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REVIEW ARTICLE

WHAT ARE THE CLIENT, ORGANISATIONAL AND EMPLOYEE – RELATED OUTCOMES OF HIGH QUALITY LEADERSHIP IN THE ALLIED HEALTH PROFESSIONS? A SCOPING REVIEW

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ABSTRACT

BACKGROUND:

Leadership is viewed as the panacea for the complex problems in modern health care where chronic disease, contracting budgets and rising consumer expectations are challenging care provision. As the second largest workforce in Australia, Allied Health Professionals (AHP) are core contributors to health teams however they are largely absent from leadership positions and there is little evidence of their impact on client and wider health system outcomes.

AIM:

A scoping review was carried out to synthesise evidence on the domains of client, organisational and employee-related outcomes of high quality leadership in Allied Health. Method: A search of grey literature, peer and non-peer reviewed literature was undertaken using Embase, Emcare, SCOPUS and Psychinfo from 2010-2017. Data were sourced from journals, government reports, conference presentations and other grey literature. The reference list of key articles was hand searched for relevant research.

RESULTS:

A total of 5880 articles were identified and after screening 35 articles were included for in depth review. Leadership contributed towards positive outcomes in all three domains and had influence across professional groups and services. Leaders are highly valued and respected by their teams. Allied Health leaders did not feature in any of the articles and AHP were the focus of only seven studies. The majority of articles were conference papers or case reviews that provided little robust data making it difficult to draw substantive conclusions on the outcome of AHP leadership.

CONCLUSION:

There was a lack of robust data specific to AHP leaders. Future research should attempt to gather evidence of the outcomes of AHP leadership through qualitative and quantitative means to substantiate the anecdotal evidence for high quality AHP leaders.

KEYWORDS

allied Health, leadership, outcomes, healthcare.

INTRODUCTION

Healthcare is changing at an unprecedented pace. Rising numbers of people with chronic diseases, ageing populations, advancing health technologies rising consumer expectations, and contracting budgets challenge healthcare delivery. [1, 2] Workforce innovation is needed to ensure health systems can meet the increased demands of 21st century populations. [1, 3] Leadership is viewed in some circles as the solution for these challenges.

As the second largest workforce in Australia, Allied Health Professionals (AHP) are important contributors to enhanced health service delivery and improved clinical and organisational decision-making. [4, 5] Allied Health are health professions from a range of skills, backgrounds and practices excluding medical or nursing. A further delineation was recently proposed by the department of

health and human services in Victoria (DHHS) breaking the workforce in to Allied Health Therapy and Allied Health science. [6] The therapy group consists of professions such as Physiotherapy, Occupational Therapy, Dietetics, Social Work and Speech Pathology: Allied Health sciences include radiographers, sonographers and Pharmacists among others.

Varying government reports espouse the benefits of leadership in AHP for practice changes and reforms. [2, 7, 8] Allied Health have embraced workforce reforms with increasing use of Allied Health Assistants (AHAs). In the 2016 Grattan report it was estimated that AHP could save an estimated $43m per year if they fully implemented the recommendations of role substitution by AHAs. [2] A recent report by the peak body representing regional and rural allied health disciplines Services for Australian Rural and Remote Allied Health (SARRAH) highlighted the valued innovation and clinical leadership displayed by AHP in chronic disease management, demonstrating how intervention and coordinated care can enhance client outcomes, avoid needless hospital admissions and unnecessary medical procedures. [8]. However, AHP are under-represented in leadership roles and there is a dearth of data on the outcomes of AHP leaders and questions about the impact of their leadership. There are calls within the profession for more AHP leaders and greater visibility for the outcomes of AHP leaders. [7, 9-11].

AIM

There is a pressing need to investigate the outcomes of AHP leadership and raise their influence at a strategic leadership level to benefit the health system. The scoping review presented addresses the following question: "what are the client, organisational and employee-related outcomes of high-quality leadership in the AHP?" Allied Health therapies were chosen as the key population for this review

METHOD

As research on leadership in the AHP is scarce, a scoping review approach was selected to identify gaps in the empirical literature and provide a picture of AHP leadership. The framework for conducting a scoping review as outlined by Arksey and O'Malley was followed. The following sections describe the process under each of the framework headings. [12]

STEP 1: IDENTIFY THE RESEARCH QUESTION.

There is a dearth of literature on AHP leadership in peer reviewed publications and research about AHP is complicated by the varying definitions and diversity in the AHP workforce. [7, 9, 10] Additionally, outcome is an all-encompassing term that needed to be refined. In order to narrow the search, the term 'outcome' was refined to include three key areas; client, organisation and employee. The following research question guided the scoping review: "What are the client, organisational and employee-related outcomes of high quality leadership in the Allied Health Professions?"

STEP 2: IDENTIFY RELEVANT STUDIES.

An inclusive approach was used to search the evidence, this included database searches, grey literature reviews, hand searching key journals, reviewing reference lists of pertinent articles as well as linking with existing knowledge networks in professional associations. The search strategy resulted in a considerable volume of data, building a descriptive account of the available evidence.

Peer-reviewed literature:

Four key databases were searched: Embase, Emcare, CINAHL and Scopus. The key search terms used are outlined in Table 1.

Grey literature:

Reports, reviews and policy papers were sourced from a number of government and private agencies such as Centre for Workforce Intelligence (2013), The Kings Fund (2015, 2016), DHHS (2016, 2014), Grattan Institute (2014) and SARRAH (2016). A search was also conducted for the representative bodies of each of the chosen professional group. These were Dietetics Association of Australia, Occupational Therapy Australia, Australian Physiotherapy Association, Speech Pathology Australia, Exercise Science Association of Australia, Social Work Australia, Australian podiatry association and Chiropractic Australia.

Search strategy:

Due to resource and time constraints the search was limited to literature published from 2010-2017. It has been noted by other researchers that healthcare research is dominated by poor quality research. [13] Recently there has been an increased attention paid to the Allied Health workforce and their leaders, it was anticipated that it would result in a corresponding increase in research material. [9-11]

Previous research with a search period from 1980- 2017 has identified a dearth of outcome studies pertaining to AHP leaders. [9, 11, 15] A similar search parameter for this study would likely yield similar results, thus a more recent time period was chosen to identify newer studies. To be included articles needed to be written in English and include the Allied Health therapy professionals: Occupational Therapists, Physiotherapists / Physical Therapists, Social Workers, Speech-language Pathologists, Dietetics, Podiatrists, and Exercise Physiologists (OT, PT, SW, SP, DT, Pod and EP). These professionals were included as they are involved in service delivery across the continuum of care in the Victorian public health system thus giving greater context to the search strategy. The databases were searched using the terms as outlined in table 1.

TABLE 1. SEARCH TERMS

SEARCH NUMBER	SEARCH TERMS
1	Leader* OR Manage*
2	"Allied Health"
3	"occupational therap*"
4	physiother* OR "physical therapist"
5	dietician OR dietetic*
6	"social work*"
7	"speech pathology*" OR "speech ther*" OR "speech and language therap*"
8	podiatry* OR chiropody*
9	Exercise physiologist
10	Employee OR staff
11	Organi$ation OR "health service"
12	Patient OR client
13	2 AND 3 AND 4 AND 5 AND 6 AND 7 AND 8 AND 9 AND
14	AND 13 AND 10
15	AND 13 AND 11
16	AND 13 AND 12
17	LIMIT 14 TO 2010-CURRENT
18	LIMIT 15 TO 2010-CURRENT
19	LIMIT 16 TO 2010-CURRENT

STEP 3: SELECT STUDIES

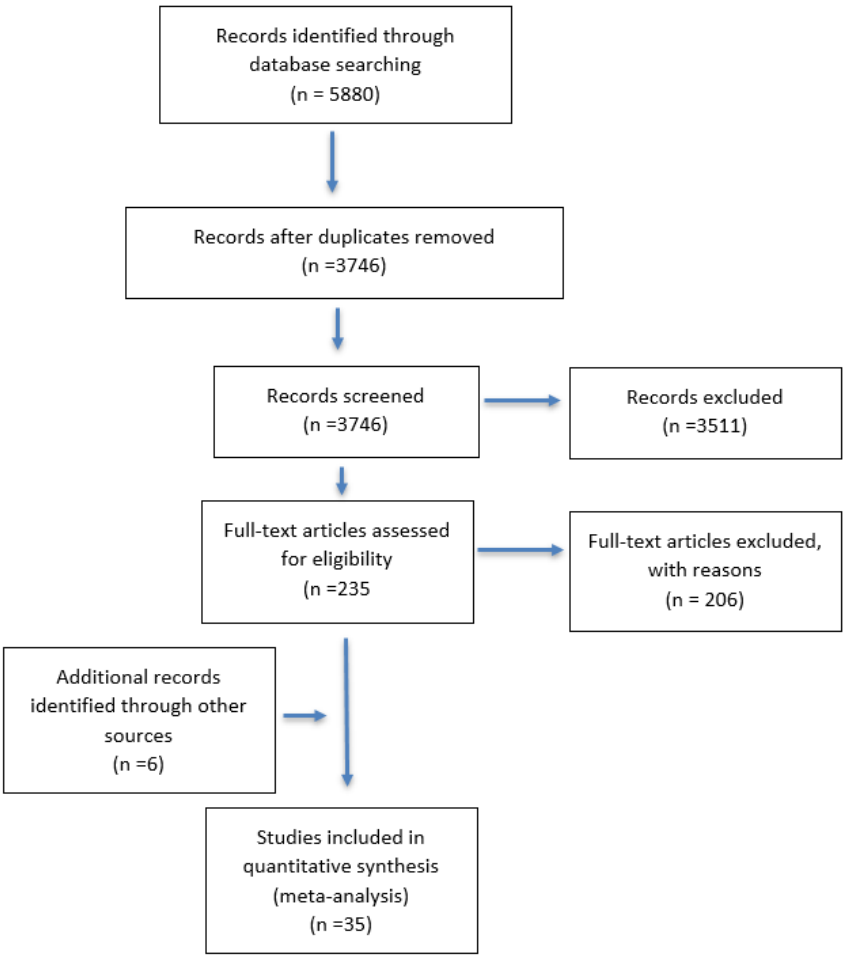
The inclusion and exclusion criteria are included in Table 2 below. To be included at least one AHP group needed to be part of the study population. This could be explicitly stated in the methodology or references made to a multidisciplinary team (MDT). Often, the composition of the population could only be ascertained following abstract or full text review. Grey literature data were included if they reported broadly on leadership under the terms "workforce redesign" or "innovation". AHP were rarely the focus of workforce redesign yet it was assumed that any workforce reform would have included the second largest workforce. Therefore, relevant reports were included for review even if they didn't mention the AHP workforce explicitly. This

decision was agreed with the research team as a means of expanding on the grey literature available. Research articles were excluded if they exclusively mentioned workforces who weren't AHP, if the articles were opinion pieces or if the research was actually a marketing or publicity write up for a type of leadership training. The Prisma Table in Figure 1 depicts the search strategy employed to result in 35 articles for inclusion.

TABLE 2. INCLUSION AND EXCLUSION CRITERIA FOR SCOPING REVIEW

INCLUSION	EXCLUSION
Research involving Allied Health as a main population or members of a multidisciplinary team	Papers that were not original research e.g. commentaries or opinion pieces
Data published between 2010-2017	Papers that specifically mentioned any Allied Health Science professions
Data that reports on outcomes of leadership or managers in a healthcare setting	Research reporting on Allied Health leaders in academia
Applied research or literature reviews reporting on applied research	Articles that were sponsored piece of research about the outcomes of a leadership training initiative
Grey literature referencing workforce, redesign or innovation	

FIGURE 1: PRISMA TABLE



STEP 4: CHART, COLLATE, SUMMARISE, AND REPORT RESULT

Key terms and information from the relevant articles were charted in an excel document. Each article was read and analysed by the principal researcher and the data was recorded in a table using the headings as advised by Arksey and O'Malley. [12] Knowledge about leadership outcomes increased with each article, and data previously deemed irrelevant or excluded from the analysis were identified as key concepts. This process also identified useful articles from the reference lists and resulted in additional articles for inclusion. This built a broad picture of outcomes and gave clarity to the topic.

RESULTS

LEADERSHIP MODELS OR TRAITS.

Many of the chosen literature referenced leadership models, theories or styles. The focus of this review was not to describe any particular type of leadership model however it is beneficial to describe some of these styles as it elucidates the concept of an effective leader. The most common model was Transformational leadership; described in four papers. [16-19] Other studies, while not directly measuring it, provided descriptions of a leader that closely aligned with transformational leadership concepts as described in table 3. [20-22]. A recent report carried out

for the Department of Health and Human Services (DHHS) in Victoria advocated for further training in transformational leadership to better equip AHP to lead services and teams for better patient care. [10].

Other leadership types mentioned were resonant leadership, situational leadership and humble leadership; further details are found in table 3.

There was no consensus about what traits or characteristics make up an ideal leader yet certain behaviours were frequently listed and these built a picture of a high quality leader. Many of these traits aligned with transformational leadership. These traits are listed in table 4 below. Effective leaders were those who were supportive of their teams and took an active role in the work or practice changes occurring. Leaders also had excellent communication evidenced by disseminating clear expectations on role performance and giving feedback. Leaders also established conditions and roles that challenges employees' skills. While tangible resources were beneficial to the employees and helped with the success of projects; it seemed to be the symbolic actions of leaders and such as time spent with teams and regular performance feedback that were valued most. [16, 21, 25]

RESEARCH ON LEADERSHIP IN THE ALLIED HEALTH PROFESSION

This scoping review identified little research specific to AHP leadership. The limited number of formal leadership positions in Allied Health has been raised by previous researchers and may account for the lack of literature pertaining to this workforce. [11] However, a gap in research knowledge is not unique to AHP and has been identified by other health researchers who have previously tried to build robust data about health care leadership. [9, 10] In their review on leadership in the National Health Service (NHS), West and colleagues articulated that the huge quantity of published literature on health leadership has not added quality knowledge in the field. His team utilised leadership information from a wider (non-health) context, espousing that data are generalizable to the healthcare setting. [13]. A similar approach was taken in this review, broadening the scope of research to multidisciplinary teams in healthcare (acknowledging that Allied Health would form art of these teams) to build evidence on AHP leadership.

AHP were the key population in seven investigative studies. [19, 22, 30, 31, 33, 34, 36] Two policy papers looked at Allied Health workforce models and Allied health board members and one paper was a keynote address on the practical and varied leadership successes of Occupational Therapists.[7,11,37] The remaining studies described interventions implemented within an MDT of which AHP were either directly mentioned or content analysis of the articles identified many informal leaders such as senior clinicians and heads of profession who had positive influence on the outcome being studied.

OUTCOMES OF LEADERS

The outcomes of leaders and leadership tended to group into three main domains: client-related, employee/staff related and organisational or system-related outcomes. The domains used in the following section are mainly artificial boundaries for the purpose of reporting and overlap does occur. For example, increased moments of hand hygiene will reduce hospital acquired infections, improving client outcomes; however hand hygiene rates are a quality and safety priority for health services and are

reported to the Department of Health and Human Services thus it can also be an organisational outcome. [38] A summary of the main outcomes for each domain are listed in table 5.

TABLE 3: LEADERSHIP STYLES AND MODELS

Transformational leadership [26]	Composed of four dimensions: Idealised influence, inspirational motivation, intellectual stimulation and individualised consideration. The leader acts as a role model to inspire and motivate employees to reach and surpass their expectations.
Situational leadership [20]	Ability to adapt leadership style depending on the task or team at hand. It contains two dimensions: task behaviour and relationship behaviour
Resonant leadership [23]	The art of persuading people to work toward a common goal. Consists of four styles of leadership: visionary, affiliative, coaching and democratic.
Humble leadership [24]	A humble leader is one who gives lower self-ratings of leadership effectiveness compared to their team.

TABLE 4 TRAITS OF AN EFFECTIVE AHP LEADER REPORTED IN THE EMPIRICAL LITERATURE

TRAITS OF AN EFFECTIVE LEADER	RELEVANT LITERATURE
• Providing resources – physical and symbolic (time/opportunities)	[16] [25, 27-31]
• Formulating clear goals and objectives	[16, 17, 19]
• Aligning goals with organisational strategies	[20, 23]
• Provides role clarity to staff	[17] [21]
• Displays content knowledge about the specifics of their employee's role	[24, 30]
• Collaborates with team to experiment with innovative ways of working	[20, 21]
• Provides a work environment and role that sufficiently challenged teams	[23]
• Is directly involved in a project or practice change	[25, 28, 33, 35, 36]
• Is perceived as being helpful and supportive of staff needs	[30, 32]
• Acknowledges and rewards effort	[34, 35]
• Provides regular transparent communication with team	[16, 31, 34]
• Affords teams autonomy and flexibility in their working role	[20, 22, 30, 31]
• Provides regular performance feedback	[24, 28]

TABLE 5 OUTCOMES FOR APH LEADERS

CLIENT	ORGANISATION	EMPLOYEE
Enhanced uptake of evidence-based practice [24]	Superior quality ratings provided by national agency [39]	Reduced burnout [17, 18]
Implementation of evidence-informed guidelines in cancer care [27]	Ready for change with quicker take up of new organisational change [21]	Enhanced job satisfaction [19, 21, 34]
Greater collaboration with carers to assist in client care [24, 25]	Quicker workforce redesign practices implemented [5]	Greater role clarity and self-efficacy [16, 23]
Improved uptake of infection control guidelines in spinal cord units [28]	Sustainability of a new client-centred model of care [16]	Increased sense of empowerment and engagement in their role [17,18, 23]
Quicker response time and effectiveness of CPR performance [41]	Increased skill in an extended scope of practice team [42]	Low rates of conflict in the team [40]
Increased quality of client care due to improved access to leaders [36]	Improved team learning and collaboration with increased quality of client care [20]	
	Reduced length of stay, reduce duplication of processes improved discharge processes [43-45]	
	Reduced attrition and enhanced retention of staff [22, 30, 34]	

OUTCOMES FOR CLIENTS

With the exception of Yeung's investigation into the influence of team leadership on quality of Cardiopulmonary resuscitation (CPR) during a simulated cardiac arrest situation no causal effects of leadership on client care were reported. In his study, leaders who had better leadership skills (as rated on a leadership questionnaire) were more effective in the simulated CPR as evidenced by quicker time to delivering defibrillation and better techniques that would have revived the patient sooner. [41]

Leaders were also found to influence knowledge translation that enhanced clinical care. Humble leaders were more effective in creating conditions in which evidence-based implementation would succeed. [24] Teams in cancer care whose managers were committed to and supportive of the roll out of an evidence- endorsed survivorship care plan reported they were more likely to use the tool in practice. [27] A study by Hanssen investigating a competence building program (CBP) to improve collaboration between staff and carers identified strong leadership engagement and active support as elements in successful implementation. [25] Sites without such support failed in the implementation of the CBP. Leaders were key players in the enactment of infection control guidelines to prevent the spread of Methicillian-resistant Staphylococcus Aureus (MRSA) on a Spinal Cord injury unit. Staff reported that leadership involvement encourages staff to implement the MRSA guidelines. [28]

OUTCOMES FOR ORGANISATIONS

Organisational outcomes were extrapolated from the results of practice improvements, model of care changes and policy initiatives under the assumption that outcomes would deliver team or service efficiencies. In his research into clinical board membership and health service performance in the National Health Service (NHS) Veronesi found a statistically significant pattern linking the number of clinicians on hospital boards with superior Healthcare Commission (HC) quality ratings. [39] The researcher concluded that a 10% increase in clinicians on boards had positive consequences for HC ratings and hospital outputs and outcomes. In her research that mapped AHP leadership on top management teams (TMT) Boyce cited numerous potential roles for AHP to enhance organisational outcomes. She concludes that the impact of AHP on organisational effectiveness will be maximised by having strong leaders in executive positions. [11] In a study of child welfare workers, leadership behaviours were associated with higher readiness for organisational change and resulting improved operational performance. [21]

A number of studies report on the important role leaders played in improved hand hygiene (HH). In one study it was noted that visible leadership on the wards such as participating in audits, providing feedback and incentives and disseminating results caused a 231% increase in moments of HH. [32] Similar improvements in moments of hand hygiene were reported in other studies where leaders were actively involved in efforts to improve HH. [29, 32, 35, 46, 47]

Leaders work to enhance organisational performance through their influence on team processes and outputs. Three research articles provided examples of how leadership enhanced the performance of multidisciplinary teams (MDT) resulting in shorter length of stays, reduced duplication of processes and coordinated discharges. [43-45] Solimeo noted that teams who successfully implemented a new model of care in primary care in the USA had active involvement of their leaders. [16] The researchers mentioned specific leadership actions such as championing new ideas, investing in team building, shielding teams from distractions and enabling teams to innovate in their practice had a greater influence on the success of the model of care change than the introduction of electronic medical records and education session.

The most commonly studied organisational outcome of leadership were staff recruitment and skill retention. Supportive leaders were ranked by Scanlon as the 4th highest influence on intention to leave after dysfunctional teams, by mental health Occupational Therapists. [22] In two studies of rural AHP, managers who supported professional development and provided effective supervision were cited as two of the main reasons staff wished to remain in their current role. [31, 34] The researchers acknowledged that recruitment in rural areas is difficult and the existence of a number of environmental barriers that are outside of a manager's control, such as job opportunities and breadth of public services for their families can play a role in attracting and retaining staff. Nevertheless, manager support is an important factor that can be controlled and positively influences staffing.

OUTCOMES FOR EMPLOYEES

Leadership behaviours were frequently cited as enhancing employee well-being and satisfaction. Leaders who provided workload autonomy, listened to team concerns and provide role clarity contributed to positive employee feelings: the outcomes of such feelings were empowerment, enhanced spirit at work, job satisfaction and intrinsic motivation. [19, 23] The researchers noted that the longer employees spent with their high performing leader the greater their satisfaction and work commitment (19). Similar results were reported by members of an MDT working in mental health and hospice settings as a result of their engaged and influential leader. [16, 17]

Researchers attest to the importance of leaders in buffering employees against mental illness, conflict, stress and burnout. In a scoping review on the sources of conflict in the workplace, Kim reported on the relationship between ratings of leadership quality and reports of conflict. The researcher noted that high ratings of leadership quality correlated with low reports of conflict and sick leave and increased feelings of personal accomplishment. These were found to mitigate mental ill-health. [40] Green noted that leaders who provided goals, gave direction and worked to enhance a positive organisational culture had employees with lower measures of burnout. [17] It was interesting to note that even with the presence of high workloads in stressful and emotionally demanding roles (e.g. mental health, child protection and palliative care) that a leader who exhibits supportive, helpful and encouraging traits can moderate the negative effects of these demanding roles. [17, 19, 23]

DISCUSSION

This scoping review examined the employee, client and organisational outcomes of high quality Allied Health leadership. The results point to a connection between effective leadership and positive outcomes in all three domains. The findings demonstrate the wide-reaching influence of leadership in healthcare.

There is a dearth of high quality research on the outcomes of AHP leaders and on the AHP workforce; this came through in the current review. Few articles provided substantive outcome data on AHP, and researchers concluded that research is needed to identify the positive impact of leaders on health outcomes. [9-11] While anecdotal and evidence-based reports espouse the value of AH interventions, the lack of data pertaining to the AHP workforce makes it difficult to draw substantive conclusions on the value-add of AHP. Researchers acknowledge that better data is needed to inform governments and funding agencies of the impact of leaders. [7, 37, 39, 48] That said, the absence of robust data does not mean there is not a role for AH leaders in healthcare. In fact, as reported in Veronesi's study on hospital boards, the professional background of a health leader may not be as important an influence on hospital quality as the number of clinicians on the hospital board. [39] Interpreted this way, any professional group can improve quality scores for the health services not just medical and nursing. Boyce substantiated this by concluding that the presence of AHP on top management teams can improve client and service level outcomes. [11]

Leaders advance client care by the influence they exert on their teams rather than their hands-on clinical practice. Numerous examples of effective team leadership substantiates this view. [7, 49] Allied Health predominantly work in multidisciplinary teams and are ideally suited to apply leadership skills beyond their profession to deliver effective care in teams. [48] It would be beneficial to explore the impact of AHP on MDT in more detail.

Effective AHP leaders in rural areas were associated with higher retention rates, buffering against high workloads that are associated with intention to leave, thus maintaining a health service for the local community. [30-34]

Project management, evidence-based protocols and policy direction are the means to enhance health outcomes yet they are only as good as the people who use them. [49, 50] Leaders establish work conditions that are conducive to superior employee and organisational outcomes. [16, 19, 21] They often influence behaviours and embed changes that sustain quality improvements. This is an important function of AHP leaders and should be more widely communicated to senior executives, policy makers and governments.

Leaders can buffer teams against the negative effects of highly demanding work conditions, reducing stress and burnout. [17] There has been a recent focus on employee well-being acknowledging that it has a negative effect on overall organisational performance. [51] Efforts have included external training and in-house wellness strategies the benefits of these may not carry over to the workplace. The affirmative actions of leaders to enhance employee well-being that were in this review point to an (as yet) untapped resource in leaders for employee and organisational benefits. What is clear is that AHP leaders have positive and wide-ranging influence on a number of domains. They possess the characteristics of high performing leaders and are key players in healthcare teams. The lack of research and associated knowledge of their outcomes needs to be addressed in order to raise the profile of AHP Leaders and further advantage the population they serve.

LIMITATIONS

This scoping review gathered a large quantity of evidence about the important role of Allied Health as it included conference presentations and non-peer reviewed research that would have been excluded from a more rigorous systematic review. Conference presentations contained some interesting data on practical application of leadership in health. However an inherent difficulty about conference papers is the lack of detail they provide about their project, hampering efforts to build knowledge on the topic. Within the research identified in this review there is a preponderance of weak study designs. More than half of the articles reported on data gathered from case studies that sourced data from one-time sampling of leader's performance over a relatively short period of time. Case studies provide great breath to the study of leadership, giving rich qualitative data, however the data

lacks depth and the results are often unique to the study setting.

RECOMMENDATIONS

AH leaders have a valuable role to play in all areas of the health system and this needs to be publicised and communicated to clients, colleagues and policy makers. Notwithstanding the death of formal organisational outcomes linked to leaders, there is clear evidence of the role leaders have on emerging outcomes such as models of care, employee satisfaction and workforce efficiencies. Future research should gather qualitative perspectives from AHP leaders and quantitative data to evidence the outcomes of high quality leadership in AHP.

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