Working contexts: the reality of being in the field.

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Abstract

The principles of sound professional practice will be discussed along with introducing an overview of the knowledge, attributes and skills required by effective practitioners. The author will explore key topics that underpin safe and effective professional practice. The early career practitioner will be exposed to issues around insurance, data protection, safeguarding and the personal responsibilities they take on in the field. The chapter will also offer some recommendations/advice regarding best practice when working in the field.
Working contexts: the reality of being in the field.

Brief Overview

Sport and exercise science is a multidisciplinary field that spans both performance and health contexts. In this chapter working ‘in the field’ is taken to mean working in an applied practice setting offering support and interventions. The specifics of working in the field vary depending on the role, discipline, and type of working arrangement. Understanding the working context and the potential nuances are central to maintaining safe and effective professional practice. This chapter will start by outlining the potential working contexts within the field (see Figure 1), followed by a wider discussion on employment issues such as salaries, philosophies, and job descriptions. The following sections will move onto the practicalities of working in the field covering logistics and admin-based issues (e.g., insurance, policies) and supervision. The last section will then focus on the overlapping considerations such as the development of soft skills/craft knowledge, working with technology and finally working as part of a multidisciplinary team (MDT).

Working contexts

This section is designed to outline the main working contexts and types of roles available. The intention is to create an opportunity for the reader to consider the
contexts in light of working practice and training and professional development needs. The number of positions available, the scope and the timeframes are often dependent on funding and the specific needs of the employer (Dwyer et al., 2019). This means the number of jobs and the type of jobs vary. This approach can offer flexibility to evolve as new positions become available based on current need. For example, positions have become available in relation to understanding the female athlete, cardiac health in athletes, or exploring obesity and physical inactivity in children.

Notably, the majority of funding in sport and exercise settings is allocated towards health and physical activity rather than elite performance (Beneke, 2013). This may be understood within the context of the wider government agenda which seeks to promote physical activity to all age ranges and populations e.g. ‘Physical activity: Applying All Our Health’ (NHS, 2022). The increased drive to promote physical activity as both a preventative and rehabilitative measure in children, older people, individuals with physical and/or mental illness as well as to disabled populations broadens the potential for employment within this sector. The demand for support within health and physical activity is therefore wider reaching than ever before.

It could also be argued that jobs within elite/performance sport are becoming increasingly more varied and wide-reaching through increased access to competitive sport environments through the development of para-sport opportunities, age-group academy structures, Masters tournaments and endurance events. For example, in
professional team sport clubs or a national representative context it is now commonplace for sports to have upwards of \( \sim 15 \) sport science support staff (Eisenmann, 2017), with most clubs including having additional support for the women’s and men’s first teams and academies. Data from the English Institute of Sport shows that it employs more than 350 people to provide direct delivery services across 40 Olympic and Paralympic sports (Meckbach et al., 2022). Such support roles typically cover the breadth of sports science (e.g. physiology, biomechanics, nutrition and psychology, strength and conditioning, data scientist, sport psychologist, performance analysis, performance lifestyle and medical services). These types of positions remain highly competitive, as there are more aspiring practitioners than the number of positions available. The evolving and wide-ranging aspects of sports science provision means it is beyond the scope of this chapter to cover all applied working contexts in depth. However, broadly speaking the contexts can be split into four main categories, which do and can overlap. These will be outlined below in Figure 1 and the subsequent section.
Figure 1. Illustrative model of the four working contexts

**Working Contexts**

**Illustrative model of the four mains categories**

*People can combine applied roles within a sporting organisation with research or opt to work in one of the context outlined below. The premise is that an internship can lead to a role in one of the three other working contexts (although this is not always the case).*

1. **Fully Immersed**
   - **Pros:** Have time to support the team. Ability to influence/set working practices.
   - **Cons:** Pay varies and long hours

2. **Partial Immersion/Short term consultancy**
   - **Pros:** Applied role and increased choice.
   - **Cons:** Potential of multiple employers and job uncertainty

3. **Research and Consultancy**
   - **Pros:** Project work with clear objectives. Potential for increased job progression as promote research and income generation.
   - **Cons:** Potentially isolated role as not fully involved with the team

4. **Internship/Voluntary positions**
   - **Pros:** Learn on the job and enhance skill development.
   - **Cons:** Potentially low paid and limited career progression
1. **Fully Immersed**

The first category is ‘fully immersed’ with the practitioner undertaking full time paid work (often including travel) as part of a wider multidisciplinary team (typically only working in one, maximum two sports/exercise settings at the same time) within a sport or exercise context (see Chapter 10). In the context of sport, an example of such a role might be working with a professional club or within the national setup of a governing body or sports council/institute. This is often the most visible role that people aspire to do, as the glamour and the prestige of working at major sporting events can be considered the pinnacle (Malone, 2017). Practitioners in these types of applied roles, typically have limited years of experience, highlighting the potential wider issue of longevity of these applied roles in sports science (Dwyer et al., 2019). In the context of exercise this could be a clinical physiologist working in a hospital full time (see Chapter 12).

2. **Partial immersion or short-term consultancy**

The second category, ‘partial immersion’ or ‘short-term consultancy’ can involve working with a team or in a clinic but on a limited number of days contract. The work may be with multiple sports/populations/or in several places, either working for yourself or as part of an organisation. In sport this could be a sport physiologist working for a team for
18 hours per week. In exercise this could be someone working in an exercise referral unit in a community setting on an 18-hour contract per week.

Overlap and Considerations for Fully Immersed /Partial Immersion.

The realities of these applied roles (fully immersed or partial immersion) in sport, typically includes long working hours (Dwyer et al., 2019), remote working with extended periods away from family and friends (Malone, 2017), feelings of isolation (Hill et al., 2021), job/financial instability (Arnold et al., 2019; Arnold et al., 2017; Gilmore et al., 2018), limited ability to progress or for career development (Arnold et al., 2017; Cropley et al., 2016; Wagstaff, 2017; York et al., 2014) and the potential for low pay (Arnold et al., 2017; Pacey, 2022).

There is also a wider concern surrounding the working environment due to acute peaks in workload (Hill et al., 2021) which could mean that practitioners are working longer hours and continual days without rest and thus are outside of legal working regulations (Arnold et al., 2019). Furthermore, researchers have revealed practitioners working in high performance sport, experience a high degree of stress related to high workload, challenging interpersonal relationships, environment/organisational stressors, physical resources (concerning the quality and accessibility of facilities, equipment, technology and data safety and moral/ethical dilemmas (Arnold et al., 2017; Kerai et al., 2019). Worryingly, research has found that experiencing such stressors has a negative
impact on the practitioners’ health and wellbeing and personal relationships (Arnold et al., 2017; Hill et al., 2021). There are also concerns related to the ability to adhere to effective working practice and ethical codes due to contractual constraints impacting on a practitioner’s ability to maintain confidentiality (Waddington et al., 2019) and the potential to be exposed to poor coaching practice (Stirling et al., 2011). For example, published accounts document how poor practice is legitimised in sport (Kerr et al., 2019), and more concerning, actively promoted, based on the assumption these types of practice enhance the likelihood of increased performance (Gervis et al., 2016). For example, Cruickshank & Collins (2015) highlight how leaders in elite sport have disclosed intentionally engaging in socially undesirable behaviours (often referred to as the dark side) in specific scenarios in their pursuit of performance outcomes and as part of their leadership aims of delivering change. In these cases, supervision, social support, organisational culture and education act as protective factors (Hill et al., 2021).

We have to be clear that there is an ethical obligation to promote safe practice and ensure the practitioner does not become an enabler of poor practice. However, we do need to consider the challenges within the environment. For example, the process of securing one of these roles (fully immersed or partial immersion) in performance sport can be related to a prior relationship with a senior member of staff (Pacey, 2022). Evidence from football indicated most staff got their current role without applying through a publicly available job advert (Pacey, 2022). These recruitment practices
increase the likelihood that someone may not want to go against the status quo in the club especially if they have a working relationship with the staff member as they might be worried about securing any future employment, compounded by the aforementioned job insecurities. It also increases the likelihood of unqualified or insufficiently experienced personnel securing jobs that they are not suited to. The ideal scenario is that recruitment follows a formal application process that adheres to equality, diversity and inclusion guidelines and reflects transparent and fair practices. Beyond recruitment, to ensure practitioner and client welfare, it is important that employment practice is continually reviewed by independent organisations.

3. Research and Consultancy

The third category of working in the field is through the context of providing commissioned or ‘bought-out’ research and consultancy services from the relative security of having a full-time post elsewhere, typically within the university sector. This approach arguably offers increased job security, increased rates of progression and potentially greater financial return as an individual can build their experience through undertaking additional applied work alongside, or as part of, their main job. In this working context, the practitioner seems to be protected from some of the job insecurities highlighted above in the fully/partial immersed roles, as they maybe already fully employed by a university, therefore already having a permanent contract and
pension. The main employer, the university, benefits as the experiences of the staff member can potentially be used to inform teaching and produce high quality research outputs as well as income generation thus enhancing the status of the university as a result of a member of their staff working at a high level. The sport/exercise setting benefits as they are getting a highly qualified member of staff who can help them to achieve their goals and meet their needs.

In addition to consultancy roles, PhD studentships (with joint University and Industry matched funding) are becoming an increasingly attractive option to answer novel research questions and offer a way to bolster the support resources and continually create evidenced based practice (McCall et al., 2016). Indeed, the origins of sport science support to national teams lie within a 1990s project in which Sport Science Support Officers were part funded by partner universities and the sports council at the time to both provide support services and conduct PhD level research in the selected sport (Burwitz et al., 1994). The benefits of accessing ‘off-field brains’ (Jones et al., 2019) mean that both the practitioners and applied researchers can work collaboratively to develop evidence-based practice and overcome the apparent dichotomy of differences in working practice and time scales to deliver impact (Coutts, 2016). Central to this approach is the development of a research-practitioner role to meet the demand of interpreting and integrating the research within the practice setting effectively, allowing for adequate provision to spend appropriate time in both environments (Coutts, 2016).
This approach addresses barriers such as ‘lack of funding and time to dedicate to research’ and in turn has the potential to increase ‘staff buy in’ and ‘manager buy in’ (Fullagar et al., 2019). Furthermore, Bartlett and Drust (2021) highlight within their framework the importance of the practitioner to have skills and knowledge in facilitation, understanding your stakeholders, knowledge of your own personal/professional philosophy as well as knowledge about the specific evidence base.

4. Internship/Voluntary Positions

Lastly, sport and exercise scientists may take on paid or unpaid internships/voluntary positions. These positions are often seen as a steppingstone to get some experience in applied work (York et al., 2014) for early career practitioners. An internship is designed as a way of gaining career-specific experience to ‘learn on the job’ (Malone, 2017), under the guidance of an appropriately qualified and experienced practitioner (Stewart et al., 2016). As well as technical skills, internships have been found to develop “soft skills,” such as communication, interpersonal, awareness of work culture, and self-confidence (Sleap & Reed, 2006). The notion of getting ‘hands-on real-world experience’ to prepare practitioners for the complexities and the realities of the role is considered to be essential in their development (Malone, 2017). Furthermore, the internship process seems to be mutually beneficial for the employers as evidence suggests within the
discipline of strength and conditioning, for example, there is a 44% conversion rate from internship/placements to a full-time paid role (Stewart et al., 2016).

One of the main challenges with internships is to make sure everyone has the opportunity to access internships and develop employability. Often there are many unintended consequences for the practitioner and the discipline as a whole if internships are unpaid. To address the challenges and to raise the standards of employment within internships, the British Association of Sport and Exercise Sciences (BASES) published a position stand on graduate internships (BASES, 2013) to acknowledge the mutual benefits for students and employers and to provide good practice recommendations.

Currently, it could be argued that more needs to be done to meet these good practice recommendations, especially given more graduates are training in sport science. This has created a supply and demand issue; high popularity and limited positions (Malone, 2017) within the training pathway of early career practitioners. The need to gain experience in limited roles, potentially creates a situation whereby some organisations offer unpaid internships because they can access trainees/students in need of experience in preference to paying full time employees. The on-going provision of these types of internships and the need to create paid roles within the training pathways for early career practitioners is a wider issue for universities, professional bodies (e.g., BASES) and employers. To address these factors, there is a need to continue
to collaborate and work in partnership to make sure there are clear, sustainable, accessible training pathways into applied sport and exercise science that meet the needs of the practitioner, the employer and the university.

The ideal internship model is one where the internship can be incorporated within the educational or training pathway/programmes. By embedding the internship within the educational/training pathways, competencies developed on the internship can be pre-agreed linked to the skill/training of the intern their need of training development. Any potential internship can be approved, and risk assessed in advance by qualified staff at the university/training pathway. The development of the intern can be linked specifically to the hours relating to the internship so paced accordingly and the intern can still access university staff, their peer network, supervisors (in situ and at university/training pathway) and access the funding and student support if required whilst on their internship.

Self-reflection task 1 for the reader: Preparing to go into the field
- Reflect on what expectations you have when working in the field
- Reflect on the benefits of working in the field
- Reflect on which categories of employment you think would suit you best at this point in time. Also consider what you might aspire to or how this might change over time.

Employment issues - salaries, philosophies, and job description
Salaries. It is difficult to report on salaries within the different working contexts as salaries are not often stated on the job descriptions (Vernau et al., 2021), especially when considering role in high performance sport (Pacey, 2022). The skills outlined on the job descriptions, combined with the competitive nature of securing an applied role often means graduates complete advanced academic and professional qualifications (Bernal-GarcÍA et al., 2018; Sleap & Reed, 2006) in pursuit of paid employment.

To shed a light on salaries, Pacey, (2022) conducted a survey with 138 practitioners working full time in British senior football. 71% of respondents were 30 years of age or younger and 62% had five or less years’ experience. The most senior role was “Head of”, and salaries ranged from £16,000 to £208,000, (average reported salary £35,000 pre-bonus with less than two thirds earning more than £30,000). The information presented here on salaries is in line with the intention of Pacey (2022) to help provide practitioners (future practitioners) information to aid their decision making about working (or not) in the field. Although the average pay is lower than a typical graduate salary, it is worth noting that there is the potential to earn a high wage, depending on the setting. In support of this, particularly in research and consultancy and in fully immersed roles, the employers’ perception of the practitioner’s value and their impact can lead to enhanced pay (Stevens et al., 2021).
Philosophies. Another consideration, especially against the backdrop of the potential of limited paid roles, job insecurities, varying salaries and environment/interpersonal stressors, is the importance of matching your philosophy with the employer’s philosophy (Fletcher & Wagstaff, 2009; Wagstaff et al., 2015). It may be tempting to take the first job that pays well due to the high costs of training when starting out, however, it may be worth considering is the job a good match for you. For example, it can be tricky to balance creating a performance environment that facilitates flourishing (Fletcher & Wagstaff, 2009) or achieving performance expectations (e.g., medal targets) whilst upholding duty of care. Although it is tricky, it is not impossible to achieve performance and health goals. For example, Stellingwerff (2018) documents how body composition can be periodised for performance whilst maintaining health throughout a 9-year international career in a female runner. We would encourage practitioners to reflect on how they would know if a setting is a good match for them.

Job description/Scope of practice. When working in the field, practitioners need to be aware of the differences in scope of practice relative to competencies, especially in relation to the use of protected titles\(^1\) to work ethically and maintain the athlete’s/clients’ best interest. Vernau et al., (2021) reviewed 51 job descriptions (from the UK (45%), North America (45%), Other (10%) for advertised Strength and

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\(^1\) Protected titles in the UK are given to professions which are regulated and protected by law and professionals must be registered to use them
Conditioning positions. The results revealed that only 29% of job descriptions asked for a professional qualification (UKSCA ASCC, or close to completion) and 24% did not list professional qualifications as essential. The academic qualification required was predominantly at Bachelor level, with only 4% of job descriptions requiring a Masters level qualification as essential and none listed a Doctorate. In terms of experience, the majority of job specifications required only 1-2 years of experience. Taken together the authors commented uncertainty around the ambiguity and lack of consistency across job descriptions.

Perhaps more worryingly is that, for the level of responsibility of the roles, the limited experience and lack of professional accreditation is not consistent with the requirements for the same level of role within the other disciplines of sports science. The authors did caution that due to competition the actual qualification and the experience may be much higher than what is stated on the job description. Additionally, it could be argued that strength and conditioning is a relatively young discipline (in comparison to other sport science disciplines) and as it matures and evolves some of these ambiguities and inconsistencies will be resolved.

Logistics and administration-based issues - insurance, policies, and professional systems

In relation to sound professional practice there are some logistical and administration-based considerations relevant in all working contexts. Ideally, these need to be
established prior to working in that context or within the early stages. Examples include negotiating and agreeing a contract (even if voluntary role), clearly outlining who is the client and your role. Regardless of the working context you have a personal responsibility to clearly communicate what work is within your scope of practice, relative to your training and associated competencies and this should be reflected within your roles and responsibilities and within the job plan/description/contract. Your roles and responsibilities must also align with the professional standards set by your relevant professional bodies (for more detail please see Chapter 2).

It is also important to set up procedures relative to confidentiality in practice; sharing of data and establishing who owns the intellectual property of the data (particularly linked to commercial enterprise and moving from one sport/setting to another). You also need to explore/agree/establish a process of ongoing referral and be aware/able to implement with staff in the organisation safeguarding policies, especially when supporting children/minors, vulnerable adults and when traveling off site (for more detail see below and Chapter 4, 11, 12, 14). It is also worth considering whether you need professional indemnity insurance and insurance for your vehicle depending on your role and position. Typically, within an ‘employed’ context much of the above will be managed by the employer but those practitioners working in a sole-trader, consultant, self-employed or own limited company capacity need to consider how these issues will
be addressed - do you, for example, as a self-employed consultant have a Safeguarding Policy?

**Working with supervision**

The type and amount of supervision will vary depending on your role, training needs, intervention goal and your scope of practice. Therefore, it is important to reflect on which supervisor is best for your needs and also if you are in a position (post training) to offer someone else supervision. It is also important to acknowledge that supervision or mentoring maybe by a direct line manager and this may bring practical advantages in terms of knowledge and skill base, there also maybe the unintended consequence of fear to share concerns. Therefore, regular monitoring to ensure the supervisor and supervisee relationship is working as intended is advised. Post training supervision is not mandatory for all disciples of sports science. It must be noted those practitioners registered with the Health Care Professions Council will be expected to received regular supervision post training. There are several known barriers to supervision such as significant time and financial barriers and ability to find a supervisor with relevant expertise or time to be able to commit. It is recognised that many practitioners do seek supervision or mentoring as well as engaging with self-reflection but learning to work with a supervisor or mentor regularly is a skill, takes commitment and potentially organisational recognition to gain the time or financial support to access supervision.
Self-reflection task 2 for the reader: Working in the field promoting duty of care in practice, Kavanagh et al. (2021) urge sport and exercise science practitioners to reflect on these four questions

- Do I know my responsibilities related to our reciprocal duty of care?
- Am I aware of the policies, procedures, resources, and support available to help meet these responsibilities?
- Am I confident that I am fulfilling my duty of care for others?
- Are other people fulfilling their duty of care for me?

Craft Knowledge

It is beyond the scope of this chapter to focus on technical knowledge and skills due to the specific needs of a wide range of roles across the field of sport and exercise science, however, there is considerable overlap when it comes to craft knowledge (McFee, 1993). Craft knowledge is gained from practical experience and the application of craft knowledge in everyday practice is seen as a fundamental part of working in the field. For example, Mujika (2017) found when interviewing sport scientists who had made a significant contribution to medal-winning performances they reinforced the importance of interpersonal craft skills. For example, key craft factors were: the ability to relate to the coach and athlete, availability, helping a project without changing it, and readiness for cooperation. Furthermore, when interviewing gatekeepers from four sports (both team and individual) about their experiences of hiring sport psychologists, in addition to technical skills, it was found that skills in being able to relate, want to work within and understand their place within a multidisciplinary team and ability to develop a common plan are sought after qualities (Woolway & Harwood, 2019). All those qualities are
trainable, however, they are influenced by the organisational culture and often supported through supervision/mentorship.

Working with technology

When working in the field, having knowledge and skills in being able to use technology and apply the interpretation of data from technology appropriately is often required. Often practitioners feel a pressure to use the latest technology (Chambers et al., 2015) to gain or continue to keep a competitive advantage or to deliver high quality services. At times this may have negative consequences as a clear rationale for the use of technology and understanding towards how the newly acquired data will improve performance and decision making is often lacking (Gamble et al., 2020). A case example is the use of the acute chronic workload ratio approach, to monitor training load (Impellizzeri et al., 2020) as due diligence towards understanding the validity of the metric was not successfully completed. Gamble et al. (2020) describes how tracking how far and fast a player ran during a match changed the intended aim, with athletes focusing on achieving technology metrics rather than focusing on performance goals, therefore progress in the metric was achieved but it was unclear how it helped to improve performance. Having a clear rationale is critical as athletes have also reported that technology is an additional stressor due to the feeling of a surveillance culture, and the knowledge that their performance is being measured (Williams & Manley, 2016).
Similarly, in an exercise context, individuals encouraged to undertake physical activity for simple physical and mental fitness and wellbeing gains may feel that the challenge to meet target numbers (distances, times, steps etc.) detracts from the freedom of doing exercise. However, conversely some individuals may require the motivation of having targets set and recorded by technology as an incentive to engage. The challenge, therefore, is to incorporate technology and data to enhance decision-making and motivation as part of the wider support goals without risking the distraction that technology may play. When using technology, the practitioner has a responsibility to ensure its validity and continue to work with the support team to translate the information into meaningful actions (Nosek et al., 2021) thus enhancing practice and guarding the welfare of the client.

Self-reflection task 3 for the reader: Working in the field
- Think about how what craft knowledge you have developed or could develop
- Reflect on how you develop (or could develop) a working relationship with a coach
- Think about an example of technology or theory and how you would explain this to a coach/athlete/client/parent

Working as part of a multidisciplinary team
The ability to work as part of a MDT, is something that is often written on a job description as an essential criterion as it is considered fundamental to offer holistic support to clients within sport and exercise settings. In practice, working in this way can
have considerable challenges, as highlighted by research such as (Collins et al., 1993; Collins et al., 1999). Rothwell et al. (2020) has highlighted that multidisciplinary is not always indicative of team working, in fact, the authors note in practice it often refers to a collective of individuals working in silos. As such, an interdisciplinary approach, defined as an ‘integration of information from more than one subdiscipline of sports science’ (Burwitz et al., 1994) or a departmental approach (Rothwell et al., 2020) might be a better approach to adopt. However, if the challenges can be overcome there is evidence of how MDT working can enhance practice and lead to best practice, for example, using the MDT in medicine or injury prevention (Tee et al., 2018).

It must be recognised that not all practitioners who are working in the field, work as part of a multidisciplinary team. When assessing exercise referrals, or when working with an athlete, practitioners are therefore strongly encouraged to reflect on whether the support work is within their scope of competence and if they have an understanding of the context of which the client operates in. For example, in Australia, McKean et al. (2015) found the majority of registered exercise professional (not accredited practicing dietitians) were working outside their scope of practice and did not have training or experience to provide nutritional advice sought by the public. The authors recommended a change to the context of education at the training level and continuous professional development on scope of practice, including when and how to refer to other professionals.
Self-reflection task 4 for the reader: Working in the field

- Reflect on how you would facilitate effective communication as a practitioner working independently with a client and as part of a team.
- Reflect on what you believe is best practice to support a client when working within a team.
- Reflect on how you would refer a client on to another practitioner if their needs were outside your scope of practice and competencies.

Summary and Recommendations

In summary, the chapter has been designed as way to provide insight into the knowledge, attributes and skills required by effective practitioners and underpin safe and effective professional practice. The reality of being in the field, can only be ever truly experienced by working in the field, but there is an ethical obligation to help prepare practitioners as best we can by being transparent about some of the known complexities of working in a dynamic, complex environment. It is hoped that by reflecting on the context of working in the field, then this will also invoke a wider discussion about:

- what knowledge, skills and attributes are required
- organisational demands/stressors and how they can be explored to help maintain athlete/client welfare and practitioner wellbeing
- what support is required (e.g., supervision/mentorship/professional body) to maintain effective working practices
- how can we create a sport and exercise science discipline that is sustainable over time
how we can promote equality, diversity and inclusion within the field of sport and exercise science.

Moving forwards, we encourage the continuation of publishing case reports and reflection articles to help gain a greater understanding of the realities of working in the field. It is the aim to use this knowledge to assist the development of best practice and evidence-based guidelines to promote and protect practitioner and client welfare.

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