Consulting on Tour: A Dual-Phase Personal-Disclosure Mutual-Sharing Intervention and Group Functioning in Elite Youth Cricket

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Abstract

In a one group pretest-posttest design, 15 elite academy cricketers were exposed to two Personal-Disclosure Mutual-Sharing (PDMS) sessions during a pre-season tour. Within PDMS1, athletes disclosed (via prepared speeches) relationship-oriented information and within PDMS2, mastery-oriented information. Social identity, social identity content, and collective efficacy were measured at baseline (one-week before the tour), post-PDMS1, mid-point, and post-PDMS2, while social validation was also obtained after each intervention session. Quantitative data revealed significant increases in social identity and friendships identity content at post-PDMS1, and results identity content and collective efficacy at post-PDMS2. Qualitative social validation data highlighted the thoughts and feelings of the athletes before their speeches and supported the effectiveness of the PDMS sessions. In sum, the data suggest practitioners can develop team outcomes (e.g., a focus on results) through developing specific aspects of teams' identities. Study limitations, practitioner guidelines, and areas for future research are discussed.

Keywords: team building, social identity, collective efficacy, interventions, social validation, thematic analysis

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A substantial body of literature exists to explore the efficacy of various intervention strategies on team functioning variables in applied sport psychology. To illustrate, studies have documented positive changes in cohesion due to role clarity education and team goal-setting exercises (e.g., Senecal, Loughhead, & Bloom, 2008). Communication exercises (Dunn & Holt, 2003), coaching efficacy programs (Harwood, 2008), motivational speeches (Gilbourne & Richardson, 2006), and outdoor pursuits (Martin & Davids, 1995) have also been associated with positive changes in team functioning. But the team building literature has revealed little continuity in the range of intervention strategies used and has lacked an evidence-base linking strategies with team functioning outcomes (Pain & Harwood, 2009).

One team building intervention which has attracted recent research attention, providing a growing evidence-base for practitioners, is Personal-Disclosure Mutual-Sharing (PDMS). PDMS requires individuals to publicly disclose previously unknown personal stories and information to members of their team (Hardy & Crace, 1997; Holt & Dunn, 2006). Stemming from counseling settings, personal-disclosure symbolizes conscious verbal presentations of a situation or issue in an attempt to establish resolution through interpersonal interaction (Olarte, 2003). Collaborative personal-disclosure underpinned by mutual-sharing can encourage empathetic responses between group members and foster enhanced understanding and an appreciation of one another's experiences (Dryden, 2006). In sporting contexts, personal-disclosure provides the catalyst for the mutual communication of morals, beliefs, attitudes, and personal motives (Ribner, 1974; Rime, 2007) which in turn augment perceptions, meanings, constructs, and understanding (Windsor, Barker, &

McCarthy, 2011). In sum, PDMS has the potential to influence the factors and correlates associated with cohesion in sport (Carron & Hausenblas, 1998; Carron, Widmeyer, & Brawley, 1985). For example, PDMS may augment athletes' perceptions of closeness, similarity, and bonding which represents group integration. Further, athletes' motivation and attractiveness are also likely to be facilitated by PDMS representing an enhanced perception of individual attractions to the group. Collectively, these changes in team functioning could ultimately benefit team performance (Dunn & Holt, 2004). Briefly, PDMS holds several advantages for sport teams but only when it is performed correctly. The sport psychologist (SP) must recognize the personal nature of PDMS and alleviate concerns when assisting athletes in the preparation of their speeches. Additionally, the SP must be able to deal with the vagaries of this personal approach where athletes might disclose provocative, concerning, deeply personal, and emotional information which may compromise themselves and the team (Holt & Dunn, 2006).

Research exploring the efficacy of PDMS in sport has typically exposed athletes to a single-bout of relationship-oriented PDMS delivered before important matches in collegiate, elite, and professional sports teams on outcomes including cohesion and communication (Dunn & Holt, 2004; Holt & Dunn, 2006; Windsor et al., 2011). Collectively, qualitative data across the studies revealed that teams increased trust in teammates, displayed greater self- and teammate-understanding and awareness, enhanced closeness to teammates, and increased motivation to play for their team. In sum, data has indicated PDMS to be an effective brief-contact intervention in situations where immediate changes in group functioning (e.g., cohesion and communication) are important (e.g., tournaments and tours).

The acute delivery of team building strategies (including PDMS) has been in marked contrast to the more longitudinal approach often used in the delivery of individual psychological skills (see Barker, Mellalieu, McCarthy, Jones, & Moran, 2013). To this end, Pain and Harwood (2009) used a multiple-phase mutual-sharing intervention with 18 collegiate soccer team athletes. The intervention comprised four consecutive weekly team meetings, focusing on the open discussion of task-based themes relating to team functioning. Focus group data suggested the intervention had led to improvements in perceptions of team functioning (i.e., cohesion, communication, trust, and confidence in teammates), training quality, self-understanding, athlete ownership, and team performance. Based upon their data, the authors suggested that PDMS-based interventions may not only be applicable before important games but for situations where teams are away during tournaments and where team routines may become monotonous (Pain & Harwood, 2009). In addition, PDMS may serve as a distraction away from the physical demands of training and playing whilst allowing opportunity for individual and team growth on important group dynamic variables. However, to date this body of research has typically focused on cohesion and communication outcomes without exploring other important psychological factors related to team functioning (Windsor et al., 2011). Finally, the use of multiple PDMS sessions might promote an even deeper understanding and emotional bond between athletes as they develop confidence in their disclosure skills (Pain & Harwood, 2009).

Building on the extant literature and following the recommendations made by Windsor et al. (2011), the present study sought to assess a more diverse set of group factors (i.e., social identity, social identity content, and collective efficacy) pertinent in a sporting context. Despite being well researched across various psychological

domains (e.g., organizational, health, and political) social identity constructs remain relatively unexplored within sport (e.g., Evans, Slater, Turner, & Barker, 2013). Social identity refers to an "individual's knowledge that he [or she] belongs to certain social groups together with some emotional value and significance to him [or her] of this group membership" (Tajfel, 1972, p. 31). Generalized to sport, social identity can be characterized as the extent to which an athlete feels they belong to their particular sporting team. A critical mass of general social psychology research has highlighted the importance of developing and maintaining social identities on a range of psychological outcomes including cohesion (Anastasio, Bachman, Gaertner, & Dovidio, 1997), commitment (Ellemers, Kortekaas, & Ouwerkerk, 1999), and collective efficacy (Reicher & Haslam, 2006). Beyond social identity lies social identity content: the specific meaningful reason(s) individuals give to explain why they identify with their group (see Postmes & Spears, 1998). In sport, for example, an athlete may identify with their team because of the excellent management of their coach, the proud history of their team, or the particular way their team competes. In academy contexts, athletes are likely to identify with their team because of the results achieved (i.e., results identity content; RIC), because it is those results that will inevitably secure them a professional contract (Harwood, 2008). Also, athletes are likely to identify with the friendships within their team (i.e., friendships identity content; FIC) given that socio-emotional bonds are ubiquitous in such interactive sporting environments. In summary, sport provides a useful medium for exploring social identity constructs given that athletes have memberships to teams (social identity) and give clear reasons to explain such group memberships (social identity content). PDMS could facilitate social identity related variables because PDMS is posited to strengthen socio-emotional bonds between athletes (Dunn & Holt, 2004). In

turn, socio-emotional bonds could strengthen athletes' emotional attachment to their group which is characteristic of social identities (see Haslam, 2004).

An additional group orientated outcome, which is an important pre-cursor to team performance, is collective efficacy (e.g., Chou, Yu, & Chi, 2010). Drawing on Bandura's (1997) framework, it is likely PDMS sessions couched around athletes' best performances (i.e., mastery sessions) would provide important mastery and vicarious experience information, together with prompting important verbal persuasion information that could ultimately foster improvements in collective-efficacy. PDMS interventions to date have relied solely upon a set of instructions that prompts athletes to disclose information aimed at improving the relationships between group members (i.e., relationship-orientated sessions; Evans et al., 2013).

The primary purpose of the current study was to explore the effects of a dual-phase PDMS intervention upon social identity, social identity content, and collective efficacy in the context of elite youth cricket, while outlining important issues to be considered when delivering PDMS in applied practice. Accordingly, a PDMS intervention was developed that incorporated both relationship- and mastery-oriented sessions to manipulate specific aspects of social identity and collective efficacy across an 11-day pre-season cricket tour. PDMS research to date has typically explored the effects of relationship-oriented speeches upon team functioning variables including communication and cohesion. Therefore, in this study we sought to explore whether other forms of PDMS (e.g., mastery-oriented PDMS) could manipulate other aspects of team functioning (e.g., social identity and collective efficacy). In light of the dual-phased nature of the proposed PDMS intervention, a series of hypotheses were developed. First, irrespective of the form of PDMS enforced, it was expected that PDMS would strengthen social identity because PDMS creates an emotionally

engaging environment for its users which should augment the emotional significance a team has for its athletes (Dunn & Holt, 2004). Second, it was anticipated that relationship-oriented PDMS would increase FIC because such sessions require athletes to disclose information aimed at improving socio-emotional bonds between team members (Holt & Dunn, 2006). Third, it was hypothesized that mastery-oriented PDMS would elevate RIC since athletes are required to mutually-share performance-related information within such sessions. Fourth, it was expected that mastery-oriented PDMS would foster the largest improvements in collective efficacy since these sessions provide athletes with important mastery, vicarious experience, and verbal persuasion information (Bandura, 1997). However, we also expected to observe some increase in collective efficacy following relationship-orientated PDMS because of the possible disclosure of mastery-based information by some athletes.

Method

Intervention Design

Aligned with recent research we endeavored to maintain a consulting role focus while following a field-based scientific design as closely as possible (Pain & Harwood, 2009). Therefore in accordance with previous research (Windsor et al., 2011) we used a one group pretest-posttest design with 15 male elite youth academy cricketers (*M*age = 16.7; *SD* = 1.67; range 15–18 years), forming the whole academy group of a United Kingdom (UK) first-class county cricket club. Whilst a one-group study is exposed to threats of internal validity, the design very much reflected the context of the tour, the situation in which the SP (first author) was working, and the needs of the coach and team. Therefore, drawing on previous research we worked hard to determine the validity of the data using a combination of quantitative and qualitative methods to determine treatment effectiveness (Evans et al., 2013; Windsor

et al., 2011). Informed consent (and parental consent where appropriate) was obtained for all participants before the tour. Cricketers completed two PDMS intervention sessions during an 11-day pre-season tour, with quantitative data collected at four time-points (i.e., baseline—one-week before the tour, post-PDMS1—day 1, mid-point—day 5, and post-PDMS2—day 11), and qualitative data collected post-PDMS1 and post-PDMS2.

Program Context and Delivery

Cricket academies within the UK include talented athletes aged 14-18. The typical role of a SP at a cricket academy is to assist the coach to create successful athletes and teams, usually by educating and supporting athletes one-to-one and facilitating team building (e.g., Cotterill, 2012).

The academy competed in an England and Wales Cricket Board (ECB) endorsed Premier League within the UK. As part of their preparation the academy squad embarked on an 11-day pre-season tour of India. Before the tour, a needs analysis for the team was undertaken to outline key psychological areas for development. This analysis took place during a reflective meeting lasting around 90-minutes with the coach, captain, and SP. The structure of the meeting was adapted from that used by Pain and Harwood (2009) and included three phases. First, to raise awareness to the coach and captain the SP presented information from his match-day observations (collected from the previous season) regarding the positive and negative psychological factors impacting the team. Second, using the SP's observations as a stimulus, the coach and captain were invited to comment and hence open discussion took place. Finally, a series of action points were generated. It was decided that the following issues were important: (a) facilitating the integration of new athletes to the existing group structures; (b) for individuals to develop an understanding of fellow

teammates; (c) developing the identity of the group, and (d) developing team confidence.

Based on the identified action points and contemporary research (e.g., Pain & Harwood, 2009; Windsor et al., 2011) a PDMS intervention program was developed for delivery on the pre-season tour to facilitate group functioning (i.e., integration, understanding, social identity, and collective efficacy). This program included two PDMS sessions scheduled at the start and end of the tour. The first focused on the use of PDMS to foster social identity, FIC, and individual understanding and empathy (see Dunn & Holt, 2004), while the second PDMS focused on developing RIC and collective efficacy via the sharing of mastery-orientated information (Bandura, 1997).

Dependent Variables

Social identity and social identity content. The three identity-related subscales used in the current study were replicated from previous social identity and PDMS research (e.g., Evans et al., 2013; Livingstone & Haslam, 2008; Postmes, Haslam, & Jans, 2013). These included single-item measures of social identity (i.e., "you identify strongly with your team"), results identity content (RIC: i.e., "the most important thing to you are the results of your team"), and friendships identity content (FIC: i.e., "the most important thing to you are the friendships within your team"). Single-item measures related to social identity variables have demonstrated high internal validity and reliability when compared with multiple-item scales (e.g., Postmes et al., 2013).

Collective efficacy. A collective efficacy measure was based on previous social psychology and PDMS research (Evans et al., 2013; Reicher & Haslam, 2006) to suit the current context. All authors agreed that each item accurately assessed athlete's efficacy in their team's ability to overcome general barriers to cricketing

success. At each time-point, collective efficacy was measured by 5-items (item 1: "your academy team is capable of achieving goals/targets that are set"; item 2: "your academy team can manage to solve difficult problems if it tries hard enough"; item 3: "your academy team can find a solution when confronted with a problem"; item 4: "throughout a game your academy team can minimize errors when under pressure"; item 5: "as an academy team you keep trying skills even when they are not going as you expect"). Cronbach alpha coefficients indicated internal reliability with values ranging from .80 to .84 to .84 to .85 for each of the four time-points.

Across all of the measures used in the study athletes indicated the extent to which they agreed with each item on a 7-point Likert-type scale, ranging from 1 (*do not agree at all*) to 7 (*agree completely*).

Social validation. Social validation is integral to intervention-based research because it informs researchers and practitioners about the delivery and effect of psychological techniques (Barker et al., 2013). In-line with previous research a qualitative social validation questionnaire exploring athletes' perceptions and feelings about PDMS sessions and procedures, along with the perceived benefits was developed (e.g., Pain & Harwood, 2009; Windsor et al., 2011). Both questionnaires included five questions (i.e., How did you find preparing for and delivering your speech? How did the session make you feel? How do you think the session will benefit the academy team? How has the session affected the way you view your teammates? What have you learnt about yourself and your teammates from the session?) Participants had ample space in which to write their thoughts.

Procedure

Data related to social identity, social identity content, and collective efficacy were collected at four separate time-points (i.e., baseline, post-PDMS1, mid-point,

and post-PDMS2) during the 11-day tour. Aside from baseline data which were collected one-week before departure during a team meeting, all other data were collected from participants in a private meeting room in the hotel in India. Social validation questionnaires were completed immediately after each PDMS session taking around 15 minutes to complete. Data were identified by squad number but social validation questionnaires were anonymous. Social desirability instructions were included and athletes were assured that all data would be anonymous, stored away from the club, and the coach and other club officials would not be informed of any individual's responses, only of the overall group response.

Pretest-baseline. The process of preparing the athletes for the first PDMS session began at a team meeting held one-week before departure to India and was in-line with procedures noted in the literature (e.g., Holt & Dunn, 2006; Windsor et al., 2011). Data was collected before any information was provided to the athletes about the intervention. At this meeting athletes were informed that the initial part of the intervention would involve sharing a personal story with their teammates and that they should be open, honest, and the team's gain depended on what athletes were willing to disclose in the session. Athletes were asked to prepare thoroughly for the initial session and that they should write or type their speeches to aid delivery. To alleviate athletes' concerns about speaking in front of their teammates, the SP provided reassurance and emotional support for public speaking anxiety to those athletes who required it while preparing their speeches. Specific guidance on the content of the speeches was not provided so as not to influence the outcome of the intervention. Athletes prepared speeches to the following instructions in PDMS1:

Instruction 1: Tell the group why you play cricket and what you think you bring to the team?

Instruction 2: Describe a personal story/situation that will help your teammates understand yourself more. Detail a personal story that you would want everyone to know about you that would make them want to be in the same team as you and want to play alongside you. Your story can be related to any event that took place in your personal life or in your sporting life. Your story should illustrate something that defines your *character*, your *motives*, and your *desires*.

We followed recommendations from past research to maximize task content relative to the identified needs of the group (Holt & Dunn, 2006). To illustrate, instruction 1 focused on facilitating individuals' integration to the group. Instruction 2 asked athletes to speak about personal sacrifices so that other group members could understand each other better, and create a social identity around friendships.

PDMS1. PDMS1 took place on the first evening in India during a team meeting. The session took place in a private conference room at the hotel following the evening meal. The chairs were arranged in a circle to encourage openness during the session, with one empty chair next to the SP where the athlete making their speech sat. The SP facilitated the depth of self-disclosure by reinforcing openness and encouraging active participation of all group members (Kirshner, Dies, & Brown, 1978; Ribner, 1974). Previous research has noted that self-disclosure is promoted if initial speakers are more comfortable with public self-disclosure and are prepared to tell a strong emotional story (Windsor et al., 2011).

The SP started the session by re-stating to the athletes not to act but to be open and honest when speaking. Further, establishing boundaries and contracting are important aspects of the PDMS process to safeguard participants and therefore are ideally determined before disclosure begins (Holt & Dunn, 2006). The SP facilitated

an open discussion with the group before the first session with the aim of establishing a contract for both PDMS sessions.

The captain of the team volunteered to speak first with the other athletes following under their own volition. A round of applause was granted to each athlete after their speech. Athletes' speeches lasted between 4-5 minutes with the session lasting around 75 minutes. Overall, the athletes approached the session in an appropriate manner which was demonstrated in the high level of effort expended relative to preparing their speeches and the formal presentation styles. Immediately following the session athletes completed items regarding social identity, social identity content, and collective efficacy, along with the social validation questionnaire. The session concluded with the SP leading a reflective discussion. For example, the athletes were encouraged to reflect on the strengths of doing PDMS, the benefits to them as individuals and as a group, areas for improvement, and the application of PDMS (including preparation) to performing in cricket. The SP observed that there was an up-beat, happy, and relaxed atmosphere amongst the group following the session. The next day at breakfast a number of athletes expressed how powerful the session had been. To illustrate, the majority indicated that they knew more about each other, that the group was coming together, they enjoyed listening to others, and that the session would help them deal with difficult situations in the future.

Mid-point: Data collection and preparation for PDMS2. To determine the maintenance effects of PDMS1 on the dependent variables data were collected, during a post-training debrief, on day 5 of the tour. The SP also issued guidelines for PDMS2 which was to be conducted on the final evening of the tour (day 11). Similar to PDMS1, the SP asked athletes to prepare thoroughly and write or type their speeches

to aid delivery. The SP again made them self available to the athletes to provide speech reassurance and support. Speeches were prepared to the following instructions in PDMS2:

Instruction 1: Describe your best ever performance/s in a game of cricket. What made it your best performance?

Instruction 2: How did you prepare psychologically the day before and the morning of your best performance?

Instruction 3: How did you feel before, during, and after the performance?

Instruction 4: How did your performance affect the team, overall?

Instruction 5: What did you learn from your best performance that you could do again in future?

Instruction 6: What have you learnt about yourself and your cricket whilst being in India and how do you think this will help you and your teammates during the season?

We again sought to maximize task content from PDMS2 relative to the identified needs of the group. The instructions were included to develop the collective efficacy beliefs of the group through the sharing of important mastery, vicarious experience, and verbal persuasion information (Bandura, 1997). In addition, the instructions were oriented towards the disclosure of results to allow us to explore the effects of PDMS on RIC.

PDMS2. On the final evening of the tour PDMS2 took place. The structure of the session was identical to that of PDMS1 where the SP facilitated the running of the session. Athletes were reminded to be honest and not misrepresent themselves in their speeches along with the contract established for PDMS1. Again all 15 athletes delivered speeches, each lasting between 3-4 minutes in duration, with the session lasting a total of 50 minutes. As in PDMS1, athletes completed items immediately

following the speeches that focused on social identity, social identity content, and collective efficacy, along with a social validation questionnaire. The session concluded with the SP leading reflective discussion and debriefing the team about the purpose of the study. A written-report regarding the specific study findings was presented to the coach and team 6-weeks after the tour.

Results

Quantitative Analysis

Descriptive statistics. The impact of the two PDMS sessions on social identity, social identity content, and collective efficacy are shown in Figure 1. Specifically, the largest mean increases were observed in social identity (from 4.80 to 5.73 = 19.4%) and FIC (from 4.60 to 5.53 = 20.2%) following PDMS1. At mid-point, maintenance effects were shown following PDMS1 on social identity, social identity content, and collective efficacy. Following PDMS2 immediate effects were shown on the outcome measures in comparison to mid-point data with the largest mean increases observed for RIC (from 5.47 to 6.20 = 13.4%) and collective efficacy (from 5.96 to 6.91 = 15.9%).

Statistical analysis. The magnitude of intervention effectiveness (effect size) was calculated for each variable from baseline to post-PDMS1 and for mid-point to post-PDMS2 using Cohen's (1988) *d* equation. Repeated measures ANOVAs were used to explore sequential changes in values of social identity, social identity content (FIC and RIC) and collective efficacy.

Social identity and social identity content. Repeated measures ANOVA, with a Greenhouse-Geisser correction for violation of sphericity ($\chi^2_{(5)} = 11.26$, $p < .05$), revealed changes across time in levels of social identity reported by the group, $F_{(1.89, 26.42)} = 13.79$, $p < .01$, $\eta^2 = .50$, with only a sequential increase in social identity

following PDMS1 (from baseline M = 4.80, SD = 1.01 to post-PDMS1 M = 5.73, SD = .80; $p < .01$). Similarly, group perceptions of the importance of friendships content (FIC) significantly changed across time, $F_{(3, 42)} = 6.50$, $p < .01$, $\eta^2 = .32$, with only a sequential increase evident following PDMS1 (from baseline M = 4.60, SD = 1.06 to post-PDMS1 M = 5.53, SD = 1.30; $p < .05$). Group perceptions of the importance of results content (RIC) significantly changed, $F_{(3, 42)} = 4.82$, $p < .01$, $\eta^2 = .26$, with only a sequential increase evident following PDMS2 (from mid-point M = 5.47, SD = .99 to post-PDMS2 M = 6.20, SD = 1.01; $p < .05$). Effect size calculations from baseline to post-PDMS1 revealed medium to large values for social identity (d = .79) and FIC (d = .78), and a small to medium value for RIC (d = .44). From mid-point to post-PDMS2 small effect sizes were noted for social identity (d = .33) and FIC (d = .17), whilst a medium to large value was noted for RIC (d = .72).

Collective efficacy. Analyses, with a Greenhouse-Geisser correction for violation of sphericity ($\chi^2_{(5)} = 28.33$, $p < .01$), revealed changes across time in levels of collective efficacy, $F_{(1.33, 18.59)} = 13.79$, $p < .01$, $\eta^2 = .50$, with sequential increases in collective efficacy evident following PDMS1 (from baseline M = 5.59, SD = .42 to post-PDMS1 M = 6.09, SD =.30; $p < .01$), followed by a further increase following PDMS2 (from mid-point M = 5.96, SD = .44 to post-PDMS2 M = 6.91, SD = 1.19; $p < .01$). Cohen's d revealed large effect size values for collective efficacy from baseline to post-PDMS 1 (d = 1.37) and from mid-point to post-PDMS2 (d = 1.06).

Qualitative Analysis

Thematic analysis of social validation data. Data from the social validation questionnaires was analyzed using inductive thematic analysis (Braun & Clarke, 2006) to ascertain greater detail of athletes' perceptions of the two PDMS sessions. Specifically, initial coding involved attaching labels to lines/segments of the

transcripts, before codes were collated to produce salient and significant themes. The qualitative analysis was conducted by the fourth author. Throughout the thematic analysis discussions were held between the fourth author and the SP to reflect and elaborate upon emerging themes with a view to enhance reliability and accuracy. Athletes' responses after PDMS1 were collated into four higher order themes: nerves (indicated by nine of the 15 athletes), concerns (11 of the 15 athletes), positive approach and emotions (eight of the 15 athletes), and together as a team (15 of the 15 athletes). Whilst, analysis of PDMS2 elicited six higher order themes: nerves/concerns (six of the 15 athletes), self and collective efficacy (13 of the 15 athletes), positive feelings (nine of the 15 athletes), enhanced understanding and closeness (nine of the 15 athletes), and no difference (four of the 15 athletes).

PDMS1. A higher order theme to emerge from the social validation data was feelings of nerves in athletes' preparation of their speeches: "[I] was very nervous about speaking in front of everyone". Such anxiety, however, appeared to recede once athletes began to speak. Feeling nervous when preparing for the session relates to the concerns reported, with athletes indicating they "found it hard to think of a story that would be interesting to everyone to hear". Thus, PDMS was perceived as a challenge, with athletes noting low confidence before their speeches typically because of the public speaking aspect of the session. On the other hand, a higher order theme interpreted from the data demonstrated some athletes approached the session positively, stating feelings of confidence in preparing themselves for the challenge. Despite contrary perceptions before PDMS1, it was overwhelmingly clear that PDMS1 led to an abundance of positive emotions: "[I felt] proud that I said stuff that I hadn't said before", together with feelings of confidence, inspiration, and relief captured in the lower order themes. Finally, an overriding higher order theme to be

elicited from the data was how effectively PDMS brought individual athletes together as a team, which was captured particularly well by one athlete: “My team is developing into a sociable group not a cricket team of academy individuals”. Numerous lower order themes were conveyed by the participants including enhanced understanding, closeness, and increased respect for teammates: “There are reasons for what makes a teammate the person they are. Respect was gained.”

PDMS2. In-line with reported concerns in preparing for PDMS1, nerves and concerns were again a higher order theme to emerge after PDMS2. Nerves, however, centered upon the difficulty of sharing information about being successful, potentially leading to feelings of embarrassment: “[I was] nervous, a bit embarrassed as I’m not a good speaker and my [performance] figures weren’t the best”, rather than concerns about giving a speech noted in PDMS1. Lower order themes suggested athletes felt PDMS2 was “easier this time than last time [PDMS1]” and thus were more relaxed. In contrast to PDMS1 and as a result of the mastery orientation of the instructions, a higher order theme analyzed from the data was the effectiveness of PDMS2 in fostering self and collective efficacy. Augmented collective efficacy appeared the most prevalent in relation to cricket specifically, exemplified by one athlete “[PDMS] has made me believe in their [teammates’] ability a lot more.” Athletes did not report feeling more self- efficacious towards their cricket per se, rather in their personal development: “[PDMS] made me feel proud in my own ability and I feel I am growing as a person and becoming more at ease with myself and others.” Similar to PDMS1, the PDMS2 produced feelings of pride and excitement about the forthcoming season.

In accordance with PDMS1, a higher order theme to emerge from the data analysis was the positive impact PDMS2 had on enhancing teammates understanding

and closeness. In particular, interpreted lower order themes indicated the group felt more united as a team, due in part to gaining an insight into their teammates' best performances and their preparation, whilst appreciating that "everyone is unique". The act of being open and honest was deemed beneficial to increase respect within the team, with one athlete stating: "[We are] more of a team than [I] ever thought was possible". The final higher order theme to emerge from the analysis was that although still effective, some athletes believed PDMS2 did not reap the intense rewards of PDMS1, simply because the team had already been through PDMS.

Discussion

The current study adds to the extant literature by reporting the effects of a dual-phase PDMS intervention on diverse group functioning variables including social identity, social identity content, and collective efficacy, while illustrating the PDMS process for applied practitioners, in the naturalistic context of an 11-day pre-season cricket tour. Data indicated promising and meaningful treatment effects on outcome variables following the PDMS intervention. First, examination of the descriptive statistics indicated large and immediate treatment effects for social identity and FIC following PDMS1 and for RIC and collective efficacy following PDMS2. Second, statistical analyses indicated the PDMS intervention was potentially effective in increasing the social identity, social identity content, and collective efficacy of the group across the phases of the study. From baseline to post-PDMS1 results indicated a significant increase in social identity and FIC following the relationship-oriented PDMS session. In relation to RIC, a statistically significant change emerged from mid-point to post-PDMS2 following the mastery-oriented PDMS session. Statistically significant increases were also found between baseline and post-PDMS1 for collective efficacy followed by a further statistically significant increase following the mastery-oriented

PDMS session. Third, effect size calculations indicated meaningful treatment effects between baseline and post-PDMS1 for social identity, FIC, and collective efficacy, and from mid-point to post-PDMS2 for RIC and collective efficacy.

The promising positive effects in the current study are in-line with other studies involving PDMS where noticeable changes have been observed on important group functioning variables including trust, understanding, social cohesion (e.g., Dunn & Holt, 2004; Holt & Dunn, 2006), communication, and collective efficacy (Pain & Harwood, 2009; Windsor et al., 2011). Changes in social identity-related variables found in the current study are consistent with our hypotheses. At baseline social identity was moderate which was expected given that the athletes competed as one academy team, yet were motivated to be seen as different from, and better than, other athletes to secure a professional contract. However, the largest and only statistically significant increase in social identity occurred after PDMS1. This finding can be explained through the PDMS1 social validation data where athletes indicated they valued and respected each other's personal disclosure. When individual's value and respect group members these standards become internalized as a significant part of an individual's sense of whom and what they are as a person (Haslam, 2004). Thus, the strengthening of social identity following PDMS1 suggests athletes began to define themselves more as a member of their academy team rather than an isolated member of their group. A further increase in social identity was evident after PDMS2, indicating this session gave athletes the opportunity to increase the commonality within their group and further strengthened emotional bonds between group members (Rydell, McConnell, & Beilock, 2009).

It was only after PDMS1 that statistically significant increases in FIC were observed. One plausible explanation for this increase reflects the nature of such

PDMS. During PDMS1, athletes were asked to share information that would encourage other athletes to want to play alongside them. By disclosing such information, socio-emotional bonds were encouraged (Hardy & Crace, 1997), which are symbolic of FIC. An additional explanation of the increase in FIC concerns the process of PDMS. Social validation data indicated that, before PDMS, athletes were nervous about speaking openly among their peers, which suggests public speaking was considered a major challenge. After each speech however, athletes responded by offering explicit signs of support (e.g., applauding, attending, and reflecting). Such displays of social support could have buffered the stressful nature of public speaking (Lakey & Cohen, 2000) and were perhaps a catalyst for fostering FIC. A final explanation of the increase in FIC centers upon the thematic similarities reported for the perceived benefits of PDMS. Athletes indicated that they felt more respect, stronger social ties, and enhanced relationships. As a result, rapport and empathy may have been established, subsequently strengthening the team spirit and harmony indicative of FIC. For the remaining phases of the intervention, FIC was maintained which demonstrates the maintenance effect of PDMS1, which may also be related to the team being on tour. To elaborate, because athletes were away from home the key providers of social support were likely to become those individuals in their immediate environment (Rees, Hardy, & Freeman, 2007). Thus, athletes may have continued to value friendships because the social support perceived and received by teammates could have helped buffer against the stressful nature of being away from routines and home (Lakey & Cohen, 2000).

At baseline, it was unsurprising that RIC was high given the results-oriented nature of academy sport (Harwood, 2008). RIC only significantly increased after PDMS2. This finding can be explained through the nature of PDMS2, as athletes were

required to recall their best performance and share how this performance influenced the self and others. Thus, it is logical that athletes increased the importance they placed upon RIC because they were encouraged to think of their group membership in terms of success. In summary, the results indicate PDMS can encourage athletes to develop a social identity with their team and different forms of PDMS can manipulate the meaning athletes attach to their social identity. To date, PDMS is the first intervention documented in the sport psychology literature that can increase social identity and aspects of social identity content.

The promising changes noted for collective efficacy across the study were also in-line with our hypotheses. The large and statistically significant increases observed for collective efficacy between mid-point and post-PDMS2 illustrates how the content of athletes' speeches manipulated their perceptions of group confidence. PDMS2 encouraged athletes to disclose information about mastery experiences in cricket, which provided important performance accomplishment, verbal persuasion, and vicarious experience information to athletes, thus increasing the perception of collective efficacy beliefs (Bandura, 1997). A slight increase in collective efficacy was also observed between baseline and post-PDMS1, which was likely to occur given speeches in this session included content which may have led to an increased perception of collective efficacy beliefs (e.g., some athletes disclosed information relating to successful past performances). Research has also revealed increased perceptions of group confidence following relationship-oriented PDMS (Pain & Harwood, 2009; Windsor et al., 2011). Discovering techniques to enhance collective efficacy is important for applied sport psychology (e.g., Feltz, Short, & Sullivan, 2008) and therefore data from this study suggest PDMS is an effective collective efficacy enhancing technique.

Qualitative social validation data on athletes' perceptions and feelings about the two PDMS sessions and procedures, along with the perceived benefits, revealed a number of key themes. Data regarding PDMS1 and PDMS2 indicated athletes felt extremely nervous and concerned about completing their speeches typically due to the public nature of PDMS. These data are in-line with previous research where PDMS has been identified to be an anxiety-provoking situation, which typically takes athletes out of their comfort zone (Evans et al., 2013; Windsor et al., 2011). Thus, the data further highlights the important supportive role to be played by the SP during athletes' preparation for PDMS sessions. Anecdotally, some athletes reported after the first session that delivering speeches was substantially more difficult than anything they had ever had to do in cricket, but nevertheless was a worthwhile undertaking. Data also revealed that to some athletes, undertaking PDMS was perceived as a challenge and something which they wanted to prepare well for and do their best in. It could be posited that because PDMS is typically stressful and challenging it is effective in bringing about immediate changes in group functioning (Dunn & Holt, 2004). Data also indicated the PDMS sessions to have had a substantial effect in promoting togetherness and closeness of the team—one of the main aims of the intervention before the tour. Further, the athletes reported increased feelings of self and collective efficacy following the mastery-oriented session. These data support the findings from the quantitative data regarding the significant increases observed for collective efficacy post-PDMS2. An important issue also to emerge from PDMS2 was athletes perceived this session to not be as intense as the first because they were now more aware of what to expect. Whilst repeated PDMS sessions will enhance the quality of relationships and rapport amongst athletes, sessions centered on similar themes may lose their emotional intensity over-time (Holt & Dunn, 2006). To this end, it is likely

athletes disclosing different types of information (e.g., relationship and mastery) will broaden their understanding and the emotional depth reached within the sessions. Future research may wish to explore athletes' perceptions of long-term PDMS interventions to inform the practice of sport psychologists.

A number of consultancy issues emerged from this study. First, the PDMS sessions were effective because the coach, captain, and older members of the team were supportive and enthusiastic about the intervention, making it particularly easy to get buy-in from all of the other athletes (Windsor et al., 2011). Second, whilst data in this study demonstrate PDMS to have had a beneficial effect, it is important to note the potential detrimental effects of self-disclosure for individuals with low self-esteem about public speaking (Cameron, Holmes, & Vorauer, 2009). Indeed, the emerging themes interpreted from the social validation data demonstrated that the current athletes were nervous and apprehensive before the session. Accordingly, in situations where SPs wish to use PDMS with unfamiliar teams some initial consultation should take place with all individuals about their views and possible apprehensions about the sessions. It is likely that some athletes may chose not to engage with the sessions and therefore in-line with previous research we encourage SPs to get them to attend and potentially take active part (e.g., Windsor et al., 2011). Third, SPs should appraise the possible risks of using PDMS to both the speaker and teammates. For example, appropriate referral and support procedures should be in place for the possibility of an athlete disclosing information that is deeply personal, involves illegal acts, sexual abuse, or comprises teammates. Fourth, it is important to create a safe environment for the athletes to enable them to feel comfortable in the content of their speeches and their possible emotional reactions (Holt & Dunn, 2006). In the current study a period of contracting was initiated at the start of each session to establish confidentiality and

a code of conduct. This contracting comprised open discussion and the collation of thoughts on flip-chart paper. Without this aspect, it is unlikely athletes would have felt comfortable enough to deliver highly emotional speeches. Finally, the context of the tour provided a suitable opportunity within which to run the intervention program given the amount of free time during the evenings. The findings align with research that has identified tour situations as the perfect opportunity for team-building activities (Pain & Harwood, 2009).

Issues with Professional Practice Interventions in Real-Life Settings: Design Considerations

The present study has value for the extant literature because it explores professional practice with an elite group in a real-world ecologically valid tour setting, outlines the challenges practitioners may face, and attempts to determine intervention effectiveness. We attempted to maintain methodological rigor and determine treatment effects using three procedures. First, we conducted a thorough needs analysis with the coaches and players and aligned our interventions accordingly. Second, we adopted a design that reflected the needs of the team and provided us with a foundation to explore the effects of the individual PDMS sessions. Third, we collected both quantitative (i.e., psychometrics) and qualitative (i.e., social validation) data throughout the duration of the tour to enable us to draw more informed conclusions. To illustrate, the dependent variables varied according to the content of the PDMS interventions and were broadly in line with our hypotheses, whilst the social validation data was further evidence that the participants found the PDMS interventions successful. Social validation was an important inclusion to our study because this gave the athletes opportunities to have their say on the effectiveness of the interventions (Page & Thelwell, 2013). To this end, because the first author had a

long-standing and positive relationship with the athletes (via one-to-one sessions) we felt confident the athletes would provide honest appraisals of our work and the effects on the group and therefore corroborate the quantitative data.

Despite the benefits of dovetailing applied research with the extensive scope sport psychology services can provide in professional practice settings (Harwood, 2008), practitioners often find themselves working in challenging conditions. These conditions have implications for the methods used and hence possibly explain why these studies are rarely published in the literature. For example, in the present study our selection of measures (including the use of single-item measures) and research design was restricted by heavy training schedules, and the amount of access and time the first author was given with the athletes before and during the tour by the coach. In addition, it would have been our preference to have further determined intervention effectiveness by exploring whether the changes observed in the psychological variables equated to changes in actual team performance; however, obtaining and determining meaningful markers of team performance is difficult, but ultimately this was not on option on the practice-orientated tour. Effects of relationship-orientated PDMS on team performance have been indicated previously (Evans et al., 2013).

We, as a community strive to improve what we do in professional practice settings to enable the future development of applied sport psychology practice and research. Therefore, despite the positive findings of the present study some limitations exist which may be considered for future researchers. Threats to internal validity could exist when using a one-group design so it is possible that positive findings could be artifacts of history, repeated testing, or maturation rival hypotheses and therefore future researchers should draw on experimental (e.g., pretest posttest) and quasi-experimental designs (including the non-equivalent dependent variables and the

pattern matching non-equivalent dependent variables designs) which rule out rival hypotheses (Shadish, Cooke, & Campbell, 2002). In the present study we would have preferred to have included a control group to reduce threats to internal validity, however the applied context of working with one elite cricket academy made this logistically challenging (e.g., Windsor et al., 2011). Indeed, in the context of elite and professional sport it may be difficult to see how the use of control groups could be ethically employed with 'real' athletes performing 'real' sport tasks in 'real' sport settings. Thus, it is likely that most applied practitioners and researchers would feel that they were unreasonably withholding a beneficial intervention from the control group (Hardy, 2012). As an alternative, researchers may consider including one or two control measures that they do not expect the intervention to affect. Thus, if the intervention enhances the variables it is supposed to and not the ones acting as controls then evidence is provided supporting the effects of the intervention.

While a control group would have conceivably reduced threats to internal validity in the present study, the social validation data does offer some evidence that the participants found the PDMS interventions successful and the effects that we observed were hypothesized a priori. Accordingly, future researchers should consider using social validation or social comparison (see Page & Thelwell, 2013) and focus group procedures as mechanisms with which to validate treatment outcomes (e.g., Pain & Harwood, 2009). Including a staggered delivery approach of interventions across a number of individuals and teams using a single-case multiple-baseline design (and the collection of time series data; Barker et al., 2013), or the collection of multiple baseline measures before an intervention is delivered would enable the establishment of linear tendencies apart from treatment(s) and would further help to guard against threats to internal validity (see Pain & Harwood, 2009).

Conclusion

The study adds to the to the extant literature by indicating the positive effects of a dual-phase PDMS intervention on social identity, FIC, RIC, and collective efficacy in an ecologically valid sport setting, along with outlining the issues to be considered by SPs. Data indicated both PDMS sessions helped to create a more effective group to the one that began the tour. Future research may ascertain the mechanisms through which PDMS influences outcomes such as social identity, FIC, RIC, and collective efficacy, along with qualitatively investigating the content of PDMS speeches to highlight why disclosure is effective. Research may also explore the effects of PDMS on other aspects of social identity including leadership effectiveness and the mobilization of effort in performance groups (van Knippenberg, van Knippenberg, De Cremer, & Hogg, 2004). Finally, research exclusively exploring the effects of mastery-oriented PDMS on collective efficacy and objective team performance would be worthwhile.

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