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Upsetting the apple cart: Within-team profiles of intragroup conflict and their associations with narcissism[★]

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ABSTRACT

Different types of intragroup conflict (i.e., relationship, task, and process conflict) co-exist in team environments yet how this co-existence is expressed is poorly understood, particularly in sports teams. Further, there is a lack of knowledge surrounding the antecedents of intragroup conflict. Here, we examined the nature of conflict profiles in sports teams and investigated narcissism as an antecedent to the conflict profiles. In a large, multi-group sample (n = 1107 athletes from 109 teams), participants completed measures of intragroup conflict and narcissism. Team-level latent profile analysis of intragroup conflict variables indicated five distinct within-team conflict profiles which varied in patterns of relationship, task, and process conflict. Moreover, teams high in narcissism (both in terms of team mean and team maximum scores) were more likely to occupy dysfunctional conflict profiles, that is profiles high in all conflict types. These findings underscore the importance of considering conflict profiles within teams and provide the first evidence for narcissism as a contributing factor in the development of conflict profiles in groups.

The success of teams is often reliant on the quality of interactions between team members. Whilst group dynamic research tends to focus on positive types of team interaction, such as intrateam communication (Smith et al., 2013), equal attention needs to be focused on negative interpersonal encounters that exist within teams. Intragroup conflict represents an example of a potentially negative form of team interaction and is defined as "the process whereby two or more team members disagree over real or perceived differences" (De Dreu & Weingart, 2003, p. 741).

Intragroup conflict research distinguishes between three types of conflict (de Wit et al., 2012): relationship conflict (RC) involves disagreements about interpersonal issues, such as personal values; task conflict (TC) includes arguments about the task outcomes for the team; and process conflict (PC) is concerned with disagreements around roles and responsibilities of the task. Meta-analyses highlight the detrimental role of intragroup conflict for teams with all conflict types impacting negatively on outcomes such as team commitment, cohesion, viability, and performance (de Wit et al., 2012). However, intragroup conflict research has historically considered each conflict type (RC, TC, and PC) in isolation, without recourse to consider the combined effects of different types of conflict. Such an isolated approach fails to adequately reflect the nature of conflict in groups, whereby conflicts can co-occur

(Boulter et al., 2022). To circumvent this issue, researchers have recently introduced a team-centric paradigm to study conflict, which encapsulates all three conflict types simultaneously (O'Neill et al., 2018). This paradigm focuses on examining distinct profiles of all three conflict types which represent team members' shared perception of conflict in their team, or team-level conflict. Essentially individuals' responses are aggregated to the team-level allowing insight into the average levels of conflict in teams as opposed to the individual's perception of conflict in their team. Although this team-level approach is virtually absent in the sport conflict literature, sports researchers have examined individual perceptions of conflict in sport (e.g., Paradis et al., 2014). Further, Input-Process-Output (IPO) frameworks of team effectiveness (e.g., LePine et al., 2011) highlight the importance of modelling antecedents, processes (such as conflict), and outcomes in the team context to better understand team functioning. In line with the IPO approach, O'Neill et al. (2018) offered the first empirical evidence for the utility of exploring intragroup conflict profiles with outcomes and how the profiles predicted team potency (a team's collective belief in its own ability), with results revealing that teams high in all conflict types having the lowest levels of potency.

While this research provides evidence of the utility of considering conflict profiles and supports the process-outcome link in the IPO model,

^{*} Some of the data used in this article were also used in Boulter et al. (2022). However, the research questions examined within the present article are substantively different from those addressed in the other manuscript. The authors declare no conflicts of interest. All online material including additional analysis, datasets, and example code can be found on the Open Science Framework (https://osf.io/basxk/)

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more work is needed. Specifically, there is a need to further examine the varying conflict profiles that are likely to exist in different types of groups to establish the generalizability of different latent profiles. Furthermore, to date there has been no investigation of the antecedents (or inputs) to intragroup conflict profiles. In the present study therefore, we provide the first empirical evidence of factors that influence conflict profiles by addressing a theoretically relevant antecedent, narcissism. We deem narcissism to be relevant to conflict due to its antagonistic interpersonal style displayed in group contexts (e.g., Roberts et al., 2018). In the following sections we present the team-centric paradigm to conflict and underscore its importance, propose domain-specific conflict profiles, and discuss the relevance of team-level narcissism as an antecedent to conflict profiles.

1. Team-centric paradigm to intragroup conflict

An extensive body of intragroup conflict research has explored the consequences of RC, TC, and PC in isolation and independent of one another (de Wit et al., 2012). However, exploring the isolated effects of different types of conflict fails to reflect the realities of intragroup conflict in teams; that is, conflicts are likely to co-occur and impact one another in a team environment (Mooney et al., 2007). As such, modelling conflict types simultaneously to explore profiles of conflict within teams offers the ability to develop a deeper understanding of intragroup conflict and its subsequent implications. Despite the theoretical relevancy of such an approach, analytical limitations exist. For instance, in order to represent co-occurring conflict, a three-way moderated regression model is normally required. However, such interaction effects can be difficult to detect due to low power issues (Aguinis & Gottfredson, 2010). Although statistical power issues can be resolved by collecting data from large samples (Aguinis, 1995), obtaining sufficiently large enough samples is challenging. Additionally, interactions are relatively inflexible in the model building process as interactions exclusively focus on predictors and moderators in conceptual models (see O'Neill et al., 2018).

Fortunately, an alternative analysis exists that addresses power issues and model building inflexibility - latent profile analysis (LPA). In the LPA approach, researchers identify patterns of variables that exist within the data which represent distinctive profiles. These derived profiles offer researchers a solution to obtaining large sample sizes as LPA can be successfully conducted with sample sizes greater than 100 (Williams & Kibwoski, 2016). Further, using the LPA approach also allows profiles to be positioned as an outcome, mediator, or antecedent (dovetailing with conceptualizations embedding within IPO team effectiveness frameworks), which resolves model inflexibility issues. The LPA approach also provides model fit indices allowing researchers to evaluate the quality of model fit and make informed decisions about the appropriate number of profiles to retain for subsequent analysis.

1.1. Team conflict profiles

One important consideration in the group dynamics literature is the type of team under investigation (e.g., industry project teams, sports teams, student working groups etc., Hollenbeck et al., 2012). Notably, most of the intragroup conflict literature uses student teams, working towards course grades (cf. O'Neill et al., 2018). This emphasis on student groups focused on short-term outcomes, while useful, precludes a full understanding of the extent to which conflict types, and indeed conflict profiles, are replicable across different types of teams. For example, tenure in student groups is often short-term with teams disbanding after work completion. Further, student groups can be put together rather arbitrarily (e.g., students randomly allocated to a project group) leading to limited group development and stability. In contrast, tenure in sports teams is commonly long-term, often lasting beyond the completion of an objective (e.g., a competition final). Thus, sports teams are representative of more fully developed and naturalistic groups

compared to student project groups. Additionally, sports teams are not arbitrarily assembled, as membership in these groups is often voluntary. Indeed, conflict within sports teams is certainly evident (Boulter et al., 2022; Leo et al., 2015; Paradis et al., 2014). It appears to be more prevalent in and around competition (e.g., Mellalieu et al., 2013), and is also associated with emergent states such as collective efficacy and team cohesion (Leo et al., 2015; Paradis et al., 2014). However, research in the sports domain has emphasized single conflict types such as task conflict (Leo et al., 2015), which impedes our understanding of the co-occurrence of the three intragroup conflict types (RC, TC, and PC). For instance, the presence of one type of conflict (e.g., RC) may alleviate or exacerbate the influence of the other conflict types (e.g., TC and PC). Therefore, the team-centric paradigm to conflict in sports teams offers an important extension of previous sport-based literature. Given the differences between the types of teams studied to date, discrepancies may be evident in the type of conflict profiles derived. Therefore, it is important to assess the extent to which conflict profiles are relevant in more established groups such as, sport teams.

Whilst many combinations of RC, TC, and PC could conceivably occur, we hypothesize three theoretically relevant profiles which may exist in sports teams (cf. O'Neill et al., 2018). Low-range conflict reflects a profile low in RC, TC, and PC. It is reasonable to expect that teams exist with low levels of all conflict types; these teams tend to be cohesive and group members resolve tensions efficiently (Jehn et al., 2008). Conversely, some teams may have high levels of RC, TC, and PC which we term the dysfunctional profile. Since RC and PC both represent conflict around interpersonal issues, they may increase the levels of threat perceived in the team which disrupts team functioning. Consistent with information processing theory (Pelled, 1996), interpersonal threats that individuals perceive interfere with task-relevant information. Thus, teams occupying the dysfunctional profile are not close-knit units, with high levels of conflict representing a threatening environment that is rife with interpersonal issues. In addition to these two profiles, TC-dominant conflict profiles may also exist, whereby TC is high with lower levels for RC and PC. This type of conflict profile refers to an environment where team members disagree on tasks and goals of the team but can do so without additional conflicts around personal values and competencies. The TC-dominant profile represents an environment whereby group members feel safe to share their ideas without reprisal. Given the three profiles discussed, our first hypothesis was that we expected to see these three distinct profiles of intragroup conflict to emerge in our sample.

2. Narcissism as an antecedent to latent conflict profiles

From an IPO perspective it is important to investigate team characteristics (inputs) as they have the ability to influence exchanges (processes) between team members (LePine et al., 2011). We propose that the personality composition of the team, whereby the personality of the team is represented as an aggregate of team members' personality scores (cf. Hardy et al., 2020), influences how teams interact. Previous work has identified the benefits and importance of considering individual differences (with a specific reference to personality) in performance domains (see Hardy et al., 2020; Roberts et al., 2018). The opportunities for glory that performance domains (in our case, sport) offer provide ample opportunity for those high in narcissism to self-enhance (Roberts et al., 2018). However, those high in narcissism also have antagonistic and self-centered tendencies which can create interpersonal issues within team environments. Thus, we examine how narcissism is associated with team conflict profiles.

In its grandiose and agentic form, narcissism refers to a self-centered, dominant, and entitled disposition, with a manipulative interpersonal style (Morf et al., 2011). Given this antagonistic disposition, it is unsurprising to note that those high in narcissism have difficulty maintaining long-term relationships lack empathy and decrease in popularity over time (Leckelt et al., 2015; Wai & Tiliopoulos, 2012). Such findings point to narcissism contributing to dysfunctional team interactions.

Indeed, investigations have found that team narcissism negatively impacts team coordination across a season (Grijalva et al., 2019). In professional basketball teams, Grijalva et al. (2019) found that teams were less likely to share task-relevant information due to the high levels of self-interest in the environment which, in turn, undermined performance. Further, Boulter et al. (2022) revealed positive associations between narcissism and all three intragroup conflict types independently of one another. In the present study, we extend this line of research by suggesting the antagonistic interpersonal style central to narcissism can create disagreements within teams, thus, increasing all types of intragroup conflict. Specifically, we believe teams high in narcissism will conduce to environments where little effort is applied to maintaining harmonious relationships, which subsequently leads to arguments around personal values, or relationship conflict (Foster & Campbell, 2007). We also expect narcissism to be associated with process conflict in teams. Notably, as process conflict centers around personal competency, it represents an ego-threat to individuals high in narcissism. Consequently, such individuals respond aggressively to sources of criticism, which should increase process conflict (Back et al., 2013). Narcissism is somewhat more tentatively linked with task conflict, as both positive and negative associations have been noted in the literature (Boulter et al., 2022). Accordingly, given the theoretical and empirical evidence, we expected team-level narcissism to contribute to profiles high in relationship and process conflict such as the dysfunctional conflict profile.

2.1. Team personality perspectives of narcissism

In the organizational literature, team personality composition has been operationalized in several ways including mean, variance, minimum, and maximum score perspectives (e.g., Hardy et al., 2020). Investigating different operationalizations of team-level narcissism is valuable in understanding how different perspectives of the same trait can influence team member interactions. In particular, team mean and team *maximum* scores have relevance to the current research question. Team mean scores represent the average of individual personality scores on a given team, which, in our study, assesses a team's general level of narcissism. We expected that a high mean level of narcissism in a team would foster a self-centered and toxic team culture whereby there is little effort applied in maintaining team member relationships. This type of environment likely encourages the transmission of narcissistic actions throughout the team via the phenomenon of social contagion (Grijalva et al., 2019), whereby even those low in narcissism engage in antagonistic behaviors as it is deemed socially acceptable in the team. Therefore, our second hypothesis is that teams high in mean narcissism would engage in various disagreements and exhibit high levels of RC, TC, and PC, meaning we expected teams high in mean narcissism to occupy the dysfunctional conflict profile.

As a compliment to the mean approach, we also examined the maximum score of narcissism in teams. The maximum score approach is useful in highlighting the potential impact one individual can have on the rest of the team this is particularly relevant as those high in narcissism have the tendency to negatively impact a team. 'Bad apples', that is, individuals who violate team norms and/or exhibit unethical behaviors have the ability to create an environment of dishonesty and distrust within groups (Gino et al., 2009). Indeed, research suggests those high in narcissism do not like others and consequently, others reciprocate the dislike towards the target narcissist creating an environment of mutual aversion (Rentzsch & Gebauer, 2019). Thus, this mutual dislike created by an individual high in narcissism likely spreads throughout the team producing high levels of RC, TC, and PC. Accordingly, our third hypothesis proposes that teams with high maximum narcissism scores (reflecting having an individual within the team scoring particularly high in narcissism) should occupy the dysfunctional conflict profile.

To summarize, the present study had two aims. First, we derived

intragroup conflict profiles relevant to sports teams. Second, we hypothesized the influence of team narcissism as an antecedent to intragroup conflict profiles. In doing so, we utilized a new team-centric approach to investigate conflict in teams and offer the first insight into the contributing factors of intragroup conflict profiles.

3. Method

3.1. Participants and procedures

We recruited 109 teams of UK-based athletes (N=1107, $M_{\rm age}=23.06$ years, SD=6.48, 59% male, $M_{\rm team~size}=10.16$ athletes per team, SD=5.14; soccer n=341; rugby union; n=186; netball n=146; hockey n=141; cricket n=59; lacrosse n=55; basketball n=51; cheerleading n=48; handball n=20; American football n=18; dodgeball n=15; volleyball n=12; rugby league n=9; Gaelic football n=6). The competitive level of our participants varied (university n=568; amateur n=483; semi-professional n=44; international n=12). We deemed this sample size appropriate (109 teams) for two reasons. First, Williams and Kibwoski (2016) suggest that latent profile analysis should include sample sizes over 100 to allow for development of multiple profiles. Second, we were constrained by time and resources for collecting team level data in person (cf. Lakens, 2021).

We received institutional ethical approval for the research and all participants provided written informed consent. We approached participants during training sessions and asked them to complete measures of intragroup conflict and narcissism. Research assistants screened questionnaires to allow participants the opportunity to complete any missing responses.

3.2. Measures

3.2.1. Intragroup conflict

We measured conflict using the Intragroup Conflict Scale for Sport (ICS–S; Boulter et al., 2022). This 11-item scale measures three types of conflict within sports teams. Four items assess relationship conflict (RC; e.g., how much friction is there amongst your team), three items assess task conflict (TC; e.g., to what extent does your team argue the pros and cons of different opinions), and four items assess process conflict (PC; e.g., to what extent do you disagree about the way you do things in your team). Item response is assessed using a 9-point scale from 1 (none/never) to 9 (a lot/always). Initial validation work has supported the validity of the ICS-S (Boulter et al., 2022). Composite reliability estimates from the present study for the sub-scales ranged between 0.73 and 0.89.

3.2.2. Narcissism

To assess narcissism, we used the Narcissistic Personality Inventory-16 (NPI-16; Ames et al., 2006). The NPI-16 is the shortened version of the original NPI-40 which assesses agentic forms of grandiose narcissism. Each item consists of a narcissistic (e.g., *I am an extraordinary person*) and a non-narcissistic statement (e.g., *I am much like everyone else*), with participants asked to choose one of the two statements that they identify with most from each pair. The total number of narcissistic statements that a participant endorses represents the score of the participant (scoring 0–16). Composite reliability of the scale was 0.72.

3.3. Data analysis

3.3.1. Team-level aggregation

To identify conflict profiles, we aggregated individual-level scores for all conflict variables (RC, TC, PC) to create mean scores for all teams (cf. O'Neill et al., 2018). Intra-class correlations indicated adequate between-team variance which supported our decision to aggregate conflict variables to the team-level (ICC = 0.21 - 0.33). Similarly, for team narcissism, we aggregated NPI scores from the individual level to create team mean scores. For maximum narcissism scores, we identified

the highest scoring individual (on the NPI) per team and assigned this participants' NPI score to the team.

3.3.2. Missing data strategy

In team research, missing team member data can have an impact on subsequent aggregation and analysis (Allen et al., 2007). To minimize the impact on aggregation and analyses, some researchers suggest the removal of teams based on a proportion of missing team member responses (Allen et al., 2007). Others advocate for the retention of all data (O'Neill et al., 2018; Stanley et al., 2011). Those who argue for retaining all data suggest that even deleting a small proportion of teams from analysis can lead to a loss of statistical power and lead to an increase in Type II errors (Stanley et al., 2011). Furthermore, missing data may be theoretically meaningful, as missing data points may be indicative of conflict within teams (i.e., team members engaging in avoidance behaviors as conflict is prevalent in their team, cf. O'Neill et al., 2018). If teams with missing data are deleted from analysis, it may limit the detection of profiles high in conflict. Therefore, in line with the statistical and theoretical reasons, we retained teams for analysis with two or more responses.

3.3.3. Latent profile analysis

We used Mplus 8 (Muthén & Muthén, 1998-2017) to perform the LPA on intragroup conflict variables. Following model development recommendations on LPA, we specified a single-profile model, then added profiles to subsequent models (e.g., one-profile, then two-profiles, etc.; cf. Lindwall et al., 2017). Ideal model solution criteria are based on lower values for Akaike Information Criteria (AIC), Bayesian Information Criteria (BIC), sample-adjusted Bayesian Information Criteria (SSA-BIC), high values for entropy (>.70), and posterior class probabilities close to 100%. Additionally, significant p-values (p < .05) for the bootstrap likelihood ratio test (BLRT) and Lo-Mendell Rubin likelihood ratio test (LMR) are also indicative of an optimal model (Lindwall et al., 2017). The BLRT and LMR p-values provide information on the current model (k) versus the current model minus one class (k-1), where significant p-values suggest better model fit for k compared to k-1. Further

Table 1
Means, standard deviations, and bivariate correlations for study variables.

Variable	М	SD	1	2	3	4
1. NPI-16 _{mean}	4.27	1.96				
2. NPI-16 _{max}	8.73	2.75	.57 ^a			
3. RC	3.16	1.08	.32 ^a	.33 ^a		
4. TC	4.44	0.90	.17	.29 ^a	.56 ^a	
5. PC	3.54	1.03	.28ª	.39 ^a	.87 ^a	.69 ^a

Note. N = 109 teams.

NPI-16 = Narcissistic Personality Inventory-16; RC = relationship conflict; TC = task conflict; PC = process conflict

it is recommended that any profile must contain >5% of the sample in that profile (Nylund-Gibson & Choi, 2018) and that the profiles are considered theoretically relevant to the domain. Additional visual inspection of BIC, AIC and SSA-BIC on an elbow plot can aid with profile selection. The elbow refers to the point in the plot where the model fit indices have levelled out or are decreasing minimally with the addition of a new profile (Nylund-Gibson & Choi, 2018).

Modelling antecedents. After optimal model identification, we tested narcissism as an antecedent of the profiles by including narcissism (team mean and team maximum scores, independently) as an auxiliary variable in Mplus using the R3STEP command (Asparouhov & Muthén, 2014). This analysis uses logistic regression, whereby estimates reflect the log odds and odds ratios of being in a particular profile compared to being in a chosen reference profile.

As logistic regression coefficients are often difficult to interpret, researchers employ odds ratios (OR) to determine the nature of regression coefficients by comparing profiles against a reference profile. In our case we used OR to determine the odds of teams high in narcissism occupying particular conflict profiles compared to our *low-range* conflict reference group. An OR estimate of 1 is equal to no association, an estimate <1 suggests that teams high in narcissism are less likely to occupy a certain profile compared to the reference group, and an estimate >1 indicates they are more likely to occupy a certain profile compared to the reference group. As the values increase, or decrease, away from 1 the association (i.e., effect size) grows stronger.

4. Results

Descriptive statistics and bivariate correlations for all study variables can be found in Table 1. Bivariate correlations revealed team mean NPI scores were significantly and positively associated with both RC (r=0.32) and PC (r=0.28) but not TC (r=0.17). NPI maximum scores correlated with all three conflict types (r=0.29 - 0.39). All three conflict types correlated with one another (r=0.56 - 0.87) following a similar pattern reported in de Wit and colleagues' (2012) meta-analysis.

We conducted confirmatory factor analyses (CFAs) to establish the discriminant validity of our study measures and full results of these analyses can be found in the online materials https://osf.io/basxk/? view only=ba4b11d091b64c36847d06d83ec90267 Our proposed three-factor model of conflict fitted the data best (in comparison to other models where different factors were combined), χ^2 (41) = 270.19, CFI = 0.96, RMSEA = 0.07, SRMR = 0.04. More importantly, the delta χ^2 value indicated a significant improvement in fit over other comparative models, thus supporting the discriminant validity and optimal fit, of the three-factor measure. For the NPI, we revealed the following fit statistics χ^2 (104) = 341.96, CFI = 0.85, RMSEA = 0.05 and SRMR = 0.04. Finally, we also combined all study variables in one analysis (e.g., O'Neill et al., 2018). Results displayed that a four-factor model, treating each variable as a separate construct, offered the best fit indices of all models, χ^2 (318) = 854.38, CFI = 0.93, RMSEA = 0.04 and SRMR = 0.04. The delta χ^2 value indicated a significant improvement in fit over

Table 2
Fit indices, entropy, and model comparisons for latent profile analysis on conflict variables.

Classes	LL	AIC	BIC	SSA-BIC	Entropy	LMRT	BLRT	nC < 10/5%
1	-462.91	937.81	953.96	935.00	_	-	-	_
2	-407.62	835.24	862.16	830.56	.78	.23	<.001	0/0
3	-368.11	764.21	801.89	757.65	.90	.001	<.001	1/0
4	-350.33	736.67	785.11	728.24	.86	.15	<.001	1/0
5	-339.35	722.70	781.91	712.39	.87	.11	<.001	2/0
6	-330.71	713.43	783.40	701.24	.90	.09	.02	2/1

Latent profile analysis for intragroup conflict variables

Note. N = 109 teams.

 $LL = \text{Log-Likelihood}; \ AIC = \text{Akaike information criterion}; \ BIC = \text{Bayesian Information Criterion}; \ SSA-BIC = \text{sample-size adjusted Bayesian Information Criterion}; \ LMR = p\text{-value of Lo-Mendell Rubin test}; \ BLRT = p\text{-value of Bootstrap Likelihood Ratio Test}.$

^{*}p < .05

p < .01.

other comparative models, thus supporting the discriminant validity of the measures. Further details can be found in the online materials.

4.1. Latent conflict profiles

Based on model fit indices a six-profile model appeared desirable (see Table 2). However, on closer inspection of this model it became evident that only a single team occupied one of the profiles. Consequently, we rejected this model based on its failure to reflect reality or any substantive and theoretical meaningfulness (cf. Lindwall et al., 2017). Thus, based on the next best model fit indices, we compared the five-profile model against the four-profile model to better understand the theoretical distinctiveness of the models. The five-profile model demonstrated superior model fit indices compared to the four-profile model (namely lower AIC, BIC, and SSA-BIC values). The five-profile solution also included our hypothesized low-level conflict profile (low-range conflict), which the four-profile model do not contain. For a visual plot of the model fits we refer interested readers to the elbow plot in the supplemental file.

Given the desirable model fit statistics and inclusion of the hypothesized low-range conflict profile, we retained the five-profile solution for subsequent analysis. Overall, the resulting five-profile model contained our three hypothesized profiles and consisted of low-range, low TC-dominant, medium TC-dominant, high TC-dominant, and dysfunctional conflict profiles in teams (see Table 3 and Figure 1), with our hypothesized TC-dominant profile represented as three separate profiles

Table 3Percentage of teams, means, and variances for five-profile model.

Conflict Profile	% of teams in profile	Variable	Mean	SE
Low-range	6.5	Relationship	1.87	.11
$M_{NPI-16} = 2.74$		Task	2.51	.16
		Process	1.98	.11
Low TC-dominant	31.5	Relationship	2.36	.08
$M_{NPI-16} = 3.49$		Task	3.91	.14
		Process	2.66	.09
Medium TC-dominant	33.6	Relationship	3.10	.17
$M_{NPI-16} = 4.63$		Task	4.70	.14
		Process	3.61	.16
High TC-dominant	21.3	Relationship	3.98	.23
$M_{NPI-16} = 4.96$		Task	5.05	.12
		Process	4.49	.15
Dysfunctional	7.1	Relationship	5.75	.30
$M_{NPI-16} = 5.07$		Task	5.45	.19
		Process	5.67	.17

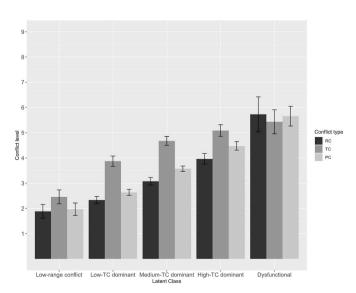


Figure 1. Latent conflict profiles for five classes.

distinct in conflict levels. The *low-range* profile was characterized by low levels of RC, TC, and PC. All three *TC-dominant* profiles revealed TC as the principal conflict type, but they each reflected increased levels of RC, **TC**, and PC across their respective profile. Finally, the *dysfunctional* profile displayed high and similar levels of RC, TC, and PC. The five-profile solution provided an adequate spread of teams across each profile (see Table 3) as all profiles contained >5% of teams. Posterior class probabilities of profile membership, which indicates the probability that teams are correctly classified into their profile, demonstrated that the five profiles were highly distinguishable from one another as all probabilities were above the 80% threshold (88.1%–99.9%).

To provide further support for the distinctiveness of the profiles, we performed separate one-way ANOVA and Tukey's HSD post-hoc comparisons on each conflict type across the different profiles. The results of these analyses confirmed the distinct nature of the profiles. Post-hoc analysis results can be found in OSF page.

4.2. Narcissism and associations with latent conflict profiles

4.2.1. Team mean narcissism

Table 4 provides detailed results of the logistic regression analyses. Findings were consistent with our second hypothesis that team mean narcissism scores were significantly and positively associated with dysfunctional profiles. We also found that team mean narcissism was positively associated with medium TC-dominant and high TC-dominant profiles. Specifically, in comparison to the low-range profile, for every one unit increase in mean narcissism scores the odds of being in the dysfunctional profile increased 2.36 times (Cohen's d=0.47), the odds of being in the medium TC-dominant profile increased 2.15 times (d=0.42), and the odds of being in the high TC-dominant profile increased 2.30 times (d=0.46). The equivalent Cohen's d scores for these odds ratios indicate a medium effect-size (Chen et al., 2010). For a full range of comparisons see the OSF page (https://osf.io/basxk/?view_only=ba4b11d091b64c36847d06d83ec90267).

4.2.2. Team maximum narcissism

As with mean scores, maximum scores were significantly and positively associated with the *dysfunctional, medium TC-dominant* and *high*

Table 4Logistic regression for team narcissism mean and max scores, with low-range as the reference group.

Narcissism type	Profile	Regression coefficient	SE	<i>p</i> - value	Odds Ratio
Mean	Low TC- dominant	.36	.23	.12	1.44
	Medium TC- dominant	.76	.24	.002	2.15
	High TC- dominant	.83	.23	<.001	2.30
	Dysfunctional	.86	.29	.003	2.36
Max	Low TC- dominant	.17	.16	.29	1.18
	Medium TC- dominant	.37	.15	.02	1.45
	High TC- dominant	.56	.16	.001	1.75
	Dysfunctional	.56	.20	.01	1.75

TC-dominant conflict profiles, supporting our third hypothesis (see Table 4). Specifically, again in comparison to the low-range profile, for every one unit increase in maximum narcissism scores the odds of a highly narcissistic individual occupying the dysfunctional profile increased 1.75 times (d = 0.31), the odds of being in the medium-TC

profile increased 1.45 times (d = 0.21), and the odds of occupying the high TC-dominant profile increased 1.75 times (d = 0.31). The equivalent Cohen's d scores for these odds ratios indicate a small effect-size for all relationships. For a full range of comparisons see the OSF page.

5. Discussion

The present study had two aims, to derive team conflict profiles and then test team narcissism as an antecedent to the profiles. First, we examined the nature of conflict profiles in sports teams whereby we revealed a five-profile solution for intragroup conflict which broadly supported our hypothesis that *low-range*, *dysfunctional*, and *TC-dominant* conflict profiles exist. Second, we examined team-level narcissism as an antecedent to these conflict profiles, in which we found support for our further two hypotheses. More specifically, team-level narcissism (both mean and maximum scores) predicted membership of the *dysfunctional* conflict profile, with mean and maximum scores also predicting membership of *medium TC-dominant* and *high TC-dominant* conflict profiles.

Our findings revealed five different conflict profiles that included the three profiles we hypothesized. These profiles were: low-range, low TCdominant, medium TC-dominant, high TC-dominant, and dysfunctional. Low-range conflict reflects a setting where teams are low in all three types of conflict, indicating a relatively harmonious team environment. The dysfunctional conflict profile represented the highest and comparable levels of conflict across all three types reflecting a highly hostile team environment. In between these two extreme profiles, three TC-dominant profiles emerged. Although TC was higher than RC and PC for all three TC-dominant profiles, they differed on the absolute levels of all conflict types across each profile, which may reflect different environments. We consider low TC-dominant to reflect a fairly harmonious environment, similar to low-range conflict, as the low levels of relationship and process conflict in low TC-dominant teams allow team mates to discuss alternative viewpoints without fear of social consequences. In contrast, medium and high TC-dominant profiles may reflect a more hostile environment. Indeed, the reason as to why medium and high TC-dominant profiles could be construed as less harmonious is that levels of RC and PC are raised in these profiles. These types of conflict, as opposed to TC, represent more emotionally laden, threatening types of conflict that can be disruptive in groups (O'Neill et al., 2018). Higher levels of RC and PC suggest that arguments around personal values and competencies, which individuals perceive as threats, are likely. Consistent with information processing theory (e.g., Pelled, 1996), such threats interfere with task relevant information in teams. Thus, like the dysfunctional profile, the increased levels of RC and PC in teams within medium and high TC-dominant profiles characterize teams that are less likely to share information and act in more hostile ways to one another, meaning that these particular profiles are unlikely to be conducive to harmonious team environments. It is also worth noting that despite the high correlations between RC and PC in this study, and the conceptual overlap between TC and PC (since they are task-related perceptions of conflict), we confirmed that a three-factor model (RC, TC, and PC as separate factors) provides the best model fit compared to various single or two-factor models (see supplemental file). These finding highlight that despite sharing both elements of task and emotional-type conflicts, PC is distinct from RC and TC in sports teams. To elaborate, RC refers to personality and value-based clashes; TC refers to the 'what' of the group (i.e., what are the goals and what should we do?), whereas PC refers to the 'how' of the group (i.e., how do we achieve our goals?).

The second aim of the study was to test an antecedent of conflict profiles. Our decision to investigate narcissism was due to the substantial interpersonal implications of the trait for teams. Given that narcissism is associated with a lack of empathy and decreased popularity over time (Leckelt et al., 2015; Wai & Tiliopoulos, 2012), we hypothesized that high team-level narcissism (team mean and team maximum scores) would be associated with membership of the dysfunctional conflict profile. We found support for our hypotheses as teams high in (mean and maximum) narcissism were more likely to have dysfunctional conflict profiles. Beyond our specific hypotheses, we also found that mean and maximum narcissism scores predicted the membership of medium and high TC-dominant profiles. It is unsurprising to see narcissism predict membership of these two specific profiles as they reflect threatening team environments as evidenced with increased levels of RC and PC. These findings provide further support that the hostile disposition of narcissism is implicated in raised levels of intragroup conflict. Examining the results in more detail, we found that the team mean operationalization of team personality had a stronger effect on conflict profile membership compared to team maximum scores. This result is not entirely surprising since more individuals are implicated in the team mean conceptualization than the maximum, so will likely have a more pronounced impact on team interactions. However, this is not to say that maximum scores should be overlooked, particularly when considering the applied implications of this work which we note later.

To our knowledge, the present study is the first to examine team conflict profiles in the sport literature. Although, we replicated several conflict profiles from previous research (O'Neill et al., 2018), our findings also differed from this work as we found that a five-conflict profile solution reflects the most optimal fit in the sporting domain. The difference in our findings compared to previous work lends further support to the conclusion that whilst some conflict profiles are replicable (e.g., low-range conflict, dysfunctional), latent conflict profiles are at least partly domain-specific.

5.1. Applied implications

The present findings have a number of practical implications. First, the conflict profiles reveal how all intragroup conflict types emerge and co-occur in teams. Specifically, the findings suggest that RC and PC are particularly key components of our profiles. Thus, establishing conflict management strategies that reduce the disagreements around personal values and roles would be conducive to effective team functioning. Second, the team mean approach to narcissism allows us to assess the general level of narcissism that exists within teams. In this instance, it is important to understand that the team composition of a trait like narcissism is associated with conflict profiles high in levels of RC and PC. Therefore, it is worthwhile for team selectors to be mindful of the overall team composition of narcissism when making selection decisions, generally too much narcissism in a team may lead to more RC and PC which disrupts team functioning. Third, the maximum score approach to narcissism suggests that so-called 'bad apples' in teams can be particularly problematic. More specifically, individuals high in narcissism tend to be the target of reciprocal dislike that they themselves have projected in the team, thus creating a hostile team environment (Gino et al., 2009; Rentzsch & Gebauer, 2019). If managers (and sports coaches) can recognize highly narcissistic individuals within their teams, they can tailor their coaching style to reduce the detrimental impact of narcissism on teams. Accordingly, identifying and managing a highly narcissistic individual allows managers and sport coaches to focus their efforts in a more targeted manner rather than trying to overhaul the team culture (represented by the team mean perspective). Some examples may include disciplining the 'bad apples' behavior by omitting them from matchday rosters or by directly addressing the individual's negative behavior (cf. Cope et al., 2010).

¹ We also examined two additional team-level narcissism operationalizations: team minimum and team variance scores. These two operationalizations were included to determine if there were any alternative team scores which drove the effect of narcissism on latent conflict profiles. Results of these analyses displayed no significant associations for the minimum or the variance approach on the latent conflict profiles and can be found here (https://osf.io/basxk/).

5.2. Limitations and future directions

The present study has several strengths associated with it. For instance, we used teams that are real, naturalistic, and long lasting, which enhances the ecological validity of the conflict profiles. The study is also the first to test antecedents to conflict profiles, and largely replicates profiles to that of O'Neill et al. (2018).

Nevertheless, we also note the limitations of our work. First, despite replication of the conflict profiles by O'Neill et al. (2018), and sample size estimations based on recommendations by Williams and Kibwoski (2016), other researchers note that to replicate and uncover the full range of profiles that may exist in a population a sample size above 500 is beneficial (see Espinoza et al., 2020). Second, our data are cross-sectional thus limiting the extent to which we can draw causality between narcissism and intragroup conflict. However, previous research on team narcissism in sport teams (Grijalva et al., 2019) suggests a causal link between narcissism and team co-ordination, therefore we have good reason to suggest narcissism impacts intragroup conflict. Finally, the cross-sectional data demonstrates how conflict is manifested at only one point in the season (i.e., early season), therefore potential later season effects are not currently included in the current study.

Given these limitations, future research may wish to adopt a longitudinal design to examine how conflict profiles develop across a season in relation to teams' win/loss record. For example, a low-range conflict profile may be evident at the beginning of a season, but a series of poor results could be associated with higher levels of RC and PC across the season. A further development would be to ascertain the way in which both team mean and maximum narcissism scores manifest in conflict profiles across the season. For instance, narcissism is associated with positive outcomes initially in group formation, but the positive effects quickly decline (Leckelt et al., 2015). Thus, it is possible that teams high in narcissism occupy a *low-range* profile initially but gradually move to the *dysfunctional* profile through the season. Furthermore, studying individual's perceptions of conflict in the group via round-robin ratings and social network analysis could offer a more fine-grained understanding of the source of conflict within teams.

In the current study, we measured narcissism using the NPI-16, which assesses a global form of grandiose narcissism. However, recent conceptualizations of narcissism reveal that narcissism is a multidimensional construct which distinguishes between agentic and antagonistic forms of narcissism, such as the three-factor model of narcissism (Crowe et al., 2019) or the Narcissistic Admiration/Rivalry Concept (NARC; Back et al., 2013). Future research should consider a multidimensional assessment of narcissism and the influence different facets of narcissism have on conflict profiles. Indeed, Lynch et al. (2021) showed how the admiration/rivalry components of the NARC have differential relationships with conflict resolution strategies. For example, team rivalry scores were associated with less cooperative strategies and more competitive strategies, whilst admiration was not associated with either type of strategy.

A final future direction would be to consider different multidimensional group dynamic variables such as team cohesion, motivational climate, or psychological safety, within a latent profile approach and to explore how different antecedents (such as narcissism) influence membership of particular profiles. For example, we may expect agentic narcissism to be associated with profiles low in task cohesion, as the goals of the team may not align with the goals of an individual high in narcissism.

5.3. Summary

To summarize, we investigated intragroup conflict profiles and their antecedents (team-level narcissism) in sports teams. Investigating combinations of the three conflict types represents a real-world approach to conflict that is intuitive to understand. Our large sample replicated similar conflict profiles to the only previous study (O'Neill

et al., 2018), and also afforded us the opportunity to conduct the first investigation into conflict profile antecedents. Team-level narcissism (both team mean and maximum scores) predicted membership of profiles high in conflict. Specifically, teams high in narcissism occupied medium TC-dominant, high TC-dominant, and dysfunctional conflict profiles. These findings suggest team-level narcissism influences the likelihood of teams occupying conflict profiles which are high in RC and PC. Thus, our study provides further evidence for the important role of the team-centric paradigm to better understanding conflict, and for the influence of narcissism in teams.

Declaration of competing interest

This submission contains no member of the editorial board for PSE. Thus, we declare no conflict of interest.

Data availability

Data is available on OSF (https://osf.io/basxk/)

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