Psychological models in sport psychology

Psychological Models in Sport Psychology: A Preliminary Investigation

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Abstract

Applied psychology is characterised by a variety of theoretical models, informing distinct approaches to classification, explanation, and intervention in service-delivery. Such theoretical or psychological models include behavioural, biological, cognitive, humanistic, psychodynamic, and social paradigms, with exposure to these models and attitude formation occurring within the structured university-based stage of sport psychology development. It is, therefore, important for the sport psychological domain to investigate developing attitudes, given these models inform subsequent professional practice and decision making. Accordingly, the present study explored the attitudes of Stage-1 sport psychology students through a modified form of the Maudsley Attitude Questionnaire (34 males, *M*age = 24.71 years, *SD* = 7.23 and 42 females, *M*age = 24.76 years, *SD* = 6.20). The questionnaire was designed to assess attitudes across eight psychological models (e.g., biological, cognitive) and four sport psychology issues (pre-performance anxiety, a lack of confidence, depression, and eating disorders). Analyses of variance demonstrated significant main, model, and interaction effects. No one psychological model was endorsed by all respondents, with model endorsement varying significantly as a function of the issue presented. Principal Axis Factoring revealed a large contribution attributable to cognitive-behavioural and 'eclectic' (mixed elements of social constructionism, biological, and psychodynamic) models. In contrast, the spiritual model represented low levels of participant endorsement and application. Investigation of Stage-1 students can promote an evidence-based understanding on currently developing attitudes and inform the development of sport psychology education, supervision of training routes, and subsequent professional delivery.

Keywords: attitudes, issues, paradigms, training, service-delivery

Psychological Models in Sport Psychology: A Preliminary Investigation

Applied psychology is characterised by a variety of theoretical models, including behavioural, biological, cognitive, humanistic, psychodynamic, and psychosocial strands, which describe and explain human behaviour and the nature of behaviour change (Poczwardowski, Sherman, & Ravizza, 2004). These models of psychology held by health care professionals are implicit in their attitudes and inform theory and practice (Reid, Moberly, Salter, & Broome, 2017). For example, whether the classification, explanation, and intervention should be directed at abnormal behaviours (behavioural); biological abnormalities (biological), maladaptive thoughts and beliefs (cognitive); present growth (humanistic); unconscious factors (psychodynamic); or social circumstances and conditions (psychosocial strands). For a more detailed discussion, we refer the reader to Poczwardowski et al. (2004). These models inform distinct approaches to service-delivery, however, different psychological models adopted by health-care professions may also contribute to the frustration and lack of cohesion felt by professionals and multi-disciplinary teams (Colombo, Bendelow, Fulford, & Williams, 2003; Reid et al., 2017).

As a consequence, Harland et al. (2009) developed the Maudsley Attitude Questionnaire (MAQ) to capture attitudes consistent with these psychological models in concepts of mental illness. With a sample of trainee psychiatrists, Harland et al. (2009) investigated the extent to which attitudes reflected endorsement of psychological models varied between diagnostic category. For example, the biological model was most strongly endorsed for schizophrenia and least endorsed for antisocial personality disorder, with the biological model most strongly endorsed overall by the trainee psychiatrists. Following on from this, Reid et al. (2017) administered an adapted version of the MAQ to trainee clinical psychologists. The social realist and social constructionist models were the most strongly endorsed, suggesting the immediate social circumstances of the individual as well as the

wider social context were perceived to be the most important factors in conceptualising mental disorders. Additionally, the three main therapeutic models (cognitive, behavioural, & psychodynamic) were valued equally by the trainee clinical psychologists. Furthermore, when comparing to the original Harland et al. (2009) study, attitudes of the trainee clinical psychologists and psychiatrists continued to sit at opposite ends of the biological/ psychosocial spectrum. As a result of these differing findings, Reid et al. (2017) highlighted a need for researchers to implement the MAQ in different psychological domains, for the purpose of allowing more reliable and informative comparisons to be made.

Within the sporting domain, exposure to these psychological models often occurs within the structured university-based stage of development. For example, the Association for Applied Sport Psychology (AASP), Division 47 of the American Psychological Association (APA), the Australian Psychological Society (APS), the British Association of Sport and Exercise Sciences (BASES), and the British Psychological Society (BPS) all require the completion of undergraduate and masters or doctoral degrees before embarking on supervised training routes. It is during these educational years, that both the timing and duration of exposure to psychological models contributes significantly to attitude formation (Reid et al., 2017). In a similar vein to psychiatrists and clinical psychologists, Stage-1 sport psychology students (individuals engaged in the final university educational stage of their sport psychology development in the UK) are taught how differing models inform classification, explanation, and intervention. Specifically, in the sport psychology context, this contributes to an understanding of what the athlete is experiencing and the specific techniques that can be applied in practice (Winter & Collins, 2015a).

The psychological model most frequently reported, both in terms of the evidence-base and as employed by sport psychology practitioners, is the combination of the cognitive and behavioural paradigms (Fortin-Guichard, Boudreault, Gagnon, & Trottier, 2018; Ravizza,

2002; Winter & Collins, 2015a). Implementing this approach requires not only concrete changes in problem behaviour, but also the allocation of appropriate techniques to allow the performer to transform maladaptive cognitions to those that are readily adaptable (McArdle & Moore, 2012). Coincidently, when synthesising the important components of sport psychology services, Poczwardowski et al. (2004) argued it is important to be grounded in one (or more) of the major theoretical models of psychology. However, to our knowledge there is no published evidence of sport psychologist's attitudes to or use of these models. This is problematic, given these models inform professional practice and subsequent judgements and decision making (Martindale & Collins, 2013; Winter & Collins, 2015a).

Accordingly, the present study aimed to characterise the profile of psychological model adoption by Stage-1 sport psychology students, when conceptualising issues within applied sport psychology. The investigation of Stage-1 students, promotes an evidence-based understanding on currently developing attitudes. In so doing, the present study can inform the development of sport psychology education, supervision of training routes, and subsequent professional delivery. Based on the previous literature (e.g., Fortin-Guichard et al., 2018; Ravizza, 2002; Winter & Collins, 2015a), it was expected that (a) overall, participants would endorse the cognitive-behavioural models significantly more than the biological and psychosocial models, thus differing from the pattern of endorsement for Harland et al.'s (2009) psychiatrists and Reid et al.'s (2017) clinical psychologists; and (b) the extent to which attitudes reflected endorsement of models would vary with diagnostic category, e.g., cognitive and behavioural models were expected to be favored in attitudes to anxiety and confidence, whereas biological models would receive greater endorsement for depression and eating disorders.

Method

Participants

At the time of the study, there were 18 BPS accredited sport psychology Masters' degrees running within higher education institutions in the UK. Following institutional ethical approval, the programme director responsible for each of these accredited degrees was initially contacted, informed of the proposed study, and invited to allow their students to participate. Primary contact with the directors was essential for recruitment of the intended participants, i.e., individuals engaged in the final university educational stage of their sport psychology development (BPS Stage-1).

Subsequently, 76 individuals currently enrolled on a BPS accredited Master's degree were recruited to participate in the study, following the completion of informed consent. The sample comprised 34 males (age: M = 24.71 years, SD = 7.23 years) and 42 females (age: M = 24.76 years, SD = 6.20 years). Collectively, participants reported the following nationalities: British (76.3%), European (11.7%), American (3.9%), Canadian (2.7%), Irish (2.7%), South African (1.3%) and Brazilian (1.3%).

Measures

We used an adapted version of the Maudsley Attitudes Questionnaire (MAQ) designed to elicit psychiatrists' attitudes towards mental illness (Harland et al., 2009). The MAQ consists of the major conceptual models available to those working in psychological domains: biological, cognitive, behavioural, psychodynamic, social realist, social constructivist, nihilist, and spiritualist. Aligned with common conceptual models in the sport psychology literature, we replaced the 'nihilist' with the 'humanistic' approach due to its prominence within our applied field (e.g., Friesen & Orlick, 2010; Katz & Hemmings, 2009; Keegan, 2010; Poczwardowski et al., 2004).

Part 1 of the MAQ included items pertaining to demographic and educational characteristics, adapted for the present study through minor adjustments to ensure relevance (e.g., 'psychiatry' was changed to 'sport psychology'). Part 2 of the questionnaire comprised

four questions to capture the essence of each psychological model broadly in terms of aetiology, classification, research, and treatment (see Table 1). This resulted in a 32-item questionnaire, with the questions assorted randomly. Participants in the present study were required to complete the MAQ in relation to two common sport psychology issues; pre-performance anxiety and lack of confidence, and two mental health issues reported within the sporting population: depression and eating disorders. All four issues were purposefully selected due to their abundance of contemporary literature (e.g., Rice et al., 2016; Woodman & Hardy, 2003) and featured curriculum content within the sport psychology educational programmes. Respondents indicated the extent to which they agreed/disagreed with each statement regarding the diagnostic category for each issue on a five-point Likert scale (1 = *'strongly disagree'*, 5 = '*strongly agree*'). Thus, part 2 of the MAQ consisted of 128 attitude items in total.

Harland et al. (2009) reported an observed median validation rating of 100% (range 84.4 – 100%) for the MAQ and a 95% confidence interval (CI) for mean construct validity between 92.3% and 98.1%. Furthermore, the MAQ has been found to have adequate construct validity with psychiatrists (Harland et al., 2009), and the principal component analysis (PCA) conducted by Read et al. (2017) implied that the eight models reflected in the MAQ were seen as distinct by trainee clinical psychologists.

To confirm the status and validity of the adapted MAQ within sport psychology, we employed a similar approach to Harland et al. (2009), albeit using a group of six experienced and chartered practitioners rather than a sub-sample of trainees. These individuals were presented with a randomised list of the 32-items and were asked to place them in the appropriate category. Scored as correct or not correct, this offered a measure of construct validity. These participants scored a median validation of 100% (range 90-100%); positively

comparable with the results from Harland et al. and supporting the validity of the adapted MAQ for use in sport psychology.

Procedure

We conducted a preliminary pilot study (Gratton & Jones, 2003) on 13 respondent trainee sport psychologists to ensure that the questions and format of the questionnaire pack were clear and understandable by the targeted respondents. Using a cognitive interviewing process, respondents perceived the MAQ to be positioned within a clinically based psychological approach, due to the language used throughout, e.g., frequent use of the word 'disorder'. The authors subsequently amended 'disorder' to 'issue' throughout part 2 of the questionnaire.

Questionnaire packs (including participant information sheets and consent forms) were either posted or sent electronically to the responding programme directors to disseminate to their respective Masters' students. Participants were advised the information they gave would be treated in strict confidence and used only for the purposes of the current research. Following completion of the first part of the MAQ, all participants followed a standardised procedure. They were asked to consider a number of statements regarding a variety of psychological models and evaluate their relevance to the four exemplar issues, by circling the appropriate number from the five-point Likert scale. Participants were instructed that the statements were not meant to be mutually exclusive and that there were no correct answers.

Data Analysis

In accordance with Harland et al. (2009) guidelines, responses for the four items derived from each model were summed to form an overall attitude score. This was based on the demonstrated premise that the four items (aetiology, classification, research, and treatment) within each model (biological, behavioural, cognitive, psychodynamic, social

realist, social constructivist, humanist, and spiritualist) probed the same construct. This reduced the number of attitude variables from 128 to 32 per respondent. This single summed aggregate score for each of the eight models was then applied to the four issues.

Reflecting the hypotheses presented in the introduction, data were subjected to three analytic approaches, following the methodology applied by Harland et al. (2009). Firstly, we examined the responses to each question, to see if any items received universal agreement or disagreement. We also looked at the top and bottom three items, to see where the extremes of view existed. Secondly, following a graphical representation of aggregated views, we used a 4 x 8 repeated measures ANOVA to test whether different models were applied to the four presented issues. Attitude scores across the four issues were specifically tested for interaction effects, which would indicate a differential application of the psychological models. Partial eta-squared (η_p^2) were reported as the effect size (Tabachnick & Fidell, 2007). Values of .2, .5, and .8 indicated small, medium, and large effect sizes, respectively (Cohen, 1992). Finally, Principal Axis Factoring was applied to the 32 attitude variables to identify those dimensions most commonly applied by participants when interpreting underlying causes of the four issues.

Results

Levels of Agreement and Disagreement Across Participants

As the first step in analysis, we wanted to look at high and low endorsement items across the questionnaire, to see if any response patterns were apparent. As was the case in the original, psychiatry-focused study (Harland et al., 2009), no statements received universal agreement or disagreement, suggesting some variance in participant perceptions. Interestingly, every model/issue combination received at least one score at either extreme; that is strong agreement or disagreement with the suggested statement.

Across participants, the three most agreed-with statements on our modified version of

the MAQ related to a humanistic model of lack of confidence: “The issue should be treated by creating a therapeutic relationship that is warm and accepting, and that emphasises growth and self-actualisation” (mean Likert value = 4.39), and a cognitive model for confidence and depression: “The issue should be treated by challenging and restructuring maladaptive thoughts and beliefs” (mean value = 4.26 for both items). Conversely, the three statements receiving the lowest endorsement were entirely related to the spiritual model: “The issue is better understood through religious or spiritual insights” to anxiety (1.29), confidence (1.33) and eating disorders (1.38), with two other spiritual approach items (questions 21d and 25d) equal third (also 1.38).

Aggregate Scores Across Model and Issue

For all the other analyses, individual question responses were aggregated to form total attitude scores (range 4–20) for each model and issue. This generated 32-items representing participants’ views across model and issue. Means and standard deviations for these data are presented in Table 2. To more clearly illustrate the endorsement of each model by issue, Figure 1 illustrates standardised mean scores around the neutral response (Likert scale of 3 changed to a mean value of 0) to present participant views on the model-issue interaction.

The figure shows a large spread of perceptions across issue for the biological model, almost identical views for the cognitive, behavioural, humanistic (all positive) and spiritual (negative) approaches, and somewhat varied differences across the other model-issue data. Reflecting the picture provided, the 4 x 8 (Issue x Model) repeated measures ANOVA demonstrated significant main (Issue: $F(3,128) = 40.4$, $p<.001$, $\eta_p^2 = .356$), Model ($F(7, 249) = 107.6$, $p<.001$, $\eta_p^2 = .596$) and interaction (Issue x Model ($F(21, 685) = 37.2$, $p<.001$, $\eta_p^2 = .338$) effects. Greenhouse-Geisser adjustments to df were used throughout.

Unpacking the significant main effects demonstrates that opinions across participants were mixed. Follow up Tukey Tests on the main effect of issue showed significant

differences between pre-performance anxiety/confidence (marginal means of 10.87/11.04 respectively) and depression/eating disorder (11.93/11.85); simplistically perhaps, between sociopsychological and biopsychological challenges. Follow ups to the main effects of model showed these as being due to significant differences between the extremes; namely, cognitive, behavioural, and humanistic on the one hand (14.7, 13.9, and 13.3 respectively), and social constructionist and spiritual on the other (9.6 and 6.4). The interaction indicates that model endorsement varied significantly as a function of the issue presented. This complex picture is most clearly interpreted by reference to Figure 1.

Clarifying the Models Used by Participants

As the final stage of analysis, we wished to clarify the psychological models used by participants when considering the four issues presented. Following the advice of Preacher and MacCallum (2003), we used Principal Axis Factoring with Promax rotation in preference to the PCA approach employed by Harland et al. (2009). This generated the pattern matrix shown in Table 3. We used a combination of the scree plot and eigen values (>1) to cut the solution to eight factors. It is relevant, however, to note the large contribution attributable to the first three factors, and our subsequent considerations will focus on these.

As can be seen, Factor 1 related to a 'cognitive-behavioural model' offering further clarity to the picture shown in Figure 1 and in the ANOVA results reported above. Factor 2 was less clear, and was termed 'eclectic', noting the mixed elements of social constructionism, biological, and psychodynamics apparent. In contrast, Factor 3 seemed clearly related to 'spiritual', suggesting a uniqueness in contrast to the low levels of participant endorsement or application. Finally, despite high levels of endorsement, 'humanistic' did not appear until the sixth iteration and then not making a large contribution to the variance.

Discussion

The present study aimed to characterise the profile of psychological model adoption by Stage-1 students when conceptualising issues within applied sport psychology. Firstly, as hypothesised, there was an overall endorsement of the cognitive-behavioural model as the 'dominant' approach in these Stage-1 students. Thus, indicating the sport psychology and mental health issues would be dealt with by allocating appropriate techniques to focus on both changes in problem behaviour and transforming maladaptive cognitions to those that are readily adaptable (McArdle & Moore, 2012). As expected, this finding contrasts from the pattern of endorsement for Harland et al.'s (2009) trainee psychiatrists and Reid et al.'s (2017) clinical psychologists for whom the biological and psychosocial models were most strongly endorsed, respectively.

From an applied sport psychology perspective, the cognitive-behavioural model has frequently been cited as the dominant approach within this field (e.g., McArdle & Moore, 2012; Winter & Collins, 2015a). In support of this, Fortin-Guichard et al. (2018) critically reviewed the scientific literature on sport psychologists' experiences and reported the cognitive-behavioural approach to be the most widely used in practice, regardless of level of experience. Therefore, it seems Stage-1 students are favouring this approach, which is mirrored from the experienced practitioners within the sport psychology literature. This may be no coincidence, given many of the sport psychology training routes (e.g., APA, AASP, APS, BASES, BPS) are supervisor-led by these experienced practitioners. Secondly, many of the experienced practitioners hold dual academic positions within higher education institutions (Winter & Collins, 2015a) and hence deliver on the sport psychology programmes. In relation to these first two points, Reid et al. (2017) highlighted how the timing and duration of exposure to psychological models are likely to contribute significantly to attitude formation. It would therefore be timely, for those responsible for delivering the sport psychology programmes, to reflect how much exposure students are receiving on each

of the psychological models presented. Thirdly, cognitive and behavioural approaches are arguably the more intensively researched models (e.g., Hofmann, Asnaani, Vonk, Sawyer, & Fang, 2012), which might indicate that the Stage-1 sport psychology students were more inclined to express strong opinions when able to draw upon a substantial evidence base (Dozois et al., 2014; Gardner & Moore, 2006; Winter & Collins, 2015b).

Only the biological and humanistic models came close to challenging the cognitive-behavioural status, but in somewhat different ways. For example, the humanistic model received high levels of endorsement for all the issues, refuting the second hypothesis of model endorsement to vary with diagnostic category. An important contribution of the humanistic model is the person-centered and nondirective approach in the therapeutic process (Rogers, 1992). Humanistic therapists aim at promoting personal growth and self-actualisation of their clients (Orlick, 1989; Ravizza, 2002). Through following the client's direction and promoting client responsibility, current goals and creating new meanings in life are explored (Fifer, Henschen, Gould, & Ravizza, 2008; Poczwardowski et al., 2014). However, despite the high levels of participant endorsement, it is worth noting that the humanistic model did not appear until the sixth iteration and then not making a large contribution to the variance (please see table 3).

In further contrast to the humanistic model, and supporting our second hypothesis, the biological model received greater endorsement for the 'bio-clinical' issues of depression and eating disorders but not universally across all four issues. The biological model represented in the MAQ by statements such as: "The appropriate study of the issue involves discovery of biological markers and the effects of biological interventions" is similar to Blaney's (1975) medical model in conceptualising mental issues as organic illnesses. As such, mental issue symptoms are manifestations of underlying organic dysfunction; a mentally ill person cannot be held responsible for his/her actions, and diagnosis provides the best way to understand

psychiatric symptoms (Reid et al., 2017). Within applied sport psychology, Poczwardowski et al. (2014) discussed how the medical model stresses the importance of psychological intervention to treat various behavioural, emotional, and cognitive maladaptive reactions to the stressors of the training process, athletic performance, and personal life (e.g., depression or eating disorders). The endorsement of the biological model for clinical issues is aligned to the sample of trainee psychiatrists from the original Harland et al. (2009) study, as opposed to the trainee clinical psychologists, for whom psychosocial models were most strongly endorsed (Reid et al., 2017). However, Heyman and Andersen (1998) highlighted how the biological model of practice seemed to lose its dominance in sport psychology to models emphasising, by their philosophical underpinnings, growth and development.

In this regard, variation was evident within participants, with all models receiving high levels of endorsement from some individuals. Specifically, an 'eclectic' factor, noting the mixed elements of social constructionism, biological, and psychodynamic models was apparent from the Principal Axis Factoring analysis. Due to the nature of this analysis, future researchers would need to explore this further, as different psychological models were blended to form a factor which may not have been aligned or theoretically coherent. Indeed, Poczwardowski et al. (2014) suggest that an eclectic sport psychology practitioner (assuming appropriate credentials) should be viewed as a creative synthesis of a number of perspectives with an underlying coherent and rigorous theoretical logic to it. Practitioners adopting an eclectic approach are therefore flexible and rely on a combination of different theoretical models, methods, and techniques originated in various schools of thought (Young, 1992). Despite receiving criticism from purists representing one psychological model, the counselling and psychotherapy literature has suggested that eclecticism is another legitimate approach for the various practicing psychological domains (Norcross, 1986). This flexible approach has been effectively adopted to address the diverse psychological aspects of athletic

performance, the various client needs (i.e., one approach being more suitable for one client than another), and the multitude of diverse contexts that sport psychologists work in (e.g., Cropley, Miles, Hanton, & Niven, 2007; Sharp, Hodge, & Danish, 2014; Symes, 2014; Winter & Collins, 2016).

Finally, it is worth noting the lack of endorsement for spiritual approaches, represented in the MAQ by statements such as: "The issue is better understood through religious or spiritual insights". There is growing evidence in the sport psychology literature, indicating the relevance of religious and spiritual values for a variety of elite athletes (e.g., Egli, Fisher, & Gentner, 2014; Sarkar, Hill, & Parker, 2014; Storch, Kolsky, Silvestri, & Storch, 2001; Watson & Nesti, 2005). Nevertheless, the spiritual model stood out both statistically and perceptually as something that was rarely considered; a similar finding to both Harland et al. (2009) and Reid et al. (2017) with their clinical and psychiatric trainees. However, the use of the adapted MAQ in different countries to the UK, may well generate a rather different perspective. For example, a North American sample (APA, AASP) might be expected to return higher scores for the spiritual dimension (e.g., Egli et al., 2014; Storch et al., 2001).

All students undertaking a BPS accredited sport psychology Masters' degree, running within higher education institutions in the UK, were invited to partake in the current study. Primary contact with the programme directors responsible for each of these accredited degrees was essential for recruitment of the intended Stage-1 participants. Unfortunately, some of the programme directors did not respond and thus did not give their students an opportunity to participate. Nevertheless, the resulting sample were representative of the population across the UK, in terms of age, gender, nationalities, and geographical spread of MSc programmes. Use of a questionnaire and the process of informed consent would have

minimised procedural bias and concerns about anonymity and confidentiality, but it remains possible that responses did not accurately reflect attitudes.

Another potential limitation is that the MAQ and the requirement for formal deliberation on the part of respondents, may capture idealised rather than actual attitudes present in sport psychology situations. Finally, we must repeat the warnings of Reid et al. (2017) that more work is needed to establish the psychometric properties of the MAQ. As with their study, we took several tacit assumptions on the internal validity of the constructs, issues with cross loadings and other elements. Of course, it may be that the differences are more reflective of genuine cross-disciplinary differences rather than issues with the psychometric structure of the MAQ itself. Nonetheless, we would suggest that comparisons across the three professions (psychiatrists, clinical psychologists, and sport practitioners) are taken with caution, albeit that they hold some important practical implications, as stated in the next paragraphs. As important considerations, researchers should endeavour to employ a larger participant pool to ensure that the conditions of the different statistical procedures are met or exceeded. We must acknowledge that our participant numbers are low, even though they (serendipitously) match exactly with the numbers apparent in the originating study by Harland et al. (2009).

These concerns notwithstanding, we would suggest that the adapted MAQ could be used as a teaching tool, offering a stimulus for conversations within sport psychology trainee groups (e.g., APA, AASP, APS, BASES, BPS) about the logic underpinning their case conceptualisations (Martindale & Collins, 2010). Future comparative research using the MAQ in samples from different training groups could also provide valuable insights into the influences of different supervisors and educational institutes. The existence of significant effects on the views and practices of trainee practitioners may provide a basis for determining to what extent such differences are justified and/or should be addressed by the training

organizations. It may also be interesting to run the MAQ across different nationalities and levels of experienced practitioners to allow informative comparisons to be made, or even at different times, to observe the trends for change in this important underpinning.

Overall, the present study presents attitudes of Stage-1 students favouring the cognitive-behavioural approach, with support also for the humanistic, biological, and eclectic models. It is therefore apparent, emerging practitioners in this field are exposed to multiple models that might inform their attitudes concerning both sport psychology and mental health issues. In fact, this use of multiple models *may* place sport practitioners in a middle ground between psychiatrists and clinicians; both disciplines within which the sports psychologist will be increasingly working as the focus on mental health in sport increases (cf. Lebrun & Collins, 2017). In this regard, it is worth reflecting on Read et al.'s comment that "our findings suggest that the attitudes of psychologists and psychiatrists continue to sit at opposite ends of a biological/psychosocial spectrum as was found by Morrison and colleagues in the 1970s. This is the case despite the increase in interdisciplinary training and working, the evolution of the professions, and the re-conceptualisation of the medical model" (2017, p.448). Supporting their comments, we hope that these findings will be useful to those involved in the supervised training programmes and the underpinning educational institutions, to inform the development of future sport psychology practitioners and their work with other psychologically focused disciplines.

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