Integrated Sport Psychology Support: A Case Study in Motor Sport

Abstract:

This article shares a joint reflection of three practitioners who provided specialist support to one elite motor sport athlete. The nine-month programme began with the broad aim of making the driver better prepared for performance at the highest level using the practitioners' experience. One practitioner specialized in athlete wellbeing and performance support, another in vision/perceptual training, and the final practitioner in heart rate variability. The practitioners developed a bespoke programme of support including vision training, slow-paced breathing, and self-awareness. Programme effectiveness was determined through objective measures such as physiological readings and subjective measures, including feedback from the driver and performance coach. Evaluation and reflections of the programme suggest that the athlete successfully learnt slow-paced breathing, improved functional vision, and enhanced pre-performance preparation and in-race regulation. The athlete also perceived the support to be beneficial and had the desire to develop mind-body effectiveness in the future.

Keywords: Integrated sport psychology; slow-paced breathing; vision training; specialist support

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Context

Sport psychology is a growing field with broad areas of research and practice. As a result of this growth, Sly and colleagues (2020) suggest that applied sport psychology practitioners should seek out opportunities to specialize and develop competencies in specific domains. For example, specialist performance domains, non-sporting domains or collaborating with clinical professionals (Sly et al., 2020). This diversification of roles and expanding areas within sport psychology has led some practitioners to develop specialisms, in this case within the performance domain. Here we term specialist practitioners as those who tend to focus on a particular expertise within sport psychology and mainly deliver a specific service. For example, using heart rate variability (HRV) as a physiological measure to underpin psychological interventions (e.g., Gross et al., 2017) or devising a visual training intervention which targets eye muscle development (Wimshurst et al., 2018). These practitioners provide a specialized service based on their scientific and experiential expertise which optimize and tailor intervention plans around a specific area of psychology. For example, interventions using biofeedback have yielded improvements in both sports performance and subjective variables (see relevant reviews - Jimenez Morgan & Molina Mora, 2017; Pagaduan et al., 2020; Pagaduan et al., 2021). The authors of this paper were approached by the athlete in question for this very reason and subsequently they felt the process of providing specialist support should be documented within applied sport psychology literature. Therefore, this case presents a reflective account of the specialist support given to an elite motor sport athlete. This case focusses mainly on documenting the unique nature of the service delivery shared by three practitioners working with one client.

Practitioner Philosophy and Expertise

In 1987 Martens called for a convergence between the "academic sport psychologist" and the "practitioner sport psychologist", resulting in a blend of orthodox scientific principles and experiential knowledge to fully understand athletic behaviors. This philosophy is quite fitting given the practitioners' approach is driven by scientific evidence, cognitive behavioral techniques, and person-situation interactions (Woolfe et al., 2003). Cognitive behavioral interventions are often interwoven with psychophysiological interventions (e.g. biofeedback) to ensure psychological skills transfer from the laboratory to real-life settings (e.g. Beauchamp et al., 2012). Our background and experience in psychophysiology in sport and exercise psychology also shapes our approach, whereby we seek to understand human behavior through both psychological and physiological measures (Cooke & Ring, 2019). Crucially, we champion working with multiple practitioners in psychological support, given each practitioner can supply a specific strength to an intervention programme. Incorporating multiple philosophical approaches to practice allows for more objective focused practitioners to be somewhat "elucidated" by more client-centered practitioners. For example, a practitioner focusing on objective measurements (physiological output) is then aided by a client centered practitioner who is able to develop meaningful interpretation of the data for the client. While we acknowledge that drawing from multiple philosophical approaches may not be preferential, the nature of the recruitment of the practitioners organically created this approach, bringing flexibility to the underpinning philosophy (Anderson et al., 2004; McGregor & Winter, 2017). The practitioners' also champion that an elite athlete will always understand their own sport, and role within it, better than any outsider, no matter how educated or experienced in other domains they are. Therefore, the practitioners consider it essential to get the athlete to contribute to their own testing and training programme by getting them to collaborate in its development.

The practitioners were actively involved in either applied practice with athletes or research within sport psychology. Practitioner one specialized in heart rate variability (HRV), practitioner two in vision training, and practitioner three in performance psychology. A detailed overview of practitioner expertise can be found in supplementary material one and the division of responsibilities across the intervention can be found in Table 1[1]. Despite the very different areas of expertise of each practitioner, to the wider sporting world, each would be labelled broadly (rightly or wrongly) as a 'sport psychologist'. From the 'inside' we all recognize that we have very different strengths and weaknesses, despite the similarities in our titles. In fact, one of the key difficulties we had putting this paper together was understanding if we are an 'integrated team', or an 'interdisciplinary' one. Within the sport sciences interdisciplinary teams are often formed from the sub-disciplines of sport science (e.g. psychology, biomechanics and physiology) (Piggot et al., 2019) and these disciplines must be integrated to form an interdisciplinary team. We felt that similarities in our formal training makes us all practitioners' who specialize in enhancing performance through psychological means, which suggests we perhaps are not interdisciplinary. Therefore, we termed ourselves as an "integrated team" and this allowed us to plan and restructure the intervention to ensure the athlete received the best support we could provide.

Table 1: Division of responsibility

	Practitioner one (HRV)	Practitioner two (Vision)	Practitioner Three (Performance Psychology)	Sports Optometrist
Primary role	Provided baseline screening and tailored	Provided visual and perception assessment for the	Conducted initial needs analysis and client centered investigation	Initial assessment of the athletes function of the eyes

[1] Note: A specialist sports optometrist was also brought in for the baseline screening to perform an assessment on the underlying function of the eyes

	breathing training	development of vision training Main point of contact for the athlete and performance coach		
Additional role	Adapting breathing behavior	Training visual and perceptual skills	Integrating objective data into psychological skills training and wellbeing focused intervention	No further role
Additional role	Facilitating the development of relaxation skills	Bringing together data and findings for summary documents	Facilitating communication and reflection between practitioners	

The Case

The athlete in this case study was actively competing in Formula three, they were an 18-year-old male, full time elite motor racer. At the time this intervention the athlete would be classed as successful-elite as they regularly compete in the top divisions of their sport which are international and experience some infrequent success (i.e. race wins) (Mckay et al., 2022; Swann et al., 2012). Initial contact was made with practitioner two by the driver's manager, due to a primary interest in vision training. The driver's manager told practitioner two about a young formula three athlete who was striving to gain promotion to the next racing category (formula two), with the end goal of reaching formula one. In the initial telephone conversation, it became clear that there were no boundaries to resources and enhancing the athlete's performance was a key motivation. Practitioner two was asked to formulate a proposal of support for the athlete. After much contemplation, practitioner two contacted practitioners one and three. Practitioner one's work could prove vital in specific aspects of racing such as arousal control and would provide a psychophysiological link between all approaches. Practitioner

three's client-centered approach and experience in preparing athletes mentally for major competitions would provide a good balance with the more objective, metrics-driven vision and HRV work. Whilst all practitioners all knew each other prior to this case, they had not worked together on an applied project previously.

Once the practitioner team was in place and agreed, a meeting between the athlete, manager, performance coach and three practitioners took place. From this meeting it became apparent that the primary aim for seeking support was to strive for a promotion to the next race category. To do this the race team were seeking support and innovation from a range of sport science practitioners. The practitioners explained their individual expertise and discussed the potential provision for the athlete. It was agreed that a needs analysis, including baseline screening, would take place to inform the intervention plan and thus meet the athlete's needs. At the time of the intervention the athlete was balancing a number of life demands including racing, full-time education, and living across multiple locations. It was agreed that the practitioners would see the athlete face-to-face once each month for a three-hour session, and the athlete would complete training between these meetings. The performance coach was present at all testing and agreed to support the athlete with the training in between the monthly meetings. The team were all located across the Southwest of England and support was to be implemented at a major racetrack in the midlands, United Kingdom.

Needs Analysis

In line with Keegan's (2016) overview of the consulting process, a needs analysis was carried out to gather baseline information and to highlight areas for improvement and areas of strength. This was conducted over one full day of assessment and consisted of three elements: a performance interview, a baseline visual screening, and HRV and breathing rate assessment. These three elements were considered to be crucial for each of the practitioners' approaches

and each assessment was conducted by one of the three practitioners. A specialist sports optometrist also assisted in this primary assessment as part of the broader visual needs analysis. He has performed this role alongside practitioner two for a number of years to ensure that any underlying biological visual deficits are picked up.

Performance Interview

The intake approach for practitioner three followed a more traditional model of service delivery. In line with her philosophical approach to practice she adopted a client-led approach aimed to build rapport, trust, and collect information that would shape this aspect of the intervention (Greenlees, 2009). An informal meeting was carried out to generate a background including demographic information, understanding of the athlete's experience of sport psychology, and their current psychological literacy. Practitioner three also provided an overview of their philosophy of practice and discussed the boundaries of confidentiality given the multiple practitioners working on this case. It was agreed that unless specified, information could be shared across the team in the essence of such information supporting and informing our whole team approach to support.

The intake interview was guided by the Performance Interview Guide (Aoyagi et al. 2017) and further the practitioner's interpretivist approach which lends itself to adopting an open, semi-structured approach to the intake interview. This involved asking a range of questions such as the athletes background, journey in the sport, and their career highs to date. While there was a focus on a strengths-based approach to consultancy (Linley et al., 2010; Ludlam et al., 2015; Zhang et al., 2017) in line with the athlete's awareness of psychology and why someone would work with a psychologist at times there was a focus on deficit in the responses. There were a number of themes arising from the intake process these included the chance to enhance the athlete's psychological literacy, to help them manage performance anxiety, and gain greater emotional control in competition or when under situations of stress,

finally the opportunity to better balance the competing demands of sport and education at a critical time in the athlete's career.

Visual Screening

Following the optometrist's screening, sport specific visual screening was carried out, for a description of each of the visual 'skills' being tested please see Table 2. These tests were based around a previous conversation with the athlete where the visual demands of the sport were discussed.

Visual 'skill'	**Definition**	**Description of test**
Eye dominance	The tendency to prefer visual input from one eye over the other.	A triangle shape is made between the thumbs/forefingers of the two hands, and with arms outstretched, the test is to look through the hole and line up a target within the triangle. Each eye is then closed in turn and the eye which is open with the target is still aligned is judged to be the dominant eye.
Peripheral awareness	The awareness of things going on around you that you are not directly looking at.	Tested using the Vienna Testing System which requires tracking a central object whilst responding to stimuli that are presented peripherally.
Eye-hand co-ordination	The processing of visual input to guide actions and movements of the hands.	Athlete has to throw and catch a ball, from a distance of 2m, against a rebound net specifically designed to return the ball in an unpredictable manner.
Reaction speed	The time it takes to produce a physical response to a visual stimulus.	Tested using FitLight™ system where the athlete had to respond as quickly as they could when a light came on.
Choice reaction speed	The time it takes to produce a physical response to a visual stimulus when there is more than one possible course of action.	Tested using FitLight™ system pre-set to display one of two different colours. The athlete had to produce a different response based on which colour the light was showing.
Dynamic visual acuity	The ability to detect details of an object while either the object or you are moving.	A disk with 26 holes, each labelled with a letter from the alphabet, rotates at a speed of 2 seconds per rotation. The task is to place a golf tee in each hole in alphabetical order while the disk rotates.
Visual overload	Placing a higher demand on the visual system than it would normally experience from the environment.	Athlete had to throw and catch a ball using alternate hands, against a wall while wearing 'strobe glasses' to occlude their vision

Coincidence anticipation	The ability to predict when a moving object will arrive at a certain destination.	Test uses the Bassin Anticipation Timer which is a track of 49 lights. The start light comes on and then the lights appear to move along the track at a speed of 7mph. The task is to press a push button to stop the lights when it reaches a pre-determined location.
Visual search	Using the eyes to scan the environment for a particular object or feature among other objects or features.	A tachistoscope was used to present images on a computer screen for a short time and the athlete had to identify letter hidden within each image.
Gaze behavior	Where and when we chose to direct our eyes to sample information.	Measures using Tobii 2 eye tracking glasses whist the athlete was driving in a simulator.

Table 2 – Description of visual skills and tests

The key areas of improvement from the visual assessment were identified as eye-hand co-ordination, dynamic visual acuity, visual overload, eye speed, and peripheral awareness (which was observed to be particularly affected by stress levels).

HRV and breathing rate assessment

The first stage of HRV measurement was to screen for factors that can influence HRV (please see the checklist in the supplementary material of Laborde et al., 2017). This was then followed by a five-minute baseline measurement, baseline measurements were taken at the beginning of every session to compare to the baseline assessment on that day, given the daily fluctuations of HRV (Laborde et al., 2017). When starting the slow-paced breathing intervention, the practitioner firstly introduced the concept to the athlete to ensure they were educated around its benefits and use. They were then taught how to use diaphragmic breathing in line with the recommendations from Lehrer (2013), this included breathing in through the nose and inflating the stomach during inhalation and exhaling through pursed lips. The breathing rate assessment consisted of multiple breathing rate attempts at around 6 cycles per minute, which is a commonly accepted breathing rate to trigger a cardiovascular resonance (Laborde et al., 2021). For example, 4.5 seconds inhaling and 5.5 seconds exhaling, which the athlete performed over

two minutes. Following each different rate, they were asked to rate their perceived comfort of this particular rate on a visual analogue scale from "0" not at all comfortable and "100" completely comfortable. The reason for doing this was to ensure the athlete felt the breathing rate was achievable and comfortable for them to maximize adherence. The results were analyzed to determine which rate provided the biggest increase in HRV (specifically cardiac vagal activity [CVA] a parameter indexing self regulation [Thayer et al., 2009]) and which had a good rating of subjective comfort for the athlete to begin their training. The result from this was a 6-6 breathing rate which increased CVA from 61ms (root-mean-square of successive differences [RMSSD], which is said to reflect CVA and be less influenced by respiration [Hill et al., 2009]) to 186ms. This information was essential to inform the subsequent breathing training, which would aim to get the athlete to breathe at the desired pace, without the prompt of a breathing pacer.

Case formulation

Following the needs analysis, the practitioners met to discuss the athletes aims, current areas of strength and areas which could benefit from extra training. We followed the framework by Keegan (2016) to formulate the consultancy process. Case formulation involved synthesising information gathered at needs analysis and intake and using that to guide the choice of intervention (Keegan, 2016). It was clear that the athlete was highly driven and focused on the outcome of being signed as a formula one driver. The athlete had experienced a great deal of success as a junior driver, wanted to capitalize on this, and 'prove' their emergence as an elite driver.

It became clear from the data collected that the athlete had limited coping resources for regulating himself when under stress (e.g., decrease in peripheral awareness under stress, highlighting a need for strategies for taxing scenarios), which would be a key motivator for

optimal performance and placings that would result in potential promotion. The overarching aim of the intervention was to make the driver better prepared for performance at the highest level by enhancing self-regulation under stress (which was indexed by psychophysiological measures). The practitioner team formulated four key areas to achieve this aim that were addressed in the following order: 1) increasing level of psychological literacy – this was to ensure the athlete was educated about the importance of psychology and could successfully apply psychology to meet their needs (e.g., Cranney et al., 2012). 2) Enhancing emotional awareness linked to the athlete's propensity to get frustrated or angry when challenged – this aim was directly related to developing emotion regulation strategies (e.g., Lane et al., 2012). 3) Enhancing their pre and in race regulation – which aimed to bring together psychological skills and psychophysiological intervention to real-world scenarios (e.g., Beauchamp et al., 2012). 4) Build upon a strength-based approach to performance - to build greater psychological flexibility, to enhance understanding of positive traits and increase optimal functioning in performance (e.g., Ludlam et al., 2015).

Intervention

To plan the sessions each month, each practitioner would work out their individual aims for the session and then the three practitioners would discuss and see where any overlap may occur so that training could be integrated. An example of this was arousal regulation where visual and HRV training were accompanied by body scanning activities to develop awareness of arousal symptoms both psychologically and physiologically (Pineschi & Di Pietro, 2013). To demonstrate this to the reader we give a detailed example of one session below and to see an overview of the phases of intervention see Figure 1. The overview is the intervention that we had planned, although the specific content of the sessions were developed to consider the athletes progress.

	Pre-Intervention	*Phase One*	*Phase Two*	*Phase Three*	*Phase Four*	*Post-Intervention*
Phase Aim	Needs analysis and case formulation	Education and development of self-awareness	Skill learning	Implementation in life and performance	Evaluation How did we do – where next?	Practitioner evaluation (team and individual reflections)
Session Number	1	2 3	4 5	6 7 8 9	10	
Session Overview	Interview and assessment day	Developing knowledge of sport psychology and awareness of own psychological function	Teaching of psychological skills (linked to visual and HRV data) Pre-performance routines, enhanced emotional awareness and regulation; developing a strength-based focus.	Applying skills in a range of environments including simulator training, stress reduction, relaxation, physical training	Interview with the athlete	

Figure 1 - Phases of intervention

Example session

The overarching aim of the following session was performance under pressure and took place in phase three of the intervention. From a visual perspective (practitioner two) the aim of the session was to work on increasing peripheral awareness and reactions to stimuli appearing in the periphery. This was based around the finding that the athlete's angle of peripheral awareness was lower than average and the understanding that when driving the periphery is predominantly used to detect other cars and to respond quickly to their appearance in the periphery. As it is also recognized that peripheral vision decreases when under stress (Adams, 1971), this was seen as an ideal area to work on in combination with the athlete working on their ability to recognize when they were feeling stressed (practitioner three) and successfully applying slow-paced breathing in stressful situations (practitioner one).

The session began with an initial test of peripheral vision using the Vienna system (as reported in Zwierko, 2007 and Zwierko, 2010). This gives an overall angle of peripheral vision

(score at baseline was 173°), which is a good objective measure than can be compared pre- and post-training. Following this, some brief training was carried out to get the athlete to become aware of what they could see in his periphery. Tasks within this included a foveal vision exercise (e.g. a mobile phone based exercise) and making a physical response to stimuli in the periphery (e.g. catch a ball being thrown over their shoulder). These tasks progressed in difficulty to add cognitive and visual load, which the athlete found difficult.

Following this the athlete completed the Vienna peripheral awareness test again. Unbeknown to the athlete, this was not the final test of the session but an interim test to see how their peripheral vision was affected when put under stress and whether they would be able to use their training to overcome that. While performing the Vienna test, the practitioners all stood closer to the athlete than on any previous tests and loudly gave feedback during the test in a way designed to elicit stress, which echoed similar procedures used in Minns et al. (2018). This included comments such as ‘your reaction time was too slow there’, ‘you missed a target to your left’, ‘your performance has decreased from this morning’ etc. The result of this added pressure was that the athletes’ overall angle of peripheral vision decreased by 42°. We spoke to the athlete about this and we directly linked this situation to the breathing training they had been doing in the previous weeks. It was suggested that the athlete could use breathing as a way of helping them combat competition stress (at this point in the intervention the athlete was able to breathe at the given pace without the need for a breath pacer).

The athlete completed the Vienna test again whilst we attempted to make them feel under pressure. This time however, it was noticeable that the athlete used the techniques and they were able to not only overcome the effect of pressure but showed an increase of 4° visual angle from the initial test of the day. By adding the breathing, we also observed a change in RMSSD from 69ms (under pressure no slow-paced breathing) to 140ms (under pressure with slow-paced breathing) during the Vienna task. The athlete also mentioned whilst debriefing

from this task that they felt more concentrated during the second attempt than the first, which highlights both psychological and physiological benefits of breathing. This would also inform further slow-paced breathing training sessions in which we would manipulate a stress response for the athlete to use the skills in a similar environment.

Other training sessions followed a similar format where each practitioner would have individual time with the athlete to work on their own specific goals for the session and where possible, these would then be combined and also finish with work in the driving simulator to try and incorporate all elements together in an environment as realistic to competition as we could get. This enabled practitioner three to build the specialist performance data into performance related interventions. For example, the skills adopted through the vision and breathing training were utilized as a foundation to developing a pre-race strategy to help manage pre-performance anxiety. It has been previously found in similar research that using slow paced breathing prior to importance performance can not only improve physiological response but also lower state anxiety (Paul & Garg, 2012). This was further linked to work concerning the development of the athlete's emotional awareness, for example using mindfulness techniques such as body scanning to become aware of arousal in the body (Moen et al., 2015; Pineschi & Di Pietro, 2013). An aim here was to develop the driver's familiarity with different emotions, to support them in fostering language or literacy concerning their emotions, and to explore the behavioral impact of different emotional contexts. This aligned with the intake interview(s) where it was evident that the athlete became easily angered or frustrated when in situations of challenge.

Evaluations

Evaluations took place throughout the intervention process to ensure practitioner effectiveness and athlete satisfaction (Anderson et al., 2004). Specifically, this was achieved via athlete

feedback and examining psychophysiological data. The athlete highlighted the benefit and enjoyment they obtained from the practical sessions and the ability to "work outside of the car" to develop psychological skills. It became apparent that the athlete was more successful at self-regulation during stressful tasks, as he was able to identify when he was feeling under strain and subsequently used slow-paced breathing to alleviate this. Successful slow-paced breathing was confirmed by HRV data (RMSSD) and visual observation of respiration rate which was determined at the beginning of the intervention. This was also successfully applied to a number of practical sessions where this has a direct impact on improving visual performance (i.e., improved overall angle of peripheral vision under pressure).

Once the agreed schedule of support was completed with the athlete, practitioner one and two interviewed the athlete about their experiences. The athlete stated they had learnt about the importance of marginal areas (such as vision, breathing training) and that this needs to be implemented into regular training to see improvements (such as doing vision training at the end of a gym session). The athlete stated they wanted more contact in the off season as three-hour long sessions are too much during the season and they struggled to find time to train the techniques during the competitive season, the athlete wanted more practical application through intensive training camps in the future. The athlete also talked about taking up other sports in the off season (such as ping pong or tennis) to help improve co-ordination. Moving forward the athlete liked the idea of working together to create a bespoke plan for the future, with more opportunity for retesting over time to see what improvements had been made.

Overall, the outcomes of the intervention improved mind-body awareness, arousal regulation for racing and enhanced visual functions. We saw direct improvements in areas of the athletes' vision and their ability to maintain slow-paced breathing under pressure. With regards to vision training the athlete highlighted his newfound awareness of the importance of vision, "I would never have really imagined that your eyes would be an area that you can

somehow work with to make it faster, make it better". With regards to breathing training the athlete recognised they were able to use slow paced breathing successfully "I think we have seen some improvements from the first time… I had to start with the app on my phone but then I was able to do it myself and I've used those techniques in certain situations". The athlete referred to this having a positive impact on their driving experience, they reflected on the implementation of pre-race strategies that enabled their hands to be "less wet" in the pit lane prior to starting the race. One drawback was that we were not able to work with the athlete directly on the track, as we only had access to the simulator during the intervention. When discussing the fact that we had not been able to use the simulator or on track training sessions to determine an outcome measure for success and the athlete mentioned that "I feel that it helps and that's the main thing". From discussion with the athlete it was clear the intervention was playing a role in their racing performance. Following the completion and withdrawal of support, the athlete did achieve their goal of promotion to the next race category.

There are some important limitations within this intervention that should be considered in line with psychophysiological field work. Regarding HRV for example, due to the athlete being extremely busy we were only given a particular time frame and could not control for all variables that might influence HRV, e.g., training load, sleep. In addition, because of constraints on time not all measurements of interest could be taken, for example understanding how long lasting the effects of slow-paced breathing were on HRV. Given there is evidence to suggest short term (single session) slow-paced breathing interventions effects on RMSSD were found to dissipate after slow-paced breathing ended (You et al., 2021), therefore this would be an interesting measure in the future when using interventions with slow-paced breathing. In future, it would be useful for researchers to develop practitioner guidelines around implementing slow-paced breathing interventions.

Regarding vision training, it was very difficult to monitor how improvements in the 'off track' measurements were translating to driving performance, particularly as the athlete effectively put a stop to simulator work mid-way through the intervention. Further, there were limitations with using the simulator itself as it is not a true representation of driving in a race scenario. Although this was directly planned as part of the intervention (Figure 1) – this was not able to be achieved. When it was possible to collect eye-tracking data, the time it took to go through the footage and note differences in gaze behavior on different laps, and link this with sector times, was immense. Ideally, this is something that could have been gone through whilst with the driver and then specifically trialed different gaze patterns at the time, but this did not prove to be feasible.

Reflections

Following evaluation with the athlete the practitioners then reflected on their experiences and approach in this case. Reflective practice is recognised as an important aspect of psychology service delivery (Cropley et al., 2020; Cropley et al., 2010; Knowles et al., 2011). Reflection is thought to facilitate examination and sense making of practice and in turn raise knowledge in action consciousness (Knowles et al., 2011). We followed guidance on reflection presented by Anderson et al's (2004) to scaffold reflective practice as an applied team. We then reflected both individually and collectively using Kolb's reflective cycle (Kolb, 1984). For clarity the reflections have been split into sub-sections.

Working as an "integrated team"

Overall, the practitioners agreed that working as an integrated team was very beneficial for both the athlete and themselves. Perhaps the most pertinent reflection was the complementarity of practitioners' different specialisms and how this directly improved the support given the to the athlete. This was agreed to influence all phases of the intervention. For example, during

case formulation whereby practitioners could jointly discuss both objective and subjective data to make an informed decision regarding intervention. Another notable benefit was observing crossover in performance outputs, such as, seeing improvements in visual outputs as a result of implementing breathing techniques and improving bodily awareness.

One notable reflection is that there were very little challenges working as a "trio" to support one athlete. We discussed how this was probably due to several factors, the most pertinent being that each of the practitioners had worked together before in an academic setting. This familiarity helped to develop a very strong working relationship and understanding of each partitioner's strengths. For those who perhaps do not have this familiarity, it would be very beneficial to discuss approaches, strengths and structure for coming sessions.

Facing resistance

The practitioners did face some resistance during the application of the intervention. As the sessions progressed, we as practitioners, wanted to make the training more task-specific to what would be happening when racing so asked to increase the amount of time in the simulator to facilitate this and to increase the use of eye tracking being carried out as we were finding specific links between gaze patterns and sector times. In addition, there was an opportunity to explore other areas of support linked to the intake interview including an increased psychological literacy, a strengths-based approach to increasing athlete self-awareness and challenging beliefs around the adoption of sport psychology beyond a deficit approach. However, this was met with resistance. After a number of weeks, the athlete specifically requested less eye-tracking and simulator time and more practical exercises away from the 'in-car' setting. This did lead to some internal feelings of conflict as what we felt would be most beneficial for the athlete went against what they were specifically requesting. After discussing within our team, we went back to the athlete with the reasoning behind what we were proposing and how this was at odds with the athletes' requests. The athlete noted what we were saying

but insisted that they were feeling most benefit from the practical, non-motor sport specific training and that was what they wanted to proceed with. There was resistance to making time for any session that went beyond the practical training environment. The athlete was not as in invested in exploring his psychological reactions more deeply, he was more invested in the practical "doing". We did spend some time ensuring that he understood the importance of deeper reflection and shifting from just training to meaningful application.

At this point in the intervention practitioner three provided a review of support provided and recommendations for the future should the athlete wish to explore further dimensions of psychological support and exited the intervention. Based on their requests, and the knowledge that we had clearly laid out our recommendations (to both the athlete and their performance coach) we felt that we had to respect the athletes wishes, but also continue to monitor progress and their feedback on what was being carried out to ensure that the athlete was still benefiting from the intervention. Practitioner three noted how often as psychologists you have to cope with the readiness of the athlete to receive support. While she was disappointed in the long-term buy in of the athlete to the more holistic approach to thinking about being an athlete, it was the right thing to do to exit the environment and allow the athlete to continue to work with practitioner one and two whose more positivist approach aligned better with the athlete. That said, the resistance to challenge and the opportunity for change was a factor in the overall cessation of the intervention and the ability to go further with the support model.

Reflective conclusions

Overall, working cooperatively as practitioners with specialisms was an insightful and beneficial experience for all involved. It provided an opportunity to directly observe other practitioners at work with a client in a way which is not normally possible. The case provides insight into the process of working as an integrated sport psychology team, a process that involved merging or blending multiple philosophies, and approaches to intervention design and

implementation. Although we would all define ourselves as professionals in sport psychology and the overarching goal of the case was performance focused, the case shows how sport psychology services are nuanced. The case is evidence of the fact that no single technique or intervention will provide all the answers and there is no "one true method" of doing applied psychology (Henriksen et al., 2011). It was evident that the athlete responded well to the practitioner specialism and psychological services delivered in a more focused or objective manner. There is certainly room to learn more about specialism and the place of focused psychological services in the delivery of sport and exercise psychology.

We recommend practitioners with psychophysiological specialisms explore how they can create accessible packages of support for athletes to provide unique and specialist support which can enhance performance, both individually and in support teams. In future it would be useful to see more practical guidelines around psychophysiological areas (e.g., interventions, visual training interventions) for researchers and practitioners in the field to replicate in their own practice.

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