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Citation:

WISHART, Maria, PEAT, George M, BOJKE, Chris, VARGAS-PALACIOS, Armando, CHANDLER, Rebecca, HAYES, Tim and FOWLER-DAVIS, Sally (2026). Antecedents to Allied Health Professional (AHP) Workforce Planning and Management in Rural and Coastal Areas: A Scoping Review. *Journal of multidisciplinary healthcare*, 19: 619599. [Article]

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Antecedents to Allied Health Professional (AHP) Workforce Planning and Management in Rural and Coastal Areas: A Scoping Review

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Abstract: Allied Health Professionals (AHPs) have a key role to play in addressing well-documented health inequalities in rural and coastal areas, but unequal AHP workforce distribution is a key challenge to them doing so. This systematic scoping review explores available international evidence on the AHP workforce in rural and coastal areas. It aims to map the existing literature and identify the key variables associated with the establishment of a more sustainable workforce. Following the Joanna Briggs Institute (JBI) guidelines a search was carried out in academic databases Medline, CINAHL, Web of Science and Business Source Premier, and policy and grey literature database Overton. 10,494 studies were identified. Following title and abstract screening and full-text review, 49 studies were identified for inclusion. Narrative synthesis identified eight key rural and coastal AHP workforce domains. Four are directly connected to the rural context, and four are related to generic human resource factors, but have distinct and potentially unique implications when considered in the rural context for the attraction and retention of AHPs. Findings are presented as an evidence-informed framework designed to guide future scholarship and initiatives to improve AHP workforce recruitment and retention in rural and coastal areas.

Keywords: allied health professionals, workforce planning, recruitment, retention, attrition, scoping review

Introduction

Rural and coastal communities can experience more complex healthcare challenges linked to ageing populations,¹ risk factors associated with a context of deprivation including high levels of smoking and substance abuse, high levels of obesity and low educational attainment.² Moreover, there is a greater prevalence of disadvantaged groups who can struggle to access healthcare, which can lead to stark healthcare inequalities.³ But while Allied Health Professionals (AHPs) may have a key role to play in addressing such inequalities, given their role in both treatment and prevention of ill health unequal AHP workforce distribution is a key challenge to them doing so because it impacts on access to, and quality of, care these professionals are able to provide.³

Evidence suggests that chronic AHP shortages in rural and coastal areas are driven by difficulties in attracting and retaining staff.^{4,5} AHPs in rural and remote areas tend to have shorter lengths of employment and poor recruitment and retention rates are driven by rural location-related factors.⁶ Qualitative research with remote and rural communities in the UK highlights that recruiting and retaining health staff, including allied professionals, is harder because of location-specific factors like community integration, infrastructure, and social networks.⁷ Other studies have identified factors related to professional practice that may impact on AHP staffing in these regions, for example the potential for accelerated professional growth but also for increased stress and professional isolation.⁸ While there is some conceptual

and qualitative agreement that location-related factors negatively affect AHP workforce sustainability, the implications for AHP workforce policy and practice delivery are unclear.

Allied Health Professionals (AHPs) constitute the third-largest workforce in the National Health Service (NHS)⁹ with 152,000 AHPs across all healthcare settings.¹⁰ These degree-level educated autonomous practitioners include fourteen professions (art therapists, dietitians, drama therapists, music therapists, occupational therapists, operating department practitioners, orthoptists, osteopaths, paramedics, physiotherapists, prosthetists and orthotists, podiatrists, radiographers, speech and language therapists) and their primary aim is the improvement of health and wellbeing to maximise the potential for individuals to live full and active lives.¹¹ Currently, the NHS workforce as a whole is more engaged in responding to health care needs than on the prevention of ill health, but the UK government has expressed the future ambition to shift focus upstream, by investing more in prevention and early intervention.⁹ This has implications for AHPs, given their potential to contribute significantly to population wellbeing and to the embedding of illness prevention and early detection strategies.

Staffing shortfalls in the UK NHS are substantive and chronic. At the end of September 2025, the overall vacancy rate was 6.7%. Although this was a drop from 7.4% the previous year, it still translated into just over 100,000 vacancies.¹² Allied Health Professionals are also likely to be affected by workforce shortages across the NHS,⁹ although published evidence quantifying shortages within specific AHP professions remains limited. Shortages are acutely felt in rural coastal and deprived regions, and are expected to increase the most for paramedics, occupational therapists, diagnostic radiographers, podiatrists, and speech and language therapists.⁹ The NHS workforce plan⁹ expresses ambitions to increase the number of AHP training places by 25% to over 18,800 by 2031/32, and to enhance the scope of some AHP roles to enable them to improve the sustainability of service provision. Clearly, a better understanding of AHP recruitment and retention challenges could contribute significantly to delivering this ambition.

This review explores available evidence on the AHP workforce in rural and coastal areas with the aim of mapping the existing literature. It has the specific objective of identifying existing research findings, and model components and metrics that might inform the development of a model to simulate the effects of interventions to improve the planning and management of the Allied Health Profession workforce in these geographical regions in England.

Methods

A systematic scoping review was conducted to identify the types of evidence available that might inform simulation modelling in this area. This review followed the protocol detailed in the Joanna Briggs Institute (JBI) guidelines for systematic scoping reviews which are widely used in healthcare research, providing a clear methodical approach, ensuring rigour, transparency, trustworthiness and unbiased reporting.¹³ The scoping review protocol was registered on the Open Science Framework (OSF) platform (DOI:10.17605/OSF.IO/NHAER) prior to the searches being undertaken. No formal ethical approval was required, however, it was registered with the Anglia Ruskin University Research Ethics Committee in accordance with institutional requirements.

Search Strategy

In line with JBI guidelines, the review adopts the “Population Concept Context” mnemonic to clarify the focus and context of the study. Thus, we clarify the main characteristics of interest in the review population (all fourteen Allied Health Professions), and a range of workforce-related concepts. “Context” in this case refers to both a geographic location (rural and coastal areas) and specific healthcare settings. We aimed for comprehensive coverage of relevant research by specifying complementary databases in the search strategy.

Using the criteria detailed in Table 1 below, we searched academic databases Medline, CINAHL, Web of Science and Business Source Premier, and policy and grey literature database Overton. CINAHL offers research articles with an Allied Health Professional focus, while Medline offers a broader medical research focus and Web of Science has a broader scientific and social sciences focus. Given our workforce focus, we also searched within Business Source Premier to give coverage of business and management scholarship. Finally, we used the policy and grey literature database Overton to ensure that we covered primary evidence sources not published in peer-reviewed journals. Searches were carried out on 7 May 2025. Our initial searches indicated that about three quarters of AHP academic literature has been published in the last fifteen years, reflecting the significant growth observed in AHP research activity since around

Table 1 Search Structure

	Include
Population	"Allied Health Professional*" OR "art therapist*" OR dietitian* OR "drama therapist*" OR "music therapist*" OR "occupational therapist*" OR "operating department practitioner*" OR orthoptist* OR osteopath* OR paramedic* OR physiotherapist* OR podiatrist* OR prosthetist* OR orthotist* OR radiographer* OR "speech and language therapist"
Concept (s)	Work* OR employ* OR recruit* OR retain OR retention OR perform* OR morale OR attitude* OR attrition OR train* OR wellbeing OR skill* OR turnover OR progress* OR career* OR educat* OR satisf* OR migrant OR shift*
Context	All healthcare settings All geographies English language only
Time	2010 to 2025
Design	Quantitative and qualitative empirical studies Grey Literature Book chapters Conference proceedings

Note: * denotes truncation wildcard used to retrieve all variants of a search term.

2010.¹⁴ Moreover, since 2010, substantial changes in workforce policy, service delivery models, rural recruitment and retention strategies, and the scope of AHP practice have altered the context in which rural and coastal workforce decisions are made. For example, many health systems have increasingly adopted integrated, community-based models of care and expanded advanced and extended-scope practice roles for allied health professionals. In parallel, workforce policy has shifted towards addressing health workforce shortages and maldistribution through targeted retention, rural pipeline, and workforce planning initiatives. Consequently, findings from studies conducted before 2010 may have limited applicability to current workforce challenges, service models, and policy environments. We therefore excluded articles published before 2010, to reflect this, and to ensure our evidence reflected current conditions and practices.¹⁵

Study Selection and Screening

Search results were imported into the Covidence Systematic Review Software package, a web-based collaboration platform provided by Veritas Health Innovation, Melbourne, Australia and available at www.covidence.org. Covidence is designed to help researchers streamline the process of conducting systematic reviews. The inclusion and exclusion criteria set out in Table 2 (below) were used to screen the titles and abstracts for eligibility. To mitigate risk of bias, four reviewers carried out the title/abstract screening. A further team member carried out title/abstract screening for a random selection of around 10% of the total with discussion to resolve any conflicts that emerged during the process. Two team members undertook the screening of titles and abstracts from the grey literature search results, again with 10% double screened by a different team member.

Table 2 Inclusion and Exclusion Criteria

Inclusion	Exclusion
Relating to AHP workforce ^a	Clinical interventions
Indicative of a measure or potentially measurable phenomenon	Literature Reviews
Linked to a setting/geography or service location/type	Conceptual/Theoretical content only
Focus on marginalised or underrepresented or underserved workforce groups/and/or location	Theses/dissertations
English language	Non-English language

Note: ^a Including where AHP workforces are named alongside other healthcare workforces.

Data Extraction and Quality Assessment

At the point of data extraction a further level of analysis was introduced, underpinned by a critical realist perspective which acknowledges the complexity of society and the nature of underlying structures. The focus was on specific contexts (those of marginalised communities, workforces and locations, eg, rural and coastal areas) underlying mechanisms (such as interventions to engage the wider community in contention) and outcomes. A standardised data extraction form was established as recommended in JBI guidelines. It included the following data items: year of publication, name(s) of author(s), title of study, study aims, AHP workforce focus, country in which study was conducted, study location (eg, local, regional, national, international), study setting (eg, primary care, secondary care, community, etc), key findings, availability of regression tables, methodology, study design, population description, sampling strategy, sample size, inclusion and exclusion criteria, method of recruitment of participants/respondents, method of data collection, and identification of any workforce-related mechanisms. Data were extracted into the form by the lead author, then exported into an Excel spreadsheet which was used in the data synthesis stage.

All extracted studies were also quality-assessed using the QuADS (Quality assessment with diverse studies) tool¹⁶ which is designed specifically for the quality evaluation of healthcare research. Using 13 criteria it enables researchers to assess aspects of research conduct and transparency. Items covered are shown in [Appendix 1](#) and are scored on a 4-point scale with higher scores indicating higher methodological quality. Individual item scores are combined to give an overall score out of 39 for each study. There is no fixed cutoff point to denote high or low quality, but scoring the whole group of extracted studies allows for comparison. Quality appraisal is not mandatory for a scoping review, but JBI guidance notes that it may be appropriate when it serves the aims of the review.¹³ Given the aim of identifying metrics that might inform the development of a model to simulate the effects of interventions on the AHP workforce we judged that an assessment of methodological rigor was necessary to understand the confidence that we could have in the available evidence, and to ensure that we did not give equal weight to robust and weak studies. The quality appraisal enhanced the transparency and credibility of the findings and of our interpretation. Studies were not excluded on the basis of their QuADS scores.

Data Synthesis

We undertook data synthesis in several stages, carried out by the first author with oversight and input from the other authors. First, in a descriptive mapping phase, we established the depth and breadth of evidence by capturing details on the extracted studies to understand where the evidence originated, how it was generated, and which AHPs it covered. We then moved to a thematic synthesis phase driven by the research objective to identify research findings, model components and metrics that might inform the development of an AHP workforce simulation model. Here, we grouped quantitative, qualitative and mixed methods studies, and undertook a detailed review of each paper to identify findings, relationships and metrics which had the potential to become variables or proxies in a simulation model. We coded and classified each finding or metric and grouped similar outputs into key themes or domains, each of which includes several sub-themes.

Results

The searches yielded 19,925 results. After automatic and manual deduplication, in which 9,432 studies were removed, this decreased to 10,494 studies. Following title/abstract screening, a further 9,887 studies were excluded, leaving 607 to move forward to the full text review stage. All 607 studies were full text reviewed by the first author and second-reviewed by one of the other authors. 558 articles deemed irrelevant were excluded at this stage and the remaining 49 articles were taken forward for inclusion in the review. Full details of the flow of studies through the identification, screening and selection process are shown in [Figure 1](#).

The 49 studies from which we extracted data, including the results of our quality assessment of each, are listed in [Table 3](#).

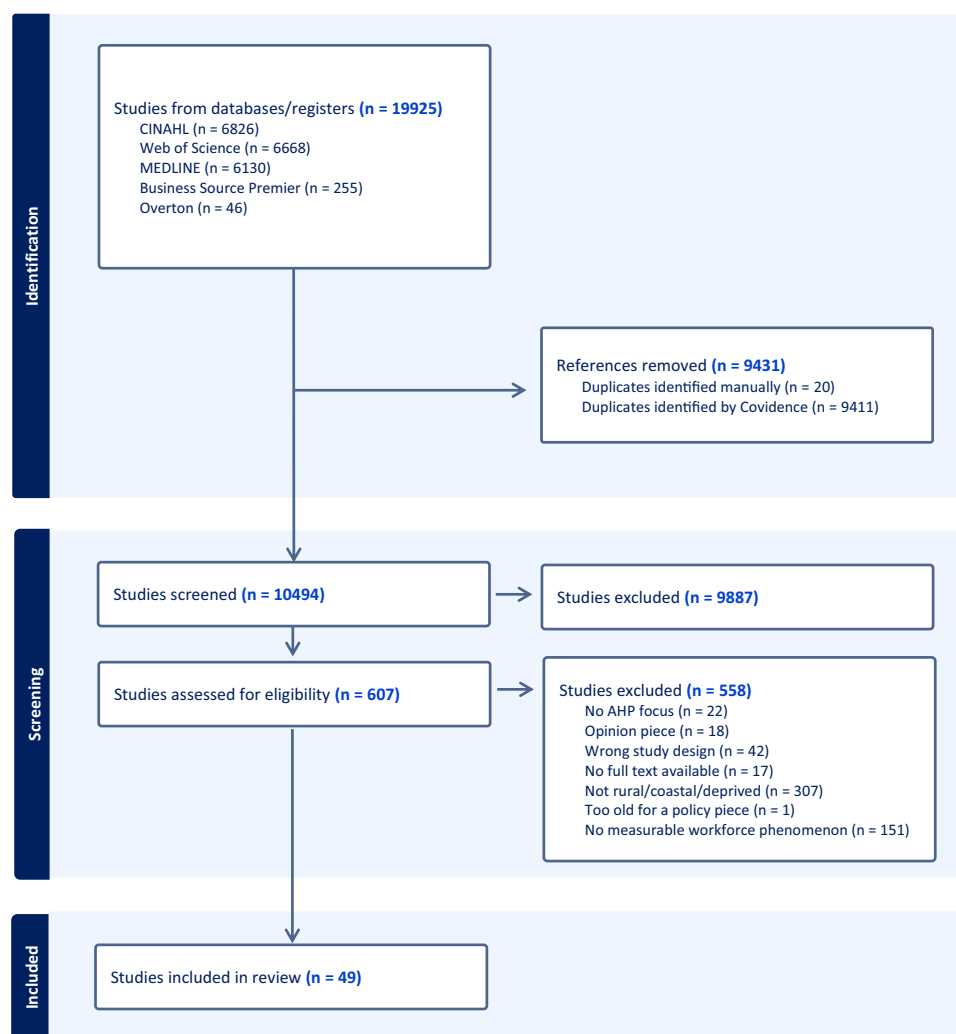


Figure 1 PRISMA diagram of the flow of studies through selection and screening.

Descriptive Mapping of Study Characteristics

The 49 studies we identified for inclusion are relatively geographically narrow, with two thirds carried out in Australia or the USA, 10% in South Africa and 8% in the UK (see [Figure 2](#)). We also note uneven coverage of the fourteen AHP professions with physiotherapists, paramedics and occupational therapists receiving the most attention. 6 of the 49 studies offer a more general focus on all AHPs. Physiotherapists, paramedics, osteopaths, occupational therapists, radiographers, podiatrists and dietitians are all the focus of at least one dedicated study. Orthotists orthoptists prosthetists and speech and language therapists are covered in studies that address specific small groups of AHPs, but art therapists, music therapists, drama therapists and operating department practitioners are not overtly addressed in any of the studies (see [Table 4](#)). Broad AHP and profession-specific search terms were specified in the search strategy, making it unlikely that a substantial body of relevant literature was missed. Their absence therefore suggests that these smaller AHP professions remain underrepresented in workforce research, highlighting an important gap in the current evidence base. In terms of methodology, 53% of the studies employ quantitative methods, 39% qualitative and 8% mixed methods. Most studies adopt a cross-sectional design with only 15% taking a longitudinal approach. 80% of the studies use convenience and/or purposive sampling approaches, perhaps reflecting the challenges of researching these professions.

Table 3 Extracted Studies

Year of Publication	Authors	Title	AHP Workforce Focus	Country in Which the Study Conducted	Study Location	QuADS Score (/39)	Sample Size
2020	KBC Australia/Australian Government. ¹⁷	Independent Evaluation of the Rural Health Multidisciplinary Training Program	All AHPs	Australia	National	16	Not reported
2014	Russ-Eft, Darlene; Levine, Roger; Fernandez, Antonio R. ¹⁸	Objective career success among paramedics: interaction effects of location and race	Paramedic	United States	National	31	Not reported
2010	Richardson, Indira; Slifkin, Rebecca; Randolph, Randy; Holmes, George M. ¹⁹	A rural-urban comparison of allied health professionals' average hourly wage	OT; Physiotherapist; Radiographer; Speech and Language Therapist	United States	National	17	Not reported
2016	Patterson, Davis G; Coulthard, Cynthia; Garberson, Lisa A; Wingrove, Gary; Larson, Eric H. ²⁰	What Is the Potential of Community Paramedicine to Fill Rural Health Care Gaps?	Paramedic	United States	National	21	31
2018	Richards, Jesse R; Scheckel, Caleb J; Kunz, Matt; Newman, Jessica R; Poole, Kenneth G, Jr; Mi, Lanyu. ²¹	Practice Area Intentions of Graduates of Colleges of Osteopathic Medicine: What Role Does Debt Play?	Osteopath	United States	National	19	From 2403 in 2007 to 4191 in 2016
2020	Cosgrave, Catherine. ²²	Context Matters: Findings from a Qualitative Study exploring Service and Place Factors Influencing the Recruitment and Retention of Allied Health Professionals in Rural Australian Public Health Services	All AHPs	Australia	Regional	21	74
2021	Greenlees, Narelle T; Pit, Sabrina W; Ross, Lynda J; McCormack, Jo J; Mitchell, Lana J; Williams, Lauren T. ²³	A novel blended placement model improves dietitian students' work-readiness and wellbeing and has a positive impact on rural communities: a qualitative study	Dietitian	Australia	Regional	24	23 students 5 supervisors
2018	Arkwright, Laura; Edgar, Susan; Debenham, James. ²⁴	Exploring the job satisfaction and career progression of musculoskeletal physiotherapists working in private practice in Western Australia	Physiotherapist	Australia	Regional	26	205
2023	Pillay, Melisa; Nkosi, Pauline Busisiwe; Sibiya, Maureen Nokuthula. ²⁵	Factors that influence resignations of radiographers employed by tertiary hospitals in the KwaZulu-Natal province, South Africa	Radiographer	South Africa	Regional	16	138
2024	Al Haliq, Samer; AlShammari, Talal. ²⁶	What Drives Paramedics to Serve in Rural and Remote Communities?	Paramedic	Saudi Arabia	National	26	379
2022	Beeler, Erin; Brenton-Rule, Angela; Carroll, Matthew. ²⁷	Recruitment and retention of the rural podiatry workforce in Aotearoa New Zealand: a qualitative descriptive study of podiatrist perceptions	Podiatrist	New Zealand	National	23	15
2024	Anwari, Colis; Yadav, Deekshita; Goel, Gargi; Rao, B C; Mohan, Pavitra; Prasad, Ramakrishna. ²⁸	Integrating physiotherapy in rural primary health care: Early lessons on the value, feasibility, and emerging role of the physiotherapist from a community-oriented primary care (COPC) program in Rajasthan, India	Physiotherapist	India	Local	13	3 cases

2015	Gallego, Gisselle; Dew, Angela; Bulkeley, Kim; Veitch, Craig; Lincoln, Michelle; Bundy, Anita; Brentnall, Jennie. ²⁹	Factors affecting retention of allied health professionals working with people with disability in rural New South Wales, Australia: discrete choice experiment questionnaire development	OT; Physiotherapist; Speech and Language Therapist	Australia	Regional	22	97
2010	O'Toole K; Schoo AM. ³⁰	Retention policies for allied health professionals in rural areas: a survey of private practitioners	OT; Physiotherapist; Speech and Language Therapist	Australia	Regional	13	
2012	Keane, Sheila; Lincoln, Michelle; Smith, Tony. ³¹	Retention of allied health professionals in rural New South Wales: a thematic analysis of focus group discussions	Dietitian; OT; Physiotherapist; Radiographer; Speech and Language Therapist	Australia	Regional	24	30
2013	Roots, Robin K; Li, Linda C. ³²	Recruitment and retention of occupational therapists and physiotherapists in rural regions: a meta-synthesis	OT; Physiotherapist	Australia and Canada	Multi national	23	12 studies
2012	O'Meara, P. F.; Tourle, V.; Stirling, C.; Walker, J.; Pedler, D. ³³	Extending the paramedic role in rural Australia: a story of flexibility and innovation	Paramedic	Australia	Regional	19	4
2013	Bond, Annabelle; Barnett, Tony; Lowe, Shelagh; Allen, Penny. ³⁴	Retention of allied health professionals in Tasmania	All AHPs	Australia	Regional	12	1182
2016	Chapman, Susan A.; Crowe, Remle P.; Bentley, Melissa A. ³⁵	Recruitment and Retention of New Emergency Medical Technician (EMT)-Basics and Paramedics	Paramedic	United States	Regional	27	3,336 EMT-Basics and 876 EMT-Paramedics (n = 4,212 respondents) over the 10 years
2010	O'Toole K; Schoo A; Hernan A. ³⁶	Why did they leave and what can they tell us? Allied health professionals leaving rural settings	Dietitian; OT; Physiotherapist; Podiatrist; Radiographer; Speech and Language Therapist	Australia	Regional	16	32
2013	Smedts, A. M.; Campbell, N.; Sweet, L. ³⁷	Work-integrated learning (WIL) supervisors and non-supervisors of allied health professional students	Dietitian; OT; Physiotherapist; Prosthetist; Orthotist; Speech and Language Therapist	Australia	Regional	24	179
2012	Slagle, Derek R.; Byington, Randy L.; Verhovsek, Ester L. ³⁸	Rural versus Urban: Tennessee Health Administrators' Strategies on Recruitment and Retention for Allied Health Professionals	All AHPs	United States	Regional	26	177 AHP admin staff, 50 from rural locations
2010	Miles E; Adams R; Anaf S; Sheppard L. ³⁹	Factors Identified by Physiotherapists that Influence the Retention of Regional Clinicians: A Qualitative investigation	Physiotherapist	Australia	Local	24	8
2018	Matsumura, Erica Silva de Souza; Alcínês Silva Sousa; Guedes, Juan Andrade; Teixeira, Renato Costa; Kietzer, Katia Simone; de Freitas Castro, Leny Silene. ⁴⁰	Geographical distribution of physiotherapists in Brazil	Physiotherapist	Brazil	National	22	206,081
2017	Jacobs, Robin J.; Kane, Michael N.; Wallace, Elaine M.; Rana, Arif M.; Iqbal, Hassan; Rana, Zaid. ⁴¹	Factors influencing osteopathic medical students' intent to work with underserved populations: Implications for curriculum enhancement	Osteopath	United States	Local	28	829

(Continued)

Table 3 (Continued).

Year of Publication	Authors	Title	AHP Workforce Focus	Country in Which the Study Conducted	Study Location	QuADS Score (/39)	Sample Size
2016	Sewpersadh, Uvana; Lingah, Thanalutchmy; Govender, Pragashnie. ⁴²	Job satisfaction among Occupational Therapists	OT	South Africa	Regional	20	49
2015	Pain, Tilley; Plummer, David; Pighills, Alison; Harvey, Desley. ⁴³	Comparison of research experience and support needs of rural versus regional allied health professionals	Dietitian; OT; Physiotherapist; Podiatrist; Radiographer; Speech and Language Therapist	Australia	Regional	18	723
2014	Johanna Maseko, Lebogang; Erasmus, Angeleen; Di Rago, Tania; Hooper, Jade; O'Reilly, Jo. ⁴⁴	Factors that influence choice of placement for community service among occupational therapists in South Africa	OT	South Africa	Regional	26	30
2017	Haskins, J. Lyn; Phakathi, Sifiso A.; Grant, Merridy; Horwood, Christiane M. ⁴⁵	Factors influencing recruitment and retention of professional nurses, doctors and allied health professionals in rural hospitals in KwaZulu Natal	OT; Paramedic; Speech and Language Therapist	Other: South Africa	Local	28	79 AHPs
2019	Muchui Thambura, Julius; Swindon, Lynda. ⁴⁶	Occupational risk factors and their impact on migration of radiographers from KwaZulu-Natal, South Africa	Radiographer	South Africa	Regional	27	221
2013	Scanlan, Justin Newton; Meredith, Pamela; Poulsen, Anne A. ⁴⁷	Enhancing retention of occupational therapists working in mental health: Relationships between wellbeing at work and turnover intention	OT	Australia	Regional	29	103
2020	Steel, Amie; Dingle, Tess; Wardle, Jon; Adams, Jon. ⁴⁸	A study of the factors impacting on workforce distribution of Australian osteopaths: The perspectives of osteopathic students, academics and clinicians	Osteopath	Australia	Regional	27	30 in focus groups, 17 interviews
2010	Solowiej K; Upton P; Upton D; O'Toole K; Leach MJ; Segal L; Manzano-Santaella A; Coombs C. ⁴⁹	A scheme to support the recruitment and retention of allied health professionals to hard to fill posts in rural areas.	OT; Physiotherapist; Speech and Language Therapist	UK	Regional	21	36 manager surveys, 9 manager interviews, 21 AHP interviews
2013	Lincoln, Michelle; Gallego, Gisselle; Dew, Angela; Bulkeley, Kim; Veitch, Craig; Bundy, Anita; Brentnall, Jennie; Chedid, Rebecca Jean; Griffiths, Scott. ⁵⁰	Recruitment and retention of allied health professionals in the disability sector in rural and remote New South Wales, Australia	All AHPs	Australia	Local	30	97
2019	Axtens, Laurence; Spruyt, Tracey; Grace, Sandra. ⁵¹	Primary attractors for allied health professionals in Australian rural and regional communities	Osteopath	Australia	National	22	12
2023	Gupta, Neeru; Gulliver, Adrienne; Singh, Paramdeep. ⁵²	Relative remoteness and wage differentials in the Canadian allied health professional workforce	All AHPs	Canada	National	29	79,820
2021	Ridgewell, Emily; Clarke, Leigh; Anderson, Sarah; Dillon, Michael P. ⁵³	The changing demographics of the orthotist/prosthetist workforce in Australia: 2007, 2012 and 2019	Orthoptist; Prosthetist	Australia	National	28	Not reported

2022	Couch, Anna; White, Jenni; O'Sullivan, Belinda G.; Haines, Terry; Menz, Hylton B.; Williams, Cylie. ⁵⁴	What recently graduated podiatrists think of rural work and how services are responding	Podiatrist	Australia	Regional	30	11 podiatrists, 15 stakeholders
2023	Golder, G.; Ladd, E.; Mills, K.; Thain, R.; Disney, S. ⁵⁵	International recruitment of radiographers and the development of a workplace integration support package: Project evaluation	Radiographer	UK	Regional	26	40 in wave 1, 14 in wave 2
2022	Nowrouzi-Kia, B.; Nixon, J.; Ritchie, S.D.; Wenghofer, E.F.; VanderBurgh, D.; Sherman, J. E. ⁵⁶	Examining the quality of work-life of paramedics in northern Ontario, Canada: A cross-sectional study	Paramedic	Canada	Regional	35	197
2023	Anchors, Zoe; Jones, Bethan; Thomas, Rachel; Berry, Alice; Walsh, Nicola. ⁵⁷	The impact of remote consultations on the health and wellbeing of first contact physiotherapists in primary care: A mixed methods study	Physiotherapist	UK	National	28	109 for survey, 15 for interviews
2020	Martin, Romany; Mandrusiak, Allison; Lu, Andric; Forbes, Roma. ⁵⁸	New-graduate physiotherapists' perceptions of their preparedness for rural practice	Physiotherapist	Australia	Regional	27	12
2024	Rodda, Lucy; Barrett, Stephen. ⁵⁹	Exploring palliative care practice and learning needs of allied health professionals in the Loddon Mallee region of Victoria: a cross-sectional survey	Dietitian; OT; Physiotherapist; Speech and Language Therapist	Australia	Local	21	121
2021	Ivec, Nicola; Beauchamp, Alison; Sutton, Keith; Mitchell, Eleanor; O'Meara, Peter; Bowles, Kelly-Ann; Williams, Brett. ⁶⁰	Investigating first-year graduate paramedics' reason for current work location: A cross-sectional, data linkage study	Paramedic	Australia	Regional	28	71
2023	Pang, Michael; Sayner, Alesha; McKenzie, Kylie. ⁶¹	Continuing professional development training needs of allied health professionals in regional and rural Victoria	Dietitian; OT; Physiotherapist; Podiatrist; Prosthetist; Orthotist; Speech and Language Therapist	Australia	Regional	31	53 AHPs 14 AHP managers
2024	McAleer, R.; Hanson, L.; Kenny, A. ⁶²	Employers most desirable attributes in early-career physiotherapists: a content analysis of job advertisements	Physiotherapist	Australia	National	26	578 adverts
2023	King, Cheneae; Timler, Amanda; Gill, Janelle; Loh, Negin; Morgan, Maria; Nolan, Jessica; Sturdy, Robyn; Debenham, James Robert. ⁶³	This is why we are staying: Job satisfaction among Physiotherapists in the Kimberley region of Western Australia	Physiotherapist	Australia	Local	28	11
2025	Keep, Gemma; Bye, Rosalind; Eriksson, Clyde; Lim, David; Hilton, Claudia. ⁶⁴	Occupational Therapists' Career Planning, Development, and Progress: An Australian Mental Health Perspective	OT	Australia	Local	28	7
2024	Yan, WT; Ohlsen, S; Wood, E. ⁶⁵	Factors Affecting the Retention of Mental Health Occupational Therapists in the UK: A Qualitative Study with Framework Analysis	OT	UK	Regional	28	16

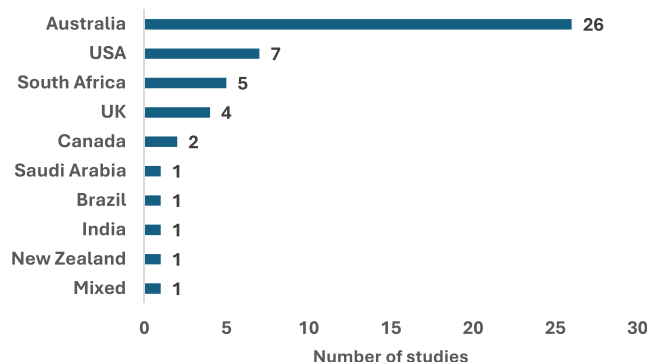


Figure 2 Geographic origin of extracted papers. Total: 49 Extracted Studies.

Quality Assessment of Studies

As noted above, the QuADS tool was used to assess the quality of the studies. Scores ranged from 16 to 35 out of a possible 39 (see Table 3), demonstrating considerable variability in quality. The median score was 26 and the average was 24. The overall pattern of QuADS scores suggested that the methodological quality of the included literature was generally limited, indicating that while the findings provide valuable insights, confidence in the evidence is moderated by weaknesses in study design, conduct, and reporting. As suggested in the tool guidance, we pay particular attention to scores in areas of interest to us. We note that the average score on the *consideration of stakeholders in research design*

Table 4 AHP Focus of Extracted Studies

	AHP Focus: Single Studies	AHP Focus: Mixed Studies	AHP Focus: Total (Single Plus Mixed)
Mixed	13	–	–
All AHPs	6	–	–
Physiotherapist	8	11	19
Paramedic	7	2	9
Osteopath	4	0	4
OT	5	10	15
Podiatrist	2	3	5
Radiographer	3	3	6
Dietitian	1	5	6
Orthoptist	0	1	1
Prosthetist	0	1	1
Orthotist	0	2	2
Speech and Language Therapist	0	11	11
Art Therapist	0	0	0
Drama Therapist	0	0	0
Music Therapist	0	0	0
ODP	0	0	0

criterion (0.9 out of a possible 3) was particularly low. Limited stakeholder engagement may reduce the applicability of findings making them potentially less relevant and less generalisable. We also note low item scores on two other criteria - *provision of recruitment data* (1.4) and *appropriateness of sampling approach to achieve the study aims* (1.7). These scores may point to methodological weaknesses, increasing risk of bias, and indicating that findings should be interpreted with caution. Along with the prevalence of cross-sectional studies and convenience sampling approaches, limitations in the quality and reporting of achieved samples in this group of studies may constrain the validity and transferability of findings. These issues should be borne in mind when interpreting results or considering their broader applicability.

Key Domains Associated with the Rural and Coastal AHP Workforce

Data synthesis resulted in the identification of eight key themes relating to the AHP rural and coastal workforce, presented in Figure 3, and discussed below. Four (Rural living conditions and social factors, Personal background and rural connections, Education and training pathways and Models of service delivery) are directly linked to the rural and coastal context. The other four (Pay and incentives, Career development and professional growth, Support mentorship and management and Working conditions and job satisfaction) are more generic factors which, according to the literature, have particular and distinctive implications in the context of the rural AHP workforce. The workforce factors associated with each domain are detailed in Figure 4 (Workforce domains and associated factors).

Rural Living Conditions and Social Factors

Family separation is an important issue impacting on the lives of rural-based AHPs with higher proportions reporting living apart from their spouse or partner or children, and more living in hospital accommodation, than their non-rural counterparts, driving feelings of dissatisfaction and increasing intention to leave.⁴⁵ It can be challenging to find employment for spouses and appropriate schools for children, which can drive attrition particularly as children progress through the education system and require different educational options which may not be readily available in rural areas.⁶³ Overall, family happiness can be a key driver in decisions related to location. Housing availability is also a key challenge, both finding appropriate accommodation²² and finding affordable housing.^{39,63} The need to travel for work has been found to be negatively associated with retention of rural AHP staff^{27,50} and in particular the need to stay away from home overnight has been identified as negative for retention.²⁹ In addition, the costs of travel associated with rural practice can be a barrier to recruiting AHPs in these areas.³⁶ Social factors impact on the experiences of AHPs in rural practice, both positively and negatively. The rural lifestyle and environment can be positive for retention, although there is some evidence that limited facilities in rural areas can temper this^{39,57} and difficulties integrating into small communities can lead to feelings of social isolation which can be negative for retention.³⁶ There is evidence that transparency in recruitment can be positive in the eventual retention of recruited AHPs.⁶²

Personal Background and Rural Connections

There is mixed evidence on a link between age and rural AHP practice. Younger people (below the age of 25) have been found to be more motivated to work in rural AHP jobs²⁶ but those aged more than 44, and those with more than 5 years professional experience, have been found to be more likely to express the intention to stay.³⁴ Having a rural background is often seen by those managing rural services as a precursor to rural AHP practice.³⁸ An association between personal and professional attitudes, in particular a positive attitude towards providing healthcare services and a strong sense of



Figure 3 Key domains associated with the AHP rural/coastal workforce.

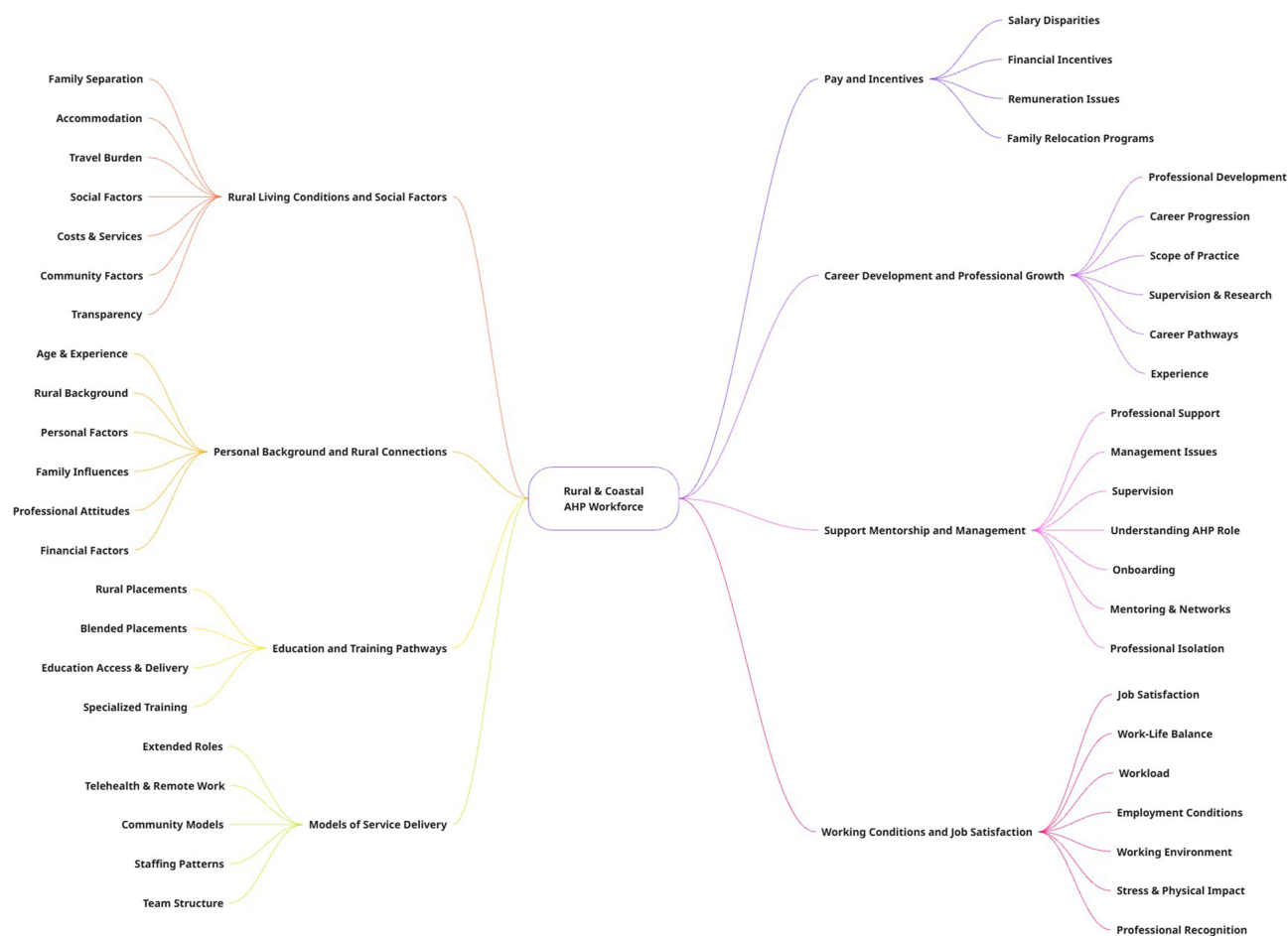


Figure 4 Workforce domains and associated factors.

professional responsibility, and the intention to practice as an AHP in an underserved area has been found.⁴¹ Females are more likely to express the intention to provide care to underserved populations in the future,⁴¹ as are AHP graduate students with a high debt load²¹ which may be attributable to loan-repayment schemes. Personal factors including pre-existing connections to rural areas through originating there^{27,51,54} or an affinity with rural communities through, for example, a previous rural placement during training or knowing people within the community³⁶ are positive for recruitment of rural AHPs. This can extend to the relocation of a spouse or partner to a rural area, which is more strongly associated with older AHPs.⁶⁰

Education and Training Pathways

Investment in educational delivery capabilities, allowing for greater access to Continuing Professional Development (CPD) in rural areas has been found to be positive for AHP retention. Educational interventions that prepare rural AHPs for the broader scope of practice often required in rural areas are particularly important.⁶¹ Conversely, there is evidence that the absence of specialised training can impact negatively on recruitment and retention of rural AHPs, because they feel less confident when faced with the need to deliver specialist services such as palliative care.⁵⁹ Undertaking a rural placement during training has been found to be associated with later rural practice, because it prepares AHPs for the clinical and personal realities of working in rural areas. It can also allow individuals to make personal connections in rural areas, or to gain direct experience of the rural context, both of which may draw them back.^{23,58} Longer rural placements, and rural placements involving both hospital and general practice are both associated with a greater likelihood of later rural practice in AHPs.¹⁷

Models of Service Delivery

There is some evidence that community models of service delivery can drive positive patient outcomes as well as reduced hospital admissions and costs^{20,28,33,35} but less focus in the literature on the outcomes for AHPs themselves. The limited evidence in this area indicates that participation in a community-based programme for rural AHPs can be positive for quality of working life⁵⁶ and that extended practice roles can be positive for retention because they offer a broad variety of challenging clinical work and the ability to make a difference within the community.³¹ Where rural generalist roles offer recognition, broader skills and the access to training they can be motivating for AHPs and positive for recruitment, thus helping to address workforce gaps.⁵⁴ Telehealth and remote consultations as a solution to AHP shortages in rural areas are under-researched in terms of AHP impacts. But available evidence points to increased levels of stress and lower job satisfaction for AHPs engaged in these modes of service delivery, often linked to worry about missing important symptoms when not operating face-to-face.⁵⁷

Pay and Incentives

There is mixed evidence on pay disparity between rural and non-rural AHPs, with some findings pointing to consistently lower pay levels in rural areas.^{18,19} Other studies suggest a more nuanced picture with rural AHPs even earning more than their urban counterparts.⁵² Pay has been found to be a major source of dissatisfaction for rural AHPs⁴² and uncompetitive salaries have been identified as an influential factor in rural AHPs' decisions to leave their posts²⁵ and even in driving migration decisions.⁴⁶ Studies have considered the role of financial incentives and found that they may be positive for attracting AHPs to rural roles, for example in offsetting relocation costs²² and that a rural salary loading may be required to retain rural AHPs.²⁹ Financial incentives linked to CPD and training have also been found to be positive for recruitment for rural practitioners.⁴⁹

Career Development and Professional Growth

The connection between CPD and retention in rural AHPs has been explored in various studies. CPD is considered very important for rural AHPs,⁶¹ especially new graduates and early to mid-career staff. A lack of CPD opportunities in rural areas is a "push factor", driving attrition and negatively impacting on recruitment. CPD focused on a broader scope of practice, which is often more relevant for rural AHPs, is associated with staff retention.⁶¹ Other studies also point to the association between a lack of CPD opportunities and rural AHP attrition^{25,31,36,39} and to the importance of CPD for retention, particularly of early-career rural AHPs.²² CPD has been associated with higher levels of job satisfaction in rural AHPs^{24,29} and opportunities for professional development have been found to influence placement choices in rural areas⁴⁴ and even attraction to rural areas for permanent employment.⁴⁸ The lack of opportunities for career progression could also be influential, with poor promotion prospects linked to job dissatisfaction⁴² and attrition.^{25,31} Conversely, clear opportunities for advancement can lead to AHPs being attracted to rural areas.⁵⁴ A published structured career pathway framework was found to help rural AHPs with career progression, because it helps to identify learning opportunities and facilitates goal planning.⁶⁴ Secondment opportunities may impact on career progression by allowing for higher skills development but rural AHPs may be reluctant to accept a secondment without a guarantee of a permanent job to follow or the support of their current manager.⁶⁴ Having student supervisory opportunities is positively associated with intention to stay in rural AHPs.³⁷ Having the opportunity for a broader scope of practice is highlighted as a key reason for rural AHPs having chosen their current rural post.⁶⁰

Support Mentorship and Management

Professional support has received some considerable attention in the rural AHP workforce literature. A perceived lack of professional support and training has been identified as a barrier to working in rural areas.³⁰ Poor management and leadership contribute to staff turnover³⁸ and this has been attributed to the lack of professional training that staff receive when they are promoted to a leadership position.²² Several studies acknowledge the importance of having capable managers³¹ that understand AHPs and the AHP role.^{32,36,64} Mentoring support to help rural AHPs build their research skills has been found to be positive for recruitment and retention⁶¹ and profession-specific advice and support is linked

with job satisfaction and retention.²⁹ Supportive managers are positive for rural AHP retention³⁹ while insufficient clinical support is negative for retention.³⁶ Feeling disconnected from leadership and higher management levels is cited as a threat to staff retention.⁶⁵ The availability of high-quality mentoring attracts AHPs to rural practice⁵¹ but research suggests that peer support can be difficult to access for rural practitioners which can lead to professional isolation.²⁴ The latter could be mitigated by social support to help new staff integrate better.²² Slow induction and onboarding processes have been linked to the loss of preferred candidates²² and a trial digital onboarding programme for rural AHPs has been found to impact positively on wellbeing.⁵⁵

Working Conditions and Job Satisfaction

Job satisfaction is associated with intention to stay in rural AHPs.^{24,34} Perceived rewards (particularly recognition and prestige), having a good work-life balance and reporting a sense of wellbeing at work are positively associated with job satisfaction and reduced likelihood to report intention to leave.⁴⁷ While self-perceived good mental and physical health are linked to a high-quality working life in AHPs, high strain jobs with high demands and low control are linked to stress, fatigue and depression.⁵⁶ There is also an established connection in rural AHPs between high workloads (of more than 40 hours per week) and dissatisfaction leading to attrition.⁴⁶ High workload is also found to be a key reason for rural AHPs being less likely to engage in research.⁴³ Flexibility and autonomy are important for job satisfaction,^{29,65} and lack of autonomy has been found to be a challenge to retention.⁵⁰ Full-time employment is associated with higher turnover intention⁴⁷ and the lack of part-time roles drives attrition, particularly in mid-career female rural AHPs.⁵³ Short-term contracts can be negative in attracting new AHPs to rural areas⁵⁴ and rural AHP careers can be seen as offering less variety²⁴ impacting on job satisfaction. Diversity of work and a good workplace culture have been identified as positive for retention in rural AHPs.⁶³

Discussion

We set out to explore available evidence on the rural and coastal AHP workforce, to identify existing research findings to inform the development of a simulation model to help improve the planning and management of this workforce. Our analysis suggests that the quality of this literature is compromised by methodological limitations. It is also geographically narrow with uneven AHP coverage which may restrict the generalisability of findings. Nevertheless, our narrative synthesis has grouped the findings of the 49 extracted studies into eight key AHP workforce domains. These domains fall into two groups: those directly connected to the rural context, and those that are arguably more generic, but which have distinct implications for the attraction and retention of rural AHPs. We now discuss these findings in more detail.

Quality of the Literature

The methodological quality of the included studies was generally limited, reducing confidence in the robustness of the evidence base. We point to limited theoretical framing and a reliance on convenience and purposive sampling which may reduce the generalisability of the findings. Key constructs are not always explicitly defined, particular in qualitative studies - the majority - creating ambiguity about the construct being measured. While these limitations perhaps reflect the challenges of researching in this relatively immature field, we argue that there is a need for more robust, theory-informed and rigorous approaches.

The Nature of Rural Employment for AHPs

Four of the eight domains we identified strongly reflect the rural/coastal context and indicate that strategies to address them may be critical in attracting and retaining AHPs. Yet these are issues that may not typically form part of a recruitment decision. First, there are personal factors that exert a strong influence on AHPs contemplating rural posts. Factors like the availability of appropriate accommodation,^{22,39} finding employment for spouses and access to schools for children appear to be disproportionately important in attracting and retaining rural practitioners.⁶³ Population sparsity and distance characterise rural areas and where travel infrastructure is suboptimal, this can complicate a recruitment decision.³⁶ Given that rural AHP roles focus on the delivery of care to individuals that may be

geographically dispersed and unable to travel, clarity around the need for travel in job design may be necessary, but more evidence is needed on how to do this.

Some evidence indicates that rural location factors including lifestyle and access to the countryside may be positive for recruitment⁵⁷ but there is little clarity around how these factors may contribute to retention of AHPs. Similarly, evidence on personal characteristics of rural AHPs is relatively sparse and contradictory and offers more focus on the more obvious attributes such as age and gender. Given the apparent importance of family-related factors, more consideration of, for example, life-stage may elucidate motivators for rural practice. AHPs who originate from rural areas are more likely to practice in these areas,^{51,54} which supports the notion of recruiting from rural areas in so-called “grow your own workforce” initiatives. This implies that AHP education in rural areas may be important for recruitment. Additionally, prior experience of rural areas may predict future rural practice in AHPs. This indicates that offering, or incentivising, rural or blended placements during training may pay dividends. The context of much research is non-UK which suggests that exploring the role of rural placements and rural recruitment and education initiatives in the UK is overdue. Moreover, a few studies contemplate the unique nature of rural AHP practice, which can imply more breadth of practice than specialism. While more generalist roles can be motivating for some AHPs,³¹ understanding around what this may mean for job design and recruitment strategies is lacking.

Overall, the literature offers insight into a range of factors connected to rural AHP employment, but with very little UK evidence. Some factors appear to be highly context-dependent and shaped by local economic and geographical conditions particularly those relating to remuneration, housing, and travel. By contrast, challenges like professional isolation, limited access to CPD, and constrained career development were reported across diverse settings, suggesting they may be more pervasive. This distinction indicates that AHP retention is influenced by both local contextual factors and wider structural challenges. Understanding what these factors imply for recruitment and retention, and on how they may be incorporated into initiatives to trial, would undoubtedly advance this literature.

Generic Workforce Factors Which Have Implications for the Recruitment and Retention of Rural AHPs

Four broader workforce factors identified in our synthesis, while not specifically rural, may be intensified in rural settings with implications for AHP recruitment and retention. Starting with pay, evidence is limited and mixed, offering contradictory insights derived from specific non-UK contexts.^{25,42} Granular detail on pay disparities for rural UK AHPs is absent, a clear gap in evidence. While pay is recognised as a key factor that may influence recruitment and retention, its relative importance against other factors such as professional development or work-life balance is unclear. Research that operationalises and tests the link could advance this area. Similarly, career development and professional support attract much interest in the literature. Studies indicate that rural AHPs find it more difficult to access mentorship CPD and career advancement than their non-rural counterparts and that this can drive professional isolation, dissatisfaction and attrition.^{31,36} Access to CPD and professional support are linked to AHP retention.⁶¹ This key insight is mostly derived from qualitative studies which are strong in depth and nuance. Adding quantitative data might complement this by examining magnitude, variation, or trends which could shed light on the costs and benefits of investing in CPD and mentorship for rural AHPs. Qualitative studies also point to the key role of managers in retaining rural AHPs,³⁹ and here again exploring how these individuals can impact may strengthen insights and shape future interventions.

While recruitment processes are notably absent from the evidence base, there is some focus on induction programmes which indicates that clear processes, social support²² and even digital onboarding initiatives⁵⁵ can make new rural AHPs feel welcomed. Moreover, there is compelling quantitative evidence linking high workload with job dissatisfaction.⁴⁶ Qualitative evidence suggests that lack of flexibility and autonomy may also drive dissatisfaction and ultimately attrition. Together, these insights indicate that attrition in rural AHPs is multifactorial and driven by both structural and experiential issues.

Conclusions and Future Research

We have identified several factors with implications for the sustainability of the rural AHP workforce. Some are strongly associated with the rural context and others are more generic but amplified by rural factors. We have synthesised these into an evidence-informed framework to guide future scholarship and workforce initiatives. Our study has raised concerns about the quality of evidence in this area, indicating that this is an emergent area of scholarship with a narrow geographical focus and uneven AHP coverage. There is clearly limited understanding of the UK rural AHP workforce supporting our assertion that developing a simulation model to explore the impacts of interventions is timely.

This study has several implications for future scholarship. Firstly, we suggest that further research might elucidate how the different factors and domains that we have identified interact, highlighting the need for integrated models of workforce retention and recruitment. We assert that both structural and experiential factors are at work. Understanding how they are connected has implications for scholarship, policy and initiatives focused on AHP workforce sustainability. Secondly, we argue that more longitudinal research designs and causal analysis could explore the interconnectedness of different antecedents. Thirdly, we note that rich qualitative insights generated in prior research may be operationalised to inform future studies to identify associations to inform workforce modelling initiatives. A fourth area of future research could explore the differences between different AHP professions to understand differential impacts of initiatives and inform nuanced approaches.

Funding

This work was supported by the National Institute for Health and Care Research (NIHR) through the Allied Health Professions Workforce Research Partnership (AHP WRaP) [Grant award NIHR160536].

Disclosure

The authors declare no conflicts of interest in relation to this work.

References

1. Whitty C, Loveless B. Chief medical officer's annual report 2021: health in coastal communities. London: UK: Department of Health and Social Care. 2021.
2. The King's Fund. Illustrating the relationship between poverty and NHS services. Available from: <https://www.kingsfund.org.uk/insight-and-analysis/long-reads/relationship-poverty-nhs-services>. Accessed July 24, 2026.
3. Gkiouleka A, Aquino M, Ojo-Aromokudu O, et al. Allied health professionals: a promising ally in the work against health inequalities-A rapid review. *Public Health Pract.* 2022;3:100269. doi:10.1016/j.puhp.2022.100269
4. Campbell N, McAllister L, Eley D. The influence of motivation in recruitment and retention of rural and remote allied health professionals: a literature review. *Rural Remote Health.* 2012;12(2):153–167. doi:10.22605/RRH1900
5. Peterson M, Nielsen S, Olson D. Recruitment and retention of rural allied health professionals: a scoping review. *Rural and Remote Health.* 2024;24(2):8374. doi:10.22605/RRH8374
6. Cleland J, Milte R, Khanna D, et al. Recruitment, retention and turnover of allied health professionals in rural and remote areas: a quantitative scoping review. *Rural Remote Health.* 2025;25(3):1–13. doi:10.22605/RRH9494
7. Maclaren A, Locock L, Skea Z, et al. 'Come and work here!' a qualitative exploration of local community-led initiatives to recruit and retain health care staff in remote and rural areas of the UK. *J Health Serv Res Policy.* 2025;30(3):180–188. doi:10.1177/13558196251318607
8. Dymott A, George S, Campbell N, Brebner C. Experiences of working as early career allied health professionals and doctors in rural and remote environments: a qualitative systematic review. *BMC Health Serv Res.* 2022;22(1):951. doi:10.1186/s12913-022-08261-2
9. NHS Long term workforce plan (2023).
10. Allied Health Professions Federation. Welcome to the Allied Health professions Federation. Available from: <https://www.ahpf.org.uk/>. Accessed July 24, 2026.
11. NHS England. The allied health professions strategy for England: AHPs deliver. 2022. Available from: <https://england.nhs.uk/ahp/allied-health-professions-strategy-for-england>. Accessed July 27, 2026.
12. NHS Vacancy Statistics England. Experimental Statistics: 2025.
13. Peters MD, Marnie C, Tricco AC, et al. Updated methodological guidance for the conduct of scoping reviews. *JBIM Evidence Synth.* 2020;18(10):2119–2126. doi:10.11124/JBIES-20-00167
14. Chalmers S, Hill J, Connell L, Ackerley SJ, Kulkarni AA, Roddam H. Allied health professional research engagement and impact on healthcare performance: a systematic review protocol. *Int J Lang Communicat Disorder.* 2023;58(3):959–967. doi:10.1111/1460-6984.12812
15. Roth L, Le Saux C, Gilles I, Peytremann-Bridevaux I. Factors associated with intent to leave the profession for the allied health workforce: a rapid review. *Med Care Res Rev.* 2024;81(1):3–18. doi:10.1177/10775587231204105
16. Harrison R, Jones B, Gardner P, Lawton R. Quality assessment with diverse studies (QuADS): an appraisal tool for methodological and reporting quality in systematic reviews of mixed-or multi-method studies. *BMC Health Serv Res.* 2021;21(1):144. doi:10.1186/s12913-021-06122-y

17. Australian Government Department oH. *Evaluation of the Rural Health Multidisciplinary Training (RHMT) Program*. Australian Government Department of Health; 2020.
18. Russ-Eft D, Levine R, Fernandez AR. Objective career success among paramedics: interaction effects of location and race. *Hum Resour Dev Int*. 2014;17(1):10–29. doi:10.1080/13678868.2013.840084
19. Richardson I, Slifkin R, Randolph R, Holmes GM. A rural-urban comparison of allied health professionals' average hourly wage. *J Allied Health*. 2010;39(3):e91–e96.
20. Patterson DG, Coulthard C, Garberson LA, Wingrove G, Larson EH. What Is the potential of community paramedicine to fill rural health care gaps? *J Health Care Poor Underserved*. 2016;27(4A):144–158. doi:10.1353/hpu.2016.0192
21. Richards JR, Scheckel CJ, Kunz M, Newman JR, Poole KG Jr, Mi L. Practice area intentions of graduates of colleges of osteopathic medicine: what role does debt play? *J Am Osteopath Assoc*. 2018;118(6):384–388. doi:10.7556/jaoa.2018.082
22. Cosgrave C. Findings from a qualitative study exploring service and place factors influencing the recruitment and retention of allied health professionals in rural Australian public health services. *International Journal of Environmental Research and Public Health*. 2021;59. doi:10.3390/ijerph17165815
23. Greenlees NT, Pit SW, Ross LJ, McCormack JJ, Mitchell LJ, Williams LT. A novel blended placement model improves dietitian students' work-readiness and wellbeing and has a positive impact on rural communities: a qualitative study. *BMC Medical Educ*. 2021;21(1):387. doi:10.1186/s12909-021-02756-y
24. Arkwright L, Edgar S, Debenham J. Exploring the job satisfaction and career progression of musculoskeletal physiotherapists working in private practice in Western Australia. *Musculoskelet Sci Pract*. 2018;35:67–72. doi:10.1016/j.msksp.2018.03.004
25. Pillay M, Nkosi PB, Sibiyi MN. Factors that influence resignations of radiographers employed by tertiary hospitals in the KwaZulu-Natal province, South Africa. *Afr Health Sci*. 2023;23(1):638–645. doi:10.4314/ahs.v23i1.68
26. Al Haliq S, AlShammari T. what drives paramedics to serve in rural and remote communities? *Healthcare*. 2024;12(11):1062. doi:10.3390/healthcare12111062
27. Beeler E, Brenton-Rule A, Carroll M. Recruitment and retention of the rural podiatry workforce in Aotearoa New Zealand: a qualitative descriptive study of podiatrist perceptions. *J Foot Ankle Res*. 2022;15(1):58. doi:10.1186/s13047-022-00562-3
28. Anwari C, Yadav D, Goel G, Rao BC, Mohan P, Prasad R. Integrating physiotherapy in rural primary health care: early lessons on the value, feasibility, and emerging role of the physiotherapist from a community-oriented primary care (COPC) program in Rajasthan, India. *J Family Med Prim Care*. 2024;13(9):3912–3917. doi:10.4103/jfmpc.jfmpc_1540_23
29. Gallego G, Dew A, Bulkeley K, et al. Factors affecting retention of allied health professionals working with people with disability in rural New South Wales, Australia: discrete choice experiment questionnaire development. *Human Resources for Health*. 2015;13(1):22. doi:10.1186/s12960-015-0013-7
30. O'Toole K, Schoo AM. Retention policies for allied health professionals in rural areas: a survey of private practitioners. *Rural and Remote Health*. 2010;10(2):1331.
31. Keane S, Lincoln M, Smith T. Retention of allied health professionals in rural New South Wales: a thematic analysis of focus group discussions. *BMC Health Serv Res*. 2012;12(1):175. doi:10.1186/1472-6963-12-175
32. Roots RK, Li LC. Recruitment and retention of occupational therapists and physiotherapists in rural regions: a meta-synthesis. *BMC Health Serv Res*. 2013;13(1):59. doi:10.1186/1472-6963-13-59
33. O'Meara PF, Tourle V, Stirling C, Walker J, Pedler D. Extending the paramedic role in rural Australia: a story of flexibility and innovation. *Rural Remote Health*. 2012;12(2):131–148.
34. Bond A, Barnett T, Lowe S, Allen P. Retention of allied health professionals in Tasmania. *Aust J Rural Health*. 2013;21(4):236–237. doi:10.1111/ajr.12039
35. Chapman SA, Crowe RP, Bentley MA. Recruitment and retention of new emergency medical technician (EMT)-basics and paramedics. *Prehosp. Disaster Med*. 2016;31:S70–S86. doi:10.1017/S1049023X16001084
36. O'Toole K, Schoo A, Herman A. Why did they leave and what can they tell us? Allied health professionals leaving rural settings. *Aust Health Rev*. 2010;34(1):66–72. doi:10.1071/AH09711
37. Smedts AM, Campbell N, Sweet L. Work-integrated learning (WIL) supervisors and non-supervisors of allied health professional students. *Rural Remote Health*. 2013;13(1):6–18.
38. Slagle DR, Byington RL, Verhovsek EL. Rural versus urban: tennessee health administrators' strategies on recruitment and retention for allied health professionals. *J Health Care Finance*. 2012;38(4):91–104.
39. Miles E, Adams R, Anaf S, Sheppard L. Factors identified by physiotherapists that influence the retention of regional clinicians: a qualitative investigation. *Internet J Allied Health Sci Pract*. 2010;8(1):1–6.
40. Matsumura ESDS, Sousa Júnior AS, Guedes JA, Teixeira RC, Kietzer KS, LSdF C. Geographical distribution of physiotherapists in Brazil. *Fisioterapia e Pesquisa*. 2018;25:309–314. doi:10.1590/1809-2950/17027025032018
41. Jacobs RJ, Kane MN, Wallace EM, Rana AM, Iqbal H, Rana Z. Factors influencing osteopathic medical students' intent to work with underserved populations: implications for curriculum enhancement. *Int J Osteopath Med*. 2017;24:42–47. doi:10.1016/j.ijosm.2016.08.003
42. Sewpersadh U, Lingah T, Govender P. Job satisfaction among occupational therapists. *S. Afr J Occup Ther*. 2016;46(1):6–8. doi:10.17159/2310-3833/2016/v46n1a3
43. Pain T, Plummer D, Pighills A, Harvey D. Comparison of research experience and support needs of rural versus regional allied health professionals. *Aust J Rural Health*. 2015;23(5):277–285. doi:10.1111/ajr.12234
44. Johanna Maseko L, Erasmus A, Di Rago T, Hooper J, O'Reilly J. Factors that influence choice of placement for community service among occupational therapists in South Africa. *S. Afr J Occup Ther*. 2014;44(1):36–41.
45. Haskins JL, Phakathi SA, Grant M, Horwood CM. Factors influencing recruitment and retention of professional nurses, doctors and allied health professionals in rural hospitals in KwaZulu Natal. *Health SA*. 2017;22:174–183. doi:10.1016/j.hsag.2016.11.002
46. Muchui Thambura J, Swindon L. Occupational risk factors and their impact on migration of radiographers from KwaZulu-Natal, South Africa. *Ergonomics SA*. 2019;31(1):3–17. doi:10.4314/esa.v31i1.2
47. Scanlan JN, Meredith P, Poulsen AA. Enhancing retention of occupational therapists working in mental health: relationships between wellbeing at work and turnover intention. *Aust. Occup. Ther. J*. 2013;60(6):395–403. doi:10.1111/1440-1630.12074

48. Steel A, Dingle T, Wardle J, Adams J. A study of the factors impacting on workforce distribution of Australian osteopaths: the perspectives of osteopathic students, academics and clinicians. *Int J Osteopath Med.* 2020;36:11–18. doi:10.1016/j.ijosm.2020.02.002
49. Solowiej K, Upton P, Upton D, et al. A scheme to support the recruitment and retention of allied health professionals to hard to fill posts in rural areas including commentaries by. *Int J Ther Rehabil.* 2010;17(10):545–555. doi:10.12968/ijtr.2010.17.10.78813
50. Lincoln M, Gallego G, Dew A, et al. Recruitment and retention of allied health professionals in the disability sector in rural and remote New South Wales, Australia. *J Intellect Dev Disabil.* 2014;39(1):86–97. doi:10.3109/13668250.2013.861393
51. Axtens L, Spruyt T, Grace S. Primary attractors for allied health professionals in Australian rural and regional communities. *Aust. J. Herb. Med.* 2019;25(3):156–159.
52. Gupta N, Gulliver A, Singh P. Relative remoteness and wage differentials in the Canadian allied health professional workforce. *Rural Remote Health.* 2023;23(2):1–8. doi:10.22605/RRH7882
53. Ridgewell E, Clarke L, Anderson S, Dillon MP. The changing demographics of the orthotist/prosthetist workforce in Australia: 2007, 2012 and 2019. *Human Resources for Health.* 2021;19(1):34. doi:10.1186/s12960-021-00581-4
54. Couch A, White J, O'Sullivan BG, Haines T, Menz HB, Williams C. What recently graduated podiatrists think of rural work, and how services are responding: a qualitative study. *Rural Remote Health.* 2022;22(1):1–11. doi:10.22605/RRH6930
55. Golder G, Ladd E, Mills K, Thain R, Disney S. International recruitment of radiographers and the development of a workplace integration support package: project evaluation. *Radiography.* 2023;29(2):442–449. doi:10.1016/j.radi.2023.02.002
56. Nowrouzi-Kia B, Nixon J, Ritchie SD, Wenghofer EF, VanderBurgh D, Sherman JE. Examining the quality of work-life of paramedics in northern Ontario, Canada: a cross-sectional study. *Work.* 2022;72(1):135–147. doi:10.3233/WOR-205025
57. Anchors Z, Jones B, Thomas R, Berry A, Walsh N. The impact of remote consultations on the health and wellbeing of first contact physiotherapists in primary care: a mixed methods study. *Musculoskeletal Care.* 2023;21(3):655–666. doi:10.1002/msc.1737
58. Martin R, Mandrusiak A, Lu A, Forbes R. New-graduate physiotherapists' perceptions of their preparedness for rural practice. *Aust J Rural Health.* 2020;28(5):443–452. doi:10.1111/ajr.12669
59. Rodda L, Barrett S. Exploring palliative care practice and learning needs of allied health professionals in the Loddon Mallee region of Victoria: a cross-sectional survey. *Aust Health Rev.* 2024;48(4):381–387. doi:10.1071/AH23255
60. Ivec N, Beauchamp A, Sutton K, et al. Investigating first-year graduate paramedics' reason for current work location: a cross-sectional, data linkage study. *Aust J Rural Health.* 2021;29(5):678–687. doi:10.1111/ajr.12786
61. Pang M, Sayner A, McKenzie K. Continuing professional development training needs of allied health professionals in regional and rural Victoria. *Aust J Rural Health.* 2024;32(4):763–773. doi:10.1111/ajr.13141
62. McAleer R, Hanson L, Kenny A. Employers most desirable attributes in early-career physiotherapists: a content analysis of job advertisements. *BMC Health Serv Res.* 2024;24(1):1–12. doi:10.1186/s12913-024-11470-6
63. King C, Timler A, Gill J, et al. This is why we are staying: job satisfaction among Physiotherapists in the Kimberley region of Western Australia. *Aust J Rural Health.* 2024;32(3):521–537. doi:10.1111/ajr.13117
64. Keep G, Bye R, Eriksson C, Lim D, Hilton C. Occupational therapists' career planning, development, and progress. *An Australian Mental Health Perspective Occupational Ther Int.* 2025;2025:1–9. doi:10.1155/oti/3901634
65. Yan WT, Ohlsen S, Wood E. Factors affecting the retention of mental health occupational therapists in the UK: a qualitative study with framework analysis. *Occupational Ther Mental Health.* 2024. doi:10.1080/0164212X.2024.2423811

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