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Finding a way in and making it stick: an exploration of chiropractor experiences working in team-oriented elite sport practice settings

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ABSTRACT

Interprofessional healthcare teams have become the benchmark for optimising athlete health and performance in high-stakes sports. Despite a history of utility as provider partners, chiropractors are currently a relatively underutilised human resource in this rapidly developing and challenging field. Consequently, our study explored the global experiences and distinct perspectives of elite-level career sports chiropractors.

Through a qualitative explorative single case study, we purposively sampled and interviewed 15 chiropractors active in elite-level athletic contexts.

'Professional characteristics and competencies', 'Running the gamut of professional career development' and 'Navigating team development in a small organisational structure' emerged as the three key themes from the data. Our data indicate that chiropractors gain provider as members of the elite athletic health and performance management team as multirole manual medicine practitioners. However, thriving in a team-oriented practice, this context appears to be reliant on their capacity for development as part of a small organisational group.

WHAT IS ALREADY KNOWN ON THIS TOPIC

⇒ There is a growing body of evidence supporting the value of interprofessional teams of providers to manage and optimise elite-level athlete health and performance. Chiropractors have gained access to elite-level sports; however, their role and value are not universally understood or acknowledged.

WHAT THIS STUDY ADDS

⇒ This investigation explores how chiropractors gain access to high-stakes sport-related healthcare as well as how they either lose or maintain their position as service provider partners.

HOW THIS STUDY MIGHT AFFECT RESEARCH, PRACTICE OR POLICY

⇒ Sports chiropractors possess a diverse set of clinical competencies that make them relevant to healthcare managers invested in optimised biomechanical functioning as part of injury management and prevention. However, integrating chiropractors requires strong leadership in order to successfully bridge existing professional practice barriers and negotiate the ups and downs of small group organisational development.

INTRODUCTION

Fielding the strongest available team is a central tenet to achieving favourable results in sports. However, reaching and maintaining a high standing in leagues, often contested over long competitive seasons, require consistency.[1] In this regard, acquiring highly talented players presents only one part of a successful strategy as underinvestment in injury prevention, rehabilitation and performance optimisation, risks a rapid erosion of the pool of available players, resulting in loss of income and status.[2]

To optimise player health and minimise time loss from sport due to injury/illness, interprofessional healthcare teams (IPHCT) have become commonplace among elite sport clubs and athletic organisations. The value of the IPHCT lies in its capacity to outperform a single practitioner in the development and implementation of performance maintenance, injury prevention and return-to-play strategies because it has at its disposal an 'expanded cognitive map', that is to say, the collective set of expert knowledge, skills and competencies of each individual member.[3] However, the caveat to this advantage is the successful practice integration of diverse healthcare providers within a collaborative team, a hallmark of elite athletic healthcare and performance management (AHPM). AHPM has become an area of focus for high performance leaders seeking healthcare providers that possess expert knowledge, unique and complementary professional competencies, but who also fit well into a team-oriented practice setting.[4] This focus on high functioning AHPM provides opportunities

for allied health providers to stake their claim as core team members. One such example can be found in the case of the sports chiropractor.

Across various healthcare professions, the management of athlete populations tends to recognised as a niche area of practice, rather than a formal specialisation.[5 6] Nevertheless, clear precedents exist for requirements in expert knowledge and competencies beyond that of general practice. This practice also applies to the chiropractic profession, where based on current consensus sports chiropractic can be defined as an area of practice within the chiropractic profession focused on applying its general scope of practice to all aspects of sport, sports science, and physical activity and for which post-graduate expert knowledge, advanced clinical-experiential training is required.[7] However, sports chiropractors, despite having a long tradition, clear prioritisation and post-graduate specialisation in sport-related practice,[8–10] are not generally prioritised when an IPHCT is constituted. Instead, their inclusion appears highly contingent on a shifting group of factors including boundary work from more established professional groups, organisational policies, athlete demands and exemplary performance by individual chiropractors.[11 12]

Nevertheless, a select group of chiropractors globally appear to have overcome the various obstacles and barriers and across diverse geographical locations and athletic disciplines to maintain successful professional careers as members of IPHCTs.[13 14] However, little is known about this select group, for example, whether commonalities exist in their professional qualities, experiences and behaviours as well as potentially unique processes used during and in their professional development and inclusion in AHPM. Such information may allow strategic adaptation of professional practice and education for successive generations to similarly find their way into this competitive practice context and to establish a generally accepted role in AHPM.

The Global Chiropractic Athletics Research and Education Initiative is a scholarly community of practice that seeks to constructively develop the postgraduate education of sports chiropractors with a specific focus on AHPM occurring in an interprofessional collaborative practice context. Our first objective was to explore the global experiences and distinct perspectives of chiropractors working in interdisciplinary team-based AHPM settings with respect to perceived essential expert knowledge and key professional competencies. Our second focus was to elucidate some of the barriers and facilitators that influence their sustained professional inclusion.

METHODS

Design

In keeping with previous investigations exploring complex, yet relatively unknown phenomena of interest, we developed a qualitative explorative single case study.[15 16] Our case was defined as interprofessional practice within a sport/athletic context and our units of observation were individual chiropractors directly engaged in this form of professional practice. Reporting was guided by the Reporting Qualitative Research checklist.[17]

Theoretical perspectives

This study was conceptualised through an interpretivist lens as it dealt with individual subjective truth, influenced by unique life experiences and cultural context, which were coconstructed in interview narratives.[18]

As our analysis developed, an additional theoretical perspective emerged during our deliberations of the content of different themes that captured the unique process with which our participants developed, namely, their position within the particular dynamics of their organisation. Consequently, Tuckman's model of small group development was invoked to frame this dynamic team development process.[19–21] The five stages and their key characteristics are described in figure 1.

The research team and reflexivity

The investigators in this project are a mix of experienced and early career researchers, with specialist knowledge in sports chiropractic, education and qualitative research as well as a non-chiropractor with expertise in sport biomechanics. Moreover, the interviewers occupied an insider perspective as they shared a professional background and practice interests with participants.[22] Interviewers interacted differently with the data. In this regard, field notes and memos were used to account for the individual researcher's impact on co-constructing meaning during the analysis process.[23]

Participants and sampling

Through the professional practitioner network, we targeted chiropractors active in AHPM contexts managing elite athletes, by means of a mass e-mails asking for nominations. We defined an elite athlete as those in tiers 4 (Elite/International Level) and 5 (World Class) of McKay's Participant Classification Framework.[24] Accordingly, we followed a purposive sampling strategy using a criterion framework to identify eligible participants.[25] Specifically, a profile for participation was created using country/context of practice, athletic discipline, years in practice and organisational role (eg, coach, health coordinator). Individuals fulfilling the profile were identified through professional and organisational networks such as the Federation Internationale de Chiropratique du Sport and the Royal College of Chiropractic Sports Sciences (Canada). Once data collection was initiated, snowball sampling was employed as participants were likely to provide the investigators with access to additional individuals of interest[14]. Our estimated number of participants, based on the principle of information power, was 12.[26] All participants were issued an information pack, containing the details of the project and opportunity was provided for questions to be answered. Informed consent was obtained from all participants prior to interviewing. The study's protocol was approved by the Research Ethics

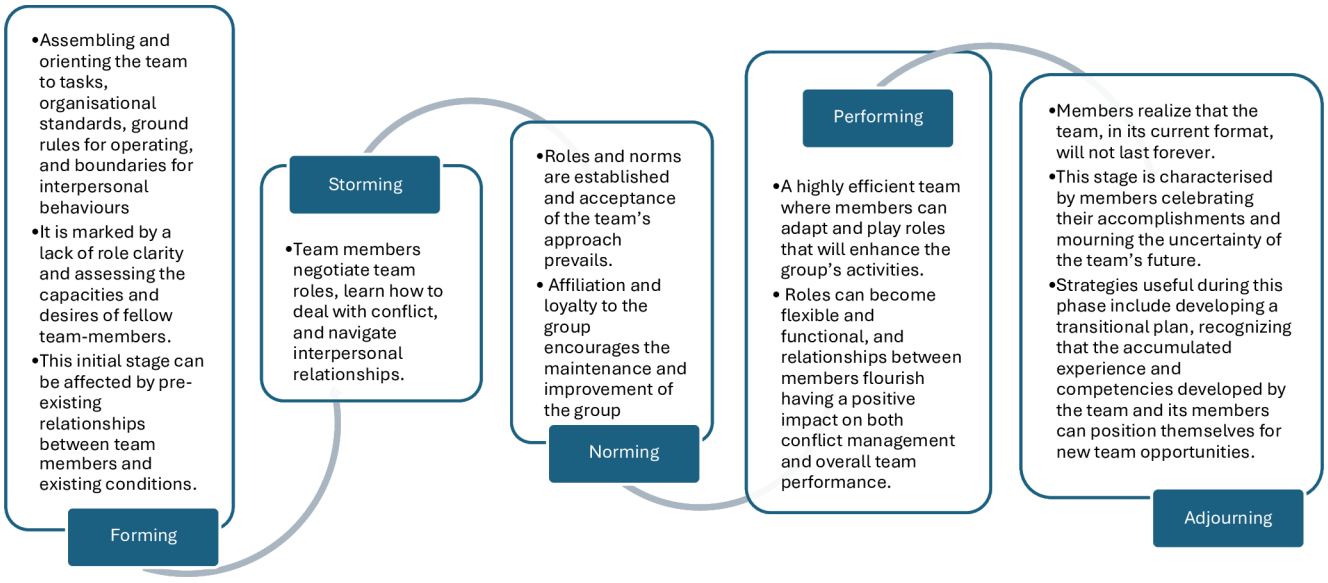

Figure 1 Tuckman's model illustrating stages of small group organisational development.

Board at the Canadian Memorial Chiropractic College (#2202B04).

Data collection and management

Semistructured, individual online interviews were conducted. Four domains, identified from existing literature[9 14] and through stakeholder input underpinned the development of our interview guide, these being unique advantages, role of expert knowledge, nature of professional behaviours, and professional engagement (box 1). The full interview guide has been provided as online supplemental material. The interview guide was piloted on two non-participants, who satisfied the eligibility criteria profile, prior to use in the study. Data were audio recorded, transcribed verbatim and anonymised. The NVivo qualitative data analysis software (V.14.2.3.2) was used to support this process.

Box 1 Interview domains, selected questions and probes

Unique advantages

1. In your opinion, what unique contributions do you make as a chiropractor to the interprofessional healthcare team? *Probe:* Unique interventions, assessment approach.
2. In your opinion, what role do other health carehealthcare practitioners on the team see you filling in the management of the athletes? *Probe*: How do they use your skills and services?

Role of expert knowledge

1. What special knowledge do you feel you bring compared with other members of the sports healthcare team? *Probe:* Do you feel such knowledge enhances the ability of the healthcare team to deal with the athletes' health and performance issues?

Nature of professional behaviours

1. Based on your experiences, how do you interact with individuals to ensure a successful professional practice with elite sport healthcare teams?
2. Conflicts are an inevitable part of an interprofessional environment, Have you experienced such conflicts? If so, how have you managed them?

Professional engagement

1. What are the challenges/barriers to sustaining your current level of involvement and potential progression within the organisation/team?

Constant comparison

We reached code saturation at 12 interviews; however, it became apparent that we had not yet distilled the process meaning outlined in theme 3 (team development).[27] Using the constant comparison principle, we, therefore, returned to the field and conducted three further interviews. Additionally, we adapted our initial interview guide to include five new probes, one dealing specifically with the 'adjourning' phase of small group development, this being:

> How do you approach the "winding" down phase of a healthcare team e.g. at the end of a season to ensure that continuity is maintained?

Analysis

A thematic analysis of text data was conducted to construct a descriptive, cross-case framework. Each transcript was independently coded by two researchers, then compared for any discrepancies, which were resolved by discussion. If necessary, a third researcher was consulted to achieve consensus. A member check was also conducted with two participants to ensure that the participant 'voice' was reflected in the analysis.[13]

RESULTS

From a list of 126 nominations, we identified 17 appropriate profiles and received positive responses from 12 individuals on requesting an interview. Participation from

Table 1 Descriptive respondent profiles

Respondent	Age	Country	Experience (years)	Main discipline	Fellowships, specialties or diplomats in sports chiropractic	Postgraduate degree
1	40	Sweden	9	Football	✓	✓
2	49	Canada	22	Football	✓	✓
3	51	Bahrain	24	Rugby	✓	–
4	41	Ireland	14	Golf	✓	✓
5	40	South Africa	8	Athletics	✓	✓
6	51	Italy	14	Athletics	✓	–
7	52	Australia	26	Beach Volleyball	✓	✓
8	37	Australia	12	Beach Volleyball	✓	✓
9	62	USA	27	American Football	✓	–
10	42	Australia	15	Golf	✓	✓
11	40	USA	10	Basketball	–	✓
12	41	Brazil	32	Athletics	✓	✓
13	47	Belgium	11	Football	✓	✓
14	78	USA	49	Power Lifting	✓	–
15	65	Canada	18	Athletics	✓	–

a further three individuals was solicited as our analysis progressed. Thus, 12 men and 3 women were interviewed between 15 September 2022 and 21 November 2023. Interviews lasted between 00:12:53 and 1:26:26, the average length being 00:54:54. The interview with R6 was disrupted by poor audio and had to be conducted in two parts. A descriptive profile is presented in table 1.

Three themes were extracted from the data: Professional characteristics and competencies, Running the gamut of professional career development and Navigating team development in a small organisational structure.

Theme 1—professional characteristics and competencies

The potential roles and functions of the chiropractor on entry to a new team or organisation are not always initially apparent to the rest of the healthcare team. However, once their capacity in assisting in rapid return-to-play and optimising athlete performance became apparent, the chiropractor became valued for their 'understanding of the neurological and mechanical system…(R1:170–172)', '… strong adjusting (manipulation) skills (R3:178–179)' and 'general well-roundedness' in athlete evaluation and management (R8:93).

At lower levels of competition (amateur), sports chiropractors reported that they often enjoyed practice autonomy. However, with higher levels of competition, increased stakes and an expansion of the healthcare services, roles and responsibilities were (at least initially) more narrowly defined. In this regard, R8 stated:

> … lower down … you may need to fill more roles because they don't have the resources to fund as many practitioners. But if you're in a team that has, you know a multitude of practitioners, then your role in that team may be far more specific (R8:288–292).

Based on descriptions of professional practice, three distinct professional roles emerged, namely: the clinician-therapist, the lead clinician (head of physical medicine) and the head of performance.

The clinician-therapist role tended to be the most narrowly focused and is built on the musculoskeletal healthcare responsibilities traditionally associated with chiropractic practice. As lead clinician, therapeutic intervention roles remain, but these tend to be expanded or replaced by athlete screening, acute care and triage functions as well as care pathway co-ordination. According to R3:'I started off as a staff chiropractor, and then… I was made the director of physical medicine and rehabilitation' (R3:218–223). In the most senior head of performance role, responsibilities shift away from clinical management and towards leadership. According to R13:

> '… (as head of performance) you have to expand your competencies and your capabilities, so other people will see you as capable to do a greater role than your circle of competence… becoming the conductor of the orchestra'. R13 (26–28).

The head of performance role typically includes establishing and maintaining team-oriented practice, liaising with athletes and senior management and conflict resolution. The three roles represent a spectrum of the evolving role of a sports chiropractor, rather than discreet categories.

To make a successful transition into an IPHCT context, our participants were quick to emphasise the importance

of understanding team competencies and clarifying individual team members' roles, rather than emphasising professional titles and according to R2:

> … we're not really talking about who's the physio and who's the chiro and who's the athletic therapist or anything like that. We have a number of jobs that need to be done and they're shared across the group (R2:167–168).

They described the required core competencies that include displaying confidence, demonstrating mutual respect and value, trust, humility, assertiveness and particularly interpersonal skills. These so-called 'soft skills' are viewed as integral to effective interpersonal relationships and communication and are grounded in the understanding of the inherent culture, diversity, professional boundaries and ego. For example:

> I think one of the big things that is missed, and that chiropractors are not always great on, is the soft skills. That's a really important part of you being a successful member of the team…. So, you're dealing with a lot of different personalities and lot of different cultural ways to deal with injury, disappointment, happiness, team dynamics, all of that. …. You need to have good social and emotional intelligence (2:16).

Competency gaps in these areas were considered detrimental to being successful and remaining on the team:

> …you graduate with technical skills and you don't graduate with soft skills or real-world business skills that would allow you to excel outside of your group of chiropractors who know you … I think a lot of chiropractors get very defensive, and then shoot themselves in the foot (2:24).

Another important attribute identified by participants related to individual roles and shared team roles. These roles not only extended beyond providing direct manual care, to directing an entire event healthcare team, but also included mundane low-level functions, for example: 'So if 1 day I'm like working on a $300 million player trying to help them with their ankle, in the next 10 min I might be filling up the water bottles'. (3.19). Such varied roles are metaphorically akin to a 'Swiss Army knife', where various 'blades' represent expert skills and knowledge, soft skills, diplomacy, humility—each separate but interconnected:

> The variety of tools that we have in our toolbox—or that Swiss Army knife sort of approach- really allows us to fit the needs of the group we find ourselves in (3:15).

Aside from the stated importance of understanding their diverse role(s), participants emphasised interprofessional practice priorities, namely the team, and athlete-centred care. Their expressed focus on prioritising the provider team recognised that although each team member may have a unique role and responsibility, in the end, it is about the team and sharing of duties—'a number of jobs that need to be done, and they're shared across the group'. (3:10). However, with varying roles and personalities on a team, the potential for conflict is ever present. The degree of conflict encountered by participants varied, but when it arose, they opined that immediate communication to resolve the conflict was important. According to R5:

> If you've got an issue, sort it out behind closed doors. (If not) that will impact the athlete's response and it will also impact your respect within the medical team (5:33).

The next key attribute of practising in an interprofessional environment is prioritising athlete-centred care. Participants noted how centring their activities on caring and what is best for the athlete facilitates role definition and communication, and ultimately defines a successful provider team, as according to R5:

> When everyone understands that the patient or the athlete is the priority, then everyone works around that, then you've got a quality team and the best outcome for the patient (5:10).

Several participants also acknowledged the uniqueness of working with elite and highly paid professional athletes, and the impact it can have on healthcare professionals. They noted the importance of being respectful of and treating the athlete as a person and refraining from seeing such work as benefiting themselves. For example:

> … treat your athletes with respect and don't abuse them… I've seen situations where chiropractors have had athletes and they've bugged them for photos and they're putting the photos up and the athlete is really not comfortable…(R9:81-9:83).

Theme 2—running the gamut of professional career development

There was broad agreement among participants that chiropractors desiring a career in athletic health and performance management would be naïve to expect a seamless transition into this niche area of practice. R5 explicitly states:

> We normally are in the bottom end at this stage, especially in (country). Um, not a lot of the national teams will allow us to be part of the, the actual team (R5:106–107).

According to R13 (126–127), as professionals traditionally educated and practising, outside the mainstream healthcare provider network, chiropractors start their career labelled as 'the other' and such their inclusion is resisted both without and with intention. With respect to the former, our participants reported expending significant effort on counteracting unawareness regarding chiropractor knowledge and competencies, and as a

consequence the role(s) and value of the chiropractor on the team. According to R1:

> … [many don't] know what we're actually studying. Most of them would—will say, 'Oh. I had no clue. I didn't know (R1;185–186).

Although frustrating at the outset, this problem tends to resolve as a matter of course. However, a more problematic barrier encountered were instances when the inclusion of a chiropractor was resisted by a senior healthcare professional. This antagonism tended to express itself as questioning professional legitimacy but could also result in an allocation of excessively narrow responsibilities aimed at limiting the role of the chiropractor.

> (Before) the (year) Commonwealth Games in (location), … the athlete's representative went to the Chief Medical Officer and said, 'We'd like a chiropractor on the team.' … the CMO said, 'Well our physios manipulate anyway, so you don't need a chiropractor'. (R7:70–74)

and

> I think I was really lucky that the guy, the gentleman that hired me was a chiropractor… So there was less politics, in terms of (laughs) the, the roadblocks that we hit as a profession (R4:85–86).

Besides the aforementioned issues, participants reflected on how chiropractors can stymie their own career development and eventual existence as a member of the healthcare team with disregard to professional behaviours and practices. Our participants strongly pointed out the negative impact of egotistic behaviours and practices, and the pitfalls associated with acting as a free agent. According to R7: '… things you should avoid is, taking patients around the corner to do your work 'in secret' and 'undermining someone else's, uh, level of expertise can be very dangerous in those situations' (R7:141–142).' And according to R4:

> I see quite a lot of (sport type) on an individual basis. They'll break away from their medical team—come in, I'll see them and put them back together and say nothing… it's a very handy situation. I don't have to answer to the team and the athlete potentially gets more one-to-one time with me, compared to say, if you have 30 players in a panel… (R4:97–102).

As is the case with barriers, some facilitators lie beyond the direct influence of the practitioner. For instance, it appears that within organised sport, the imperative finding of competitive advantages extends into the provision of health service delivery. Chiropractors, as a relatively unique provider, are the beneficiaries of a curiosity inherent to this practice context. This demand for fresh perspectives is often driven by athletes and brokered by influential individuals tasked with leading and sustaining change. This process is demonstrated in the following responses:

> … we come in with fresh eyes and fresh views and a lot of other things and it is a fresh wind. And I think that, for the time, we're riding a little bit on that… (R1:500–502).
>
> A lot of that now is being driven by the athletes saying 'Is there a chiropractor here? I, you know I need an adjustment', which certainly helps with that interaction' (R7:53–55).
>
> Oh, it's who you know… and … It's, who knows what you can do… (R2: 111–112).

and

> The gentleman that brought me in was the high-performance Director… He had a good experience with chiropractors' working within the team, … he liked their holistic approach. He liked the manipulation. He liked the adjuncts that a lot of the sports chiropractors were doing (R4:72–73).

The individual sports chiropractor is likely to benefit from an early start to their sports-oriented career; in this regard, volunteerism at grassroots level and a professional internship were highly recommended. Our participants further underscored the importance of building and maintaining relationships with influential individuals who act as either ambassadors or champions. As their career develops, the importance of understanding the principles of leading and sustaining change gain importance; however, there is no substitute for 'delivering the goods' with respect to athlete health and performance. According to R15:

> I created a situation that (event organizers) had never seen a medical set up like this before. (country name) Games, we were given a five-star rating… there were absolutely no complaints … (R15:407–412).

and

> … every event you do, if there's a chief medical officer, and you've done a good job interacting with the athletes and doing a good job clinically, they're going to open doors for you (R15:823–825).

Theme 3—navigating team development in a small organisational structure

Chiropractors described critical stages during this team development process where certain skills and competencies were essential for maintaining congruence and acceptance within the team. Emerging from the data was discrete evolutionary stages of a sports chiropractor's participation in an AHPM team that could be framed within Tuckman's model of small group development.

Forming

Participants described receiving an invitation to join a team because of their pre-existing relationships with influential individuals working in sport. They reported the value of these pre-existing relationships in not only getting their 'foot in the door' but also their ability to

integrate quickly in the IPHCT team immediately on entry. According to R7:

> … you have to do the grassroots, so that you can relate to the others, and they don't see you skipping the queue. You need to be very good with your manipulative skills, but building relationships with others in those teams before you even get there is important because otherwise, it becomes very hard to get an invitation (R7:285–289).

Storming

Chiropractors reported a critical time during the early stages of working with an IPHCT team, where they relied heavily on their interpersonal skills to discover their unique value to the team. On doing so, they reported gaining acceptance from team members. Participants reported observing other team members being unsuccessful during this stage due to poor interpersonal relationships and were removed from the team. These instances are illustrated by R10 and R15:

> … it's serving your role in that time, and you figure out what, what your purpose is there (R10:193–194).
> …we've had issues before, where an individual has come in and…it's all about them…leave your ego at the door…you need to humble…communication is just vital to working in in any sort of team (R10:304–309).

and

> You have to check your ego at the door…so diplomacy, being able to listen, being able to observe… (R15: 142).

Norming

Once they had demonstrated their ability to work within a team framework, participants felt they were trusted and accepted into the team. It is at this stage where this trust afforded added benefits, such as an increase in the team's utilisation of their services. In this regard, R1 stated:

> … involve other professions… by doing that, you're showing that you are a team member. You are someone that they can rely on… (R1:269).

Performing

Participants described working in a highly functioning team and were satisfied being contributing team members. The increased trust they gained often led to an advancement of their roles and responsibilities on the team:

> … with time, we created trust and we created a mutual respect that turned into a very high performing Department, … (R3: 275–276).

and

> … if you've been together for a while, you see what your strengths and what weaknesses are … you don't expect anyone to be completely well rounded and excellent in everything …that happens over time, of working in the trenches together (R10: 282–298).

Adjourning

Participants reported their successful tenure on an IPHCT allowed them to develop skills, competencies and relationships that positioned them for subsequent invitations to join other provider teams functioning in the AHPM context. Participants noted that when they joined new provider teams, they were more prepared to navigate the team's development cycle in their new setting:

> …being able to rise to the top and stay there is going to be dependent on leadership and communication, that can be developed and that can be maintained (R2: 420–422).

As a means of summary, the developing role of the sports chiropractor framed within the stages of development in a team practice context is illustrated in figure 2.

DISCUSSION

Our data support previous assertions that to gain a foothold in the sport setting context, the sports chiropractor presents as a multimodal practitioner, possessing a well-rounded set of professional competencies, clustered around the management of musculoskeletal problems.[10 12] Volunteerism and professional internships serve as key early career activities as they contribute substantially to a transferal of knowledge and skills from the educational to the workplace setting.[28] In addition to sharpening their expertise and skills, the individual sports chiropractor also should substantially improve their understanding of their chosen athletic subdiscipline, resulting in competence and confidence that become obvious to athletes, other providers and decision-makers alike. Moreover, these activities grant access to interprofessional practice settings, allowing the individual practitioner to begin building effective team-oriented working relationships.[4]

Once established as a trusted team member, opportunities may present themselves for the sports chiropractor to assume a leadership role. These opportunities likely depend on relationships developed with powerful individuals, who are prepared to risk disrupting the traditional hierarchy of professional practice. This is where the focus in expert knowledge must pivot for the sports chiropractor to not only perform the duties of a competent clinician but also to begin harnessing the IPHCT's expanded cognitive map.[3] Of particular importance in this regard, is their capacity to communicate clarity of purpose and to avoid/resolve conflict, as these are potential determinants of success at higher levels of athletic health and performance management.[29]

The issue of professional boundary work as it impacts the chiropractic profession generally and specifically in

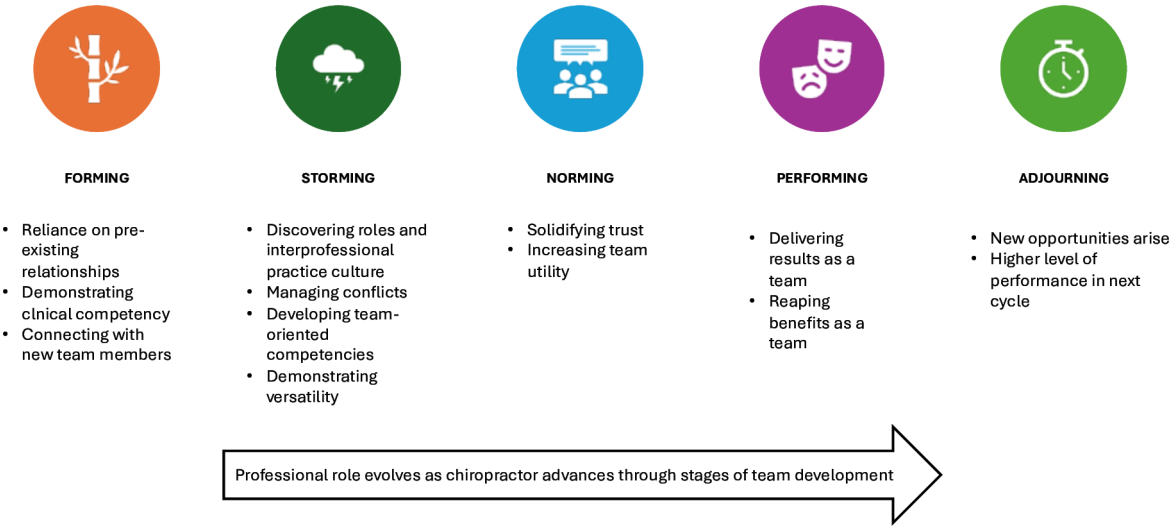

Figure 2 The developing role of the sports chiropractor as team member utilising the Tuckman framework of small group development.

the context of sports injury practice is well described in the literature and we similarly noted this phenomenon as a barrier in general chiropractic practice.[12 30 31] However, this issue was not perceived as an insurmountable deterrent to their participation in AHPM teams. Rather through internships, early career exposure to team-focused practice and perseverance this issue appears to be surmountable by the individual practitioner. Whether pressure can be exerted at the group level to instigate policy change, falls beyond the scope of this investigation.

As a profession functioning in a contested area of musculoskeletal health and without the historical benefit of mainstream inclusion, chiropractors have developed protective strategies to secure their market share both at the individual and professional group level.[32] While successful in the general practice sense, self-reflective critique has been raised, which strategies such as practitioner autonomy, authority and status run at cross purposes with the altruistic values associated with team-oriented practice. Setting aside their own professional practice perspectives and adopting a spirit of openness and co-operation may present the aspiring sports chiropractor with a significant challenge, but it is one that they will likely have to overcome to thrive at the elite level of athletic health and performance practice.

Tuckman's model has been applied in the healthcare setting, in particular, the field of nursing practice.[33 34] To our knowledge, however, ours is the first investigation to use this framework as a lens to explore chiropractors in the AHPM context. We noted all stages, with storming presenting the most challenging phase in the development of the provider team, and also posing the greatest threat to the ongoing presence of the chiropractor. This stands in contrast with Kelly *et al*,[34] who reported that, a virtual community of gerontological nurses, experienced no storming, during the process of maturing as a group. Although our study was not a comparative case study, we would argue that group homogeneity can account for this apparent juxtaposition. Specifically, a nursing community of practice, working towards a common goal, is more likely to naturally form a cohesive working group, due to its tacit set of shared professional values and experiences, than a mixed group of professionals functioning under high pressure to optimise player health and performance.[35] The importance of leadership was abundantly clear in our participants' responses, and in the case of our professionally heterogenous healthcare teams, the role of the responsible leader becomes integral to the group's progress. Simply stated, this individual must succeed in guiding the group through storming and into norming.[36]

Strengths and limitations

Our study had strengths including robust methods used during data collection analysis that increases the validity of our findings. Three researchers conducted and analysed interview data and in addition analysed each other's interview transcripts and coding. In this regard, we achieved a high degree of respondent triangulation and member reflection. The research group included individuals who could claim a professional insider perspective. One member was a non-chiropractor whose reflective comments provided valuable alternative perspective inputs.

Our study also had limitations. We followed a criterion process to procure our sample of participants. While this provided a certain degree of standardisation, it also excluded the identification of individuals with important experiences. This became apparent when we returned to the field in order delve into theme 3. Although we returned to the field in order to conduct further interviews, we did not conduct multiple interviews with participants. It is, therefore, possible that further insights could have been discovered with a second round of nuanced interviews. Generalisability is always a limiting factor in exploratory work of this nature, however, our

data may have some transferability as the instances of chiropractors working as IPHCT members is limited.

CONCLUSION

Sports chiropractors appear to develop their career paths in three distinct tiers, with each level allowing for progressively more autonomy of practice and leadership. Practising successfully in an IPHCT context is perhaps just as dependent on the successful use of 'soft skills' as that of clinical management acumen. A necessary first step in this regard is coming to grips with how the team functions in its delivery of services. Maintaining traction depends on creating the image of a 'Swiss Army knife' deployed for the provider team to benefit the athlete.

The portfolio of a sports chiropractor is neither tacitly understood nor accepted and thus presents an ongoing barrier to interprofessional practice. Moreover, when resisted by a senior actor on the grounds of professional legitimacy, initial inclusion can be particularly difficult. However, chiropractors also appear to stymie their own inclusion at times, by practising as individualists, this includes egotistical behaviour. On the other hand, as relatively 'exotic', chiropractors are afforded opportunities to provide input, in instances where standard care options have been exhausted and when successful, their inclusion is often endorsed by powerful champions and ambassadors.

The five stages of the Tuckman model were recognisable in the narratives of career sports chiropractors. As such this IPCHT practice context can be viewed as an example of small organisation development.

Chiropractors are likely to be viewed as outsiders, at the outset, but in this competitive and result-oriented context of practice, success is achievable in the long run. Investigations interrogating questions around group efficacy involving chiropractors as team members are required.

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