likelihood of a sense of fit, the participants who fit this profile, and those that did not agreed that the benefits of finding professional, cultural and environmental fit could be achieved without a rural background. "Yeah I don't fit into either of those (laughing), um, I think so

Table 2 Safe and supported practice sub-themes

Subtheme	Description	Illustrative Quote
Connectivity and Technology	Access to reliable technology and infrastructure that enables both clinical practice and professional connection	"The infrastructure I think is poor … compared to what I heard reported in [urban centre]" (P17)
Valuing Learning	Equitable access to relevant, high-quality professional development opportunities that support career growth	"I don't want to go to the same entry level talk every year just to count them in my CPD folder" (P14)
Relationship with Leader(ship)	Trusting relationships with managers who understand rural contexts and provide appropriate autonomy with support.	"Within 45 minutes of being here, she had two assessments to do … And she was just like 'So what do you guys normally do when you have got this?'" (P1)

Table 3 Creating roles people want to come for sub-themes

Subtheme	Description	Illustrative Quote
Recruitment Experiences	Quality of recruitment processes that provide candidates' first impressions of organisational culture	"Talking to people about their partners who are moving with them, and what they do and giving them connections" (P3)
Variety of Work	Opportunity to work across diverse clinical areas and age groups	"I like the variety, so that keeps my head engaged. It means I know a little about a lot, instead of a lot about a little" (P6)
Growth Pathways	Visible opportunities for professional development and career advancement	"If you could do more by being here … you were supported to maybe get a couple of papers towards a post-grad diploma" (P17)
Freedom and Scope	Autonomy and breadth of practice available in rural settings	"I feel like I've got that freedom. She does, she definitely trusts me that I'll do the work" (P16)
Lifespan of Roles	Recognition that roles have natural cycles and tenure expectations	"I think at the age and stage they're at it's just that next progression in their careers" (P17)
The Right Role	Alignment between personal circumstances, values, and job requirements	"I was attracted back… coz they could offer me what fitted with my family life" (P15)

long as you get the right person it doesn't have to be part of who they are so long as they've got the right personality to manage living rurally" (P3).

While **Fit** shares some characteristics with **Sense of Connection and Belonging**, it operates as a cross-cutting concept that integrates elements from all three themes. Connection and belonging represent one important dimension of what contributes to fit, but fit encompasses the broader alignment between an individual's professional needs (Theme 2: **Safe and Supported Practice**), role requirements (Theme 3: **Creating Roles People Want to Come For**), and personal circumstances alongside community connection (Theme 1).

Participants could experience a strong connection and belonging but still lack **Fit** if, for example, professional development opportunities were inadequate or the role didn't align with their career stage. Conversely, some participants described developing fit over time, even when initial community connections were limited, as they found professional satisfaction and gradually built relationships. **Fit** represents the dynamic interplay of all three thematic areas, rather than being reducible to any single theme.

This sense of fit appeared to outweigh specific challenges that participants face, and when Fit was absent it often triggered their decision to leave the rural role.

> *I said to her the other day, 'would you come back to the hospital?' And she was like, 'way too white (laugh)' so and she was just absolutely up front, like, 'No, there's no fit for me there' (P18)*

Participants noted that fit can be developed and nurtured through supportive leadership, clear and transparent growth pathways, strong professional networks and opportunities to integrate into their communities; components of which can be found across the themes presented above.

Discussion

This study provides new insights into the experiences and perspectives of AHPs working in rural and remote settings in Aotearoa. The findings align with international literature in some respects while offering unique contributions specific to the Aotearoa context.

The importance of **Connection and Belonging** resonates with research by Cosgrave [20] and Kumar, Tian [21], who similarly found that supportive professional relationships and community integration significantly influence retention. However, our findings particularly highlight the reciprocal nature of these relationships. AHPs both receive and provide care within their communities, and the importance of service as an expression of connection was especially significant for Māori participants.

The concept of **Safe and Supported Practice** extends existing literature on professional development access [28, 29] by emphasising perceived inequities between AHPs and other professions. This perceived hierarchical valuing of workforce groups appears to be a significant factor in AHPs' experiences of feeling undervalued, consistent with findings from Walker, Blattner et al. [30]. A significant contributing factor to these experiences was what Fors [31] terms geographical narcissism - the tendency for urban-based professionals and systems to devalue rural health and expertise. This manifested in how decisions were made without understanding rural contexts, how professional development was structured, and how rural AHPs felt their skills were perceived by urban counterparts, further compounding their sense of being undervalued within health system hierarchies.

The experiences described by participants highlight several factors that distinguish rural AHPs from other rural health professionals. Unlike medical and nursing colleagues who often work within well-established rural career pathways and support structures [32], AHPs frequently practice in professional isolation from discipline-specific peers, relying on interprofessional relationships for support rather than profession-specific mentorship.

Additionally, AHPs describe working at the edges of their scope of practice more frequently than might occur in urban settings, requiring greater professional autonomy while having less access to specialist supervision within their own disciplines [20]. The diversity of the AHP workforce, encompassing over 40 professions with varying regulatory frameworks, training pathways, and scopes of practice [33], also means that recruitment and retention strategies effective for the more homogenous medical and nursing professions may not translate effectively across all AHP disciplines.

Our findings around **Creating Roles People Want to Come For** challenge some common assumptions about rural recruitment. Contrary to literature emphasising financial incentives [34] or lifestyle factors such as outdoor activities [35], our participants placed greater emphasis on professional aspects such as scope of practice, variety and growth opportunities. This suggests that professional satisfaction may be a more powerful motivator than previously recognised.

The cross-cutting concept of **Fit** offers a novel contribution to understanding rural AHP workforce issues that extends beyond existing literature on person-environment fit and workplace satisfaction. While Campbell et al. [36] examined how AHPs perceive remote workforce roles, and Conomos et al. [37] explored work values and rural perceptions, our conceptualisation of Fit integrates three distinct but interconnected dimensions that operate simultaneously in rural AHP workforce decisions.

Our findings suggest Fit encompasses **professional fit** (alignment between skills, scope of practice and role requirements), **personal fit** (compatibility with lifestyle preferences, values and life stage), and **place-based fit** (connection to community, environment, and cultural context). This multi-dimensional approach distinguishes our concept from existing frameworks in several important ways. Unlike previous studies that examine either individual characteristics or environmental factors separately, Fit operates as a dynamic interaction between person, profession, and place.

Critically, our findings suggest Fit can be cultivated over time through intentional organisational and community actions, challenging static models that rely primarily on pre-existing attributes like rural origin. Participants described how their sense of Fit evolved through meaningful engagement with communities, development of professional confidence, and acquisition of context-specific knowledge. This challenges simplistic recruitment models that focus solely on rural background or training as predictors of rural retention [38, 39].

Furthermore, Fit appears to function as both a protective factor during workplace challenges and a key component in retention decisions [40]. When Fit was strong, participants described weathering significant workplace difficulties; when compromised, departure becomes inevitable regardless of other positive factors. This dual function distinguishes Fit from simple job satisfaction measures and positions it as a more nuanced understanding of rural workforce retention dynamics.

Implications for practice

This research provides evidence-based insights that can inform targeted strategies across multiple levels of the rural health system. The findings challenge traditional approaches that focus primarily on recruitment incentives, instead highlighting the need for holistic strategies that address the interconnected nature of professional, personal, and place-based factors that influence AHP workforce decisions.

Framework application for rural workforce development

The concept of Fit identified in this research offers potential as a framework for rural workforce analysis and policy development. Rather than viewing the rural AHP workforce challenge as primarily one of recruitment, our findings suggest that creating conditions where AHPs experience fit across multiple dimensions will naturally enhance both recruitment and retention. This holistic approach moves beyond traditional recruitment strategies to focus on the dynamic interaction between individual characteristics, professional requirements, and place-based factors.

The Fit framework can be operationalised through targeted interventions across multiple levels. Line managers can create micro-moments of belonging and develop understanding of rural contexts, recognising that connection and belonging are essential rather than optional elements of rural practice sustainability. Organisations can provide equitable professional development and technology infrastructure, ensuring that AHPs do not experience the hierarchical disadvantages described by participants. Professional bodies can advocate for scope of practice recognition, and challenge system structures that undervalue AHP contributions. Education providers can develop rural pathway programmes that prepare AHPs for the unique aspects of rural practice while fostering connections to rural communities. The interconnected nature of these interventions reflects the multi-dimensional aspects of Fit identified in this research.

Policy and system-level implications

At the policy level, health system leaders need to recognise that AHP workforce development requires different approaches from those traditionally used by medical and nursing professions. The diversity of the AHP workforce, encompassing 40 professions with varying regulatory frameworks and training pathways [6], means that

one-size-fits-all strategies are unlikely to be effective across all AHP disciplines.

The concept of geographical narcissism [31] identified in this research; where urban-based systems devalue rural expertise, requires active attention at policy level. This includes ensuring rural perspectives are genuinely incorporated into workforce planning decisions and recognising the unique professional challenges faced by rural AHPs working in professional isolation from discipline-specific peers.

Future research and implementation

Future research should explore how these findings translate into measurable workforce outcomes when implemented in practice settings. Evaluation of Fit-based interventions across different levels of rurality, health system context, and professional groups would strengthen the evidence base for this approach. Investigation of how the Fit concept relates to existing workforce theories could enhance its theoretical development and determine its added value for rural health workforce policy development in Aotearoa and internationally.

Implementation research examining the effectiveness of targeted interventions designed to enhance professional, personal, and place-based fit would provide valuable insights for rural health organisations seeking evidence-based approaches to workforce development. Future studies could also examine whether factors such as degree of rurality, remoteness classification, or gender identity should be explicitly incorporated into the Fit framework to enhance its predictive utility and practical application. Additionally, exploring how the Fit framework operates across different cultural contexts, particularly for Māori and Pacific AHPs working in rural settings, could enhance its applicability and cultural responsiveness.

Strengths and limitations

This study has several strengths and limitations. Strengths include the diversity of professions, geographical locations, and cultural backgrounds represented. This study is also the first of its kind in Aotearoa, providing valuable context-specific insights previously absent from the literature. The Interpretive Descriptive methodology [24] enabled robust analysis while maintaining focus on practice applications.

Limitations include that all participants identified as female, limiting insights into potential gender differences. Additionally, self-identification of rural practice rather than using geographic classification such as Whitehead, Davie, et al. [26]'s Geographical Classification for Health may have affected sample composition. While diversity was achieved across professions, geographical locations, and cultural backgrounds, the range of disciplines represented was not proportional to typical rural AHP workforce composition. Social workers were over-represented (n = 7) relative to their usual workforce numbers, and some key rural professions such as pharmacy, were under-represented (n = 1). This may limit the generalisability of findings across all AHP disciplines in rural settings. In addition, the analysis did not examine the themes by career stage, which could provide valuable insights for targeted workforce development strategies in future research.

Conclusion

This study provides significant insights into the experiences and perspectives of AHPs working in rural and remote settings in Aotearoa New Zealand. The findings highlight that successful recruitment and retention requires attention to both professional and personal factors, with particular emphasis on creating environments where AHPs feel valued, supported to develop their practice and connected to their communities. These insights can inform evidence-based strategies to strengthen the rural AHP workforce with implications for health policy makers, rural health organisations, professional bodies and tertiary education providers seeking to address persistent rural workforce shortages.

Abbreviations

AHPs	Allied Health Professionals
COVID-19	Coronavirus Disease of 2019
CPD	Continuing Professional Development

Acknowledgements

We are grateful to the 18 AHPs who gave up their time to participate in the research.

Author contributions

JG designed the study with support from PL and NK; JG and NK were involved in the data collection; JG analysed and interpreted the data with support from NK and PL; JG drafted the manuscript with support from NK and PL. All authors approved the submitted version.

Funding

No funding was received for this research.

Data availability

The qualitative datasets generated during this study are not publicly available due to their co-constructed nature between researcher and participants, the sensitive personal narratives contained within, and ethical constraints. Participants consented to share their experiences with the assurance that raw data would remain confidential to the research team. The contextual and potentially identifiable nature of in-depth qualitative data makes complete de-identification challenging whilst preserving data integrity.

Declarations

Ethics approval and consent to participate

While the Declaration of Helsinki primarily addresses medical research conducted by physicians and is therefore not directly relevant to this qualitative study; exploring allied health professional perspectives, it has adhered to the core ethical principles regarding human subjects research, including informed consent, voluntary participation, confidentiality, and minimisation of harm. The study received ethical approval from Auckland University of Technology Ethics Committee (AUTEC 18/424). All participants

gave online informed consent to participate via a Qualtrix survey, followed by verbal consent at the commencement of the recorded interview. This included consent for their data to be analysed and included in research reports.

Competing interests
The authors declare no competing interests.

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Received: 8 June 2025 / Accepted: 18 January 2026
Published online: 30 January 2026

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