Routledge Handbook of Applied Sport Psychology
A comprehensive guide for students and practitioners
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Almost all the material one reads about sport psychology is based on work with able-bodied athletes, including those with no or minimal sensory deficits. And yet there are millions of individuals who have sensory deficits, specifically visual and hearing impairments. Some compensate quite well for these deficits, with glasses/contact lenses or hearing aids/lip reading skills, whereas others have deficits that are not amenable to such corrections. The majority of adult individuals have some visual impairment (people using glasses/contact lenses) or some degree of hearing loss (fewer wear hearing aids, but many do). These losses don’t affect the ability of most of these individuals to compete in athletic endeavors.

Although there are exceptionally few elite athletes who are blind/visually impaired or deaf/hard of hearing (hoh), there are many who do participate on a regular basis, some in competition with sighted/hearing athletes, and many others as part of disability-specific groups such as the United States Association of Blind Athletes (USABA), Confederação Brasileira de Desportos dos Surdos (CBDS), Deaf Sports Australia (DSA), Korean Deaf Sports Federation (KDSF), or USA Deaf Sports Federation (USADSF). A few athletes who are deaf/hoh have competed in the Olympic Games. They include: Angel Acuna (Mexico – basketball), Tony Ally (UK – synchronized diving), Frank Bartolillo (Australia – fencing), Tamika Catchings (USA – basketball), Juri Jaansen (Estonia – rowing), and Terrance Parkin (South Africa – swimming). Jeff Float, a deaf swimmer, was the captain of the USA 1984 Olympic swimming team who won a gold medal in the 4 x 200 m relay. He also won ten gold medals in ten events in the 1977 Deaflympics. One elite visually impaired athlete, Marla Runyan (who has Stargardt’s disease), has competed as an Olympian and a Paralympian in middle distance running (as the dust jacket of her book [2001] notes, the “first legally blind athlete to compete in the Olympic Games”). This chapter, however, is not oriented toward the professional/elite athlete per se, but toward all athletes with sensory impairments, whether they compete in elite competition or recreational sport events.

**Athletes who are blind/visually impaired**

Whether practitioners have worked with individuals with visual impairment (VI) in the past, or are simply interested in learning more about working with this population, the tools
and tips in this section are designed to provide some food for thought as consultants embark on work with athletes who present a set of strengths and challenges that may be unfamiliar to many practitioners. We hope that readers will emerge from this chapter with some new perspectives and ideas for working with athletes with VI.

Individuals with VI may possess some visual ability, enough to drive a car (with some assistive technology) and read regular-size print, may be totally blind, or may fall somewhere in between. VI may also affect vision in different ways. For example, vision loss may be more pronounced in an individual's peripheral field (in the case of retinitis pigmentosa), or may be more pronounced in an individual's central vision (as in the case of macular degeneration or Stargardt's disease). We encourage readers to consult other resources, such as Lighthouse International (2010), to obtain more in-depth information on specific types of VI. In addition, organizations such as the International Blind Sports Federation (IBSA: 2010a) and the United States Association of Blind Athletes (USABA: 2010), a US Olympic Committee member organization, can be consulted for more information about organizational support for sport opportunities for the visually impaired, ranging from sport skills camps for youth to elite-level, Paralympic competition. In addition, IBSA provides specific medical criteria that athletes must meet with regard to their visual abilities to be eligible to compete in IBSA-affiliated events (IBSA, 2010b).

When consultants first meet athletes with VI, it is likely that questions will arise such as: "What can you see?" and "What does the world around you look like?" Although such questions may seem direct and somewhat brusque, the answers may provide practitioners with valuable information as they begin work with the athletes. The answers to these questions most likely lie in observations of the athletes, as well as in the insights the athletes are able to provide. Understanding athletes' strengths, needs, and challenges is central for establishing positive rapport, providing helpful support, and implementing effective interventions.

So, where to begin? Sport psychologists should not be afraid to be curious about observing athletes in their surroundings, or hesitate to engage in one-on-one conversation with athletes so they can help better understand their needs. When observing and conversing, it may be helpful to learn more about how much vision the athlete possesses, whether one eye is stronger than the other, the degree to which the athlete relies more heavily on central or peripheral vision, whether the athlete is able to drive or read regular size print, which color contrasts work best for the athlete to be able to perceive detail, and whether there was once a time when the athlete possessed better vision.

Conversations about the athlete's VI should be approached with sensitivity, respect, and genuine interest. Some athletes may be more comfortable discussing their VI than others, so proceed with conversations accordingly. Some athletes may be eager to enlighten practitioners as to their needs and circumstances, whereas others may seem distant and reluctant to share details. In the case of the latter, observational skills may be called upon more heavily until the athlete feels comfortable enough to talk more openly.

Consultants should consider how best to communicate with athletes with VI, given the critical role communication plays in the sport psychology consultant-athlete relationship. An emphasis on descriptive, accurate, verbal communication is critical. It is best that any live or video-taped demonstrations, pictures, or other visual media are accompanied by accurate descriptions of what is being depicted. Minimize background noise to enable the athlete to focus on your voice or the voices of others. When engaged in a group discussion in which individuals are taking turns to speak, call upon individuals by name to speak rather than using nonverbal cues such as pointing or head nods. When speaking directionally, use clear terms such as "to the right," "to the left," "forward," or "backward" rather than vague
terms such as “over here” or “over there.” In addition, any directional gestures such as pointing should be accompanied with clear directional terminology.

When communicating with athletes via emails or blogs, consider that the athletes may require the use of magnification or screen reader software to engage in such communication. Check with the athletes ahead of time to be sure that the means by which you are communicating electronically are compatible with their assistive technology. In addition, if the athletes use screen reader software, avoid the use of bold or colored type face for emphasis. Such software may not distinguish between different font styles and colors, thus your intended emphasis will not be clear to the athlete.

Aside from using more verbal communication, when working with athletes with VI, what practitioners do will not change much, but how they do things may require special consideration. For interventions that are best facilitated through the use of printed material, for example, consultants should learn from the athletes ahead of time how they can best avail themselves of this material. Some options include providing materials in large print; providing materials using different color contrasts (e.g., black paper with white writing); providing materials in electronic form to be viewed on a personal laptop computer by the athlete; having a fellow athlete, with whom the visually impaired athlete is comfortable, read the printed material aloud to the athlete; providing an audio recording of the printed material (and a personal listening device, if needed) for the athlete; and offering any printed material in Braille format (for those athletes who are able to read Braille). Regardless of the format that is most appropriate, make these arrangements ahead of time so that the athletes are able to take part in the sharing of information at the same time as their fellow athletes (rather than the athletes having to wait until a later time to view or hear the material).

Sport psychology practitioners commonly introduce imagery and mental practice activities with both individuals and teams. Given the usually visual nature of imagery, some practitioners may erroneously presume that athletes with VI cannot participate in and benefit from imagery exercises. Many visually impaired individuals, however, either have, or used to have, some visual ability, so they may be able to benefit from and appreciate such sensory information. In addition, imagery is most effective when the most salient sensory information is included. Thus, for a visually impaired athlete (and any other athletes for that matter), the inclusion of auditory, olfactory, and kinesthetic, along with some visual images, might help to create mental representations to which the athlete can relate (the more polysensory the image the better). The athletes can play an active role in creating these images by describing their world as they “see” it, feel it, smell it, and so forth.

With regard to team-building activities, practitioners need to take care ahead of time to be sure that activities are adapted to enable athletes with VI to participate fully and safely. Of particular emphasis might be team-building activities focused on enhancing verbal communication among teammates during practice and competition. Given the possibility that nonverbal on-field communication may not be receivable or useful for an athlete with VI, it would be helpful for the team to develop and practise effective, agreed upon, verbal communication strategies. Consultants may consider helping the athletes develop and practise a system of code or cue words that can be easily communicated to one another in competitive situations, as well as practising speaking loudly enough to one another so that they deliver information accurately. It may also be important to facilitate practice situations that simulate competition, complete with game-day noises in the background, so that all team members can practise communicating with one another in this context.
Athletes with VI, at one time or another, are likely to express a certain degree of anxiety about having to travel to and practise/compete in new and unfamiliar facilities. Navigating in new, unfamiliar environments may be a highly anxiety-provoking experience for individuals with VI, and consultants may be called upon to assist athletes in making this transition smoothly. This assistance is important because athletes’ energy is likely to be better used in preparing for the competitions rather than on worrying about finding the bathrooms or not tripping up and down stairs. If possible, travel with the athletes to the new facility to provide them with opportunities to become familiar with the surroundings. It might be helpful to obtain a map of the facility and, using the map, develop a tactile representation of its layout. The athletes can then use their hands to explore the layout of the facility. Consultants may also assist in identifying members of the teams with whom the athletes are comfortable and who can assist the athletes in getting around the facility once they arrive. Consultants may also help the athletes identify and practise the navigational/mobility skills they already possess and use in the community, and discuss how these skills can be used when transitioning to the new sport contexts.

Athletes who are deaf/hard of hearing (deaf/hoh)

There are excellent opportunities for sport psychology practitioners to work with deaf/hard of hearing (hoh) athletes. The world population for people with these hearing impairments was estimated to be 560 million people in 2005 and expected to increase to 900 million in 2025 (Davis, 1995). Chances are high that sport psychologists will encounter athletes with these “hidden” disabilities at some point in their careers. Hearing loss is considered a hidden disability in that without visual external devices such as hearing aids and cochlear implants, it is invisible to others. Furthermore, not all athletes benefit from these listening devices and those who do, often do not wear them while competing, for any number of reasons (e.g., lack of sweat-proof devices, vulnerability of breaking, rules banning them from competition). Athletes who are deaf/hoh may share many characteristics in common with hearing athletes, but may also exhibit some unique characteristics.

Athletes who are deaf/hoh are a diverse population with varying degrees of hearing loss, educational backgrounds, different communication methods, and athletic skills. How athletes feel about their hearing loss plays an important part in their personal identification. Athletes with a hearing loss can identify themselves as deaf, Deaf, or hard of hearing. For example, athletes who were born deaf, communicate in native sign language (e.g., British [BSL], Chinese [ZGS], Israeli [ISL], Kenyan [KSL], Mexican [MSL]), and socialize mainly with the deaf community may identify themselves as Deaf. The uppercase Deaf refers to a cultural and linguistic minority rather than a medical condition to which the lowercase deaf refers (Padden & Humphries, 1988).

The audiological definition of hearing loss ranges from mild to profound, and involves age of onset and the ability of the individual to use any hearing for communication purposes. Hard of hearing individuals tend to have mild to moderate hearing loss and are able to make use of hearing aids and assistive listening devices for communication purposes. Most often these individuals communicate orally (speech) although some learn sign language. Deafness is medically defined as a severe profound hearing loss and the inability to rely on hearing for communication. These individuals may or may not identify themselves with the deaf community. Some learn to speak well; some don’t. Some depend on lip
reading and others immerse themselves in deaf culture and learn to communicate in their native sign languages (there are 121 sign languages in the world).

Deaf/hoh athletes compete in sports and exercise for the same reasons other people do – for fitness, fun, socialization, and competition. These athletes are “able-bodied” and do not have a physical or mental disability that prevents them from participating in sports and exercise activities with their hearing competitors. There are no changes in rules or special classifications. Visual and/or tactile cues are substituted in place of auditory cues. For example, a flashing light or wave of a flag/hand is used simultaneously with a starter’s gun to signal the beginning of a race. Most deaf/hoh athletes have some hearing and may be able to hear some sounds.

**Elite deaf/hoh athletes**

Just as there are elite hearing athletes who compete in the Olympics, there are some exceptional elite deaf/hoh athletes who have competed in the Olympics as well as the Deaflympics. The governing body of deaf sport, International Committee of Sports for the Deaf (ICSD), formerly Comité International des Sports des Sourds (CISS), identified “the top ten deaf Olympians of the Century,” including Ignazio Fabra (four Olympic Games, wrestling, Italy), Terence Parkin (2000 Olympics silver medalist, swimming, Republic of South Africa), and Susan Jane Pedersen (1968, two gold and two silver medals, swimming, USA); Lovett, Eickman, & Giansanti, 2001).

Athletes who compete in competitions sanctioned by ICSD must have a minimum of a 55 decibel per tone average hearing loss in their better ear (Deaflympics, 2010b). Any kind of amplification gives an unfair advantage for those who can use them (e.g., the sound of the bat or hand on the ball provides auditory information on how hard or soft the ball was hit or hearing a teammate shout “pick” on a defensive play); thus, hearing aids and external cochlear implant parts are banned in deaf sport competitions (e.g., Deaflympics, Deaf World Championships, European Deaf Swimming Championships). Athletes do not need to know sign language to participate in Deaf Sport events, although it is encouraged. For more in-depth information about ICSD, its rich history (including co-founder of the International Paralympics), listings of sporting events, national sports governing bodies, and volunteer opportunities, and so forth, please visit the ICSD website (Deaflympics, 2010a).

**Communication strategies**

Sport psychologists may work with deaf/hoh athletes as part of a team or one-to-one. Frequently, the first encounters with these athletes are when they are part of a hearing team as opposed to a team of all deaf/hoh athletes. Generally, there are no differences in delivery of psychological skills training or counseling services with these athletes as part of an all deaf or mixed team of deaf and hearing athletes. As with all athletes, it is important to establish good rapport and, to do this, one must have good communication skills. In terms of deaf/hoh athletes, sport psychologists need to find out the specific communication methods they use. These methods may range from spoken language to sign language or a combination of both. Do not assume that all deaf/hoh athletes can lip read. Even the best lip readers miss a lot of information due to not all phonemes of spoken language being visible on the lips. Ask the athletes what their desired communication methods are. For those who lip read, do not exaggerate your lip movements. Speak clearly and make sure you are facing the athletes.
when you are talking. Be mindful of anything obstructing the view of your lips (e.g., facial hair, chewing gum, hands, clipboard).

When working with athletes who communicate in sign language (this does not mean gesturing), learn the specific sign language of the athletes or use qualified sign language interpreters. Sign language is learned at the same rate as any other language and one’s fluency depends on using the language (signing) regularly. Sport psychologists can learn sign language at local universities and through nonprofit/profit-making agencies that offer courses. There are private teachers/tutors, as well as various media/internet products/services that offer sign language classes. One can hire sign language interpreters through most university offices of students with disabilities, or via businesses that provide interpreting services. A consultant should talk directly to the deaf/hoh athlete when using an interpreter. Video Remote Interpreting (VRI) is available for free or at a low cost and requires web camera, TV or computer monitor, and telephone access number. There are a variety of different new technologies in which VRI or direct communication (sign to sign) is accessible (most recently, the Ojo Personal Video Phone). Please note that even in English-speaking countries (e.g., UK, USA, Australia), their sign languages are different. Furthermore, in the USA, American sign language has various regional signs. For example, the word “anxiety” is signed away from the body in New York but close to the body in Texas. One needs to be aware of these types of regional “accents” of sign language that are present in many large countries.

When working with two or more athletes who sign, or in situations where sign language may be understood by hearing athletes, coaches, trainers, or spectators, the sport psychologist needs to be sensitive about communicating confidential information. Sign language is visual and anyone who knows it can see what is being discussed. So if the information being shared is confidential, then the practitioner needs to be sure to communicate with the athlete privately.

When preparing for competition in mainstream environments, one should consider ahead of time the challenges the athletes might face (e.g., “hearing” a call to report to a certain place for an event); coaches, psychologists, and support staff can anticipate some of these challenges and make plans ahead of time to insure the athletes are where they need to be. Deaf/hoh athletes will not be able to hear a practitioner when they are actively performing, therefore staff need to give their instructions prior to performance (e.g., warm-up, time-out, half-time). Some athletes may have had some hearing in the past, thus allowing them the advantage of using memory of auditory cues in imagery and relaxation exercises. Hard of hearing athletes have some hearing that they can use when working with consultants. Consider the degree to which the athletes are able to hear the crowd and use this information when helping the athletes develop strategies to either block out the noise or use the crowd noise to “psych up” for performance.

Some hard of hearing athletes are able to hear music and use various auditory relaxation methods. For deaf athletes who are not able to use the regular “sound” modes of relaxation such as music and audiotapes, alternative methods include self-guided progressive muscular relaxation, deep breathing exercises, and massage/tactile relaxation methods.

Sport psychologists can conduct relaxation and imagery exercises with deaf/hoh athletes using either written or signed instructions first, then use light, vibrations, and/or appropriate tactile (touch) methods (with or without eyes opened) in lieu of sound. Boundaries, however, must be established, and discussion should take place regarding the type of touch that is acceptable to use for purposes of communication. Also be cognizant of the “speed” of your signs, which can assist in the relaxation and imagery process. For example,
a sport psychologist using his/her calming, soothing voice on a relaxation tape with hearing athletes can also achieve the same in sign language by signing in a soothing, calm manner; not signing LOUDLY, LARGELY and in the athlete’s personal space.

**Intervention strategies**

For all deaf/hoh athletes, make eye contact and otherwise get their attention. A wave of the hand, a touch on the shoulder, flashing lights, or waving flags are some practical ways of gaining athletes’ attention. Be mindful of the position of the light or sun when talking/signing. If the sun or light is behind you, it will impair the athlete’s view. Facial/body language should be consistent with the practitioner’s sign/verbal language. Use visual communication tools such as computers (e.g., Power Point, word processing), dry erase/chalk boards, flip charts, overhead projectors, text messaging, captioned and/or signed videos, web cameras, and written and/or signed instructions in your work with this population. If working with large groups, divide into smaller groups to facilitate ease of communication. You can also demonstrate your instructions and ask the athletes to mirror your movements or ask them to repeat instructions to check for communication understanding.

When working with these athletes on hearing teams, team-building exercises can assist the deaf/hoh athlete(s) to feel included, and aid in overall cohesiveness of the team. These methods may entail instructing hearing teammates about visual cues, signs, and gestures that help facilitate communication. Deaf/hoh athletes should also be encouraged to inform teammates and coaches of their specific needs. These athletes have similar performance issues as hearing athletes, and it should not be assumed that performance problems are related to their deafness. Please note when using sport psychology tests/inventories with Deaf athletes whose native language is not English (or specific spoken language of these tests), videotaped translations in the athletes’ native sign language or qualified sign language interpreters should be provided (Clark & Sachs, 1991).

Deaf/hoh athletes are a heterogeneous population who share many of the same characteristics as hearing athletes. The difference in working with this population may be in communication methods and the highly visual nature of deaf/hoh athletes. These athletes seek optimal performance enhancement as much as other athletes. Sport psychologists have many opportunities to provide psychological skills training and other services for this generally underserved group of athletes.

**Athletes who are deaf-blind**

Sensory impairments may occur in combinations, as seen in athletes who are deaf and blind. Some individuals may be Deaf-blind, some deaf-Blind, some Deaf-Blind, and some legally deaf and legally blind, so there are many different definitions (culturally and linguistically). Similarly, many different communication methods must be used, depending on the deaf-blind person. For example, some deaf-blind have more hearing and poor vision, thus relying on speech and sounds for communication; others are deaf but have some vision, and communicate in sign language. Others have some vision, some hearing; some have neither and communicate via tactile means. The bottom line in working with deaf-blind athletes is to begin with the strategies indicated above for blind/VI and deaf/hoh.
athletes, but then tailor specific strategies to the needs of the individuals with whom you are working. Establishing and working with their preferred communication methods are essential.

The category of deaf-blind as a disability is officially recognized and included as part of the Paralympics. There are active deaf-blind athletes at different levels in many competitive sports, such as tandem cycling, speed skating, lawn bowling, running, and judo. Rules are altered as needed for deaf-blind participation.

**Conclusion**

The content of sport psychology sessions with athletes who are blind/visually impaired or deaf/hoh will be similar to sessions held with athletes without sensory impairments. The main differences will be in terms of the methods of communication. Competent professionals providing sport psychology services for athletes with sensory impairments will be aware of these similarities and differences and use them to their advantage in working most effectively with these athletes. See Boxes 47.1 and 47.2 for the main practical suggestions for working with these populations.

**Box 47.1**

*Practical suggestions for working with athletes who are blind/visually impaired (VI)*

- Talk with and observe the athletes to better understand the nature of their vision loss, as well as their strengths and challenges.
- Be sure that communications with athletes with VI are highly descriptive, accurate, and verbal.
- In using print or electronic media when working with athletes with VI, be sure to use methods that are compatible with the athletes' capabilities and resources.
- Athletes with VI may be able to appreciate the inclusion of visual information in imagery exercises because many currently have some visual ability, or have had it at some point in time.
- Assist athletes with VI and their fellow athletes in developing clear and effective on-field verbal communication strategies.
- Assist athletes with VI in preparing for travel to new, unfamiliar facilities for practice and/or competition. This preparation may help athletes reduce anxiety associated with the transition, thus allowing for increased attention on their athletic endeavors.
- Planning ahead and consulting with the athletes regarding any adaptations that may be necessary helps to ensure that athletes with VI are able to participate safely and as fully as possible alongside their athlete peers in any interventions that are implemented.
Box 47.2

Practical suggestions for working with athletes who are deaf/hoh

- Find out from the athletes what their preferred communication methods are. If the athletes communicate in sign language, then learn sign language or use a qualified sign language interpreter. Note that different sign languages are used in different countries, even those that speak the same language (e.g., UK, USA, Australia).
- Speak clearly and slowly but DO NOT EXAGGERATE your lip movements.
- For athletes who lip read, be sure to face the athlete when speaking. Also be aware of anything obstructing the view of your face/lips.
- Be aware of the position of the sun or light when communicating with all deaf/hoh athletes. If the sun or light is behind the sport psychologist, it will block the athlete’s view. Therefore, the sport psychologist should make sure the light is in front or to the side of him/her.
- Make eye contact with, and otherwise get the attention of, the athlete. A wave of the hand, a touch on the shoulder, flashing lights, and waving flags are some practical ways of gaining the deaf/hoh athlete’s attention.
- Use visual communication tools – such as computers (e.g., PowerPoint, word processing), dry erase/chalk boards, flip charts, overhead projectors, text messaging, captioned and/or signed videos, web cameras, and written or signed instructions.
- If working in large practice groups, divide into smaller groups because this tactic will facilitate ease of communication.
- Demonstrate instructions and ask the athletes to mirror your movements.
- Be aware that deaf/hoh athletes will not be able to hear you when they are actively performing. Give your instructions prior to performance (e.g., warm up, time out).

References

