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A multi-perspective exploration of decision-making debriefing processes in an elite sailing team: Comparing declared and actual practice

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ABSTRACT

Despite evidence for the benefits of debriefing and reflecting on decisions, and the existence of best practice guidance, no study to date has aimed to investigate and develop decision-making debriefing in sport to improve athlete's decision-making. To address these gaps, this study investigated the declared and actual processes of decision-making debriefing practice in an elite sailing team. Semi-structured and stimulated recall interviews were conducted to investigate decision-making debriefing processes from multiple perspectives in one elite sailing team. To provide a rich and accurate insight into decision-making debriefing practice, observational methods were then used to compare actual practice to declared practice. Results showed that there were discrepancies between what participants said they did and what they actually did, highlighting that perceptions alone cannot be relied upon, and objective feedback may be required to instigate accurate reflection of practice and encourage change.

1. Introduction

Sailing takes place in a dynamic and uncontrollable environment. The fastest route to the finish line is variable with the changing wind direction, wind speed, waves, and tide throughout the race. A sailor must consider these changing environmental factors and the actions of competitors, constantly using their perceptual-cognitive skills and adjusting to make effective decisions (Araújo et al., 2005; Davidson, 2009). This is in addition to managing factors that may influence their decisions such as physical and emotional state, sailing knowledge and skills, regatta context, racing rules etc. Therefore, sailing performance is underpinned by athletes being capable of both making and executing decisions effectively; a combination of both cognition and action (Bar-Eli & Raab, 2006; del Campo et al., 2011).

Broadly speaking, there are three main ontological perspectives explaining the role of cognition in decision-making (Ashford et al., 2021a); information processing, ecological dynamics, and naturalistic decision-making. The information processing perspective views decision-making as a structured and highly cognitive process, relying on rational analysis and memory to arrive at an optimum decision (Mann et al., 2007; Mascarenhas & Smith, 2011). In contrast, the ecological dynamics perspective argues decisions emerge because of an individual's perception and action coupling through the information available in the environment (Araújo et al., 2006). Cognition is the on-going, active maintenance of a performer-environment system made up of the individual, their environment, and the task constraints (Araújo et al., 2019). In the middle of these two perspectives sits the Naturalistic Decision-Making (NDM) approach. It explains decisions made by experts under time-pressured, complex, and uncertain conditions (Klein, 2008), such as sport. The NDM approach suggests effective decisions are made by recognising situations and matching typical responses to that environment, rather than seeking optimal solutions (Kermarrec & Bossard, 2014; Klein & Calderwood, 1991). It is argued that empirical support for each of these perspectives highlights decisions can be placed on a continuum of emergent or intuitive to evaluative and deliberate, depending on the level of cognition involved in the process (Ashford et al., 2021a; Raab & Laborde, 2011). Where decisions fit on this continuum is seemingly dependent on the complexity of information available, the typicality of decisions, the time available, and the performer's characteristics (Abraham & Collins, 2011; Ashford et al., 2021a). Although there are situations where direct perception and action will be required in a race, it can be argued that many decisions in sailing can be placed on the more deliberate and considered end of the continuum due to their complex nature, the time available, and the opportunity to think several

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steps ahead. Therefore, cognition may play a significant role in decision-making in sailing.

To target decision-making accuracy in such complex environments, there has been a call for research that evaluates errors, understands how they occur, and how learning can be influenced in the process of decision-making (Gore et al., 2006). One approach to this is reflective practice. Research inside and outside of sport has shown reflective interventions can enhance performance on complex decision-making tasks (Razieh et al., 2018), promote decision-making skills (Wainwright et al., 2010), and enhance the development of professional judgement and decision-making expertise (M. Smith et al., 2019). Additionally, it has been argued that both team and individual decision-making skills cannot be developed effectively without the use of a slow, deliberative, off-field reflective environment being applied to the performance context (Richards et al., 2016).

However, without appropriate guidance on reflection, learners risk thinking deeply about the wrong things (Moreno & Mayer, 2005) and adopting inappropriate strategies to improve performance (Mayer, 2004). Therefore, coaches may be vital in guiding reflection and ensuring the necessary depth of processing is achieved for sailors to learn. One way in which coaches are included in a sailor's reflective practice is through 'debriefing'. Debriefing is a facilitator guided reflective discussion that attempts to bridge the gap between experiencing an event and making sense of it, in order to mutually highlight lessons for learners and make potential changes (Fanning & Gaba, 2007; Jamalpuri et al., 2016; Raemer et al., 2011). Previous research outside of sport has highlighted the benefit of debriefing for enhancing decision-making performance (Qudrat-Ullah. 2007; Zapko et al., 2015). Research in sport has also argued that the process of reflection with coaches allows players to be empowered and take responsibility for their own learning, increases their knowledge and understanding, facilitates a shared understanding of the teams mental model, and enhances their ability to make the correct decisions in future competitive environments (Richards et al., 2009, 2012). Therefore, debriefing sailors' decision-making may be an appropriate method of learning from experience and improving complex decision-making skills.

Current debriefing research in sport (Kojman et al., 2022; Macquet et al., 2015; McArdle et al., 2010; Middlemas et al., 2018) is limited to general performance and either focuses on team sports and/or gathers information from limited perspectives. No study to date has specifically investigated coach-athlete debriefing practice with regards to reflecting on decision-making performance specifically. Therefore, there is little understanding of the strategies and techniques used during a debrief to guide athletes towards improvements in subsequent decision-making performance.

Research has argued that observational methods can be used to supplement other methods and corroborate research findings (Gray, 2009; Jamshed, 2014), providing an account of actual practice to compare with declared practice collected during interviews. Previous research in sport has also highlighted that individuals can have an inaccurate perception of their practice and may reflect on false accounts of their behaviour (Partington & Cushion, 2013; Partington et al., 2015). Consequently, perceptions alone cannot be relied upon to give accurate accounts of sports practice, including decision-making debriefing practice. Previous debriefing research has either relied on a single method approach (Macquet et al., 2015; McArdle et al., 2010), or not explicitly compared perceptions and experiences of the debrief process gathered in interviews to observational data collected (Kojman et al., 2022; Middlemas et al., 2018). No study to date has compared the participant's declared and actual decision-making debriefing practice. More research utilising data triangulation is needed to directly compare coaches and athlete's perceptions of how they debrief decisions with evidence of actual debriefing practice, identifying inconsistencies between declared and actual behaviour, and providing a more accurate and rich insight into debriefing practice.

To address these gaps in the literature, ensure credibility, and attain a significant depth of understanding not achieved in previous research, the current study aims to explore and directly compare perceptions of in-regatta decision-making debriefs from three different perspectives in one elite sailing team; coaches, sailors, and expert consultants. Expert consultants are witnesses to debriefing practice within the organisation and so may be able to provide an external, less emotional viewpoint on the process. The study also aims to observe decision-making debriefs of multiple coach-athlete relationships within the same elite sailing team. It aims to directly compare observations to the participant's declared process of debriefing, comparing what participants say they do and what they actually do. It is hypothesised that similarities and differences will emerge both between different perspectives of declared practice, and between declared practice and actual practice, potentially revealing implicit techniques, recall limitations of participants, and constraints to consistent practice. Through this comparison, the study aims to provide a greater understanding of the reported and actual strategies and techniques coaches use during a debrief to guide their athletes towards improvements in subsequent decision-making performance.

2. Methodology

2.1. Philosophical beliefs

This research was driven by a realist post-positivist stance (Fox, 2008), with a critical realist ontology and modified dualist epistemology (Lincoln et al., 2018). Therefore, like positivists, it is believed that there is some objective reality within the social world. However, unlike positivists, it is acknowledged that although objective truth is the goal, discovering such reality in a variable and uncertain social world may be unachievable (Lincoln et al., 2018). The social world is value and theory laden and context dependent and as such, so is the research and the researcher (Tashakkori & Teddie, 2003). Post-positivist research relies on exploring multiple realities to approximate the truth, yet also applying methodological rigor and trustworthy data analysis (Fox, 2008; Greene et al., 1989; Lincoln et al., 2018; Phillips & Burbules, 2000). When adopting a modified dualist epistemology, the researcher attempts to gain knowledge about phenomenon by observing, measuring, and assessing it as objectively possible (Lincoln et al., 2018).

In line with this post-positivist stance and modified dualist epistemology, this research applied both triangulation and a critical multiplism methodology (Lincoln et al., 2018; Tanlaka et al., 2019), using more than one method and investigating more than one perspective. Methodological triangulation (Denzin, 2009) was achieved using multiple methods within the study. Data triangulation (Denzin, 2009) was achieved throughout this study by collecting data on the same phenomenon from multiple points in space and time. In line with post-positivism, reflexivity was also used throughout the study to account for the researcher's own values and acknowledge their own sense of reality. Critical multiplism was achieved in this study by exploring perceptions of the decision-making debriefing process from multiple perspectives. During this study, differences and commonalities in these data were examined to best understand how decisions are debriefed in a context-informed way and arrive at a satisficing truth. The critical multiplism approach allowed phenomena to be seen from multiple perspectives, adding depth, reliability, and validity to these data to conclude the inherent meaning confidently (Denzin, 2012; Fusch et al., 2018; Stavros & Westberg, 2009).

2.2. Participants

Data was purposefully sampled from coaches and athletes in an elite national sailing team. Participants were recruited based on their current involvement in the ten Olympic sailing classes. As data collection took place before Olympic Games selection in the team, there were multiple sailors being supported by one coach.

The observation sample comprised of 52 participants from an elite

national sailing team (9 coaches and 43 sailors). At the time of collection, each coach was coaching a separate Olympic class at Podium level on the World Class Programme. The tenth Olympic sailing class was excluded from the study due to a change in coach during the data collection period. Coaches ranged in experience from one to 22 years (M = 11.89, SD = 7.66), with four out of the nine participants having experience of coaching at an Olympic Games.

At the time of collection, 34 sailors were on either Podium (A – B) or Podium Potential (C – D) level funding as stipulated by UK Sport and were being supported by the observed coach in their respective class. The remaining nine sailors were on Podium Potential Pathway (E – F) level funding and were only being supported by the observed coach in the competition(s) during the data collection period; they had a different full-time coach within the national sailing team who was not included in the study. These nine participants were included in the analysis due to their involvement in group decision-making debriefs and the insight they provided into the consistency of the coach's practice. The sailors ranged in senior sailing experience from four to 15 years (M = 9.4, SD = 3.28), with six sailors having represented Great Britain at an Olympic Games. The sample consisted of 17 coach-athlete dyads and 14 coach-athlete triads (double-handed boats) in nine out of the ten Olympic sailing classes, totalling 31 coach-athlete relationships. Seventeen out of the 52 participants (5 coaches and 12 sailors) went on to represent Great Britain at the rearranged Tokyo 2020 Olympics.

Out of the observational sample, 30 participants were interviewed (9 coaches and 21 sailors). All sailors in the sample were on either Podium or Podium Potential level funding, were campaigning for Tokyo 2020 selection, and were being supported by the interviewed coach in their respective class. An additional six participants who were a group of elite sailing experts, had an insight into current practice of the coaches in the study, and had experience coaching at an Olympic or Paralympic level (M = 23.17 years, SD = 17.97 years) were interviewed. More specifically, this cohort was made up of two technical coaches, two consultant coaches, the campaign manager, and the performance director. For ease of reading, they are referred to as 'Expert Consultants'.

To ensure anonymity in the results, coaches are identified as C, sailors are identified as S, and expert consultants are identified as E. Following institutional ethical approval (UoC REC 1718_34), all participants were provided with information relating to the nature of the study and completed a written informed consent form prior to study commencement.

2.3. Data collection

A pilot study with sailors and coaches in the elite sailing team's pathway was conducted one month before data collection to allow the researcher to familiarise themselves with the methodology and make any appropriate amendments. As a result of conducting the pilot study, the interview guide was simplified to enable greater flow of interviews. Due to the ability to capture contextual details and nonverbal cues (i.e., body language, facial expressions, gestures etc.), video recordings can support a rich and accurate analysis (Heath et al., 2010). However, during the collection of clips for the pilot study, participants reported they were more comfortable with an audio form of recording, and it provided greater usability on the water. Therefore, observational data in the current study was audio-recorded to ensure participants were as comfort table as possible and provide greater opportunities to collect data.

Interviews. A mutually convenient time and location was arranged for a face-to-face interview which allowed for the researcher to engage with people in a natural setting, accounting for subjective experiences and context (Jones et al., 2013; Sparkes & Smith, 2014). A semi-structured interview format was used, whereby participants were guided through sets of questions that focused on the debriefing of sailor's decisions. Separate interview guides were made for each of the cohorts in this study (see Appendix A). For coaches and sailors, the interview guide consisted of three main sections: General, Specific, Improvements. The 'General' section explored how and why participants debriefed sailor's decisions.

The benefits of stimulated recall in the context of semi-structured interviews have been shown in the past in sport (Debanne & Fontayne, 2009; Hall, 2015). Therefore, the 'Specific' section of the interviews included an audio clip, collected by the coach, to help participants recall and develop their perceptions of their current practice for debriefing decisions considering what they heard and to instigate further discussion that may have been missed. On completion of the clip, participants were asked to talk the researcher through the specific debrief, their thoughts and feelings at the time of the clip, and their thoughts on hearing the clip back. When applicable, the same clip was used in coach interviews and sailor interviews. The final section of the interview (Improvements) focused on perceptions of how the debrief process could be improved.

As some of the expert consultants weren't currently coaching sailors, the interview guide was adapted accordingly. The first section and final sections followed the same structure as the coach and sailor interview guides but accounted for recalling on past coaching experience. The middle section of the interview focused on understanding participants perceptions of how coaches in the elite sailing team *currently* debriefed decisions. Interviews were always closed by giving the participants an opportunity to add any further information and ask any questions. Participants were then debriefed and thanked for their participation. Interviews lasted between 47 and 135 min ($M = 77.08$, $SD = 21.42$). All interviews were digitally recorded, and audio recordings were transcribed verbatim.

Observation. Data collection took place at three international regattas over the course of four months (April–August 2018), covering 19 days of competition in total. In total, 161 decision-making debriefs were recorded (108 were conducted on the water between races, 53 off the water). All decision-making debriefs were digitally audio recorded and transcribed verbatim. For at least 1 day at one of the three regattas, the researcher followed a class, observing and audio recording all the decision-making debriefs in each coach-athlete relationship. When observing the decision-making debriefs, the researcher acted as a 'complete observer' (Sparkes & Smith, 2014); not actively participating in the conversation and interacting from an outsider's perspective. Outside of the debriefs, the researcher acted as an 'observer as participant' (Sparkes & Smith, 2014), engaging with coaches and sailors to build rapport. This also included asking questions to coaches during races to gain clarity on sailor's decision-making in the moment and provide accurate context when observing the debriefs. The researcher kept a reflexive diary in which field notes and reflections between the three regattas were recorded. Field notes are an essential component of rigorous qualitative research, providing rich context for analysis (Phillippi & Lauderdale, 2018). They provided information about the setting, environment, behaviours, thoughts, feelings, and outcomes relating to the decision-making debriefs and so provided context to the data analysis process. When the researcher was not present or it was not possible to observe, the coach and/or another member of the elite sailing team who was witness to the decision-making debriefs for unrelated reasons (e.g., Sport Science and Medicine staff) was asked to audio record all decision-making debriefs during the three regattas.

2.4. Data analysis

The computer software package NVivo was used to store, manage, and analyse transcripts. This enabled the researcher to work efficiently with a large data set, facilitating both depth and sophistication of analysis (Nowell et al., 2017).

Interviews. Triangulation when analysing these data was conducted by analysing each of the three data sets in turn and comparing resulting patterns to highlight similarities and differences (Flick, 2018). In line with the modified dualist epistemology and the desire to assess data as

objectively as possible, interviews were analysed using a rigorous and systematic approach to coding and theme development; reflexive thematic analysis (Braun & Clarke, 2019). Coach interviews followed an inductive process of analysis. During the first phase of 'familiarising yourself with the data', the researcher manually transcribed verbatim each of the coach interviews and read and reread all the interviews prior to analysing the content, noting any initial ideas. The second phase is 'generating initial codes'. The researcher independently assigned words, phrases, and/or blocks of text to either one or multiple codes. Once this was completed for all interviews, the researcher then collated codes into potential themes; phase three of reflexive thematic analysis. Aligning to phase four, themes were reviewed with another researcher to check if they worked in relation to the assigned codes and to the entire data set. This researcher acted as a critical friend, stimulating debate, challenging decisions being made during the theme collation process and encouraging the researcher's reflection on methodological and analytical decisions (B. Smith & McGannon, 2018; Sparkes & Smith, 2014). Through phases three and four, broad themes were identified and narrowed down. Once themes and subthemes had been reviewed, they were named and defined by the researcher, completing phase five of reflexive thematic analysis.

The inductive process of analysing interviews with coaches organically identified themes which followed the interview guide. As sailor interviews followed a near identical interview guide to interviews with coaches, they were analysed deductively using the themes generated from the coach's data set as a coding manual. This was deemed appropriate as coding and the generation of themes was completed for coaches' interviews first and so the researcher felt subsequent data would always be driven by an awareness of this analysis process. Using pre-existing categories to analyse the data is in line with the post-positivist philosophical stance taken throughout this study (Fox, 2008). The process of deductive analysis allowed constant comparison between coach and sailor responses, highlighting any similarities and differences in the data sets. Expert consultant interviews followed a different interview guide to coach and sailors and so the data set was initially inductively analysed using reflexive thematic analysis (Braun & Clarke, 2019). After initial coding was completed, codes were reviewed with respect to coach and sailor interview analysis to allow for the aim of the study to be considered as a coherent whole. Therefore, phase three of reflexive thematic analysis was completed deductively. This comparative process allowed triangulation between coaches, sailors, and expert consultants with respect to how decisions are debriefed in the elite sailing team.

Observation. Observational data was deductively analysed using the themes generated from the analysis of interviews (Braun & Clarke, 2019). The process of deductive analysis allowed constant comparison between what participants said they did to what they actually did, highlighting any similarities and differences in the data sets. Using pre-existing categories to analyse the data and arrive at a satisficing truth of practice is also in line with the post-positivist philosophical stance taken throughout the study (Fox, 2008). Using NVivo, frequencies and the conversation coverage percentage was provided for each code. This allowed for the variance within and between decision-making debriefs to also be analysed, providing information on the consistency of the process of decision-making debriefing in the elite sailing team. Descriptive statistics were also gathered for the time of day a decision-making debrief was performed and the length of debriefs. All data was calculated for the sample as a whole and separately for on and off water decision-making debriefs.

2.5. Methodological rigour

Researchers have suggested that trustworthiness in qualitative research is a combination of credibility, transferability, dependability, confirmability, and reflexivity (Korstjens & Moser, 2018). Within the present study, several procedures were employed to enhance the trustworthiness of the findings with regards to these concepts.

Credibility was achieved through three methods; prolonged engagement, data triangulation, and investigator triangulation. The researcher was immersed in the sport for 30 weeks weeks prior to starting the first data collection period. During this time, the researcher attended meetings, regattas, and training camps to understand the sport and build trust and rapport with potential participants. Data triangulation was achieved through cross-comparisons of three separate cohorts within the study and the use of multiple methods. Investigator triangulation was also achieved through the use of another researcher as a "critical friend" who challenged decisions being made during the theme collation process and encouraged the researcher's reflection on methodological and analytical decisions (B. Smith & McGannon, 2018; Sparkes & Smith, 2014).

Transferability in the current study is evidenced through thick description. Detailed descriptions of the procedures and analysis are provided for transparency. To show dependability and confirmability, a detailed codebook was kept and updated throughout the analysis process, with an audit trail of any changes that were made through each stage of analysis. This ensured that any decisions made to amend codes or themes in the data set were transparent. An audit trail was also kept explaining reasons for theoretical, methodological, and analytical choices made throughout the study (Koch, 1994). Finally, along with the audit trail, reflexivity is evidenced using field notes which contained self-reflexive commentary around the researcher's feelings during the data collection process (Tracy, 2010).

3. Results and discussion

The aim of this study was to understand the decision-making debrief process between a coach and their respective sailor(s) during a competitive regatta, directly comparing declared and actual decision-making debriefing practice in an elite sailing team. As seen in Table 1, three themes were identified: When, What, and How. The results are discussed in line with existing literature at the end of each theme or subtheme to avoid repetition and increase readability. Rich, in-depth quotations from multiple sources are included where relevant to support the conclusions made on the themes.

3.1. When

All cohorts during the interviews reported conducting debriefs on the water after every race and off the water daily. This finding was supported by observational data which showed debriefing sailor's decision-making in a competitive regatta is regular practice within the elite sailing team (108 decision-making debriefs were conducted on water between races, and 53 were conducted off water between race days). More specifically, the average length of decision-making debriefs on the water was 3.34 min (SD = 2.88), ranging from 15 s to 13 min. The average length of decision-making debriefs off the water was 17.27 min (SD = 11.01), ranging from 1.5 to 45 min 87 % of all off water debriefs were conducted on the same day of racing, either straight after racing or later in the evening.

Interview and observational data also found environmental factors influenced when decision-making debriefs occurred. These factors

Table 1
Thematic framework summary.

Theme	Sub-theme
When	
What	
How	Phases of Debriefing
	Sailor Led
	Individual vs. Group
	Use of Questioning Skills
	Use of Objective Data

included both the physical environment (i.e., time available, type of regatta, sailing class etc.), and the level of emotion present. The results showed allowing all parties the time to self-reflect and process information could help to reduce emotion and aid logical thinking, evidenced in the below quote.

> C: Sorry it's [the debrief] taken so long
> S: No that's fine I always think we should do it like that 'cos like it takes me quite a while to think
> C: When I'm sailing, I'm like you, I need time to decompress think it through and then come with ideas because if you just do it snappy it's very easy to be emotionally driven by it
> S: Yeah, for sure it literally took me 'til like half an hour ago to think about it logically

This theme showed that debriefing decisions both on and off the water is regular practice within the elite sailing team. The timing of these debriefs varied due to physical and emotional factors, with the average time being longer off the water. Research has argued that debriefing is most effective when it occurs immediately after the event due to delays being disadvantageous to recall and causing potential anxiety with performers (Arafeh et al., 2010; Ross, 2020). However, the current study found some athletes may need to take time for emotions to subside before an effective debrief can be conducted, suggesting the importance of a logical conversation may outweigh the disadvantages surrounding recall in some circumstances. This finding supports previous debriefing research (McArdle et al., 2010) that debriefs are a changing process which are influenced by environmental factors and individual preferences. Individuals need to understand the context in which they are operating for debriefs to be effective; a concept known as contextual intelligence (Brown et al., 2005). Therefore, it is important for coaches and individuals facilitating a debrief to develop their emotional and contextual intelligence so that they can tailor to the practicalities and needs of the environment and individuals and maximise potential for learning.

3.2. What

All cohorts during interviews felt that although good decisions and positives were discussed, a large majority of decision-making debriefs were spent debriefing poor decisions to learn from mistakes and make necessary improvements: 'It's often focused on things that they can improve on and work on and probably see as weaknesses more than anything' (C). Sailors mentioned that decision-making debriefs rarely analyse why the positives went well: 'I don't think we probably do a great job of, right actually today was really good so why was it really good' (S). This perception was supported by the observational data. Out of the 365 decisions highlighted in debriefs, 58 % were poor decisions and 42 % were good decisions. As shown in Fig. 1, the percentage of decisions debriefed on and off the water relative to the total number of decisions highlighted was higher for poor decisions than good decisions (75 % vs. 41 %). Therefore, when poor decisions were highlighted, the why and how was more likely to be discussed compared to when a good decision was highlighted.

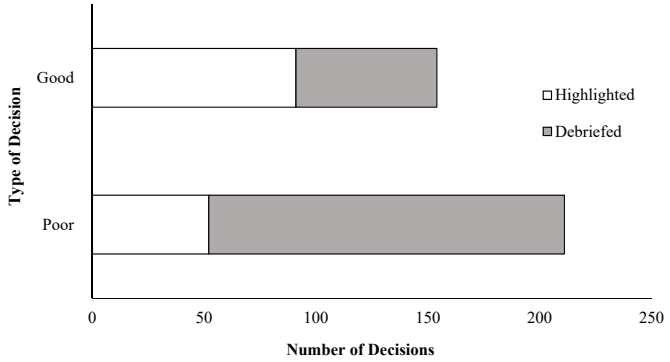

Fig. 1. Ratio of poor and good decision highlighted and debriefed.

The results showed the focus of the decision-making debriefs can be both specific and broad. All cohorts reported that, when decision-making was the crux of the day, critical moments of the race or decisions that made the most impact were the ones debriefed. However, all cohorts highlighted talking about a situation too much can occur: 'We get lost in the detail every time' (C). All cohorts reported that it was better and more efficient to debrief from a broad perspective, focusing on the priorities and/or goals of the day or race, which informs specific decisions made:

> [Talking about debriefing individual situations] I just think that might sort of narrow it down so much that you lose the bigger picture and bigger rules of what was right and what was wrong and then you become, sort of like, so engrossed in it, and actually there was a situation earlier in the year where like we'd become so analytical over a certain situation and then we forgot how to do it right (S)

Analysis of observational data (Table 2) showed that 80 % of all decision-making debriefs contained a broad focus at some point in the conversation and 84 % contained a focus on a specific moment of a race. When the decision-making debriefs had a specific focus, the average percentage of time spent discussing was higher than when the decision-making debriefs had a broad focus (46 % vs 32 %). Therefore, when conversations had a specific focus, they took more time on average. However, there was a large amount of variance found in average conversation coverage on and off water, as evidenced by the minimum and maximum coverage percentages in Table 2.

This theme showed both poor and good decisions are highlighted in decision-making debriefs. However, a large majority of debriefs were spent debriefing poor decisions, focusing on why they went badly rather than discussing what led to making good decisions. Previous research has shown that soldier performance significantly improved when both failures and successes were debriefed after each day using why questions, compared to debriefing failures alone (Ellis & Davidi, 2005) and that, through systematic reflection, people can learn from both their successes and failures (Ellis et al., 2014). However, the current study shows an uneven ratio of analysing good decisions compared to poor decisions, highlighting a potential area of improvement in current debriefing practice.

This theme also showed decision-making debriefs can be both specific and broad. On average, when conversations had a specific focus, they took more time, providing potential support to the perception that

Table 2
Decision-making debrief focus.

Location	Focus	Debriefs (%)	Average conversation coverage (%)	Min (%)	Max (%)
On Water	Broad	74	37	2	100
	Specific	79	47	6	94
Off Water	Broad	92	27	1	75
	Specific	96	44	3	93
On and Off Water	Broad	80	32	1	100
	Specific	84	46	3	94

Note. 'Debrief Percentage' refers to the percentage of the total number of debriefs which contained a broad focus (i.e., priorities and goals) or a specific focus (i.e., critical moments). 'Average Conversation Coverage Percentage' refers to how much of the total conversation this broad or specific focus took up. For example, 74 % of the total number of debriefs conducted on the water had a broad focus at some point in the debrief, and when on water debriefs had this broad focus, it accounted for 37 % of the total debrief on average. 'Minimum' and 'Maximum' percentage values highlight the variance in Average Conversation Coverage e.g., a broad focus in an on water debrief accounted for 2 % of the whole debrief in one example, and 100 % of the debrief in another example.

it can be possible to talk about a critical situation too much and that it may be more efficient to debrief from a broad perspective. Previous research on decision-making reflection has focused on critical incident analysis alone (Richards et al., 2009, 2012). Meta-analytical research has also promoted a focus on specific over general events (Tannenbaum & Cerasoli, 2013). The current findings contradict this as participants declared a *preference* to debrief decision-making broadly as opposed to critical moments, and actual practice showed both critical moments and a broad focus were equally common elements of the debriefs. The findings extend current research by showing the importance of both reflecting on critical incidents *and* what has influenced performers approach to the day.

3.3. How

Phases of Debriefing. Although not explicitly highlighted by participants as a debriefing structure, the interview and observational data found decision-making debriefs in sailing may contain four different phases similar to the PEARLS framework (Promoting Excellence and Reflective Learning in Simulation; Eppich & Cheng, 2015). These four phases include allowing sailors to react to their performance and vent emotion, describing specific or holistic situations to develop shared understanding, analysing decision-making to understand why decisions were made and what other options were available, and summarising learning and/or actions. In contrast to the PEARLS framework, these phases did not always occur in sequential order. Table 3 shows that over 80 % of off water decision-making debriefs consisted of three of the four phases of the PEARLS framework at some point within the debrief. The reaction to performance phase was the least consistent phase on and off the water. However, the requirement of this phase could be dependent on the individual involved, the context of the regatta and race, and the level of emotion involved in the day. It may depend on how much this phase is needed for the individual to engage in a reflective discussion (Jamalpuri et al., 2016).

Although describing the situation was reported to aid learning, all cohorts mentioned the tendency to spend too long in this phase, compared to the analysis phase: [After listening to stimulated recall clip] 'We just have a chat which is fine, it's just frustrating to hear because you're like, you're not actually getting anything from that' (S). This perception is supported by observational data which shows a high percentage of time spent in the describe phase (41 % on water, 32 % off water), which was very similar to the amount of time spent in the analysis of decisions phase (43 % on water, 47 % off water). Sailors and expert consultants stressed the importance of keeping the conversation focused on the why and why different options were not taken. However, observational data showed that 34 % of coaches' questioning related to understanding the why behind decisions made, and this type of questioning was less common on the water (see Table 4).

With regards to the final phase of decision-making debriefs, learning and/or actions were said to be clarified at the end of debriefs. However, sailors said that this clarification process was not always done, and so conversations were not ended and learning had not been consolidated: '… but we never came to a conclusion or something that we were going to do' (S). This perception was supported by observational data which showed this final phase did not always occur at the end of a debrief, with only 58 % of off water and 34 % of on water decision-making debriefs identifying learning or actions at the end of the conversation. In relation to this phase, it was also found that 47 % of on water decision-making debriefs had an explicit next race focus and 64 % of off water decision-making debriefs had an explicit next day focus.

This sub-theme showed evidence of all four phases of the PEARLS framework (Eppich & Cheng, 2015) during a decision-making debrief. The majority of time was spent in third phase of analysing decision-making (43 % on water, 47 % off water). This supports research which has stressed the importance of divulging into the process and the thoughts and feelings attached to decisions as opposed to just describing the outcome (Moreno & Mayer, 2005; Richards et al., 2009). A very similar amount of time was spent in the second phase of describing (41 % on water, 32 % off water). Research has argued the importance of achieving a balance between description of the situation and subsequent analysis as it may be difficult to engage in critical thinking processes without good descriptive (Atkins & Schutz, 2013). The current results indicate that the appropriate balance between describing and analysing decisions may not be achieved and that more time could be spent in the analysis phase of the debrief, especially when both parties already have a good understanding of what happened.

Additionally, even though the majority of debriefs identified learning or actions at some point, not all debriefs summarised learning or actions at the end of a conversation. Therefore, coaches and sailors may be falling into a common pitfall of having no definite look forward (Tannenbaum et al., 2013) or closing the loop after a debrief (Salas et al., 2008). Therefore, the appropriate balance of looking back and forward may not have been achieved during the debriefs and learning may not have been consolidated. Reflective practice does not occur without action (Jasper et al., 2013) and identifying solutions and areas of improvement is the key to applying learning into practice (Ahmed et al., 2012). Therefore, failing to achieve this in decision-making debriefs could negate the benefit of the debrief and the ability to transfer learning into the next race or day.

The multiple perspective and method aspect of the current study identified both perceived and actual inconsistencies in practice with regards to the phases of a decision-making debrief. There was a high proportion of variance in the extent to which each debrief consisted of

Table 3
Phases of debriefing: A non-sequential process.

Location	Phase	Debriefs (%)	Proportion of conversation (%)
On Water	Reaction to performance	17	14
	Developing an understanding	75	41
	Analysing decision-making	77	43
	Identifying learning	43	16
Off Water	Reaction to performance	6	4
	Developing an understanding	96	32
	Analysing decision-making	92	47
	Identifying learning	81	21

Note. 'Debriefs Percentage' refers to the percentage of the total number of debriefs which consisted of each phase. 'Proportion of conversation' refers to the average proportion of time spent in each phase. For example, 17 % of all debriefs conducted on water included a reaction to performance phase. When this phase was present in an on water debrief, it accounted for, on average, 14 % of the total debrief. Debriefing phases did not always follow a strict sequential order.

Table 4
Coaches Questioning of Why Decisions are Made.

Location	Why Questions (%)	Total % of Why in Question Type			
		Open	Closed	Leading	Non-leading
On Water	24	41	9	16	28
Off Water	39	55	18	25	46
On and Off Water	34	51	14	21	40

Note. 'Total Percentage of Why in Question Type' refers to the percentage of why questions asked in the total amount of open, closed, leading, and non-leading questions in decision-making debriefs i.e., out of all the open questions asked on and off water, 51 % related to asking the why behind a decision. 'Why' questions included why, why not, how come, how, understanding sailors thought process etc.

each of the four phases and the time spent on each phase, both within and between classes and on and off water. Results also suggest that the phases may not have always occurred in sequential order. Therefore, elements of this four-phased process may be intended but not always achieved.

Sailor Led. Results show that all cohorts believed debriefs should be sailor led, with coaches guiding and facilitating the debrief, keeping it on track and focused on the why. Some sailors reported the importance of having the confidence to challenge the coach on their opinion, believing in themselves and taking or leaving what the coach says. A proportion of sailors perceived debriefs to be coach led at times: 'I'm pretty sure that [coach] leads it' (S). The observational data showed that in 30 % of all the decision-making debriefs, coaches were deemed to be leading the conversation or explicitly providing sailors with the answers before asking, evidenced by the following extract; 'Probably your best bet was to have tacked and then the second you hit it then got back on shift' (C). As shown in Table 5, on average, coaches spoke for half of the decision-making debrief on and off water. However, there were high variations in the data with the amount of time coaches spoke ranging from 5.91 % to 78.62 % on water, and 20.15 %–80.69 % off water.

This sub-theme showed that, in support of previous research, debriefing is intended to be a collaborative process which encourages the learners to lead the conversation (Hogg, 2002). The observations in this subtheme show coaches and sailors have equal input into the decision-making debrief, each talking approximately fifty percent of the time. However, coaches also spoke for over ≥39 % of the debrief on and off the water in double-handed classes and group debriefs where there were multiple sailors involved. Therefore, there is indication that, in these contexts, the coach may have led the debrief as opposed to it being equal input from all parties. Additionally, the results showed individual debriefs are also coach-led at times. In coach-led situations, the likelihood of athletes to self-assess and generating their own thoughts, feeling, and behaviours may be reduced. Therefore, athletes may be less likely to take control of their own learning and become self-regulated learners (Zimmerman, 1989) which has been argued to be important for sporting success (Jonker et al., 2012).

The perceived or actual evidence of coach-led debriefs could indicate a coach-athlete power differential as highlighted in previous research (Hogg, 2002; McArdle et al., 2010). However, there was no explicit mention of a coach-athlete power differential in the interviews. As shown in the results, some sailors even reported having the confidence to challenge the coach, suggesting a power differential in an opposite direction. This may be due to a large majority of sailors reporting they felt they led the debrief, had a high level of influence on the process, and benefitted from an equal conversation between themselves and the coach. Therefore, a high level of athlete autonomy in debriefs may help the process remain collaborative and effective. However, despite all cohorts believing debriefs should be sailor led, there is limited evidence to suggest this was the case. Debriefs were either a collaborative process with equal input from both parties or coach led.

Individual vs. Group. Out of 161 decision-making debriefs, 90 % were conducted on a one-to-one basis between a coach and their sailor (s). Two out of the nine classes conducted group decision-making debriefs on the water at times, with three of out nine classes conducting group decision-making debriefs off the water at least once. Group debriefs were reported to be helpful if everyone was open to sharing as they increase access to the coach and are an opportunity for more perspectives to learn from. However, sailors and expert consultants also acknowledged that individual differences can make group debriefs difficult, they may contain less analysis of decisions, and they can generate an unnecessary amount of information to process: ' … it's hard to compare [decisions] and it can just be extra noise' (S). Sailors reported the benefits of doing a group debrief in addition to an individual debrief:

> The good thing about the group is if there's five of you there, so you got five times as many scenarios and decisions, so just more opportunity to learn from those things ….and then for the solo debriefs the benefit is that you can expand more on your own decision, look into it more and try and get a clearer picture. (S17)

This sub-theme showed the majority of decision-making debriefs occur on an individual level. However, group debriefs also occur and were perceived to be of benefit at times, sometimes over individual debriefs. Some sailors perceived them as an extra opportunity of time with the coach in a squad environment and valued additional perspectives. This is consistent with Macquet et al. (2015)'s findings that a comprehensive picture of performance cannot be built alone, and research outside of sport which has shown members of a group debrief can benefit as mutual discussion leads to deeper understanding (Bilgin et al., 2015). The results support research suggesting that there are equal and significant increases in knowledge when debriefing alone, in small groups, *and* large groups (Verkuyl et al., 2019). Therefore, depending on the athlete's needs and wants, coaches should consider the use of both individual and group debriefs during competition.

Use of Questioning Skills. The interview data highlighted the importance of having good questioning skills, limiting biasing sailors, and finding an appropriate balance of challenge versus support, and telling versus learning. However, interview and observational data suggest this was not always achieved. Coach interjection data showed 9.5 % of what coaches say in a decision-making debrief is asking questions. Table 6 shows the coaches questioning skills during on and off water decision-making debriefs. The use of open, non-leading questions was more common off the water and the use of closed questions was more common on the water. Sailors and expert consultants also stressed the importance of letting the sailor speak first and to limit biasing them. However, some sailors reported that this isn't always done: 'So, he's already got an idea of what he thinks happened and it is like he's putting that on us, whereas if he kept that to himself until he understood our viewpoint I think that would be better' (S). Similarly, sailors and expert consultants also highlighted finding the balance of telling sailors the answer versus encouraging their learning without it feeling like an interrogation:

> … and sometimes you just need to be told … But obviously you've got the other extreme where if someone just told you all the time, that wouldn't work either … I've noticed a massive difference in all

Table 5
Average percentage of time coaches spoke.

Context	Location	
	On Water (%)	Off Water (%)
All classes	48.86 (108)	49.14 (53)
Single-handed classes	49.81 (82)	58.27 (27)
Double-handed classes	45.87 (26)	39.66 (26)
Group	50.54 (10)	61.41 (6)
Individual	48.69 (98)	47.57 (47)

Note. Number in brackets refers to the number of debriefs in the specific context.

Table 6
Coaches overall questioning skills.

Location	Question Type (%)			
	Closed		Open	
	Leading	Non-leading	Leading	Non-leading
On Water	26.32	26.32	7.14	40.22
	52.64		47.36	
Off Water	22.69	20.01	6.92	50.38
	42.70		57.30	
On and Off Water	24.51	23.21	7.03	45.30
	47.70		52.30	

> the coaches trying to ask questions and sometimes it just turned into a quiz. (S)

The process of a coach asking good questions in the debrief can help athletes reflect on their performance (Forrest, 2014), support learning (Cantrell, 2008) and potentially develop athlete's problem solving and decision-making skills (Chambers & Vickers, 2006; Wright & Forrest, 2007). This sub-theme reiterated the importance of coaches asking the right questions and engaging in a discussion as opposed to an interview. Although the importance of questioning skills was highlighted by all participants, the results in this sub-theme challenge the extent to which coaches possessed and utilised these skills in practice. The results showed coaches can often bias sailor's responses and provide options without engaging the sailors thinking. Higher order questions such as: 'Why?', 'How?' and 'Which is best?' are most effective as they make athletes think and yield multiple response possibilities (Hattie, 2009). The observations in this subtheme show there was an equal balance of closed and open questions and thus no evidence that higher order questions, such as why and how, were asked most of the time. Self-learning requires active engagement of the learner in knowledge construction (Spencer & Jordan, 1999; Yoder & Hochevar, 2005). Therefore, the results are evidence that coaches can succumb to a common pitfall of telling, not discussing (Tannenbaum et al., 2013) and thus, at times, fail to engage the sailors in self-learning and development.

Use of Objective Data. Objective data in the form of weather data (e.g., weather masts, compass numbers etc), and performance data (e.g., tracking, video etc.) were reported as resources used to aid decision-making debriefs. When available, they allow debriefs to be as factual as possible, reduce uncertainty in perceptions, reduce emotion, and aid sailor recall:

> Sometimes you have a perception of the day and a perception of why people did well and then you look at the tracking and you're like, 'It didn't start where I thought it started, or it didn't go the way I thought it went' and it just gives you a bit more information. (S)

However, due to the nature of sailing, access to objective data isn't always possible. Even when objective data is available, interview and observational data showed the accuracy and the ability to rely on it is limited: 'It only shows you where you are and where you're going, it doesn't show you why' (S). Despite participants perceiving objective data to be beneficial to debriefing decision-making, and some evidence in the current study of its ability to challenge inaccurate perceptions of sailors, observations show objective data were not frequently used both on and off the water. The use of objective data was only referenced in a minority of decision-making debriefs ($\leq$41 %). When referenced, the use of weather data, which usually have greater accuracy, was discussed more often (41 % on water, 45 % off water) than performance data (0 % on water, 21 % off water). Therefore, objective data may be used more if there is greater confidence in its accuracy.

Research has shown the benefits of using objective data, such as video, in a debrief (Kojman et al., 2022). However, this study showed that some sports, such as sailing, may not experience the same consistent benefits due to the availability and accuracy of such data. Research in the health education domain (Ostovar et al., 2019; Zhang et al., 2019) has found no clear learning or performance advantage of video-assisted debriefing *over* verbal debriefing. Therefore, the absence of objective data in a decision-making debrief may not affect the positive learning outcomes.

3.4. Factors influencing decision-making debriefing

The results highlight inconsistencies in decision-making debriefing practice. Physical and emotional environmental factors were reported to influence the nature and experience of a decision-making debrief. Variables such as time constraints, regatta focus, sailing class, number of sailors, race outcome, accommodation logistics, individual preferences, protests, other commitments, and the level of emotion involved influenced when and how decision-making was debriefed. As previous research has suggested (Hogg, 2002), coaches had to balance immediate and accurate recall with allowing reflection time to regulate emotions. The sailing environment also creates a barrier to data driven feedback. Tracking data is not always available, coaches are sometimes put into "pens" behind the starting line so unable to follow the race, and some competitions restrict the use of weather masts. Therefore, the availability and reliability of objective evidence is limited. This increases reliance on subjective perspectives to clarify what went on in the race and what the best decisions were. Access to multiple perspectives and learning from others could thus help increase indicators of performance which is argued to be important for debriefing effectively (Salas et al., 2008).

Furthermore, individual characteristics and relationships of the people involved were also found to influence the nature of a decision-making debrief, supporting previous research (McArdle et al., 2010; Middlemas et al., 2018). These included the coach and sailors' level of knowledge and experience, personality differences, and the sailor's attention span and engagement and willingness to learn. These findings reinforce that debriefing is not a consistent exercise (McArdle et al., 2010; Middlemas et al., 2018) and highlight the importance of developing both emotional and contextual intelligence (Brown et al., 2005), tailoring practice to the individuals and context to maximise potential for learning. However, it is not known whether inconsistencies in participant's practice were intentional or not and thus whether it is evidence of the appropriate application of emotional and contextual intelligence or of sub-optimal practice. Individuals are encouraged to reflect on how consistent their decision-making debriefing practice *should* be, and when and how practice would need to adapt to suit the needs of the individual and context and maximise potential for learning.

4. Strengths and weaknesses of the study

The critical multiplism methodology was a strength of this study as it allowed subjective experiences of coaches, sailors and experts to be compared and contrasted with each other as well as with observed actual practice. Adopting these methodological approaches allowed inconsistencies both between subjective perspectives, but also between declared and actual practice to be uncovered, building upon research that has shown coaches can often have an inaccurate account of their practice (Partington & Cushion, 2013; Partington et al., 2015), and highlighting the danger of relying on a sole subjective perspective to understand phenomena. Further research should continue the application of these methodological approaches to increase the depth, reliability, and validity of the data collected.

In support of previous research (Hall, 2015), stimulated recall interviews were used successfully in this study. Extending current research, they not only enabled a richer understanding of a decision-making debrief and the factors that influence practice to be gathered but were also a tool to challenge previously declared practice and increase participant's awareness of sub-optimal practice. The current study extends current research as it found that audio clips, not video clips, were also effective in generating further elaboration of practice. Although the appropriateness of audio over video clips may depend on the phenomena in question, the study suggests that the same benefits with regards to stimulating recall can be achieved. Future research should look to investigate the advantages and disadvantages of using audio over video clips to stimulate recall.

To achieve breadth and depth of data, the research attempted to gather data from as many sailing classes and as many events as possible. This meant relying on the coaches to record their own decision-making debriefs when the researcher could not be present. However, the nature of collecting data in the applied world meant gaps in data collection occurred. Therefore, there is a possibility that the results to not represent

a complete picture of participant's practice. There was also disparity in the quality and the ability to make sense of data when collected by the researcher compared to the coaches. To address these limitations, future research in the applied context could aim to collect data only when the researcher is present, utilise waterproof recording equipment which could block the influence of wind, and/or mic up each participant to remove the need for participants to stop and start recording and thus the memory or technical issues associated.

There is also a possibility of observer effects when the researcher or coach was recording decision-making debriefs. However, the intention was not necessarily to remove observer effects. In line with the post-positive philosophical stance taken in this study, the world is value laden and context dependent (Tashakkori & Teddie, 2003) and so research should not aspire to be value free. As Monahan and Fisher (2010) argue, practice may be even worse when the researcher is not present, and it is unlikely to be much better. Therefore, with respect to the current study, it can be argued that the best version of the participant's decision-making debriefing practice was observed, or at least participant's beliefs of what best practice is. Thus, indications of sub-optimal practice may be even more valid as they have escaped the filter of self-censorship and/or indicate participant's lack of understanding of what best practice in decision-making debriefing is or their skills to execute it. However, clinical research has shown that the presence of a third-party observer can increase anxiety and disrupt performance (Rezaei et al., 2017). Therefore, it is possible that the presence of the researcher could have created anxiety for the participants, disrupted the flow of debriefs, and reduced the likelihood of observing optimal debriefing practice. The current study utilised multiple time points and included an extensive period of researcher immersion in the aim of reducing the likelihood that self-censorship occurred at every data collection time point and increasing participant's comfortableness with the researcher's presence. There is a possibility of observer effects, but this is not necessarily a limitation of the study and perhaps even a strength.

The study focused on one national sailing team, the most successful Olympic sailing nation in the world. Within this team, the study examined multiple individuals in multiple sailing classes who possess a range of experience from Podium Potential to Podium level. Therefore, a significant strength of the study is the breadth and depth of understanding gathered from one elite sailing team. Although not the purpose of qualitative research, it can be argued that the focus on one elite sailing team can limit the ability to generalise the findings to the broader population. More research investigating decision-making debrief practice in other sports is needed.

This study focused on reflecting on decisions and thus assumes individuals can verbally report on their cognitive processes. However, decision-making is not always a conscious process, and one cannot always access and verbalise the mental processes involved (Ashford et al., 2021b). Both on and off-field environments are important for developing decision-making and may depend on the level of cognition involved (Ashford et al., 2021a, Ashford et al., 2021a; Raab & Laborde, 2011; Richards et al., 2016). A potential limitation of the study is that it has only focused on providing greater understanding of an off-field environment method to develop complex decision-making at the more evaluative and deliberate end of the continuum, rather than the more evaluative and emergent end. When considering the development of decision-making in sport, the insight provided by this study should be considered in combination with on-field incidental training of decision-making (i.e., frequent exposure to perception of information, practice manipulation), applying both implicit and explicit learning approaches and ensuring all types of decisions within the sport are targeted.

5. Practical implications

This study has provided several practical implications for debriefing decisions effectively. To summarise, effective decision-making debriefs should be simple, relevant and structured around critical moments or strategy/goals for the race or day. Facilitators must try and find the balance between the description and analysis of a decision, prioritising the "why" over the "what" and challenging athletes to avoid an unproductive dialogue of their whole performance. With regards to analysing decisions, the focus should be placed on the process of decision-making and trying to understand how both good and bad decisions were made and why the best options were or were not taken in the moment. To ensure learning transfer and athlete ownership of the process, athletes should be encouraged to summarise debriefs by highlighting actions and learning for the future. Facilitators should prioritise discussion, listening to the athlete's perspectives first, refraining from providing the answer straight away, and encouraging athlete reflection. Implementing an explicit structure, such as the PEARLS framework, could aid these suggestions and increase consistency and efficiency in decision-making debrief processes. Given the variability in decision-making debriefing practices found in this study and research suggesting there is no best way to conduct a debrief (Sawyer et al., 2016), individualised structures should be co-constructed with debrief participants, ensuring flexibility and purposeful application to suit both the individual(s) and the context.

6. Conclusion

This study provides a rich and accurate insight into decision-making debriefing practice within an elite sailing team, and a greater understanding of the strategies and techniques coaches use during a debrief to guide athletes towards improvements in decision-making performance. By comparing declared to actual practice, it highlighted inconsistencies in decision-making debriefing practice, discrepancies between what participants say they do and what they *actually* do, and some evidence of sub-optimal practice. However, inconsistencies in practice could also be explained by the finding that debriefing is not a consistent exercise. Insight into the processes of decision-making debriefing provided by this study, alongside objective feedback, can provide guidance for individuals reflection of the why, what, when, and how of their own decision-making debriefing and encourage changes to practice where appropriate.

CRediT authorship contribution statement

Chelsea Orme: Writing – review & editing, Writing – original draft, Visualization, Validation, Resources, Project administration, Methodology, Investigation, Formal analysis, Data curation, Conceptualization. **Simon Crampton:** Writing – review & editing, Supervision, Methodology, Funding acquisition, Conceptualization. **Jenny Smith:** Writing – review & editing, Supervision, Methodology, Formal analysis, Conceptualization.

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Declaration of competing interest

The authors declare that they have no known competing financial interests or personal relationships that could have appeared to influence the work reported in this paper.

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Appendix A. Supplementary data

Supplementary data to this article can be found online at https://doi.org/10.1016/j.psychsport.2025.102910.

Data availability

The data that has been used is confidential.

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