## RESEARCH

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Why they come, why they stay and why they leave: a survey to understand the drivers of recruitment, retention, and attrition of allied health clinicians in an Australian metropolitan health network



Abby M. Foster<sup>1,2,3\*</sup>, Simone Munro<sup>1</sup>, Janet Golder<sup>1</sup>, and Debra Mitchell<sup>1,2</sup>

## Abstract

**Background** While allied health plays a central role in healthcare, workforce challenges are straining the sector. Challenges are shaped by population changes, emerging models of care, and educational limitations, and were exacerbated by COVID-19. This study aimed to identify drivers of recruitment and retention for allied health clinicians in an Australian metropolitan setting. Identifying and addressing these factors is essential to the design and implementation of tailored, evidence-informed workforce strategy and policy.

**Methods** This cross-sectional, online survey explored workplace attraction, job seeking behaviours, and workplace perceptions. 29 Likert-scale statements informed by the existing literature examined factors influencing allied health retention. Allied health employees from a single Australian metropolitan health network were invited to participate. Descriptive statistics, logistic regression, and deductive content analysis were undertaken.

**Results** 42.6% (n = 593) of those invited participated in the survey, with 45.7% (n = 271) of participants having been with the organisation for six or more years. 35% (n = 197) of respondents to a question about intention to leave agreed that they aimed to leave their current role within six months. Variables associated with intention to leave were not feeling a sense of satisfaction with their role (odds ratio [OR] 1.51, 95% Cl 1.22–1.85), not being recognised and rewarded by the team manager (OR 1.37, 95% Cl 1.12–1.67), not working in the preferred clinical area (OR 1.56; 95% Cl 1.25–1.95), and feeling burned out by the job (OR 1.44; 95% Cl 1.16–1.78). Qualitative findings support the centrality of aspects of the job (job characteristics), the organisational context (rewards offered; climate; organisational support) and person-context interface (peer/group relations; work-life conflict) to attraction, retention, and attrition in roles.

**Conclusion** This study identifies factors affecting recruitment, retention, and attrition of allied health professionals in a metropolitan setting. Findings are impacted by the personal and professional effects of the COVID-19 pandemic response. Results provide a baseline upon which the impact of interventions can be measured, while informing

\*Correspondence: Abby M. Foster Abby.Foster@monashhealth.org

Full list of author information is available at the end of the article



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the prioritisation and design of tailored workforce strategies. Further, findings may inform local policy responses to improve the allied health workforce and ensure excellent care for the community.

Keywords Workforce, Allied health, Attraction, Recruitment, Retention, Attrition, Australia

## Background

Allied health (AH) plays a crucial role in the Australian healthcare system, providing a range of essential services to support the health and wellbeing of the population [1]. AH is the collective term used for university qualified health professional groups, often in a multidisciplinary team. In the state of Victoria, Australia, AH includes 25 professional therapy and science practitioners. Professional groups range from Physiotherapy, Occupational Therapy and Social Work as the three largest cohorts, through to the smaller cohorts of Creative Art Therapy, Neurophysiology science and Audiology (not inclusive of all professional groups). From diagnosis and treatment, rehabilitation and recovery, to preventative care and chronic disease management, AH ensures that the community receives the care and support required to optimise health and wellbeing [2]. In addition to enhancing the health outcomes for patients, AH is an essential component in a sustainable and effective healthcare system [3].

## Workforce shortages in allied health in Australia

Despite the essential role AH plays in the Australian healthcare system, workforce challenges have been straining the sector [4]. While data limitations restrict the depth of our understanding of the issue [5], a national shortage of allied health professionals (AHPs) has been identified, including social workers, occupational therapists, and to a lesser degree speech pathologists and physiotherapists [4]. Several factors contributing to these workforce shortages have been identified [6], including population changes, new models of care, and education and training limitations.

In Australia, the demographics of the population AH clinicians serve is changing. These changes are driven by better healthcare, improved access to food, improved diagnosis and treatment, and reduced child mortality. The ageing population is associated with an increase in individuals living with chronic conditions and an increase in the absolute number of people with disability [7] is just one example of a factor modifying the demographic profile of AH clients and patients, increasing the demand for AH services at a rate that outpaces the supply of qualified professionals.

Allied Health workforces are funded in differing models across Australia, based on the sector of employment. Allied Health in the public health sector relies on proportions of national weighted activity units (NWAU) funding, with disability and aged care being Commonwealth funded. The private sector is funded by the consumer. The emergence of new models of care and expansion of existing models of care in Australia, including the National Disability Insurance Scheme (NDIS) and the Victorian Better at Home initiative, have created competition for talent. In addition, the findings of inquiries, including the Royal Commissions into Aged Care [8], Mental Health [9], and Disability [10] have highlighted the important role AH clinicians play in the aged care, disability and mental health sectors, resulting in an expansion in available positions and incentivisation of these sectors [11].

Despite a steady increase in AH training programs [6] and a marked increase in the number of registered AHPs [12], significant vacancies remain in the public health sector. These existing workforce shortages have been amplified by the COVID-19 pandemic and the healthcare and community response to it.

## The impact of the COVID-19 pandemic on the allied health workforce

The pandemic has had, and continues to have, a profound impact on the global workforce. For the AH workforce, changes have affected both the delivery of service and the workforce itself [13].

The AH workforce experienced an increased demand for services, changes in service delivery models with many services transitioning to virtual or remote delivery methods [14], and disruptions to education and training [15] leading to challenges in ensuring a continued supply of skilled workers. Furthermore, many AHPs were redeployed to support contact tracing efforts [16], the vaccination response [17], or critical care services [18]. These service changes have had subsequent impacts on the workforce.

The so-called "Great Resignation" was an economic trend that began in early 2021 which saw employees resigning from their positions [19]. While many sectors were impacted by this worldwide trend, healthcare was one of the industry's most significantly affected by this rapid attrition. High rates of both resignation and intention to leave were reported in healthcare workers [20]. Drivers of attrition in the sector identified in the literature include negative psychological responses to stress [20], a lack of team collegiality and connectedness [21], changes in work roles [22] including redeployment [23], a lack of organisational support or rewards [23, 24], and burnout [22, 25]. Healthcare sector implications are overlaid by the interaction between gender and work roles

[26], an essential consideration given 70% of the global healthcare workforce [27] in the COVID-19 response were women. While the lack of comprehensive national workforce dataset for allied health means the impact of this trend for Australian allied health professionals could be quantified, data from specific contexts suggest a proportion of allied health professionals were considering resigning because of COVID-19 and its impacts [28]. This phenomenon highlights the need for ongoing investment in job creation, workforce development, workplace flexibility and support for workers to enhance the sustainability of the workforce.

While COVID-19 undoubtedly had a significant impact on the healthcare workforce, the pandemic has exacerbated and highlighted the workforce 'crisis' rather than causing it [29]. Identifying and addressing the specific recruitment and retention challenges in this space is critical for ensuring a resilient and effective AH workforce that is equipped to meet the needs of patients and communities.

# Factors contributing to workforce recruitment and retention in allied health

Pre-pandemic examinations of the push and pull factors for recruitment and retention of AH clinicians have largely been focused on experiences in regional and remote areas in countries including Australia, South Africa [30] and New Zealand [31, 32]. This is attributed to the long-standing maldistribution of AH clinicians between metro, rural and remote areas [33]. A systematic review of the factors that influence workplace location choices for allied health professionals identified five key domains that influence AH recruitment and retention: (a) opportunities for career development; (b) workload and type of work; (c) organisational and workplace structure; (d) previous location exposure; and (e) personal factors [33].

Given the specific focus of existing literature favours AH recruitment and retention challenges in remote and regional areas, an examination of the evidence beyond AH is required to better understand drivers of recruitment and retention. A meta-synthesis of the antecedents of voluntary employee turnover presents us with a holistic picture of the reasons people cease their employment across sectors and professions [34]. From the empirical research, they identified 57 predictors of workforce attrition, organised into nine pre-determined domains: individual attributes; aspects of the job; traditional job attitudes; newer personal conditions; organisational context; person-context interface; external job market; attitudinal withdrawal; and employee behaviours. While the application of this model to AH has not been explored, it provides a broader lens through which AH attraction, retention and attrition can be examined.

#### Responses to the allied health workforce shortages

Despite the limitations in our understanding of the specific factors influencing the recruitment and retention of AHPs identified above, responses to AH workforce shortages have been implemented.

Government actions to address the workforce limitations include the development of the *Victorian Health Workforce Strategy* [35] at a state level and the inclusion of AHPs in the priority visa at a Commonwealth level, with relocation support offered. The state government also implemented a frontline worker bonus scheme for those working in COVID-19 wards [36] and later introduced a healthcare worker winter retention and surge payment [37]. Additionally, new attraction measures such as rural and regional scholarships to new graduate speech pathologists and occupational therapists are soon to be implemented [38].

Addressing workforce shortages in AH requires a tailored, multi-faceted approach that addresses the underlying factors contributing to the shortage. While there is a paucity of data derived from metropolitan centres, scrutiny of the factors influencing recruitment and retention of AH identified in regional and remote settings can form a foundation upon which a more context-specific understanding can be built. The aim of this study, therefore, was to identify the factors influencing AH recruitment and retention within a large, tertiary healthcare network.

## Methods

#### Study design

This study employed a cross-sectional, online survey to allow for a breadth of participant perceptions on workforce factors to be captured. The survey was designed by a team of AH leaders and researchers, considering survey design principles [39] and with reference to the existing literature in this field. The initial section of the online survey contained the participant information and consent process. The survey consisted of 51 questions covering: (1) employment demographics, (2) participant perceptions of workplace attraction, (3) current job seeking behaviours, and (4) participant perceptions of their current workplace. The survey included questions with dichotomous yes/no, multiple choice, five-point Likert scale, and open-ended response options.

The survey included 29 statements pertaining to the five key domains identified in the literature as influencing AH recruitment and retention (personal factors, values, workload and type of work, leadership and management, and career development and enhancement). Between four to seven statements were present for each domain. A five-point Likert response scale was used (1 = strongly disagree, 2 = disagree, 3 = neutral, 4 = agree, 5 = strongly agree, with the addition of "Don't know" and "Not applicable"). The online survey was piloted by a small number

of participants, representing a cross section of employees across professions and programs. Minor changes in wording and response format were made as a result. The complete survey tool is available in the Supplementary Materials.

## **Research context**

This research was undertaken in Melbourne, the capital city of the state of Victoria in south-east Australia. Over the period of 2020–2021, citizens of Melbourne experienced extended periods of lockdown, being issued with stay-at-home orders except for permitted activities for a total period of 262 days over six lockdowns. Lockdown restrictions varied on each occasion, but included limited permissible reasons to leave the home, mask mandates outside the home, overnight curfews and visitor restrictions. Healthcare workers, including allied health professionals, were considered authorised workers and were permitted to leave the home for the purposes of work.

In January 2022, a peak of COVID-19 infections in the community necessitated the implementation of a statewide external state of emergency, known as a Code Brown, in Victoria. This emergency response resulted in the temporary closure of several AH services, and the redeployment of AH employees to clinical roles deemed critical and crisis response roles, including COVID-19 vaccination, testing, contact tracing, and COVID-19 supportive community pathways.

Over the period of July 2021–March 2022 a rising vacancy rate in AH positions was observed across the organisation. This survey was issued in May 2022 and whilst the Code Brown emergency response had ceased, many services that included an AH workforce were yet to resume.

### Participants and setting

Monash Health is the largest public health service in the state of Victoria, Australia. The network provides healthcare to one quarter of Melbourne's population, with AH providing services in all programs and across the lifespan. Clinical services are provided by AH within, but not exclusive to, adult inpatient, community rehabilitation and community health, mental health, and paediatric services. Monash Health AH is structured in a devolved framework, with operational governance provided through program areas. Professional governance is provided through the Chief Allied Health Officer, independent of operational lines. In terms of professional inclusion and services delivered, the service is comparable to other publicly funded healthcare providers across the state.

Eligible participants for this study were required to meet the following criteria: (1) AHPs or allied health assistants, (2) currently employed at Monash Health. All AH employees, regardless of the nature of their employment, were eligible to participate. 1534 AH clinicians were eligible to respond, inclusive of professional groups from both AH therapies and scientists employed under the governance of the Chief Allied Health Officer. As Monash Health is a public health facility, private practitioners and those working in primary care are not within the scope of this study.

## Procedure

Ethics exemption was granted by the Monash Health Human Research Ethics Committee (HREC: QA/85560/ MonH-2022-307215). Digital informed consent was collected from all participants within the online survey. Limited demographic information was collected to enhance the confidentiality and anonymity of participant responses across both data collection and analysis.

All survey responses were de-identified and stored in a secure, password-protected electronic file at Monash Health, accessible only to members of the research team. The Checklist for Reporting Results of Internet E-Surveys (CHERRIES) reporting guidelines [40] informed the reporting of this study (see Supplementary Materials).

The online survey was designed and hosted on Survey Monkey (http://www.surveymonkey.com). The survey was open for a period of 16 days (5–21 May 2022). The survey was distributed via email from the Chief Allied Health Officer to all AH employees at Monash Health. The survey was also discussed in AH virtual forums and promoted by electronic newsletter.

### Data analysis

Data from the survey were initially exported from Qualtrics to a Microsoft Excel spreadsheet. Data was cleaned to remove responses from ineligible respondents, and from respondents who gave consent for internal use of their data but requested their qualitative responses could not be used in presentations and publications.

Demographic data were analysed using descriptive statistics (frequencies, percentages, means, standard deviations, and ranges) for all participants. Percentages indicating intention to leave were calculated based on an affirmative response to the question *"Are you looking to leave your current role in the next 6 months?"*, divided by total participants. Missing responses were excluded from further analyses.

Several univariate analyses were conducted to evaluate the association between the selected variables and the dichotomous outcome variable *intention to leave*. Initially, univariate logistic regression analyses were used to identify variables with a *p*-value < 0.05 for their association with *Intention to leave* scores. Next, significant variables at univariate analysis were then entered into a multiple logistic regression model. A backwards elimination process was used and variables with the highest *p*-value were removed from the equation one-at-atime and the change assessed for its impact on pseudo R2. All non-significant variables were removed until remaining variables had a *p*-value < 0.05 for their association with Intention to leave scores. The variables that were removed were then individually added back into the model and tested for their impact on the Akaike Information Criterion (AIC) and were excluded from the final model if AIC increased [41]. The remaining variables were reported with their odds ratio (OR), standard error, 95% confidence interval (95% CI), and *p*-value. All statistical tests were conducted in Stata [42].

Open-ended responses from the survey were analysed in Microsoft Excel using deductive content analysis [43]. Analysis saw participant responses coded to predetermined codes, aligned with the antecedents of voluntary employee turnover identified by Rubenstein and colleagues [34] in their systematic review of the literature. The identified set of turnover antecedents to which participant responses were coded included (1) *Individual attributes* (e.g., age, abilities and skills, extraversion, locus of control); (2) *Aspects of the job* (e.g., job characteristics, role ambiguity, task complexity, workload); (3) *Traditional job attitudes* (e.g., job involvement, job satisfaction,

 Table 1
 Demographic characteristics of survey respondents

organisational commitment); (4) *Newer personal conditions* (e.g., coping, engagement, stress/exhaustion); (5) *Organisational context* (e.g., climate, organisational prestige, organisational support, rewards offered); (6) *Personcontext interface* (e.g., fit, justice, leadership, peer/group relations, work-life conflict); (7) *External job market* (e.g., alternatives); (8) *Attitudinal withdrawal* (e.g., withdrawal cognitions); and (9) *Employee behaviours* (e.g., job search, absenteeism, employee performance). Three authors (AMF, JG & SM) coded the qualitative content, with dual coding and peer checking conducted on 30% of responses to enhance credibility.

## Results

#### Sample demographics

The survey was distributed to 1534 AH clinicians and garnered a response rate of 42.6% (n = 653). Of those who completed the survey, 90% consented to have their data included in the publication resulting in a total sample of 593 participants (38.7% of the target population). The sample was representative of the local allied health population within the parameters of profession, grading, and program of employment. Refer to Table 1 for response rate from individual professions to demonstrate sample representation.

		N (%) participants in survey	N (%) of total allied health workforce
Number who completed survey		653	
Number consented to data publication	n	593 (90%)	
Profession / Discipline	Allied Health Assistants (AHA)	37 (6.2%)	102 (6.66%)
	Audiologists	8 (1.3%)	15 (0.98%)
	Bio-mechechanists	1 (0.2%)	1 (0.07%
	Child life Therapists	5 (8.4%)	9 (0.59%)
	Community Development Workers	10 (1.7%)	75 (4.9%)
	Art Therapists	1 (0.2%)	3 (0.20%)
	Dietitians	55 (9.3%)	123 (8.03%)
	Exercise Physiologists	10 (1.7%)	26 (1.70%)
	Music Therapists	6 (1.0%)	14 (0.91%)
	Neurophysiological Scientists	4 (0.7%)	9 (0.59%)
	Occupational Therapists	111 (18.7%)	273 (17.82%)
	Physiotherapists	151 (25.5%)	353 (23.04%)
	Podiatrists	17 (2.9%)	40 (2.61%)
	Social Workers	95 (16%)	322 (21.02%)
	Speech Pathologists	52 (8.8%)	120 (7.83%)
	Welfare Workers	1 (0.2%)	5 (0.2%)
	Other	12 (2.0%)	
	Not reported	2 (0.4%)	
_ength of service (years)	0–2	157 (26.5%)	
	2–5	156 (27.7%)	
	6–10	106 (17.9%)	
	11–15	92 (15.5%)	
	16–20	35 (5.9%)	
	20+	38 (6.4%)	
	Prefer not to say	9 (1.5%)	

Relevant demographic data is presented in Table 1. Sixteen different professional groups were represented, with the largest being physiotherapy (n = 151; 25.5%), occupational therapy (n = 111; 18.7%) and social work (n = 95; 16%).

## Attraction, retention, and attrition: coding frequency counts

Factors related to the attraction, retention, and attrition of AHPs were examined. The frequency with which variables were coded are represented below in Table 2 and discussed in the sections below.

## Why they come: factors that influence attraction

Questions were asked regarding attraction to roles and organisations in general, and in relation to participant's current organisation and role.

#### Attraction to organisation

Attraction to specific employees or organisations was influenced by diverse factors, with a predominance of responses pertaining to the domains of *organisational context* and *person-context interface*.

The nature of the organisation, the domain of organisational context, that provided pull factors for AH employees were characterised by a positive climate, organisational support, and the rewards offered by an organisation. Characteristics of an organisation with a "positive workplace culture" included those who were "forward thinking and inclusive" or made a "commitment to excellence". In addition, a "supportive work environment" was required. Rewards beyond pay were also considered important, including "opportunities to move or progress into other roles or positions, clinical supervision" and "opportunities for...learning/professional development".

Specific to the health network that respondents were employed in at the time of the survey, participants reported attraction to both *organisational size* and *organisational prestige*. Respondents had been attracted to a *"large health network with an excellent reputation [and] lots of opportunities within allied health"*. It was perceived as important that the organisation was *"well known for excellent service delivery"* and had *"room to explore personal and career growth across the organisation"*.

Perceived or anticipatory *person-context interface* was also frequently reported to be of importance in attracting participants to an organisation. *Fit* was characterised as being predicated on the "*ethos of the organisation and alignment of core values [with my own]*". Participants reported the need for positive *peer/group relations*, seeking roles in teams composed of "*team members who are team players and have a positive working atmosphere*". Furthermore, "*equity within the team*" was of value, as was a "sense of belonging". In addition to valuing team relationships, "responsive and supportive leadership" was deemed attractive, with some specifying a desire for leadership "that understands the tensions between career and family". This speaks to the desire to avoid work-life conflict through organisations that actively support "work/ life balance", which may be facilitated by practicalities such as "proximity to home".

## Attraction to role

Attraction to an organisation was conditional on attraction to a specific role, or *aspects of the job*. Respondents described a desire to find a role that was *"interesting*". From a clinical perspective, people were attracted to roles that included *"rotating programs"* that provided *"exposure to different clinical settings*". Conversely, the *"ability to specialise"* was seen as valuable by others. The nonclinical element of a job was also considered important, with the provision of *"opportunities for service development and quality"* and *"innovation [and] research opportunities"*.

Specific roles were also selected and deemed attractive based on *individual attributes, internal motivation* in particular. Internal motivation may be values-driven, such as a role that *"allows me to follow my passions"* or provide an *"ability to improve a person's quality of life"*. Motivation may also be career related, such as a role being *"aligned to my career goals"* or a readiness to *"take on new challenges"* and *"use my skills in a different setting"*.

Examinations of why people are attracted to particular roles and organisations help to inform recruitment strategy, examination of how to retain AH clinicians within roles and organisations is also essential to better understand voluntary turnover.

#### Why they stay: factors that influence retention

Respondents who had been working within the health network for a period of more than six years were asked to describe the main reasons they continued to work for the health network. There was evidence of significant overlap between variables associated with attraction and those associated with retention. Table 2 provides an overview of the frequency with which participant quotations were coded to individual variables. Variables identified in their responses were predominantly related to the *organisational context* and the *person-context interface*.

The variable most frequently reported was *peer/group relations*, a variable that sits within the *person-context interface* domain. This variable speaks to the professionals' interpersonal experiences with coworkers, including feelings of support, cohesion, or social integration. Some expressed the main reason that they remain within the organisation as being relational. For example, "I

Domain	Variable	Frequency counts					
		Attraction			Retention	Attrition	
		To employers/ organisations	To AH positions (general)	То МН	To current role	-	
ndividual	Abilities and skills	0	17	3	53	0	10
attributes	Age	0	0	1	2	0	2
	Agreeableness	0	0	0	0	0	1
	Children	0	0	0	1	0	1
	Conscientiousness	0	1	0	0	0	0
	Education	0	4	0	5	0	4
	Emotional stability	0	0	0	0	0	0
	Ethnicity / race	0	0	0	0	0	0
	Extraversion	0	0	0	1	0	0
	Internal motivation	0	24	3	196	1	42
		-					
	Locus of control	0	0	0	10	1	4
	Marital status	0	0	0	0	0	1
	Openness to experience	0	4	1	38	6	0
	Sex	0	0	0	0	0	0
	Tenure	0	0	0	0	0	3
•	Instrumental communication	35	3	2	1	2	12
dc	Job characteristics	162	326	201	186	88	67
	Job security	28	22	33	35	37	29
	Participation	3	36	5	37	7	20
	Pay	50	25	14	8	18	13
	Role ambiguity	3	1	1	0	1	4
	Role conflict	2	3	0	0	0	2
	Routinisation	12	17	2	39	3	9
	Task complexity	12	25	6	42	5	9
	Workload	15	30	14	18	4	37
raditional job	Job involvement	5	1	0	5	7	1
raditional job ttitudes	Job satisfaction	16	30	22	29	71	9
	Organisational commitment	3	2	0	0	6	0
	Other commitment	4	15	0	16	3	1
	Other satisfaction	3	3	0	2	16	0
lewer	Coping	0	0	0	0	0	1
ersonal							•
onditions	Engagement	0	0	0	1	0	3
	Stress/exhaustion	2	0	0	3	0	44
ontent	Centralisation	14	7	0	2	0	8
ontent	Climate	234	51	56	14	20	31
	Organisational prestige	81	7	89	20	7	1
	Organisational size	17	4	119	9	11	53
	Organisational support	162	44	19	20	21	53
	Reward contingency	5	3	0	0	0	4
	Rewards offered	246	220	200	163	130	72
erson-	Fit	81	76	86	39	10	2
interface	Influence	23	15	0	3	1	2
	Job embeddedness	13	1	0	0	0	0
	Justice	41	4	1	5	0	10
	Leadership	114	59	13	43	23	41
	Met expectations	0	0	11	0	0	5
	Peer/group relations	176	162	63	112	140	22
	Psychological contract breach	7	0	0	0	0	28
	Work-life conflict	, 176	82	148	68	61	54

## Table 2 Coding frequency counts table: attraction, retention, and attrition

Domain	Variable	Frequency counts					
		Attraction				Retention	Attrition
		To employers/ organisations	To AH positions (general)	То МН	To current role	-	
External job market	Alternatives	6	1	8	15	6	2
Attitudinal withdrawal	Withdrawal cognitions	0	0	0	0	1	0
Employee behaviours	Selection process performance	0	0	0	0	0	0
	Job search	0	0	1	0	0	0
	Absenteeism	0	0	0	0	0	0
	Lateness	0	0	0	0	0	0
	Employee performance	0	0	0	0	0	0
	Organisational citizenship behaviours	0	0	0	0	0	0

#### Table 2 (continued)

really enjoy the dietetics team I work with. I feel valued as a member of this team". Others described "exceptional teams [with a] passion for allied health excellence and patient-centred care".

An additional factor identified within this domain was work-life conflict, with respondents more likely to remain when this conflict is reduced. Work-life balance or integration was enhanced for participants who worked "close to home" or felt they "don't have to think about work after hours" and experienced "flexible work life balance". Leadership and fit were also person-context interface variables perceived to reduce the likelihood of voluntary employee turnover. "Great leadership and support" were characterised by individuals being "encouraged and supported to progress their career" or "support...to explore different avenues and challenges". Furthermore, fit was identified when "my core values align with [those of the organisation]".

Another frequently reported variable was *rewards* offered, within the domain of organisational context. A variety of rewards were identified by respondents. Participants benefited from the "learning opportunities that are available through rotational positions". Furthermore, they valued opportunities for growth within the organisation, including "opportunities to advance into Grade 2 positions", and "opportunities to move into different roles, either through secondments or permanently". In addition to career growth opportunities, support for ongoing professional development and formal learning were valued, such as "leave support to allow for post-graduate studies".

Other variables cited within the organisational context included the organisational support. This was characterised by "looking after each other and checking in" and feelings of being "trusted, valued and respected". Conversely, not experiencing organisational support can result in a "determination to succeed against organisational resistance". Climate was also regularly commented on, with respondents suggesting they remained within the health network "because it feels like my community", reporting that "allied health has a strong and supportive culture across [the organisation]".

In addition, job characteristics and job security (within the aspects of the job domain), and job satisfaction (within the traditional job attitudes domain) were frequently reported to influence the decision to continue employment. Job characteristics reported to enhance retention included when the work was characterised by "a variety of interesting clinical work" and work that "evolves and keeps me interested". Job security was attained through stability and permanency of employment. Those reporting remaining at work due to job satisfaction described an enjoyment of their work through statements such as, "I really love the work I do" and "love the work, love my job".

#### Why they leave: factors that influence attrition

In addition to examining the factors influencing why people have stayed at the organisation for more than six years, analysis was undertaken to better understand planned voluntary employee turnover.

#### Rates of intention to leave

The number of participants who responded to the intention to leave question was n = 564; 35% of these respondents agreed that they intended to leave their current role within six months. Those who expressed an intention to leave were asked to provide their reasons for wanting to leave, with respondents able to select more than one response. The intention to leave was predominately to seek a new clinical or non-clinical role within our health network or within another public health setting. A smaller group of staff were looking at opportunities outside of public health all together (refer to Table 3 for details).

Of those respondents expressing an intention to leave their current role 45% (n = 67) were mid-level clinicians

Category	Specific rationale	Frequency of response <sup>*</sup>
Internal movement	Different role (clinical or non-clinical) within team	50
	Clinical role in another department / team	68
	Non-clinical role in another department / team	53
Alternate public health service	Clinical role with another public health provider	91
	Non-clinical role with another public health provider	47
External to public health	Clinical role outside of public health sector	43
	Non-clinical role outside of public health sector	40
	Leaving current profession permanently	22
	Establish my own private practice within current profession	34
	Establish my own private business (not current profession)	5

**Table 3** Intention to leave current role in the next 6 months: reasons provided (n = 197)

 ${}^{*}$ Respondents were able to choose more than one answer

who, in addition to carrying a clinical caseload within the scope of practice for their profession, undertake additional duties including supervising and training students and supervising junior staff. These employees were primarily located in hospital-based and community services. An additional 20% (n = 30) who intended to leave were senior clinical employees with high levels of specialist knowledge.

## Qualitative analysis: variables impacting of intention to leave

Participants who indicated an intention to leave their role in the next six months were asked to explain why they were looking for a change in role. Analysis demonstrated a greater breadth of responses across domains and variables when compared to questions pertaining to attraction and retention (as demonstrated in Table 2).

Variables in the domains of *aspects of the job, organisational context* and *person-context interface* domains were frequently identified.

Aspects of the job described by participants as influencing their intention to leave are discussed. Specific job characteristics, or a lack thereof, were described by those seeking new opportunities. For many, the lack of alignment between their current role and their desired clinical caseload or patient population resulted in their desire to move on: "I want to move into a role...[to] work with the caseload I want to work with long term". Others were seeking roles in which they could undertake specific duties, such as being able to "train and educate students" or "seeking opportunities to do clinical research [which] is not feasible in [my] current clinical role". Others identified a desire to move out of clinical roles completely: "The only thing that I would consider leaving for is a non-clinical role". Others spoke to the lack of job security in roles where permanency was not offered or guaranteed, with some motivated by "uncertainty about having my role become permanent" to look elsewhere: "I'm not necessarily looking to leave my current role; however my current secondment is not permanent. I would *leave for permanency*". It was perceived by respondents that staff vacancies were resulting in increased *workload*, a maligned aspect of the job. Participants described that they felt they *"need a change [due to] burnout from high direct clinical workloads*".

The organisational context in which participants were working also impacted their intention to leave. Where there was a perception of insufficient rewards offered, such as "limited career progression" in niche areas of practice, a lack of "support [for] learning and staff development" or access to options like leave without pay, people were likely to seek alternative work roles. Negative organisational context was also impacted by the *climate* at a team level, with individuals expressing concerns when the "culture in [the] team is suffering". The emotional impact may be that individuals are "not happy in the current environment". Where a sense of organisational support was not experienced, individuals reported the creation of "an unhappy environment", leaving some to question "Who is looking out for our health in this health-care system?".

The *person-context interface* restricted people's willingness to remain in a role when *leadership* did not meet their needs or *work-life conflict* was present. "Unsupport*ive*" leadership "creat[ed] an unhappy environment". This was characterised by leaders who had "unrealistic expectations" or "undermin[ed] clinicians", where there was a perceived lack of engagement with clinical employees, or when leadership had become "more about numbers".

Participants provided examples of work-life conflict arising when "the role has become more challenging", "it is too far for me to travel", or they were "looking for more flexibility in [their] job role". The degree of flexibility in public health was negatively contrasted with "[National Disability Insurance Scheme] and private [practice] flexibility". Caring responsibilities were also considered in relation to work-life balance, with one participant reporting that "whilst allied health [is] reasonably flexible, it is nice to have [the] ability to adjust hours at times. [This is] especially important when looking to start a family". In contrast to positive peer relationships attracting individuals to the organisation, when *peer/group relations* were unsatisfactory or frayed it increased the likelihood individuals would consider leaving their current role. Such peer relationships may be characterised by teams with "poor cohesion and motivation amongst colleagues", an "unsupportive team environment", or "insufficient communication [and] cooperation". Where people experienced negative "politics in my department", some reported experiencing "low morale in [the] team".

When participants believed their employer had not met the obligations of the employment relationship, or there had been a *psychological contract breach*, they defined this as a reason they were considering leaving their current role. While the frequency of those reporting psychological contract breach was comparatively low, examples of the perception of "*not feeling safe in the workplace*" or experiencing "*limited listening [to] or input [from] the people working clinically*" speak to its importance.

Additional domains and variables not identified or identified with lesser frequency in relation to attraction and retention were identified when discussing risk of attrition. These included variables in the domains of *individual attributes* and *newer personal conditions*.

Internal attributes included internal motivation for a change in work role, and opportunities to utilise abilities and skills optimally. Internal motivations expressed by our participants included when respondents were feeling "stale [in my] current job" and were seeking "a change [that] might reinvigorate [me]". Internal motivations may also be "to explore other experience[s]", or a desire to find a specific role in which "the work that aligns more with my values and practice". Individuals were also inspired to move to another role if they "[felt] that I have the skills required for the next level of my current role", or if they were "looking for opportunities to further develop my... knowledge" in particular areas of practice.

A driver from within the *newer personal conditions* domain was *stress/exhaustion* experienced by participants. Significant variation in the degree of stress and exhaustion reported as a motivator to seek alternative employment was observed. From seeking opportunities to *"have a proper break from healthcare"* with a view to rejoin the organisation later, through to descriptions of a *"clinical role [that] is too exhausting"* or *"high stress levels due to insufficient staffing"*. One described that they were *"working way too hard, feeling exhausted…maybe even shattered"*. At the extreme end, burnout was reported by a number of respondents.

#### Quantitative analysis: predictors of intention to leave

Univariate logistic regression was undertaken to identify the impact of individual factors on respondents' intention to leave their current role. The factors found to predict an intention to leave during this moment in time within the COVID-19 pandemic were; (a) I feel valued and respected by others in my profession; (b) My role does not give me with the ability to work in my preferred clinical area; (c) I am not recognised and rewarded for my work by the manager of my team; and (d) My manager provides support for me to attend professional development. Findings from the univariate logistic regression are presented in Table 4.

A multiple logistic regression was run to predict the intention to leave their current role from the independent variables. Following backward elimination, the variables associated with intending to leave were (a) not feeling a sense of satisfaction with the role, (b) not being recognised and rewarded by the team manager, (c) not working in the preferred clinical area, and (d) feeling burned out by the job (see Table 4).

## The impact of COVID-19 on retention and attrition

All participants were asked how has the COVID-19 pandemic influenced your job seeking behaviours? Open text fields were analysed using the previously identified domains to further understand the variables affecting the employee's job seeking (refer to Table 5).

Exploration of the impact of the COVID-19 pandemic on participants' relationship with their work yielded responses coded to variables in domains not previously identified (i.e., *individual attributes, newer personal context, external job market and attitudinal withdrawal*). In addition, in response to this question there was also alignment with domains identified when examining attrition, including *aspects of the job, organisation context*, and *person-context interface*.

Individual attributes were described as influencing job seeking behaviours during COVID-19. Openness to experience, and to a lesser extent, internal motivation were described by those looking for new opportunities as a result of their COVID-19 experiences. Openness to experience was described in both the positive and the negative. The spectrum of responses ranged from expressions of increased willingness to look in areas "that I would not normally look...[and] seek more diverse job opportunities" through to significant hesitancy to make a change due to the pandemic ("I feel that the pandemic has led to me feel like I just want some stability in my life/job position for the time being").

Hesitancy to leave was identified in participants for who prioritised *job security*. Conversely, those experiencing work-life conflict identified the need to *"review what might be best for me and my family"* in the context of there being *"more jobs available, [meaning] I am able to negotiate what works personally for me"*. Alternative opportunities sought included roles with increased workplace flexibility, such as the ability to work from home

		r> z	Multivariate OR (95% Cl)	P> z
Are you looking to leave your current role in the next 6 months?				
My employer provides a family-friendly workplace	0.72 (0.49, 1.07)	0.10	1	I
I do not feel a sense of job security in my current role	1.09 (0.85, 1.39)	0.51	1	I
I have become more callous to other people since I took this job	1.01 (0.72, 1.41)	0.95	1	I
Flexible workplace arrangements are not given due consideration by my manager	1.00 (0.73, 1.37)	0.99	1	I
It is easy for me to travel to / access my current place of work	1.04 (0.78, 1.40)	0.78	1	I
I am not paid appropriately for my work	1.10 (0.83, 1.46)	0.50	1	I
I feel burned out by my job	1.26 (0.92, 1.74)	0.15	1.44 (1.16, 1.78)	0.00
I feel valued and respected in my role by others in my profession <sup>*</sup>	1.50 (1.00, 2.26)	0.05	1	I
I do not feel valued and respected in my role by others in my multidisciplinary team	0.92 (0.66, 1.29)	0.63	1	I
I feel valued and respected by the organisation	0.73 (0.50, 1.06)	0.09	1	I
Monash Health's vision and values align with my own professional values	1.34 (0.83, 2.16)	0.23	1	I
Working in the public health system is not important to me	0.85 (0.59, 1.24)	0.41	1	I
I do not feel a sense of job satisfaction in my role	1.35 (0.94, 1.94)	0.10	1.51 (1.22, 1.85)	0.00
I am consistently able to provide the standard of care I want	0.99 (0.74, 1.33)	0.95	1	I
The work I do is important to me	0.97 (0.50, 1.91)	0.94	1	I
The work I do is important to others	1.28 (0.80, 2.06)	0.30	1	I
The work I do does not make a difference in the lives of my patients, their families, and/or their communities	1.32 (0.98, 1.78)	0.07	1	I
My role does not give me with the ability to work in my preferred clinical area $^{st}$	1.59 (1.14, 2.21)	0.01	1.56 (1.25. 1.95)	0.00
In my role, I am exposed to a broad range for professional experiences	1.13 (0.75, 1.71)	0.56	1	I
The work I do is enjoyable and interesting	0.81 (0.45, 1.47)	0.49	1	I
I am inspired by the leaders in my profession	1.02 (0.67, 1.55)	0.94	1	ł
I am inspired by the leaders in my multidisciplinary team	0.76 (0.53, 1.11)	0.16		I
I do not feel supported by my manager	1.00 (0.68, 1.47)	1.0	1	I
I am not recognised and rewarded for my work by the manager of my team $^{st}$	1.53 (1.07, 2.18)	0.02	1.37 (1.12, 1.67)	0.00
I have access to supportive, regular supervision	0.90 (0.66, 1.24)	0.54	1	I
Opportunities for promotion and career progression do not exist for me within Monash Health	1.25 (0.94, 1.66)	0.12	1	I
My role provides opportunities for me to work to the full scope of my abilities	1.04 (0.75, 1.45)	0.81	-	I
I am provided with opportunities to develop professional skills	0.86 (0.57, 1.30)	0.48	1	I
My manager provides support for me to attend professional development <sup>*</sup>	1.71 (1.11, 2.65)	0.02		1

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Domain	Variable	Coding frequency
Individual	Abilities and skills	7
attributes	Education	1
	Internal motivation	18
	Openness to experience	34
	Tenure	2
Aspects of the job	Instrumental communication	3
	Job characteristics	116
	Job security	62
	Participation	14
	Pay	14
	Role ambiguity	2
	Role conflict	3
	Routinisation	7
	Task complexity	3
	Workload	30
Traditional job	Job involvement	4
attitudes	Job satisfaction	26
	Organisational commitment	9
	Other commitment	14
Newer personal	Coping	1
conditions	Engagement	3
	Stress/exhaustion	45
Organisational	Centralisation	2
content	Climate	19
	Organisational prestige	2
	Organisational size	2
	Organisational support	40
	Rewards offered	21
Person-context	Fit	5
interface	Influence	4
	Job embeddedness	3
	Justice	10
	Leadership	19
	Met expectations	3
	Peer/group relations	17
	Psychological contract breach	6
	Work-life conflict	103
External job market	Alternatives	70
Attitudinal withdrawal	Withdrawal cognitions	56
Employee behaviours	Job search	3

Table 5 Coding t	frequency tabl	le: impact of	f the pand	lemic
response of reten	tion and attriti	ion		

and flexible hours. The search for alternate employment was associated with increased frequency of responses coded under the domains of *external job market* and *attitudinal withdrawal*.

Participants also spoke to the significant impact the service changes implemented in response to the pandemic has on *aspects of the job*. For some, the role they undertook during the pandemic was so far removed from their chosen job role, with one participant describing that the response to the pandemic "changed everything. Every. Single. Thing". The organisational support provided in the context of this change was also of importance. Participants reported that the response to the pandemic provided them a "perspective of what is a priority for the organisation", and the importance of ensuring "AH is...as valued as they could be in the organisation".

## Discussion

The present study used survey methods to collect qualitative and quantitative data pertaining to the attraction, retention, and attrition of allied health employees in a large metropolitan health service during the third year of the COVID-19 global pandemic. The research identified that a high proportion of participants (35%) intended to leave their current role within 6 months. In addition, the results provide detailed insights into the factors shaping the allied health workforce locally. Variables significantly correlated with intention to leave were identified as: feeling a sense of satisfaction with their role; not being recognised and rewarded by the team manager; not working in the preferred clinical area; and, feeling burned out by the job. Qualitative findings extend these findings and identify the centrality of aspects of the job (job characteristics), the organisational context (rewards offered; climate; organisational support) and person-context interface (peer/group relations; work-life conflict) on attraction, retention, and attrition in AH roles. A diverse range of responses to COVID-19 and job seeking behaviours were experienced by our participants, with polarised responses observed, ranging from openness for any opportunities, to hesitancy to leave for job security.

These findings build on previous allied health workforce research, which has predominantly been focused on the remote and regional workforce [33]. While the factors identified in the existing literature base have been demonstrated by this research to have relevance in the metropolitan setting, the value of applying a broader model has also been established. The use of such a model has been demonstrated in a recent rapid review of the AH attrition literature [44]. The use of Rubenstein's model [34] in our study facilitated the identification of diverse drivers of attraction, retention and attrition that may not have been identified without the broader perspective brought about by a trans-sector model. It extends previous work exploring factors that affect intention to leave of allied health clinicians in Australia [45] by examining factors beyond job satisfaction and exploring the research question in a large sample size.

When asked if they intended to leave their current role, 35% of participants responded, *Yes.* These findings are consistent with decade-old intention to leave findings for allied health in a similar Australian metropolitan setting [45] but exceed global averages prior to the pandemic [46]. A more recent review of allied health attrition intention rates more broadly, across professional groups, countries and contexts, ranged from 7.6 to 74.1% [47]. Variability in intention to leave rates may be attributable to contextual variation, including differences in professional roles, geographic contexts, workplace environments and measurement approaches. Differing definitions of 'intention to leave' may also contribute.

It is important to note that within our study, intention to leave rate includes both those planning to leave the organisation and those employees staff looking for role change within the organisation. This may account for the diversity of variables associated with intention to leave, as those seeking internal movement or career progression are distinct from those seeking to leave the organisation or the profession. The findings of those seeking career progression help us support responsive local professional development and career pathways to retain allied health professionals.

By examining the responses of AH employees who have remained in the organisation for more than six years, we are provided with insight into what factors influence the experiences of 'long-stayers'. A recent synthesis of the research relating to rural AH workforces has concluded that at present, there is no clear model for predicting the retention of AH professionals [48]. In the context of this research, variables identified were predominantly related to the *organisational context* and the *person-context interface*. Understanding the positive influences on retention can inform a strengths-based approach to workforce strategy development, allowing for the promotion and communication of attractive organisational characteristics and maintenance of valued programs.

Results of this study highlight the importance of the relational elements of work, including leadership and peer relationships, in shaping attraction, retention, and attrition. Given the known impact pandemic responses have on the peer relationships of healthcare workers [49] and leadership styles [50], a contextual interpretation of these findings is essential. Investment in initiatives to enhance leadership capability and programs which support strong team functioning and peer relations, such as the Institute for Healthcare Improvement's *Framework for Improving Joy in Work* [51], may be of value. Importantly, strong leadership [52] and peer relationships [53] are also known to reduce stress and burnout.

One factor described by participants as impacting the intention to leave was feeling burned out. It is essential that these findings are interpreted in the context of the rapid and unprecedented change in service delivery and models of care brought about by the response to the COVID-19 pandemic. A large 2020 study of almost 21,000 US healthcare workers found burnout rates of 49%

[54]. Health professionals have been described as susceptible to burnout if they are committed and dedicated and it is seen as consisting of three major dimensions: emotional exhaustion, depersonalisation and cynicism, and a decreased sense of personal accomplishment [55]. Tavella et al. [56] added the dimensions of cognitive impairment and compromised work performance, potentially exacerbating workforce shortages. Redeployment may have increased the likelihood of burnout in those impacted as a lack of social support and feeling of belonging has been associated with burnout [55]. Some authors would argue that symptoms that have previously been labelled burnout in health professionals are instead experiences of stress from working in an uncongenial workplace [57]. Given this study uses data from prior to the pandemic, it is possible that these two factors have compounded.

The pandemic impacted the way care was delivered, with the temporary cessation of some programs and the redeployment of some allied health employees to roles such as vaccination, testing, COVID-19 community support programs, and contact tracing. A survey of healthcare staff redeployed to a rural Victorian contact tracing team found that although some staff experienced a sense of personal growth during the experience, team members also described a need to adapt to constant change that took a personal toll on them [16]. Similarly, Coto [13] surveyed allied health professionals across the U.S. and most respondents either agreed (48.7%) or strongly agreed (37.5%) with the statement that they felt stressed due to the changes in clinical activity due to the pandemic. These findings are also reflected in the findings of this research.

The majority of allied health professionals in Australia are women [12]. Therefore, the gendered impact of COVID-19 and its response must also be considered. A 2020 survey of healthcare workers in which 67% were women found that stress over childcare was a contributor to workplace stress and burnout during COVID-19 [58]. A scoping review on the impact of COVID-19 and other crises on healthcare workers found that women were disproportionately negatively impacted, with higher workloads, increased caregiving responsibilities and higher rates of mental ill-health [59]. This may account for the desire to seek work roles that enhance work-life integration, as reported by our participants.

Healthcare workers have been found to downplay their distress and show reluctance to seek help when experiencing work mental health symptoms during the pandemic [60]. It is important that healthcare managers actively identify and respond to the signs of burnout, offering employees assistance such as Employee Assistance Programs [61].

The AH workforce is often marginalised in medically modelled hospital and healthcare environments which centre the needs of the medical and nursing workforces. From a human resource management and workforce perspective, AH professions are comparatively under-researched in healthcare [62]. The findings of this research add to the sparse literature base and provide the opportunity for like health services to introduce local policies and practices that can enhance the retention and career trajectory of their AH employees.

The insights provided by these findings may also be used to inform policy level interventions to strengthen the allied health workforce in the public health sector. Future policy must recognise the impact of recent reform in the health, aged care and disability sectors on the AH workforce [63], and the necessity of the AH workforce in achieving health policy objectives. The AH workforce can help support important and necessary health reforms [64], yet the issues relevant to AH are not always well represented when making recommendations for these changes [65]. As such, initiatives must consider how to address the factors identified in this study as contributing to the experience of burnout and intention to leave, while strengthening those factors that contribute to AH retention, such as leadership capabilities, workload and clinical care provision. Results of this study should be considered alongside the soon to be released National Health Workforce Strategy [66].

#### Limitations

In interpreting these findings, it is important to note group data is presented. While this will support the design of local high-level workforce interventions, variation between professions and teams must be considered, as must the diverse employee profile and needs. The findings of this research will have value for allied health employers as they emerge from the pandemic. Participants in this study were employees of a single metropolitan tertiary health network in Melbourne, Australia. While a large and diverse representative sample was achieved, the strong contextual influence on the findings must be considered in interpreting and applying the findings to other groups. Particularly, these findings may be of value to other similar metropolitan health services.

This theory-informed understanding of the drivers of attraction, retention and attrition provides a measure upon which evidence-based workforce policy and intervention strategies can be designed. The lack of prepandemic baseline measures mean comparative data is not available. Rather, these findings provide a snapshot in time. As such, it is unclear the degree to which these findings have been influenced by COVID-19. Furthermore, it can support priority setting and allow for the impact workforce strategy implementation to be measured. Repeated measures in the future will be useful in measuring change over time; however, it will be difficult to disentangle whether observed changes are a result of the distance from the pandemic and/or the implementation of policy and strategy interventions.

Finally, the researcher team were allied health employees of the health network under investigation at the time of the research. The impact of being insider researchers is minimised by the implementation of strategies to enhance rigour. Rigour in the quantitative and qualitative analysis mitigated the risk of bias by applying systematic methodologies, such as reflexivity, peer debriefing, and member checking, to ensure findings are not shaped by personal biases or prior assumptions. These practices enhance the trustworthiness and validity of the research despite the researchers' close connection to the study context.

#### Conclusions

Attracting and retaining allied health clinicians is crucial for ensuring the continued delivery of high-quality healthcare services, and the improved health and wellbeing of our community. Addressing the factors associated with AH attraction, retention and attrition through tailored workforce strategic plans and evidence-informed policy responses will ensure a stable and skilled allied health workforce.

Strategically addressing the challenges faced by allied health employees in metropolitan settings, including those posed by the pandemic, will be critical for ensuring a resilient and effective workforce that is equipped to meet the needs of individuals and communities.

#### Supplementary Information

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Supplementary Material 1.

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#### Authors' contributions

AMF substantially contributed to conception; design; collection, analysis and interpretation of data; and writing of manuscript. SM substantially contributed to analysis and interpretation of data; and writing of manuscript. JG substantially contributed to analysis and interpretation of data; and writing of manuscript. DM substantially contributed to conception; design; collection, analysis and interpretation of data.

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#### Data availability

The datasets used and/or analysed during the current study are not available as consent was not provided for data sharing beyond the scope of this project.

#### Declarations

#### Ethics approval and consent to participate

All activities were carried out in accordance with the Australian National Statement on Ethical Conduct in Human Research (NHMRC, 2018) and adhered to the Declaration of Helsinki. Ethics exemption was granted by the Monash Health Human Research Ethics Committee (HREC reference number: QA/85560/MonH-2022-307215). Participants were provided with a link to a downloadable version of the participant information statement and consent form for their records, and digital informed consent was collected from all participants within the online survey to facilitate participant anonymity.

#### **Consent for publication**

Not applicable.

#### **Competing interests**

The authors declare no competing interests.

#### Author details

<sup>1</sup>Monash Health, Allied Health Workforce, Innovation, Strategy, Education & Research (WISER) Unit, Kingston Centre, 400 Warrigal Road, Melbourne, VIC 3192, Australia

<sup>2</sup>School of Primary and Allied Health Care, Monash University, Melbourne, VIC, Australia

<sup>3</sup>School of Allied Health, Human Services & Sport, La Trobe University, Melbourne, VIC, Australia

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#### Reference

- Philip K. Allied health: untapped potential in the Australian health system. Aust Health Rev. 2015;39(3):244–7.
- AHPA. What is allied health? Allied Health Professions Australia. https://ahpa.c om.au/what-is-allied-health/. Accessed 13 Dec 2023.
- Lizarondo L, Turnbull C, Kroon T, Grimmer K, Bell A, Kumar S, et al. Allied health: integral to transforming health. Austr Health Rev. 2016;40(2):194–204.
- National Skills Commission. 2022 skills priority list: key findings report 2022. https://www.jobsandskills.gov.au/sites/default/files/2023-12/2022%205kills% 20Priority%20List%20Key%20Findings%20Report\_0.pd. Accessed 2 Oct 2023.
- Health Policy Analysis. Allied health workforce data gap analysis. Australian Government Department of Health; 2022. https://www.health.gov.au/sites/d efault/files/documents/2022/09/allied-health-workforce-data-gap-analysis-is sues-paper\_1.pdf. Accessed 11 Dec 2023.
- AHP Workforce. 12 strategies to address allied health workforce shortages. AHP Workforce. 2023. https://ahpworkforce.com/workforce-planning/12-strat egies-to-address-allied-health-workforce-shortages/. Accessed 11 Dec 2023.
- Australian Institute of Health and Welfare. Older Australians. AIHW; 2023. http s://www.aihw.gov.au/reports/older-people/older-australians/contents/about. Accessed 5 Nov 2023.
- Final report: care, dignity and respect Royal Commission into Aged Care Quality and Safety. 2021. https://www.royalcommission.gov.au/aged-care/fin al-report. Accessed 11 Dec 2023.
- Final report. Royal Commission into Victoria's Mental Health System. Parlimentary Paper Number 202. 2021. https://www.vic.gov.au/royal-commission -victorias-mental-health-system-final-report. Accessed 11 Dec 2023.
- Final report. Royal Commission into Violence, Abuse, Neglect and Exploitation of People with Disability. 2023. https://disability.royalcommission.gov.au/ publications/final-report. Accessed 11 Dec 2023.
- Pre-COVID-19 projected employment in Queensland 2019-2024. Jobs Queensland. 2020. https://jobsqueensland.qld.gov.au/wp-content/uploa ds/2022/03/Anticipating-Future-Skills\_2019-2024\_AUG-update\_web.pdf. Accessed 7 Dec 2023.

- 12. Health workforce. Australian Institute of Health and Welfare. 2024. https://ww w.aihw.gov.au/reports/workforce/health-workforce. Accessed 2 Apr 2025.
- Coto J, Restrepo A, Cejas I, Prentiss S. The impact of COVID–19 on allied health professions. PLoS ONE. 2020;15(10):e0241328.
- Malliaras P, Merolli M, Williams CM, Caneiro JP, Haines T, Barton C. It's not hands-on therapy, so it's very limited': telehealth use and views among allied health clinicians during the coronavirus pandemic. Musculoskelet Sci Pract. 2021;52:102340.
- Brack P, Bramley A, Downie S, Gardner M, Leo J, Sturt R, Markham D. Riding the waves: lessons learnt from Victoria's COVID–19 pandemic response for maintaining effective allied health student education and clinical placements. Aust Health Rev. 2021;45(6):683–9.
- Evans S, Shaw N, Veitch R, Layton M. Making a meaningful difference through collaboration: the experiences of healthcare staff redeployed to a contact tracing and monitoring team as part of the COVID–19 response. J Interprof Care. 2023;37(3):383–91.
- Dunn K, Foster AM. An appropriate role for allied health professionals? Experiences in the COVID–19 vaccination response. Poster presented at National Allied Health Conference; August 7-10, 2023; Perth: National Allied Health Conference; 2023.
- Paykel M, Ridley E, Freeman-Sanderson A, Ramanan M, Booth S, Cook K, et al. Allied health surge capacity in Australian intensive care units during the COVID–19 pandemic: a cross-sectional survey. Austr Crit Care. 2023;36(1):108–13.
- Tessema MT, Tesfom G, Faircloth MA, Tesfagiorgis M, Teckle P. The "great resignation": causes, consequences, and creative HR management strategies. J Hum Resour Sustain Stud. 2022;10(1):161–78.
- Poon Y-SR, Lin YP, Griffiths P, Yong KK, Seah B, Liaw SY. A global overview of healthcare workers' turnover intention amid COVID–19 pandemic: a systematic review with future directions. Hum Resour Health. 2022;20(1):70.
- De los Santos JAA, Labrague LJ. The impact of fear of COVID−19 on job stress, and turnover intentions of frontline nurses in the community: a cross-sectional study in the Philippines. Traumatology. 2021;27(1):52–9.
- Sklar M, Ehrhart MG, Aarons GA. COVID-related work changes, burnout, and turnover intentions in mental health providers: a moderated mediation analysis. Psychiatr Rehabil J. 2021;44(3):219–28.
- Schug C, Geiser F, Hiebel N, Beschoner P, Jerg-Bretzke L, Albus C, et al. Sick leave and intention to quit the job among nursing staff in German hospitals during the COVID–19 pandemic. Int J Environ Res Public Health. 2022;19(4):1947.
- 24. Magnavita N, Soave PM, Antonelli M. Prolonged stress causes depression in frontline workers facing the COVID–19 pandemic—a repeated crosssectional study in a COVID–19 Hub-Hospital in central Italy. Int J Environ Res Public Health. 2021;18(14):7316.
- 25. Shah SHA, Haider A, Jindong J, Mumtaz A, Rafiq N. The impact of job stress and state anger on turnover intention among nurses during COVID-19: the mediating role of emotional exhaustion. Front Psychol. 2022;12:810378.
- Mele BS, Holroyd-Leduc JM, Harasym P, et al. Healthcare workers' perception of gender and work roles during the COVID-19 pandemic: a mixed-methods study. BMJ Open. 2021;11(12):e056434. https://doi.org/10.1136/bmjopen-202 1-056434.
- Miyamoto I. COVID–19 healthcare workers: 70% are women. In: Inouye DK, editor. Asia-Pacific Center for Security Studies. 2020. https://dkiapcss.edu/covi d-19-healthcare-workers-70-are-women/. Accessed 7 Oct 2024.
- Wynter K, Holton S, Trueman M, Bruce S, Sweeney S, Crowe S, et al. Hospital clinicians' psychosocial well-being during the COVID–19 pandemic: longitudinal study. Occup Med. 2022;72(3):215–24.
- Office of the Assistant Secretary for Planning and Evaluation. Impact of the COVID-19 pandemic on the hospital and outpatient clinician workforce: challenges and policy responses. U.S. Department of Health and Human Services; 2022. Issue brief HP-2022-13. https://aspe.hhs.gov/sites/default/files/docume nts/d00f83e424d58c535273ec21906b199e/aspe-covid-workforce-report.pdf. Accessed 13 Dec 2023.
- 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 Gesondheid. 2017;22:174–83.
- George JE, Larmer PJ, Kayes N. Learning from those who have gone before: strengthening the rural allied health workforce in Aotearoa New Zealand. Rural Remote Health. 2019;19:4878.

- Walker SM, Kennedy E, Nixon G, Blattner K. The allied health workforce of rural Aotearoa new Zealand: a scoping review. J Prim Health Care. 2022;14(3):259–67.
- Couch A, Menz HB, Coker F, White J, Haines T, Williams C. Factors that influence workplace location choices in the different allied health professions: a systematic review. Aust J Rural Health. 2021;29(6):823–34.
- Rubenstein AL, Eberly MB, Lee TW, Mitchell TR. Surveying the forest: a metaanalysis, moderator investigation, and future-oriented discussion of the antecedents of voluntary employee turnover. Pers Psychol. 2018;71(1):23–65.
- Victorian health workforce strategy: a 10-year strategy for a modern, sustainable and engaged healthcare workforce. Victoria State Government Department of Health. 2024. https://www.health.vic.gov.au/victorian-health-workfor ce-strategy. Accessed 2 Apr 2025.
- Foley M. More support for our hardworking healthcare workers. Premier of Victoria. 2021. https://www.premier.vic.gov.au/more-support-our-hardworkin g-healthcare-workers. Accessed 2 Apr 2025.
- Andrews D. More support for healthcare workers. Premier of Victoria. 2022. https://www.premier.vic.gov.au/more-support-healthcare-workers. Accessed 11 Dec 2023.
- Speech pathology and occupational therapy student grant program guidelines. Victoria State Government. 2023. https://www.vic.gov.au/speech-path ology-and-occupational-therapy-student-grant-program. Accessed 11 Dec 2023.
- 39. Aday LA, Cornelius LJ. Designing and conducting health surveys: a comprehensive guide. 3rd ed. San Francisco: Jossey-Bass; 2006.
- Eysenbach G. Improving the quality of web surveys: the checklist for reporting results of internet E-Surveys (CHERRIES). J Med Internet Res. 2004;6(3):e34.
- 41. Hosmer DW, Lemeshow S, Sturdivant RX. Applied logistic regression. Hoboken: Wiley; 2013.
- 42. StataCorp. Stata statistical software. College Station: StataCorp LLC; 2018.
- Graneheim UH, Lundman B. Qualitative content analysis in nursing research: concepts, procedures and measures to achieve trustworthiness. Nurse Educ Today. 2004;24(2):105–12.
- 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.
- Wilson NA. Factors that affect job satisfaction and intention to leave of allied health professionals in a metropolitan hospital. Aust Health Rev. 2015;39(3):290–4.
- Lazzari M, Alvarez JM, Ruggieri S. Predicting and explaining employee turnover intention. Int J Data Sci Analytics. 2022;14(3):279–92.
- Yeoh SA, Kumar S, Phillips A, Li LSK. Unveiling the Exodus: a scoping review of attrition in allied health. PLoS ONE. 2024;19(9):e0308302.
- 48. Peterson M, Nielsen S, Olson D. Recruitment and retention of rural allied health professionals: a scoping review. Rural Remote Health. 2024;24.
- Billings J, Ching BCF, Gkofa V, Greene T, Bloomfield M. Experiences of frontline healthcare workers and their views about support during COVID–19 and previous pandemics: a systematic review and qualitative meta-synthesis. BMC Health Serv Res. 2021;21(1):923.
- Anjara S, Fox R, Rogers L, De Brún A, McAuliffe E. Teamworking in healthcare during the COVID–19 pandemic: a mixed-method study. Int J Environ Res Public Health. 2021;18(19):10371.
- Perlo J, Balik B, Swensen S, Kabcenell A, Landsman J, Feeley D. IHI framework for improving joy in work. IHI White Paper. Cambridge: Institute for Healthcare Improvement; 2017. https://www.ihi.org/resources/white-papers/ihi-fra mework-improving-joy-work. Accessed 3 Oct 2022.
- Dyrbye LN, Major-Elechi B, Hays JT, Fraser CH, Buskirk SJ, West CP. Relationship between organizational leadership and health care employee burnout and satisfaction. Mayo Clin Proc. 2020;95(4):698–708.
- Peterson U, Bergström G, Samuelsson M, Åsberg M, Nygren Å. Reflecting peer-support groups in the prevention of stress and burnout: randomized controlled trial. J Adv Nurs. 2008;63(5):506–16.
- Prasad K, McLoughlin C, Stillman M, Poplau S, Goelz E, Taylor S, et al. Prevalence and correlates of stress and burnout among U.S. healthcare workers during the COVID–19 pandemic: a national cross-sectional survey study. EClinicalMedicine. 2021;35:100879.
- 55. Bridgeman PJ, Bridgeman MB, Barone J. Burnout syndrome among healthcare professionals. Am J Health-System Pharm. 2018;75(3):147–52.
- 56. Tavella G, Hadzi-Pavlovic D, Parker G. Burnout: redefining its key symptoms. Psychiatry Res. 2021;302:114023.

- Kendrick M, Kendrick K, Morton P, Taylor NF, Leggat SG. Hospital staff report it is not burnout, but a normal stress reaction to an uncongenial work environment: findings from a qualitative study. Int J Environ Res Public Health. 2020;17(11):4107.
- Harry EM, Carlasare LE, Sinsky CA, Brown RL, Goelz E, Nankivil N, Linzer M. Childcare stress, burnout, and intent to reduce hours or leave the job during the COVID–19 pandemic among US health care workers. JAMA Netw Open. 2022;5(7):e2221776.
- Morgan R, Tan H-L, Oveisi N, Memmott C, Korzuchowski A, Hawkins K, Smith J. Women healthcare workers' experiences during COVID–19 and other crises: a scoping review. Int J Nurs Stud Adv. 2022;4:100066.
- Ménard AD, Soucie K, Freeman LA, Ralph JL. My problems aren't severe enough to seek help: stress levels and use of mental health supports by Canadian hospital employees during the COVID–19 pandemic. Health Policy. 2022;126(2):106–11.
- 61. Doran M. Employee assistance programs: a misunderstood and underused resource for nurses. J Nurs Adm. 2022;52(11):625-7.
- Walker M, Stanton P, Halvorsen B, Cavanagh J, Bartram T. Research handbook on contemporary human resource management for health care. In: McDermott AM, Hyde P, Avgar AC, FitzGerald L, editors. Allied health professionals: hidden but essential. Cheltenham: Edward Elgar Publishing; 2024. p. 149–63.
- Allied Health Professions Australia. Federal budget feels like Groundhog Day for allied health. Media release. 2025. https://www.ahpa.com.au/news-upda tes/federal-budget-feels-like-groundhog-day-for-allied-health. Accessed 11 Apr 2025.
- 64. Croakey Professional Services. Allied health professions: the key to critical health reform? Croakey Health Media; 2024. https://www.croakey.org/allied -health-professions-the-key-to-critical-health-reform-copy/. Accessed 11 Apr 2025.
- Hogan L, Watt A. Why was allied health missed? A critical examination of the recommendations of the disability Royal commission for allied health professionals working with people with intellectual disabilities. Res Pract Intellect Dev Disabil. 2024;11(2):318–30.
- 66. National allied health workforce strategy. Australian Government Department of Health and Aged Care. 2025. https://www.health.gov.au/our-work/n ational-allied-health-workforce-strategy. Accessed 11 Apr 2025.

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Abby Foster is an experienced speech pathologist, manager and researcher. She holds a PhD from The University of Queensland. Abby is the Allied Health Research Advisor at Monash Health, with adjunct appointments at both La Trobe University and Monash University. Abby is passionate about exploring and enhancing the nexus between allied health and social justice.

**Simone Munro** is an experienced speech pathologist, people leader and strategic project manager. She holds a Master of Speech Pathology, and holds the position of Allied Health Workforce Advisor at Monash Health, a tertiary health service in Melbourne, Australia. Simone is dedicated to creating joy at work and shaping the allied health workforce for the future.

Janet Golder is an experienced clinical dietitian and project manager. She holds a Masters of Nutrition and Dietetics, and is currently participating in a doctoral training program at Monash University. Janet is employed as a Research Assistant at Monash Health and is passionate about integrating research into allied health practice.

**Debra Mitchell** is an experienced physiotherapist, manager, project manager and researcher. She has a PhD from Monash University. She is the Senior Research Fellow at Monash University and Each, a provider of community health and social services across the east coast of Australia. Debra is passionate about allied health care and healthcare improvement.