An exploration of the perceptions of Allied Health Professionals on their roles within residential aged care

Luongo, A. [1,2]; Murray, C.M. [1,3,4] & Girard, D. [1,2]

Allied Health and Human Performance Academic Unit, University of South Australia, [2] Clinical Exercise Physiology Program, [3] Occupational Therapy Program, [4] International Centre for Allied Health Evidence; IIMPACT in Health

DOI: 10.21913/TAHS.v3i1.1620

Abstract

Aim and Background: The Allied Health Professional (AHP) plays an important role in ongoing care within residential aged care facilities. Information about how AHP roles align with best practice principles will allow aged care providers to evaluate how they can maintain standards while increasing efficiency of care. This study aimed to explore the perceptions held by AHPs on their roles within aged care facilities to analyse how they see their duties aligning with their disciplinary role and scope. **Design and Methods:** A voluntary sample of 10 AHPs (6 Physiotherapists and 4 Occupational Therapists) from a target population of 20 AHPs from the same aged care organisation participated within a multi-method two stage qualitative design. Descriptive statistics, content analysis, and thematic analysis were used to analyse collected data. **Results/Findings:** Three major themes emerged: systematic and contextual tensions; scope of practice and care; enablement model and person-centred care. Participants agreed upon the importance of multi-disciplinary team structure and provided detail about how this applies in falls prevention and management. Participants suggested a dilemma between implementing best practice and performing interventions that allowed efficient use of time and resources as per funding models. Participants noted some limit in their scope of role due to current funding and time restrictions. **Application and Conclusion:** There appeared to be considerable untapped potential for increase in scope and specificity of AHP roles within residential aged care. Further research is required to understand the implications of implementing best practice under funding and time restrictions, as well as how the distribution of funding in aged care could support a wider range of allied health disciplines. **Key Words:** aged-care, Allied Health Professionals, roles, best practice

Introduction

With life expectancy increasing and the population continuing to age, there is a growing need for support and services for older people (Australian Bureau of Statistics, 2020). The most vulnerable older people in the Australian population with complex medical needs often require residential aged care (Australian Institute of Health and Welfare, 2019). The 2016 Aged Care Workforce Report (Mavromaras et al., 2017) suggests that before the year 2050, an additional 1.2 million Australians over the age of 85 will require assistance with their daily living with a considerable proportion of these individuals requiring higher levels of care (Mavromaras et al. 2017). These heightened demands are expected to place a large strain on the current aged care system making it highly 'important to exploit opportunities for increased efficiency' (Ergas & Paolucci, 2011, p. 67) within this industry.

Currently, residential aged care facilities in Australia are expected to provide quality care and services (including individual therapy) (Office of Parliamentary Counsel, 2019) within the context of staff shortages and resource limitations (Henderson et al., 2017; Ludlow et al., 2021). Best practice within residential aged care involves individualised and equal access to care and residents having control over their care choices (Aged Care Quality and Safety Commission, 2020). To meet the aim of best practice, it is important for facilities to effectively utilise their Allied Health Professionals (AHPs) to maximise the potential number of residents who can receive care and rehabilitation in line with the Australian Aged Care Quality Standards (Aged Care Quality and Safety Commission, 2020).

In 2017, there was a call to increase the number of disciplines funded under the Aged Care Funding Instrument (ACFI) model (Australian Ageing Agenda, 2017). They stated that 'increasing ACFI funding to include preventative education programs and a broader scope of treatments together with funding more allied health disciplines as a whole'

would greatly assist in distribution of AHPs in residential aged care and assist residents in the building of independence and prevention of falls (Australian Ageing Agenda, 2017). AHPs provide residents with diagnostic, management, and preventative services which vary depending upon the skill set within their discipline (Whitford, Smith & Newbury, 2012). In this sense, AHPs have a diverse set of skills that literature proposes is best utilised when administering services as a multi-disciplinary team (MDT) (Harris & Zwar, 2007). For example, people with chronic disease who access care through MDTs have improved adherence to their treatment plans and greater likelihood of effective disease management, than if receiving services from a single AHP (Harris & Zwar, 2007; Heiwe et al., 2011).

The research team held meetings with the leadership group of an aged care provider in South Australia to establish what they wanted to know about allied health within their organisation. The aim of the research was to explore the roles that their AHP currently perform within their residential aged care facilities and how they perceive their current roles as relating to their understanding of best practice. This includes their perceptions of how they currently work together and how they could work together more. There was a request to focus some of the questions on falls prevention and management as this was traditionally a large part of the allied health role which provides opportunity for multidisciplinary work. This data will inform future decision making about alignment of their services with the Aged Care Quality Standards. The following research questions were established:

- How do Allied Health Professionals perceive their role in an aged care setting?
- How do Allied Health Professionals work together in an aged care setting?
- How do Allied Health Professionals address falls risk in their practice?

Methods

Study Design

This research was completed for undergraduate research honours in Clinical Exercise Physiology. A multi-method two stage qualitative design (Morse, 2010; Tashakkori & Creswell, 2007) was utilised. The first stage involved an online questionnaire with a combination of Likert scales and open text questions. The second stage involved semi-structured interviews with consenting AHPs. An overview of the study design is provided in Figure 1.

Sampling and Recruitment

A convenience sample of 20 eligible AHPs were identified by the organisation. They were Physiotherapists or Occupational Therapists working on site at residential aged care facilities during November 2020. All 20 AHPs were initially contacted by the leadership group via email, inviting them to be involved in the project. The email correspondence was clear that participation was voluntary and there were no expectations to participate. Eligible AHPs were given two weeks to complete the survey before a reminder was emailed. Reminders were sent to all regardless of whether they had completed the survey, to notify them that they had one week to be involved in data collection if they wished to do so. Due to unexpectedly low response rates, a second and final reminder email was sent in January 2021. Overall, invited AHPs had a three-month window from late November until early February to complete their surveys. Participation in the survey was anonymous; however, participants were provided with the opportunity to leave their contact details within the survey if they wished to volunteer to be involved in the follow-up interviews which occurred in April – May 2021. This information was not provided to the organisation. The recruitment process is outlined in Figure 1.

Data Collection

Due to the absence of an existing suitable survey, a bespoke survey was designed that incorporated both Likert-scales and open questions. The survey questions were informed by literature reviews of AHPs standards of practice to assist understanding of their roles within the aged care sector and to ensure concepts were expressed with clarity. This background work resulted in questions that were targeted toward current trends for AHPs in the aged care sector. The survey included a section asking for demographic information, asking about assessments and interventions that AHPs perform, opportunities for collaboration, leadership and attending to resident psychosocial and emotional wellbeing. The survey can be viewed in Supplementary File 1. The survey was designed in *Google Docs* (Google LLC, 2022) and piloted with four clinical exercise physiology students. The survey was also reviewed by the leadership group from the aged care organisation with follow up meetings to discuss the survey structure and purpose, resulting in changes being made.

The final survey consisted of three parts: 1. Demographic Information; 2. Questions about routine assessments and interventions; and 3. Questions about general roles and responsibilities. It took roughly 10 minutes to complete using 10-point Likert scale responses, with a value of 1 meaning strong disagreement to the statement, while a value of 10 meant strong agreement to the statement. An even Likert scale was used to prevent participants from remaining neutral to a statement, and in theory, to promote deeper consideration of participants' opinions prior to answering. Participants were invited to provide further comments for each question which resulted in qualitative data in addition to the responses on the 10-point scales. There was also a broad open question asking about challenges with performing best practice. In addition, there were two closed questions with the option for free choice responses about awareness of other allied health disciplines residents are seeing and other disciplines the respondent would refer to.

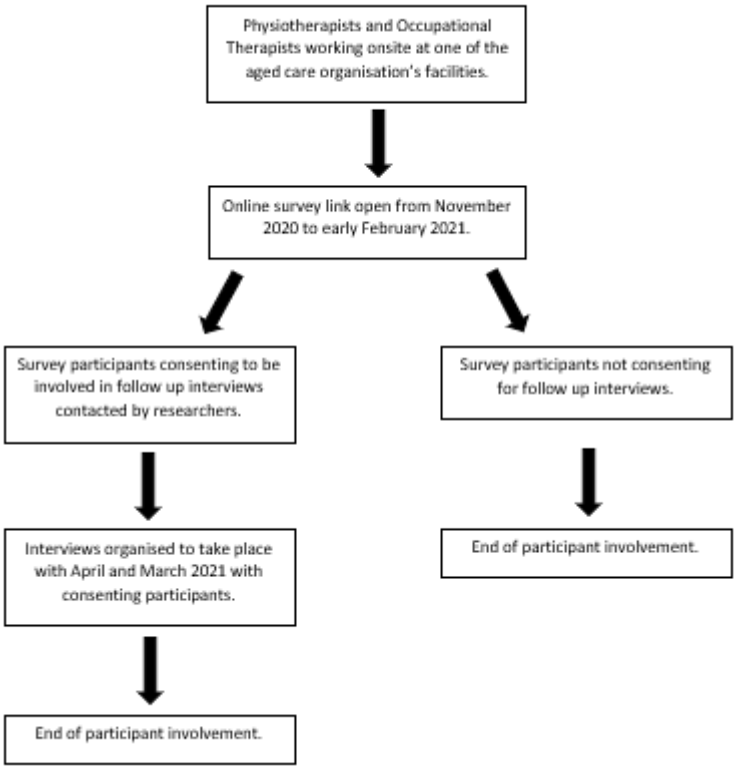


Figure 1: Overview of recruitment process

The survey data were analysed prior to designing the interview guide to ensure the questions were centred towards gaining greater context and understanding of answers provided within the surveys. In addition, the guide was informed by undertaking literature reviews of similar qualitative research studies as well as analysing the current Aged Care Funding Instrument (Department of Health, 2022) as this seemed important based on the survey data. Discussions also occurred between the research team and the organisational leads to ensure the interviews would address their needs and intended outcomes from the project. The interview guide was piloted with two student colleagues of the first author (AL) to check the appropriateness and flow of the questions but also to practise interviewing skills. Changes were made to the guide as a result. The interview guide is available in Supplementary File 2.

The first author (AL) emailed participants who indicated on the survey they were prepared to be interviewed. The sole interview was conducted by the first author (AL) via

Zoom (Zoom video communications, 2022) due to COVID-19 related restrictions within aged care facilities and to reduce participant burden. The interview was performed using a semi-structured format consisting of a 5-minute introduction and preparation period, followed by a 20-minute discussion, and concluding with a 5-minute debriefing. The participant was provided with opportunities to bring forth their own topics of discussion or modify any statements they had made prior to the conclusion of the interview. With the participant's consent, the interview was recorded using Zoom's meeting recording software as well as a backup voice memo recording. The interview was transcribed verbatim by the first author (AL).

Data analysis

The survey data were initially analysed by the first author followed by consultation with the broader research team. Data were exported from Google Doc's (Google, 2022) survey software and imported into an MS Excel (Microsoft Corporation, 2022) spreadsheet. Each respondents' data were allocated a unique identifier that displayed their occupation alongside a numerical value differentiating them from other participants. The demographic data were analysed using descriptive statistics (number, frequency and mean), and organised with tables and also pie charts to show percentages. For the Likert scales, values of 5 or below were interpreted as being in disagreement, whereas values of 6 or above were interpreted as being in agreement. This enabled preparation of means and standard deviations for the Likert scales. The findings of the Likert scales were assembled into appropriate bar graphs to show the responses for each of the options on the Likert scale and plot graphs to show the findings according to disciplines. The findings of closed questions that gave free choice for responses were analysed using descriptive statistics (number, frequency and mean).

The open questions and interview were analysed using content analysis (Leung & Cheng, 2019). For each open question, the responses in excel spreadsheets were reviewed separately by two researchers for consistent themes. These were then discussed in a meeting

to arrive at a decision for the themes across the questions. The one interview was then coded line by line (open coding) separately by two reviewers (AL and CMM). These codes were then organised to arrive at summary themes for each of the seven topics in the interview guide. From here, the themes for each topic were compared with the themes from the open text responses using colour coding. The eight sets of themes were then consolidated into one overarching set of themes that represent both the open text responses and interview. These themes were discussed in meetings with the research team and an audit trail of analytic decisions kept (Liamputtong, 2013).

Results

Participants

Table 1 shows the characteristics of participants who were involved in the research. There were ten respondents with six Physiotherapists (PT) and four Occupational Therapists (OT) including six females and four males. Most were aged between 20 and 29 and had between one and nine years of experience. The conditions that participants identified as working with most frequently were people with dementia (n=9), followed by deconditioning/ sarcopaenia (n = 5). Also listed were pain, falls, fractures, neurological conditions (i.e. stroke), osteoarthritis, heart failure, lung disease, complex mental health, anxiety, and incontinence. Three of the survey respondents expressed their interest to be contacted for subsequent interviews, but only one responded to the follow-up contact. As a result, one of the 10 AHPs in the sample was interviewed. Discipline and gender of interviewee is not disclosed to protect anonymity.

Table 1. Participant characteristics

Characteristics	All Allied Health Professionals	Occupational Therapists	Physiotherapists
Gender			
Male	4	1	3
Female	6	3	3
Age (Years)			
20-29	6	3	3
30-39	3	0	3
40-49	1	1	0
Years working in discipline			
<1	1	1	0
1-4	4	2	2
5-9	4	1	3
10-14	1	0	1

Survey Findings – Likert scales

Given the number of Likert scales completed by respondents, not all data are reported. Figures displaying the results of the survey data for selected Likert scale questions can be seen in Supplementary File 3. Strong agreement was shown in response to questions about the role of the AHP in assessing resident's environments. Participants agreed that they *Assess the environment residents live within* with a mean value of 8.2 (SD = 1.9). Similar agreement was shown for the statement that AHP's *Provide/advocate for the use of assistive equipment such as walking aids and dressing aids* with a mean value of 8.9 (SD = 2.5). While the statement *Provide preventative care (actions taken to avoid residents suffering an injury, disease, illness etc.)* had a mean of 7.1 (SD = 2.5), there was a clear distinction between PT and OT answers. PTs answered with a mean of 8.2 (SD = 1.5) in comparison to OT's mean of 5.5 (SD = 3.0).

In terms of falls risk and reablement, participants were in strong agreement to knowing or asking for history of residents falls with 90% providing a value of 9 or greater. Similar agreement was shown for the statement *My services attempt to maintain/improve*

residents self-care capacity with 90% of participants providing a value of 7 or higher. When analysing the use of falls risk assessments by AHPs, a mean of 8.2 (SD = 1.2) was shown for the statement that participants *Administer some form of falls risk assessment*.

Participants showed further agreement when questioned about how they collaborate with other allied health disciplines. Advocation for multi-disciplinary team (MDT) structures had 100% of participants providing 8 or higher values to the statement: *It is more effective to manage risk of falls as a MDT.* Participants were aware of overlap between the roles of other allied health disciplines with 70% agreement (value of 8 or more) with the statement *at some point I have delivered interventions for residents which I believe were better suited to another allied health profession.*

Qualitative Findings

Disciplines referred to

As shown in Figure 2, the participants mostly referred to podiatry, followed closely by nurse practitioners and speech pathology. The breakdown of referral destination according to discipline can be seen in Supplementary File 3.

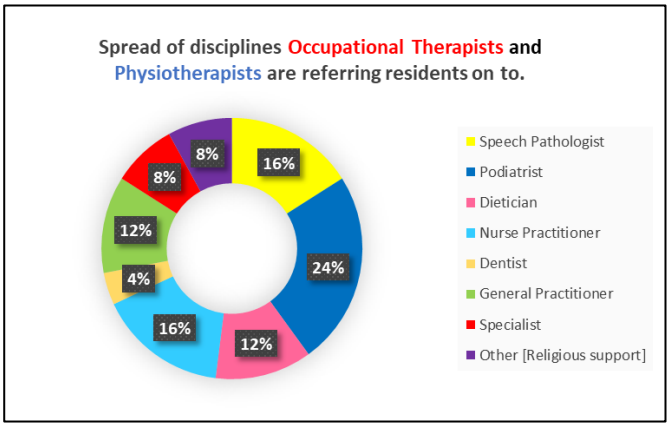


Figure 2:. Pie chart showing the spread of disciplines Occupational Therapists and Physiotherapsits refer residents on to *(closed question with free choice responses)*

Challenges for best practice

The findings from the question about challenges for best practice were initially thematised separately from the rest of the open questions arriving at the breakdown of challenges as shown in Figure 3. This shows that funding models presented the biggest challenge to best practice, closely followed by lack of time. These responses were then included in the content analysis for further synthesis and comparison with other open questions and the interview data.

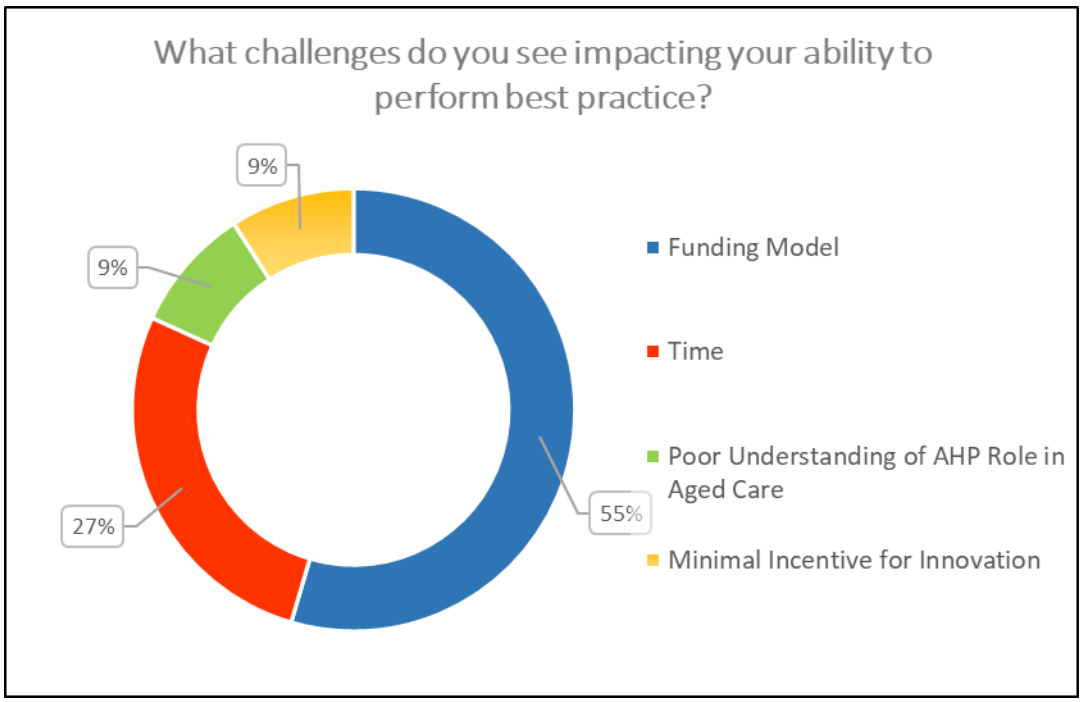


Figure 3. Pie chart displaying the key challenges that participants identified as impacting their ability to perform best practice as derived from open question survey response answers (*data displayed as percentages of times the theme was referred to).*

Allied Health Professional Roles in Residential Aged Care

Overall, there were eight themes from the analysis of the open text responses on the survey; lack of funding, lack of time, bounded scope, expanding scope, enablement model is elusive, clinical reasoning tensions, compliance industry/ current practice and neglected needs. When themes were combined with those from the topics in the interview, three overarching themes were developed: 1. systematic and contextual tensions; 2. scope of practice and care; 3.

enablement model and person-centred care. The full audit trail showing the analysis leading to these themes can be seen in Supplementary File 4.

Theme 1: Systematic and contextual tensions. Participants acknowledged tensions related to funding which limited their ability to consistently undertake best practice, attend to psychosocial needs of residents and access needed resources. The limitations of the Aged Care Funding Instrument came through strongly with PT2 stating that they *"provide majority massage interventions"* to residents and PT5 that the *"ACFI funding model … includes 0 funding for rehab or exercise"*. Participants expressed frustration that despite previous indication that massage therapy for chronic conditions may not align with evidence-based practices (PT3), this was what the Aged Care Funding Instrument directed them to do.

> We are *"stuck between the position of trying to (do) what's right in terms of evidence and what's right for the organization… because we need to do (4B treatment) to be employable."* PT3

The participants can see the potential for addressing psychosocial health of the residents but had limited capacity to attend to these due to funding.

> *"Mental health concerns … are not funded for the time and staffing they often require"* OT4.

> *"there's no scope for any kind of mucking around you can't do exercise you can't do cognitive behaviour therapy you have to do those hands-on kind of treatments." PT3*

The resource limitations generated by the funding model were also raised by participants, noting that *"the current funding model supports decline"* (OT4) and *"aged care is not funded to provide OT interventions"* (OT3). The suggestion was made that broadening the scope of AHP would increase the expense for the federal budget.

Theme 2: Scope of practice and care. Participants discussed their scope of practice in relation to falls and falls risk management, as well as the structure of referral pathways.

Participants highlighted the relationship between Occupational Therapy and Physiotherapy in addressing different resident needs. Some participants suggested that the falls risk assessments used were quite general. For example, PT3 referenced the Falls Risk Assessment Tool (FRAT) in the statement *"FRAT is administered by RNs [whereas] general non-standardised assessments of falls risk [are performed] by PT/OT."* In contrast, OT2 reported specificity in assessments stating that a majority *of "assessments conducted are Physiotherapy based and not global allied health assessment".* When questioned regarding tools used to screen residents' falls risk, PT6 used *"exercise outcome measures such as Timed Up and Go, 5rep Sit To Stand and 2-Minute Walk Time"*. PT3 reported the difficulties associated with *"improving confidence post-fall".* The aged care quality standards introduced in 2019 "*highlight balance of preventing injury vs maintaining independence"* (PT3) and this participant noted that oftentimes *"improving one reduces the other"* creating a dilemma.

Participants discussed their interaction with other AHP disciplines within the organisation suggesting there was good collaboration between Occupational Therapy and Physiotherapy practitioners. OT4 noted that *"collaboration within onsite staffing happens frequently"* but issues exist with being able to access AHPs who are not onsite, such as speech pathology.

> *"outsourced professions (such as podiatry, dietician, dental, private therapy services) are more difficult to consult/get in contact with"* OT4.

Having Occupational Therapy and Physiotherapy co-located or nearby enabled collaboration about the most appropriate discipline to take a referral, with Physiotherapy usually attending to pain management and the Occupational Therapist would take referrals for task analysis such as hand dexterity for making a cup of tea. There were some practices that were acceptable for either discipline, such as equipment management.

Theme 3: Enablement model and person-centred care. Participants suggested gaps in the enablement model due to contextual limitations for delivering person-centred care. Both PT3 and OT4 saw the value in a reablement approach for improving *"quality of life"* and *"resident choice"* but acknowledged that there were sometimes systemic barriers to this approach.

> *"Reablement (is) limited by time and lack of funding support. Lack of time to chase residents to engage in physical activity"* PT3.

Despite the limitations that AHP experienced, efforts were made to address psychosocial needs and goals of residents through an enablement lens. For example, PT6 "*surveyed residents as to what they like and want in exercise sessions."* Psychological interventions were discussed by OT4 who observed that there are group activities provided by *"lifestyle ... and some 1:1 activities that support psychological wellbeing"* but expressed these could be tailored more to individual needs. It was acknowledged that the care environment too can *"lead to faster deterioration"* cognitively because the residents *"have everything done for them"* (PT3). A considerable contextual and structural barrier to allied health programs is the difficulties residents have in attending activities, group exercise classes and gyms due to their dependence on aged care workers.

> *"Most residents require assistance to participate in activities that focus on psychological health."* OT4.

Discussion

The aim of this study was to explore the perceptions held by AHPs on their roles within aged care facilities of the participating aged care organisation. From the data provided by ten participants (6 Physiotherapists and 4 Occupational Therapists), there was general agreement that their role was to improve self-care for residents and decrease falls risk, and there was overlap between the Physiotherapy and Occupational Therapy role. Participants supported

the multi-disciplinary team structure within their facilities and saw this as the most effective approach to managing resident falls risk. Most participants were clear in identifying the consistent collaboration that exists amongst the staff within facilities. Participants showed falls prevention and treatment to be of high importance within their roles, with frequent collaboration occurring between AHPs to understand residents' fall risk and rehabilitation following a fall. This approach was consistent with best practice guidelines for falls prevention in residential aged care (Australian Commission on Safety and Quality in Health Care, 2009). There was high agreement about performing falls risk assessments for residents with some room for further streamlining of the assessment processes and tools used.

Consistent with wider literature, some tension arose in the findings between providing services that are best for business because they align with current funding models and providing services that give residents the greatest overall health benefit (Hamilton & Menezes, 2011; Peters, Marnie & ANMF Aged Care Working Group, 2020; Wills et.al, 2016). Notably, multiple participants reported that they mainly provide massage therapy treatment (known as 4B treatments in the Aged Care Funding Instrument) (Department of Health, 2022) which has questionable evidence for its benefits for those with chronic conditions. Alternatively, convincing evidence exists for the use of exercise to help manage chronic conditions within the aged care setting (Raynor et al., 2020; Saxton, 2011; Scrivener et al., 2020), yet only two participants reported incorporating exercise into their interventions. Participants suggested that more evidence-based treatments such as exercise would be impractical to deliver to the large number of residents given the time and staffing it would require in opposition to 4B treatments.

In theme one, an Occupational Therapy participant stated that funding provided was not specific to the Occupational Therapy role and did not include Occupational Therapy interventions for residents. It was implied that the role of Occupational Therapists in residential aged care facilities is still developing. This finding was consistent with larger

scale studies (Bennet, Shand & Liddle, 2011; Bonsall et al. 2016), that propose potential for greater understanding of the Occupational Therapy role within the aged care system. In the context of this research, the finding may be due to Occupational Therapists only being recently introduced into the organisation. Data additionally showed minimal presence of other allied health professions such as speech pathology, exercise physiology, dietetics, and podiatry, with them sometimes being external consultants rather than onsite staff.

The results suggested that at some point, participants had delivered interventions to residents that they believed were better suited to another allied health profession. Notably, data showed clear distinctions between the roles of Occupational Therapy and Physiotherapy within facilities with consistent triaging processes occurring in team meetings. Despite this, there was overall agreement that there may be scope for improvement in referral allocations to ensure the most appropriate AHP was responding. Both Occupational Therapy and Physiotherapy respondents indicated that they were performing tasks that were not suited to their profession, meaning that they may all be performing similar interventions, creating a missed opportunity to use their disciplinary expertise (for example, task analysis in Occupational Therapy). It would be important for future research to further explore the assessments and interventions performed by AHPs from different disciplines in terms of identifying those which fall outside of their scope of practice compared to within it.

Recent stressors accompanied by the COVID-19 pandemic have contributed to mental health symptoms amongst aged care residents (Brydon et al., 2021) meaning psychosocial approaches to care are more crucial than ever in targeting cognitive and emotional health (Raynor et al., 2020). Participants identified that residents would benefit from emotional comfort and support but suggested that current funding models do not incentivise these interventions. This once again emphasises that despite understanding the principles of best practice within their role, the AHP respondents in this research are being bound by the parameters of the aged care funding model.

Strengths and Limitations

Strengths of the study included multiple data collection methods, a thorough approach to survey design and interview question development (done in consultation with the participating organisation), multiple data analysts and a clear record kept of analytic decisions made. Several limitations existed within the study. The small sample size (n=10) increased the impact outliers had on findings. Additionally, this small sample size makes the data less representative of the larger population of Occupational Therapy and Physiotherapy staff both within the participating organisation and in the residential aged care sector generally. As such, findings should be interpreted with caution as being context specific and coming from a small sample within one organisation. Due to uncertainty surrounding COVID-19, researchers were unable to attend a residential aged care facility, creating a lost opportunity to gain anecdotal experience of the structure and operations occurring on site.

Conclusion

An online survey and face to face interview was used to gather data from ten AHPs about their perceptions of their role within residential aged care. Across all participants groups, there was expertise evident in understanding residents' history of falls and ability to address potential for future falls. Funding models and time were identified as the largest challenges for performing best practise. Within this context the AHP worked collaboratively with some overlap in roles. Whilst the role overlaps enabled responsiveness to referrals, they may limit use of discipline expertise in some situations (for example psychosocial needs; task analysis; exercise provision). There appeared to be considerable untapped potential for increase in scope and specificity of allied health roles within residential aged care.

1

4 Key messages

1. Allied Health Professionals have an important role to play in the delivery of care and services to people living in residential aged care
2. Current funding for services in residential aged care are limiting the role of Allied Health Professionals
3. Current roles are centred around improving self care for residents and decreasing falls risk
4. There is potential for broadening of scope of allied health roles in residential aged care and clearer delineation of roles between Allied Health disciplines

Conflict of Interest

Whilst members of the leadership group at the participating organisation assisted with recruitment, they were not involved in the research beyond assisting with study focus and recruitment. No authors have conflict of interest to declare

Funding

There was no funding for this research

Acknowledgements

The authors would like to acknowledge Professor Gaynor Parfitt of the University of South Australia for their time and effort to provide guidance during the projects design, implementation and reporting phase. The authors would also like to acknowledge the participating aged care organisation and participants for their involvement.

Ethics

Approval was obtained from the University of South Australia Human Research Ethics Committee on 1st November 2020 No. ID: 203419 Approval was given from the Executive

of the participating aged care organisation following University of South Australia approval and through input from the leadership group into the methodology.

References

Aged Care Quality and Safety Commission 2020, *Quality Standards: The Aged Care Quality Standards (Quality Standards) are now in effect*, Australian Government, accessed 29 June 2021, <https://www.agedcarequality.gov.au/providers/standards>

Australian Ageing Agenda 2017, What's needed to improve the provision of allied health services in residential aged care?, *Australian Ageing Agenda*, accessed 29 June 2021, <https://search.informit.org/doi/10.3316/informit.024532381182512>

Australian Bureau of Statistics 2020, *Twenty years of population change*, ABS, viewed on 8 February 2021, <https://www.abs.gov.au/articles/twenty-years-population-change>

Australian Commission on Safety and Quality in Health 2009, *Preventing falls and harm from falls for older people: Best practice guidelines for Australian residential aged care facilities*, Commonwealth of Australia, Canberra, accessed 2nd February 2022, < https://www.safetyandquality.gov.au/sites/default/files/migrated/30458-Guidelines-RACF.pdf>

Australian Institute of Health and Welfare, 2020, *Interfaces between the aged care and health systems in Australia— GP use by people living in permanent residential aged care 2012–13 to 2016–17*, viewed 17th January 2022, https://www.aihw.gov.au/getmedia/db38699f-86ec-44c1-84b0-96787b3805f6/aihw-age-103.pdf.aspx?inline=true

Bennett, S, Shand, S, Liddle, J 2011, Occupational therapy practice in Australia with people with dementia: A profile in need of change, *Australian Occupational Therapy Journal*, vol. 58, no.1, pp 155-163.

Brydon, A, Bhar, S, Doyle, C, Batchelor, F, Lovelock, H, Almond, H, Mitchell, L, Nedeljkovic, M, Savvas, S, Wuthrich, V 2021, National Survey on the Impact of COVID-19 on the Mental Health of Australian Residential Aged Care Residents and Staff, *Clinical Gerontologist*, pp. 1-13.

Clarke, V & Braun, V 2017, Thematic analysis, *The Journal of Positive Psychology*, vol. 12, no. 3, pp. 297–298.

Department of Health, 2022, *Aged Care Funding Instrument*, Australian Government, Canberra, viewed 7th February 2022, https://www.health.gov.au/initiatives-and-programs/residential-aged-care/funding-for-residential-aged-care/the-aged-care-funding-instrument-acfi

Ergas, H, & Paolucci, F 2011, Providing and financing aged care in Australia, *Risk management and healthcare policy*, vol. 4, no. 3, pp. 67–80.

Google LLL, 2022, *Google Docs*, Santa Clara County, CA, viewed 7th February 2022, https://policies.google.com/

Guide Healthcare 2021, *Pain Management Services: 4a and 4b Claims*, viewed on 9 October 2021, <https://www.guidehealthcare.com.au/aged-care/pain-management/4a-4b-claims>

Hamilton, SD & Menezes, FM 2011, Embedded Incentives in the Funding Arrangements for Residential Aged Care in Australia, *Economic Papers (Economic Society of Australia)*, vol. 30, no. 3, pp. 326–340.

Harris, MF, Zwar, NA 2007, Care of patients with chronic disease: the challenge for general practice, *Medical Journal of Australia*, vol. 187, no.1, pp. 104-107.

Heiwe, S, Kajermo, KN, Tyni-Lenné, R, Guidetti, S, Samuelsson, M, Andersson, IL, Wengström, Y 2011, Evidence-based practice: attitudes, knowledge and behaviour among allied health care professionals, *International Journal for Quality in Health Care*, vol. 23, no.2, pp. 198-209.

Henderson, J, Willis, E, Xiao, L, & Blackman, I 2017, Missed care in residential aged care in Australia: An exploratory study. *Collegian*, 24(5), 411-416.

Leung, D. Y. & Chung B 2019, Content analysis: Using critical realism to extend its utility. In P. Liamputtong (Ed.), *Handbook of research methods in health social sciences* (pp. 827–841). Springer, Singapore. https://doi.org/10.1007/978-981-10-5251-4_102

Liamputtong, P 2013, *Qualitative Research Methods*, 4th Edition, Oxford University Press, Victoria, Australia

Ludlow, K, Churruca, K, Mumford, V, Ellis, L, Testa, L, Long, J, & Braithwaite, J 2021, Unfinished Care in Residential Aged Care Facilities: An Integrative Review. *The Gerontologist*, 61(3), e61-e74.

Mavromaras, K, Knight, G, Isherwood, L, Crettenden, A, Flavel, J, Karmel, T, Moskos, M, Smith, L, Walton, H, Wei, Z 2017, *The Aged Care Workforce 2016*, Australian Government : Department of Health, viewed 8 February 2021, https://gen-agedcaredata.gov.au/www_aihwgen/media/Workforce/The-Aged-Care-Workforce-2016.pdf

Microsoft Corporation, 2022, *Microsoft Excel Software*, Redmond, WA, viewed 7th February 2022, https://www.microsoft.com/en-us/about

Morse, JM 2010, Simultaneous and Sequential Qualitative Mixed Method Designs, *Qualitative Inquiry*, vol. 16, no. 6, pp. 483–491.

Office of Parliamentary Counsel, 2019, *Quality of Care Principles 2014: Aged Care Act 1997*, Australian Government, Canberra, viewed 7th February 2022, https://www.legislation.gov.au/Details/F2020C00096

Peters, MD, Marnie, C & ANMF Aged Care Working Group 2020, *Royal Commission into aged care quality and safety: submission to the Royal Commission into aged care quality and safety - funding, financing and prudential regulation of the aged care system*, Australian Nursing and Midwifery Federation, Australia.

Raynor, AJ, Iredale, F, Crowther, R, White, J, Dare, J 2020, It's Not Just Physical: Exercise Physiologist-Led Exercise Program Promotes Functional and Psychosocial Health Outcomes in Aged Care, *Journal of Aging and Physical Activity*, vol. 28, no.1, pp. 104-113

Saxton, JM (ed.) 2011, *Exercise and Chronic Disease: An Evidence Based Approach*, Taylor & Francis Group

Scrivener, K, Bravo, KA, Greely, B, Heidema, M, Violi, A, Young, N 2020, An ongoing physiotherapist led exercise program in residential aged care: Description of participant satisfaction and outcomes, *Australian Journal on Ageing*, vol.39, no.1, pp.359-365.

Tashakkori, A & Creswell, JW 2007, *Editorial: The New Era of Mixed Methods*, Journal of Mixed Methods Research, vol. 1, no. 1, pp. 3–7.

Whitford, D, Smith, T, Newbury, J 2012, The South Australian Allied Health Workforce survey: helping to fill the evidence gap in primary health workforce planning, *Australian Journal of Primary Health*, vol. 18, no. 1, pp. 234–241.

Willis, E, Price, K, Bonner, R, Henderson, J, Gibson, T, Hurley, J, … Currie, T 2016, *Meeting residents' care needs: a study of the requirement for nursing and personal care staff*, Australian Nursing and Midwifery Federation, Australia

Zoom Video Communications Inc, 2022, *Zoom software*, San Jose, California, viewed 7th February 2022, https://zoom.us/

Supplementary File 1

Allied Health Professional Survey: Perceptions of Allied Health Professionals on their roles.

This survey has been approved by the University of South Australia Human Research Ethics Committee and the XXXXXX Operational Services Executive.

The survey has been prepared by Clinical Exercise Physiology honours student Anthony Luongo for the purposes of learning more about the roles of Allied Health Professionals and how they work together in residential care. Anthony's supervisors are Dr Danielle Girard, Dr Carolyn Murray, Professor Gaynor Parfitt from the University of South Australia and the leadership team at XXX. In completing this survey, you are providing consent for your data to be grouped and included within an analysis. Your identity and individual data will not be disclosed.

Questions within this survey have been presented with best practice in mind. Our idea of best practice within residential aged care allows for the equal access to individualised quality care between each resident, as well as the complete control over the care they receive. Within best practice, these goals would be achieved within a multidisciplinary approach that addresses the emotional, physical, and environmental context the resident is living within. While answering these questions we ask that you keep in mind how your current roles relate to this idea of best practice.

The survey consists of three parts:

1. Demographic Information

2. Questions about your routine job

3. Questions about your role.

It should take roughly 10 minutes to complete.

If you wish to elaborate on your answers, follow up interviews will be offered to anyone wishing to participate. Further information will be provided at the end of this survey including space for you to leave your contact details. Please tick the box below if you wish to participate in a follow up interview.

☐

Part 1

What is your gender?

- Male
- Female
- Other

What is your age?

- 20-29
- 30-39
- 40-49
- 50-59
- 60 or older

What is your allied health discipline?

- Dietician

- Exercise Physiologist
- Occupational Therapist
- Pharmacist
- Physiotherapist
- Podiatrist
- Speech Pathologist
- Other:

How many years' experience do you have within this allied health discipline?

- Less than 1
- 1-4
- 5-9
- 10-14
- 15-19
- 20 or more

What type of conditions do you most commonly work with?

- [Open ended questions]

From what profession do you receive referrals for your services?

- Please list:

Part 2

Strongly Disagree Strongly Agree
0 1 2 3 4 5 6 7 8 9 10

{Please indicate your agreement to the following statements from 1-10.}

In my job I routinely…

Assessment

- Conduct initial assessments
- Evaluate how a resident's care plan can be improved
- Assess the environment residents live within
- Assess resident's physical function
- Assess resident's cognitive function
- Administer some form of falls risk assessment to residents.

Any other comments about assessments you provide?

Psychological Intervention and Management

- Consider psychological wellbeing when providing care to residents.
- Provide residents with education on maintaining their own health.
- Provide services that maintain or delay the decline of residents' cognitive ability.
- Work on improving residents' confidence post-fall.

- Implement behaviour change for residents through interventions such as goal setting, positive self-talk, relaxation, etc.

Any other comments relating to intervention and management with a psychological focus?

Physical Intervention and Management

- Treat injuries
- Provide preventative care (actions taken to avoid residents suffering an injury, disease, illness etc.)
- Provide curative care (actions taken after a resident has acquired an injury, disease, illness etc.)
- Assist clients with reablement
- Improve resident's physically post-fall.
- Provide/advocate for the use of assistive equipment such as walking frames, sock aids and ramps.

Any other comments relating to intervention and management with a physical focus?

Part 3

Strongly Disagree Strongly Agree
0 1 2 3 4 5 6 7 8 9 10

{Please indicate your agreement to the following statements from 1-10.}

Collaboration

- I provide services to residents in groups.
- I provide services to residents one on one.
- My colleagues and I collaborate to evaluate resident's needs and quality of life.
- It is more effective to manage a residents' risk of falls as a multidisciplinary team.
- Residents regularly have access to services from multiple Allied Health Professionals.
- I am encouraged to refer my residents on to colleagues in other professions.

-Please list in the space below any disciplines in which you have referred a resident on to.

- I am aware of which other Allied Health Professionals are seeing residents I work with.

-These Allied Health Professionals include… (please list in the space below)

Any other comments related to collaboration?

Leadership Skills

- I have provided education to onsite carers/staff.

- I have reported injury incidents/near misses' residents have had in the past.
- I have previously identified and addressed opportunities of improvement within my workforce.
- I am proactive in identifying the ideal approach for caring for each residents' individual needs.
- If identified, I am prepared to address the inadequate care of residents with my supervisors.
- At some point I have provided care for residents which I believe could have been better suited to another allied health profession.

Any other comments relating to leadership skills?

Psychosocial and Emotional Health and Wellbeing

- I consider how my services relate to residents' individual preferences and needs.
- I consider how I can maintain residents' dignity when providing my services.
- I regularly partake in actions which focus on improving resident's quality of life.
- I actively provide comfort to distressed or unsettled residents.
- My services attempt to maintain/improve residents selfcare capacity.
- My services involve helping residents maintain social interactions.
- I encourage independent decision making from residents
- I actively try to stimulate the use, recognition and understanding of language
- I have [or ask for] knowledge about the history of falls with residents I work with.

Any other comments relating to psychosocial and emotional health and wellbeing?

What challenges do you see impacting your ability to perform best practice?

[Open ended]

Follow Up Interviews

Feel free to leave any other comments you have below.

If you would like to elaborate on your answers provided within this survey, or volunteer for follow up interviews in 2021, please fill your information in below. Interviews will last roughly 30 minutes in either face to face settings or over Zoom. All data collected from the interviews will remain confidential and participants identification will be coded during the analysis stage. Confidentiality will also be maintained whether you volunteer to be interviewed or not.

Please fill in your contact details below if you wish to be contacted.

Name……

Facility you work at……..

Email Address……..

We appreciate you taking your time to complete our survey and if you have left your information above, we will contact you shortly.

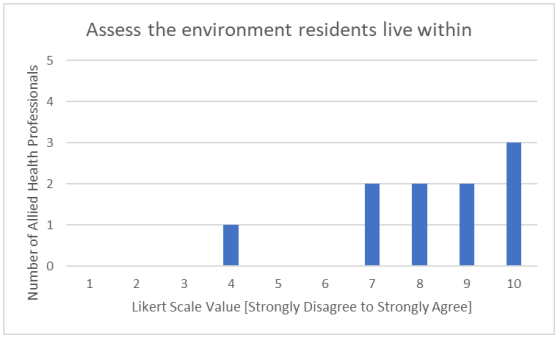
Supplementary File 2

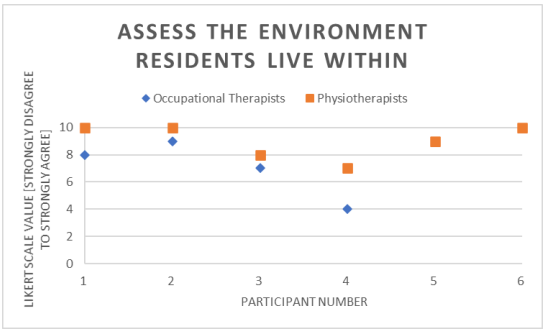
Overview of semi-structured interview guide including themes of questions asked, the questions themselves, as well as reasoning for the questions deriving from survey responses.

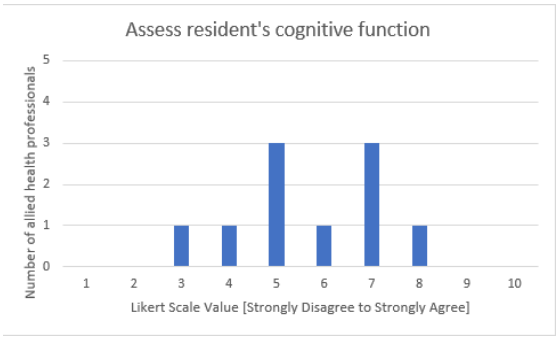
Question Theme	Questions to Probe	Reasoning for questions
Understanding their role	• Can you describe to me your role within the facility and the duties you complete on a daily/weekly basis?	Helping to understand how they see their role. Can help to provide context to survey answers and interview responses.
Collaboration	• Can you explain to me any collaboration between yourself and other Allied Health Professionals within your workplace? • What communication exists between yourself and other AHP's?	Minority of participants did not mention it being common to collaborate with other AHP's in the workplace.
Funding	• How does current funding impact your role as a [PT or OT] -What could your roles look like with improved funding?	70% of participants and 100% of those being interviewed mentioned funding as a significant barrier to achieving best practice.
Assessments	• What roles do assessments have in your practice? -selection of assessments? -Improvements to the assessments?	Repeated mention of universal assessments. Potential for lack of specificity. Mention of lack of cognitive assessment.
Falls	• How do you as an individual health professional currently address falls prevention and recovery? • What differs between your disciplines approach to falls and other AHP disciplines within your workplace? • Within your survey when discussing reablement, you mentioned that when 'preventing injury vs maintaining independence, improving one reduces the other', could you please elaborate on your thoughts here?	Overlap between PT and OT statements of what they do within falls management. PT stated that 'Preventing injury vs maintaining independence, improving one reduces the other' when discussing reablement.
Cognition	• How are resident's cognitive needs addressed within your workplace?	69/90 answers in cognitive section of the survey were 9 or 10. Significantly higher than other sections. Yet 2/3 participants to be

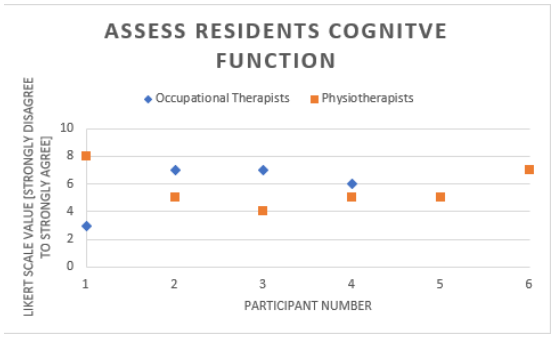
	-ways in which your workplace could better address residents' cognitive needs. -how do you believe a [PT/OT] should attend to a resident's cognitive needs if at all?	interviewed stated concerns over poor cognition focus in residents care plan.
Barrier to best practice	• What does 'best practice' within your role as a [PT/OT] mean to you? How does that differ from your current duties? • Can you tell me more specifically about any barriers which prevent you from achieving best practice? [discussing time constraints, financial constraints, staff and delegation of roles.]	70% of participants responding to open ended question regarding barrier to best practice. 5 answers referred to funding issues, 3 referred to time constraints, and 1 mentioned being understaffed.
Concluding	• Are there any other comments you would like to make today about the topics which were discussed, or something new you would like to bring up?	Allows participant to voice any opinion they have which they feel was not touched upon in the survey. Opportunity for them to express any ideas they feel they wish to share.

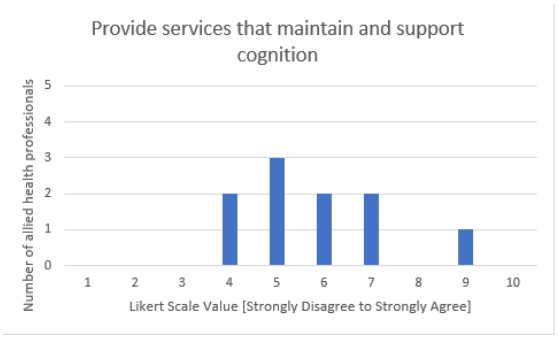
Supplementary File 3: Selected results from Likert scales on survey

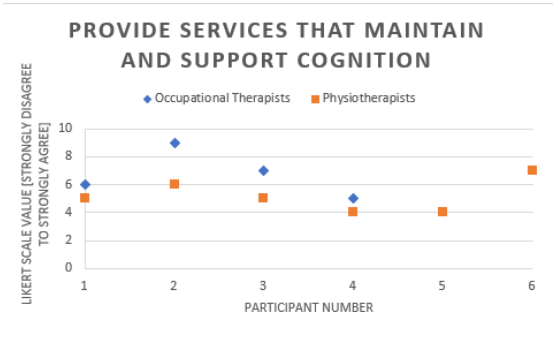


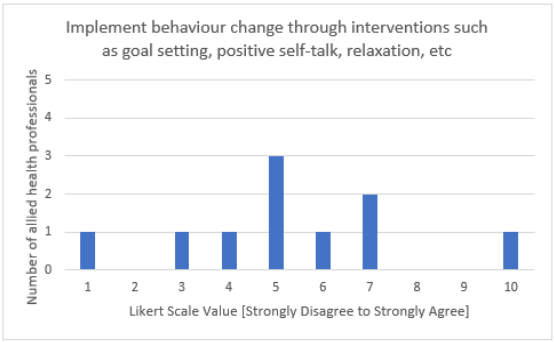


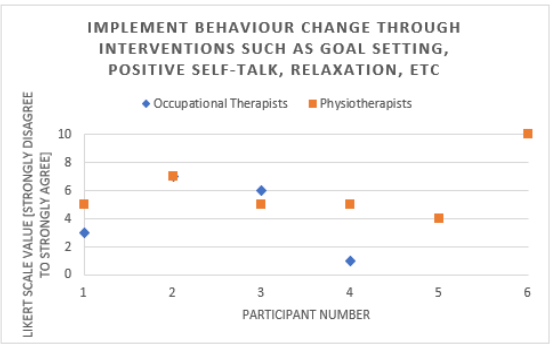


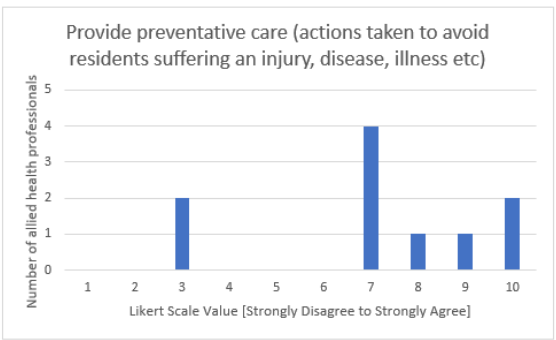


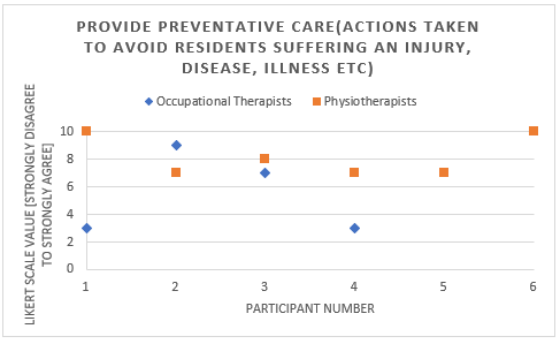


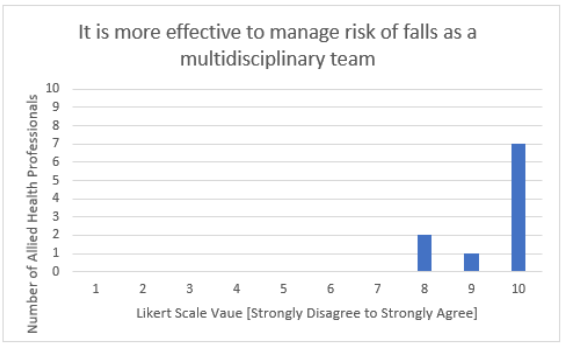


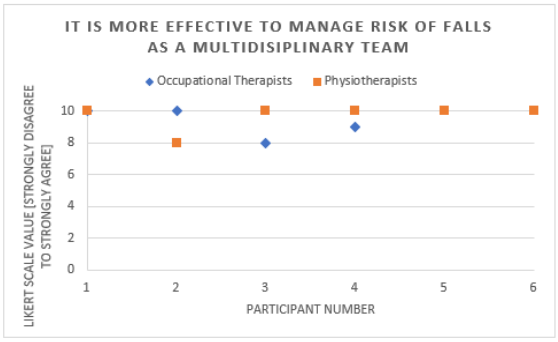


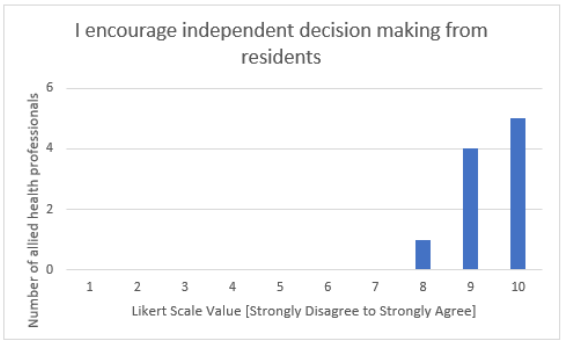


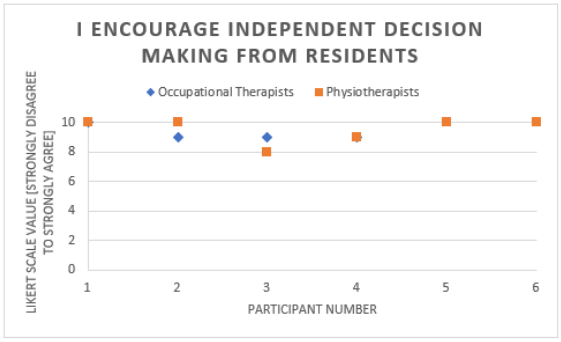


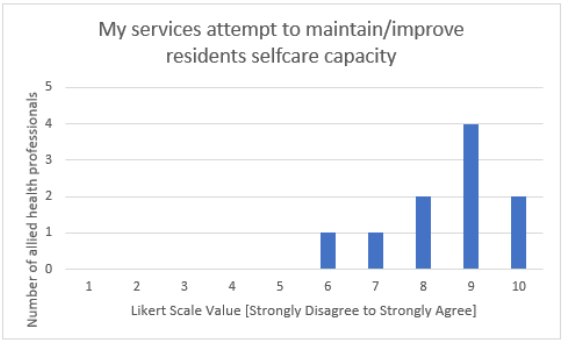


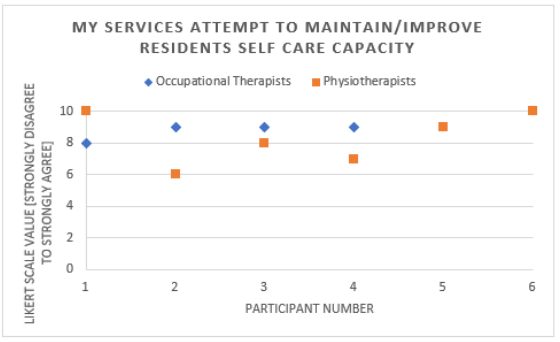

It is more effective to manage risk of falls as a multidisciplinary team
Number of Allied Health Professionals
Likert Scale Vaue [Strongly Disagree to Strongly Agree]

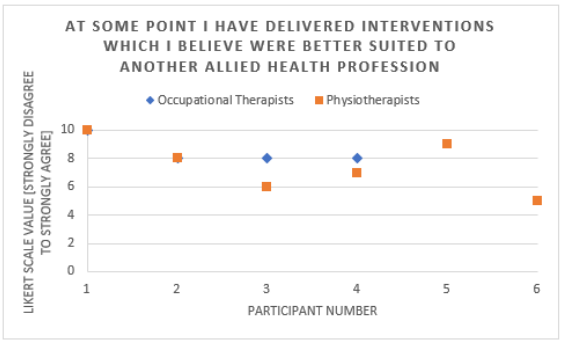

IT IS MORE EFFECTIVE TO MANAGE RISK OF FALLS AS A MULTIDISIPLINARY TEAM
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER

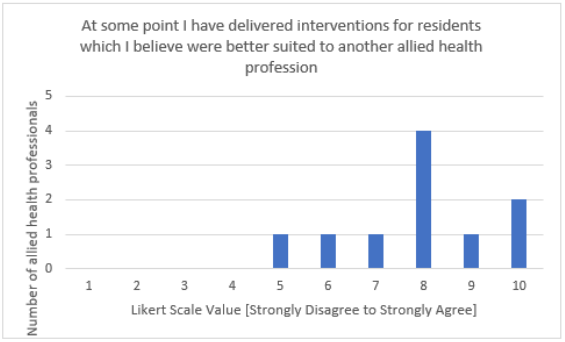

I encourage independent decision making from residents
Number of allied health professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]

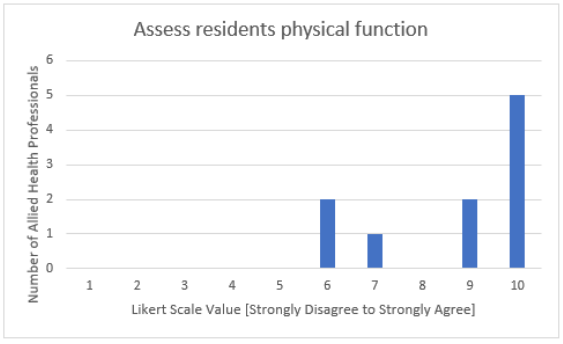

I ENCOURAGE INDEPENDENT DECISION MAKING FROM RESIDENTS
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER

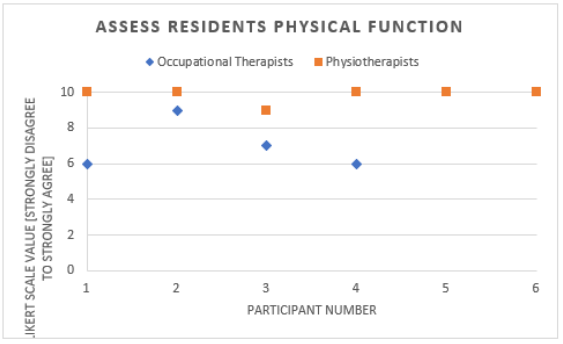

My services attempt to maintain/improve residents selfcare capacity
Number of allied health professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]

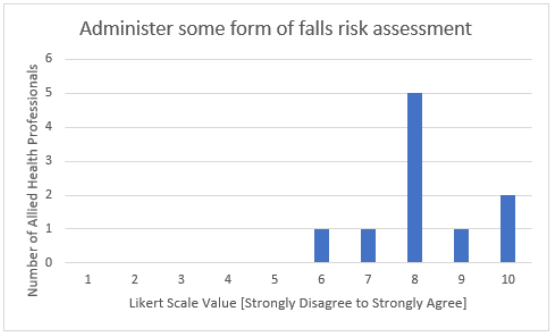

MY SERVICES ATTEMPT TO MAINTAIN/IMPROVE RESIDENTS SELF CARE CAPACITY
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER

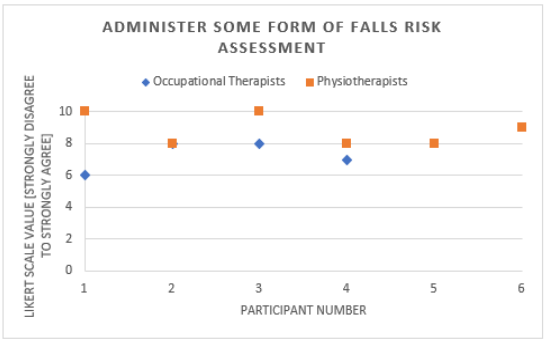

AT SOME POINT I HAVE DELIVERED INTERVENTIONS WHICH I BELIEVE WERE BETTER SUITED TO ANOTHER ALLIED HEALTH PROFESSION
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER

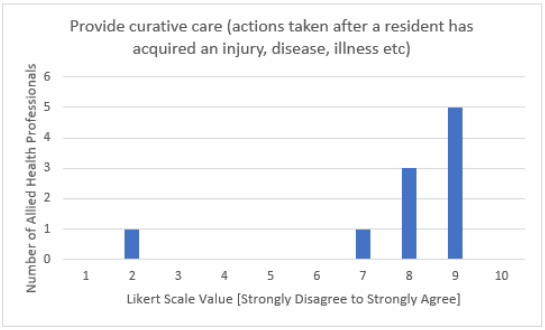

At some point I have delivered interventions for residents which I believe were better suited to another allied health profession
Number of allied health professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]

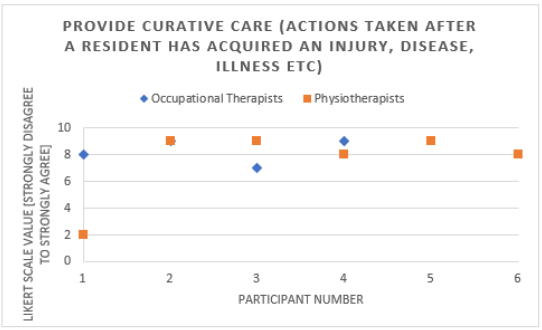

Assess residents physical function
Number of Allied Health Professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]

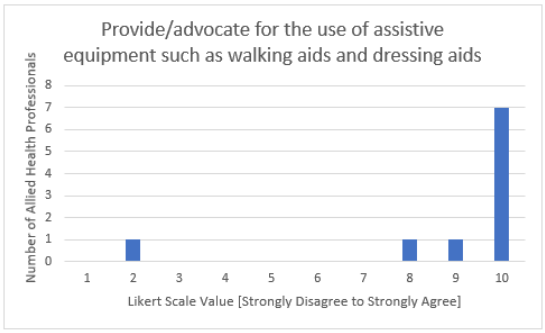

ASSESS RESIDENTS PHYSICAL FUNCTION
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER

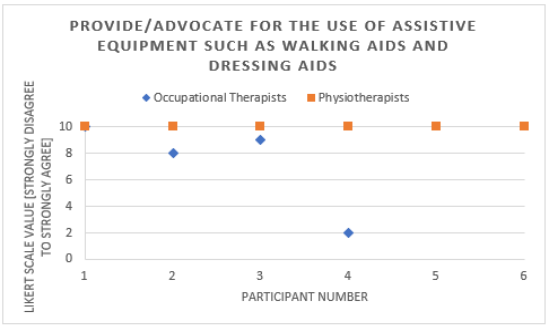

Administer some form of falls risk assessment
Number of Allied Health Professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]


ADMINISTER SOME FORM OF FALLS RISK ASSESSMENT
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER

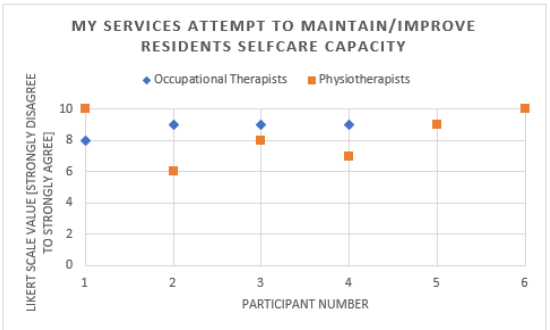

Provide curative care (actions taken after a resident has acquired an injury, disease, illness etc)
Number of Allied Health Professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]

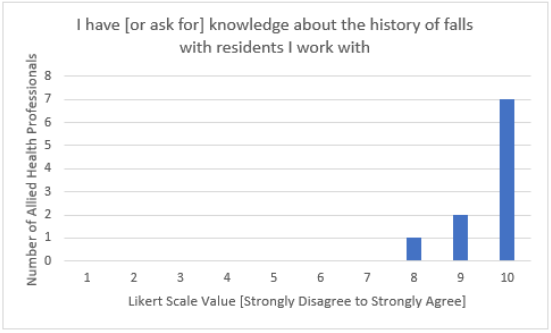

PROVIDE CURATIVE CARE (ACTIONS TAKEN AFTER A RESIDENT HAS ACQUIRED AN INJURY, DISEASE, ILLNESS ETC)
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER

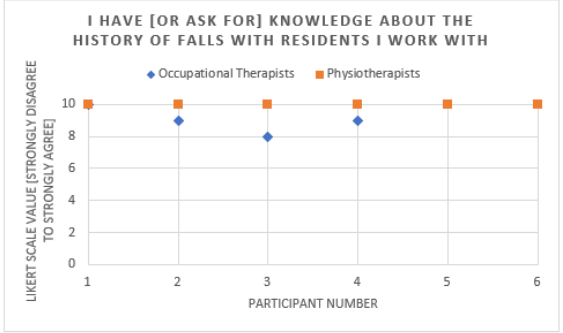

Provide/advocate for the use of assistive equipment such as walking aids and dressing aids
Number of Allied Health Professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]


PROVIDE/ADVOCATE FOR THE USE OF ASSISTIVE EQUIPMENT SUCH AS WALKING AIDS AND DRESSING AIDS
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER


My services attempt to maintain/improve residents selfcare capacity
Number of Allied Health Professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]


MY SERVICES ATTEMPT TO MAINTAIN/IMPROVE RESIDENTS SELFCARE CAPACITY
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER


I have [or ask for] knowledge about the history of falls with residents I work with
Number of Allied Health Professionals
Likert Scale Value [Strongly Disagree to Strongly Agree]


I HAVE [OR ASK FOR] KNOWLEDGE ABOUT THE HISTORY OF FALLS WITH RESIDENTS I WORK WITH
Occupational Therapists
Physiotherapists
LIKERT SCALE VALUE [STRONGLY DISAGREE TO STRONGLY AGREE]
PARTICIPANT NUMBER

Supplementary File 4: Overview of content analysis to arrive at three themes

Survey	Topic 1 Collaboration	Topic 2 Funding	Topic 3 Falls Risk/ Assessment	Topic 4 Roles	Topic 5 Cognition/ Assessment	Topic 6 Barriers to best practice
Lack of funding Lack of time Bounded scope Expanding scope Enablement model is illusive Clinical reasoning - tensions Compliance industry / current practice Neglected needs	Arrangement of allied health services Deciding disciplinary role and referrals between AH	Saving money Bounded scope and cost Tensions – EBP, Clinically indicated & organisational expense	Falls Referral timing and process Other allied health or nursing Strategies to prevent falls Common incidence of falls	OT and physio roles Transdisciplinary practice	Goals and quality of life Reasoning of falls risk Support for deteriorating cognition Supportive environment but less to do / think about Provision of stimulation Rt motivation	Allied health scope and preference Funding Staff availability

Possible themes

Scope of practice and care

Systemic and Contextual Tensions

The reasoning of enablement

Person-centred Care