EXAMINING THE "I" IN TEAM: A LONGITUDINAL INVESTIGATION OF THE INFLUENCE OF TEAM NARCISSISM COMPOSITION ON TEAM OUTCOMES IN THE NBA

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Previous research has shown that narcissism is unrelated to job performance, yet this individual-level effect may be underestimating narcissism's wider influence on organizational performance. To assess this possibility, we draw on social exchange theory and the agency model of narcissism to investigate how team narcissism composition affects team coordination and performance. Our model was tested using game-level longitudinal data from National Basketball Association teams. Teams with higher mean and maximum levels of narcissism as well as higher narcissism members in core roles (i.e., central and influential roles) had poorer coordination and in turn performance than teams with lower levels. In addition, having higher team familiarity amplified the effects of narcissism for team mean and core role narcissism. The nature of the observed interaction, however, was surprising. Originally, we hypothesized that narcissism would lead to greater decrements in coordination as familiarity increased. Instead, we found that teams with higher mean and core role narcissism maintained the same levels of coordination over time, whereas teams with lower narcissism experienced improvements in coordination. Thus, team-level narcissism appears to prevent teams from capitalizing on normative coordination gains that occur as familiarity increases. These results underscore the importance of considering narcissism when forming teams.

Teams have become increasingly prevalent in modern organizations because they allow for the flexible division of labor (Sundstrom, De Meuse, & Futrell, 1990), stimulate creativity (Harrison & Rouse, 2014), and meet employees' social needs (Oh, Labianca, & Chung, 2006). Unfortunately, many teams are not able to fully realize the potential benefits associated with teamwork. One common mistake in forming teams is to focus too heavily on selecting members based on technical skills while simultaneously undervaluing teamwork skills, resulting in teams that experience difficulty when working interdependently (Hackman, 1990; Marks, Sabella, Burke, & Zaccaro, 2002). For instance, sports teams "show it is (relatively) easy to hire a star athlete, or even acquire several stars, but much more difficult to get them to work together collaboratively and effectively" (Narayan & Ployhart, 2013: 165). Team success, therefore, is a function of not only team members' task competence and available resources, but also depends on more intangible attributes that influence how team members interact with

one another. Consistent with this observation, several empirical reviews have revealed that personality traits play an important role in determining team effectiveness (Bell, 2007; Halfhill, Sundstrom, Lahner, Calderone, & Nielsen, 2005; Prewett, Walvoord, Stilson, Rossi, & Brannick, 2009; see also LePine, Buckman, Crawford, & Methot, 2011).

Despite mounting evidence supporting the value of personality for understanding team behavior, existing work has largely failed to consider the personality trait of narcissism. This is a surprising omission, given that narcissism is a uniquely interpersonal trait associated with difficulty maintaining long-term relationships (e.g., Blair, Hoffman, & Helland, 2008; Paulhus, 1998). Narcissists tend to be entitled, arrogant, have inflated self-importance, and lack empathy for others (Campbell & Foster, 2007; Carroll, 1987; Raskin & Terry, 1988). It is easy to see how these interpersonal attributes could produce dysfunctional team behaviors. Yet, virtually all prior narcissism research has been conducted at the individual level and has concluded that individual narcissism is not significantly related to job performance (O'Boyle, Forsyth, Banks, & McDaniel, 2012).

We argue, however, that this individual-level job performance research may be underestimating narcissism's true impact on organizational performance as a whole. Narcissism's consequences tend to be largely relational, thus it follows that narcissism's influence is more likely to reside at the team level than the individual level of analysis. That is, narcissism is more likely to directly influence interdependent team processes and emergent states than isolated individual performance. Our argument is supported by a long history of research on person–situation interactionism, which suggests that individuals express traits in response to "trait-relevant situational cues" (Allport, 1966; Murray, 1938; Tett & Burnett, 2003: 502). Because teamwork demands interdependence among team members, interpersonal traits such as narcissism are expected to manifest themselves, and as a result should be relevant to team processes and performance. In particular, teamwork provides unique opportunities to act on self-interested impulses by taking advantage of others' efforts and concealing selfish acts through a diffusion of responsibility (Li, Kirkman, & Porter, 2014). Thus, we investigate whether narcissism undermines a team's ability to coordinate effectively and subsequently hinders team performance.

At the same time, we acknowledge that the interpersonal context within teams varies depending on how well team members know one another. Indeed, we argue that team familiarity (i.e., the degree of shared experience that team members amass over time; Espinosa, Slaughter, Kraut, & Herbsleb, 2007; Huckman, Staats, & Upton, 2009) is particularly relevant to the current study because narcissists' relationships tend to deteriorate as interpersonally abrasive qualities (e.g., arrogance, entitlement, and overconfidence) accumulate across repeated interactions (Paulhus, 1998). This finding aligns with team-level research showing that, when it comes to group functioning, the effects of surface-level attributes (e.g., gender and race) diminish over time, whereas the effects of deep-level attributes (e.g., traits) strengthen over time (Harrison, Price, & Bell, 1998; Harrison, Price, Gavin, & Florey, 2002). Thus, we predict that narcissism's adverse influence on team coordination strengthens as team familiarity increases and in turn leads to poorer team performance. Figure 1 provides a summary of our model.

To develop our arguments for narcissism at the team level of analysis, we draw on both the agency

FIGURE 1
Proposed Theoretical Model
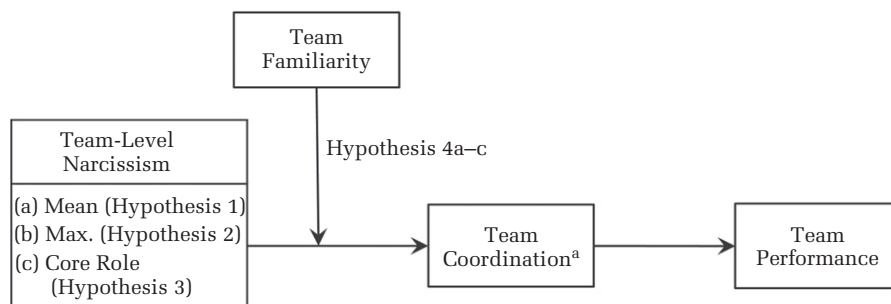
Note: [a] Hypothesis 5a–c and Hypothesis 6a–c: Team-Level Narcissism is proposed to exhibit indirect effects on Team Performance through Team Coordination.

model of narcissism (Campbell, Brunell, & Finkel, 2006; Campbell & Foster, 2007) and social exchange theory (Blau, 1964; Gergen, 1969). From the agency model of narcissism, we extract the foundational principle that narcissists are simultaneously high in agency (e.g., dominance and independence) and low in communion (e.g., nurturance and warmth). We then use social exchange theory to predict how narcissism's interpersonal structure will influence team coordination. Social exchange theory posits that interpersonal interactions unfold through a process of reciprocity whereby both positive and negative deeds are repaid in kind (Cropanzano & Mitchell, 2005). Through the lens of social exchange theory, we expect that narcissistic individuals' egocentric behaviors will evoke reciprocal selfishness from exchange partners. As the nature of teamwork makes collaborative efforts particularly valuable, a shift toward emphasizing personal interests over those of the collective is expected to hinder team coordination and performance (Ashforth & Mael, 1989).

Through developing and testing this model, the current article advances our knowledge of narcissism and teams in three ways. First, we investigate narcissism at a higher level of analysis, demonstrating that team-level narcissism is an untapped source of team variability.[1] Although past meta-analytic research has established that, on average, narcissism does not interfere with an employee's ability to perform tasks independently (O'Boyle et al., 2012), we show that narcissism does hinder collaborative team performance over time. In other words, we establish that narcissism has differing effects on performance outcomes at different levels of analysis. Further, as this is one of the early investigations of teams' narcissism composition, there is not past precedence to guide how individual narcissism scores should be combined to capture a team-level effect. Thus, our second contribution is to outline the logic underlying how narcissism is conceptualized and measured at this higher level of analysis. In particular, we consider three compositional approaches, including the mean, maximum, and core role (i.e., the aggregate narcissism of individuals in influential and central roles on a team [Humphrey, Morgeson, & Mannor, 2009]). By using different approaches, we

capture a broader understanding of narcissism's team-level effects.

Third, we include team familiarity in our model to derive a temporally bounded perspective of how narcissism influences team processes and outcomes. In particular, we expect that narcissism's association with team coordination will strengthen as team familiarity increases. Despite acknowledgment of the critical role played by time, teams are usually studied in static settings with cross-sectional designs. By using a longitudinal approach, we answer calls for a better incorporation of temporal considerations into organizational theories (e.g., Ancona, Goodman, Lawrence, & Tushman, 2001; Marks, Mathieu, & Zaccaro, 2001; Shipp & Fried, 2014). Our paper also has clear practical applications, given that the personality makeup of a team can be strategically manipulated by organizations through recruitment and selection practices to produce teams with more ideal team personality configurations.

THEORY AND HYPOTHESES

Narcissism Theory and Extant Research

To better understand the interpersonal complexities that undergird narcissism, Campbell and colleagues integrated decades of prior research to develop the agency model of narcissism (Campbell et al., 2006; Campbell & Foster, 2007). A fundamental tenet of this theory is that narcissism is characterized by high agency, a desire for power or influence over others, and low communion, a lack of interest in warm and caring interpersonal relationships (Bradlee & Emmons, 1992; Campbell & Foster, 2007). As agency and communion represent two fundamental relational drives (i.e., the "desire to get ahead" and the "desire to get along," respectively [Hogan, 1996; Wiggins, 1979]), this interpersonal makeup explains narcissists' general disinterest in or detachment from close relationships (Back, Küfner, Dufner, Gerlach, Rauthmann, & Denissen, 2013; Morf & Rhodewalt, 2001).

Central to this conceptualization of narcissism is the belief that narcissists' pursuit of admiration and success often comes at the expense of those around them. Narcissists are willing to use and abuse other people to get ahead such that they "trade interdependence and closeness for individual status and esteem" (Campbell, Bush, Brunell, & Shelton, 2005: 1358). An interpersonal strategy that is expected to be particularly detrimental in team contexts where working interdependently is crucial to task accomplishment (Bachrach, Powell, Collins, &

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[1] When we use the term "team-level narcissism," we are referring to approaches that measure configurations of *individual* team members' narcissism (e.g., the mean or maximum of members' scores) and not a referent shift approach in which a measure refers to the team as a whole (e.g., "My team is narcissistic" [Chan, 1998]).

Richey, 2006). As a consequence, because there is a mismatch between narcissists' attributes and those demanded by the team setting, it follows that narcissism likely detracts from team performance (Tett & Burnett, 2003).

Despite this clear conceptual linkage and a burgeoning interest in narcissism within the organizational literature (e.g., Chatterjee & Pollock, 2017; Martin, Côté, & Woodruff, 2016; Nevicka, Van Vianen, De Hoogh, & Voorn, 2018), narcissism's impact at the group or team level of analysis remains relatively unexplored. Studies that exist generally take a leadership perspective, focusing on whether narcissism promotes leadership emergence in leaderless groups (Brunell, Gentry, Campbell, Hoffman, Kuhnert, & DeMarree, 2008; Nevicka, De Hoogh, Van Vianen, Beersma, & McIlwain, 2011) and how narcissistic leaders influence team outcomes (Liu, Chiang, Fehr, Xu, & Wang, 2017). Nonetheless, past work has largely neglected questions concerning how the *configuration* of team members' narcissism affects team processes and outcomes (cf. Felty, Whitaker, Bergman, & Bergman, 2015). The current paper, therefore, extends prior individual-level narcissism theory by using various compositional approaches to estimate how aggregate levels of narcissism impact team members' ability to integrate efforts through team coordination.

In terms of how team-level narcissism is conceptualized, it is important to point out that, even when measured at a higher level of analysis, personality traits reside within the individuals who compose the team. Thus, unlike many other team-level variables, traits are "not created by the collective, they are pre-existing" and fall under what Cronin, Weingart, and Todorova (2011) referred to as cumulative constructs "where the higher-level phenomena is based in stable individual properties" (Cronin et al., 2011: 576). Consequently, team-level narcissism is expected to influence team outcomes to the extent that distinct cumulative levels or configurations of narcissism across teams produce different patterns of interactions among team members (Bliese, 2000; Kozlowski & Klein, 2000). Because narcissists tend to have difficulty maintaining healthy dyadic relationships (Campbell & Campbell, 2009; Carlson & DesJardins, 2015), we predict that narcissism will have a similarly corrosive impact at a higher level of analysis through its influence on vital interpersonal processes necessary for coordination. In particular, we rely on the essential features of narcissism and the tenets of social exchange theory to describe how narcissism's dysfunctional influence transpires.

Team-Level Narcissism's Relationship with Team Coordination

The crux of social exchange theory rests on the idea that relationships are based on the adherence to rules of reciprocity for interpersonal interactions (Blau, 1964), including negative norms of reciprocity. In his classic work on the topic, Gouldner (1960: 172) referred to negative reciprocity as "sentiments of retaliation where the emphasis is placed not on the return of benefits but on the return of injuries." In the current discussion of team-level narcissism, we expect negative reciprocity to fuel the contagion of self-interested behaviors in teams through the tendency for uncooperative, self-interested acts to elicit uncooperative, self-interested responses from exchange partners. Below, we explain our logic in more detail for team mean, maximum, and core role narcissism in turn.[2]

Team mean narcissism. The examination of team mean narcissism allows us to assess how a team's general level of narcissism affects coordination. It is expected that teams with higher mean narcissism will emphasize agentic motives such as striving for superiority and status, and deemphasize communal motives by displaying little effort to maintain harmonious relationships (Campbell & Foster, 2007). Narcissists crave the admiration of others and seek to stand out and be recognized for their contributions, and, therefore, are likely unwilling to sacrifice opportunities for individual accolades, recognition, or advancement (Morf & Rhodewalt, 2001). Consistent with this logic, narcissists have been shown to conserve personal energy and effort for use at times when their work is recognized and rewarded individually (Wallace & Baumeister, 2002). Further, using a classic social dilemma in which short-term individual welfare is pitted against the long-term well-being of a larger community (i.e., the tragedy of the commons [Hardin, 1968]), past work has demonstrated that narcissists selfishly utilize collective resources for personal gain to the detriment of other individuals and the community as a whole (Campbell et al., 2005).

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[2] Using the lowest scoring member (i.e., the minimum) is another team composition approach that researchers sometimes employ (e.g., Bell, 2007). In the current study, we do not examine the minimum because narcissism's deleterious consequences for teams are assumed to stem from behaviors that damage interpersonal relationships, yet logic does not dictate that lower levels of these negative behaviors in a single member (as represented by the minimum) would impact teams either positively or negatively.

We expect that this kind of narcissistic behavior is particularly problematic for teams. When work must be performed interdependently, selfish behavior is likely to spread even to members who are not individually high in narcissism. As a result, we posit that what ultimately differentiates teams with higher average levels of narcissism from those with lower average levels of narcissism is how members prioritize the team versus the self. In teams characterized by higher mean narcissism, we argue that the tendency is for members to primarily look out for their own self-interests, behaving in ways that benefit the self but not necessarily the team as a whole (Campbell et al., 2005). In this way, higher mean narcissism would promote a system of reciprocal egoism in which members are generally more self-focused and less willing to make personal sacrifices for the team (Kramer, Brewer, & Hanna, 1996; Li et al., 2014). Notably, the idea that selfish behavior may be transmitted among team members is consistent with the well-established phenomenon of social contagion (Levy & Nail, 1993) whereby unethical behaviors (Kish-Gephart, Harrison, & Treviño, 2010), absenteeism (ten Brummelhuis, Johns, Lyons, & ter Hoeven, 2016), antisocial behaviors (Ambrose, Schminke, & Mayer, 2013), and aggression (Bandura, Ross, & Ross, 1963) have each been shown to spread among individuals.

An emergent tendency for team members to think and act more selfishly is problematic because past research has established that teams typically perform better when members place collective interests ahead of individual interests (Ashforth & Mael, 1989; Owens & Hekman, 2016). Not only are self-interested acts often at odds with what is best for the collective, they are also associated with decreased trust among exchange partners (Lioukas & Reuer, 2015). The failure to develop trust (and positive exchange relationships more generally) arguably undermines a team's ability to effectively integrate effort through pathways such as members refusing to share scarce resources and failing to harmoniously transition efforts among team members (De Jong & Elfring, 2010; Mach, Dolan, & Tzafrir, 2010). As a result, we predict that teams with higher mean narcissism in which everyone is "in it for themselves" will experience decreased coordination compared to teams with lower mean narcissism.

Hypothesis 1. The mean level of narcissism in teams is negatively related to team coordination.

Team maximum narcissism. We also investigate how a team's maximum narcissism affects coordination by using the highest team member's narcissism score to represent the team. Operationalizing a personality variable as the team maximum is useful when it is theoretically plausible that "the characteristic of one team member will have a profound influence on team performance" (Bell, 2007: 599; see also Kozlowski & Klein, 2000). This is expected to be the case for narcissism, where one extremely arrogant, selfish, and difficult-to-get-along-with individual can contaminate the entire team dynamic. Consistent with this logic, past research has established that "a bad apple spoils the barrel" (Duffy & Lee, 2012) or that a single negative individual can have an "asymmetric and deleterious effect on others" (Felps, Mitchell, & Byington, 2006: 176; see also Barrick, Stewart, Neubert, & Mount, 1998; Neuman & Wright, 1999).

In terms of how a highly narcissistic teammate influences others, social exchange processes dictate a tit-for-tat response such that selfish behaviors are reciprocated (Blau, 1964). If people observe that one team member is a selfish contributor, but is benefiting from other members' hard work, then other team members may similarly withdraw effort or allocate efforts more selfishly so that they do not feel exploited (Felps et al., 2006). Particularly if teams are highly interdependent and necessitate that members must continue to work closely with a highly narcissistic member, then the most narcissistic member's selfish behavior may disperse throughout the team. Using the same logic supplied for mean narcissism, we expect that increasing levels of selfish behavior result in the development of weaker exchange relationships. Overall, we anticipate that higher maximum narcissism will make mutually beneficial interchanges among team members less likely to occur and lead to poorer team coordination.

Hypothesis 2. The maximum level of narcissism in teams is negatively related to team coordination.

Team core role narcissism. Finally, we utilize a role composition approach to assess the possibility that the negative influence of narcissism on coordination will be exacerbated when narcissists hold roles on a team that are relatively central and important (i.e., "core") (Humphrey et al., 2009; LePine, Hollenbeck, Ilgen, & Hedlund, 1997). To frame our investigation into core roles, we rely on Humphrey and colleagues' (2009) strategic core theory, which posits that some roles on a team are more critical to a team's workflow and that the attributes of these critical members should be more influential. In terms of what is considered a core role, these authors identified three essential features: core roles are

those that "encounter more problems, have greater exposure to the tasks being performed, and are in a central position in the workflow" (Humphrey et al., 2009: 57). The importance of core roles has been confirmed across a number of studies and diverse outcomes (Siegel Christian, Christian, Garza, & Ellis, 2012; Siegel Christian, Pearsall, Christian, & Ellis, 2014; Stuart & Moore, 2017; Summers, Humphrey, & Ferris, 2012).

In the current study, we argue that the centrality and importance of core team members means that they have a greater influence on team social exchange processes. To elaborate, because core role holders are in a central position in the workflow, they have the opportunity to engage in a greater number of social exchanges, enhancing the likelihood that they will set the interpersonal tone for the team. Although we are not aware of any studies examining the impact of core role holders' narcissism, subordinates in teams led by narcissists have been shown to perform fewer prosocial behaviors (Liu et al., 2017). Narcissistic leaders' self-interested behavior appears to spread to followers by creating norms that encourage followers to "avoid prosociality in favor of more self-interested action" (Liu et al., 2017: 1592). This result supports our argument that individuals exposed to narcissists in influential positions—whether it be position power or centrality—are more likely to adopt egocentric behavior.

Notably, our theoretical arguments for the mean, maximum, and core role operationalizations are similar in that each draws on social exchange theory to suggest that selfish behavior tends to be reciprocated. However, the mean operationalization implicitly assumes that all members impact the team equally, whereas the maximum examines only the dysfunction that ensues from the single most narcissistic member (regardless of that individual's role in the team). In contrast, the core role approach acknowledges that some members have greater influence than others based on their position in the team. To be clear, we do not intend to suggest that the narcissism of non-core members does not influence coordination, but instead that the narcissism of core role holders potentially has a comparatively greater influence and deserves independent analysis.

Hypothesis 3. Teams that have higher narcissism members in core roles will coordinate more poorly relative to teams that have lower narcissism members in core roles.

The Moderating Role of Team Familiarity

We next consider how narcissism in teams interacts with team familiarity to affect coordination. Team member familiarity refers to the shared experiences that team members accumulate, and generally facilitates team performance because it enhances trust and contributes to the formation of accurate team mental models (Espinosa et al., 2007; Weick & Roberts, 1993). However, the benefits associated with familiarity rest on the assumption that the buildup of interactions among team members is relatively positive, which is not expected to be the case for narcissistic exchange partners because selfish acts tend to trigger selfish responses.

Imperative to this notion of reciprocity that underpins social exchange theory, however, is the assumption that relationships are developed through multiple encounters that unfold over an unspecified timeframe (Cropanzano & Mitchell, 2005). Thus, temporal factors are clearly imperative to consider when relying on social exchange theory as a guiding framework. In the current paper, we incorporate team familiarity to account for the fact that relationships take time to develop. We posit that increasing familiarity provides more opportunities for narcissists' negative interpersonal tendencies to surface and subsequently damage team relationships (Harrison et al., 2002). As such, the hypothesized negative influence of team-level narcissism on coordination is expected to become stronger as familiarity increases for each of the operationalizations of team members' narcissism (i.e., mean, maximum, and core role).

Narcissists tend to make a positive first impression by appearing charming, self-assured, physically attractive, and humorous (Back, Schmukle, & Egloff, 2010; Holtzman & Strube, 2010; Oltmanns, Friedman, Fiedler, & Turkheimer, 2004). As time progresses and team familiarity builds, however, narcissists' interpersonally abrasive qualities begin to surface (Campbell & Campbell, 2009; Robins & Beer, 2001). For example, Paulhus (1998) found that, immediately after group formation, team members described narcissists positively, using adjectives such as "confident," "entertaining," and "physically attractive." Yet, by the end of the study, team members' perceptions of narcissists had dramatically deteriorated, such that narcissists were described as "hostile," "arrogant," and "cold." Regarding why narcissists' negative qualities become more potent as familiarity develops, we argue that increasing levels of familiarity allow a greater number of social

exchanges to accumulate and more time for the outcomes of social exchanges to become evident. It takes time to determine whether positive acts will be reciprocated and to ascribe meaning to ambiguous or potentially harmful acts (Vanneste, Puranam, & Kretschmer, 2014). For narcissism in particular, it takes time to disentangle whether a team member is a high performer or self-enhancer, and whether, when push comes to shove, a team member will prioritize collective interests ahead of self-interests. Altogether, we expect familiarity to exacerbate team-level narcissism's negative relationship with coordination because it is through an accumulation of social exchanges that narcissists' negative qualities become apparent and thus have the opportunity to erode interpersonal relationships.

> Hypothesis 4. Team familiarity moderates the negative relationship between (a) mean-level narcissism, (b) maximum-level narcissism, and (c) core role narcissism on team coordination such that the relationship is stronger for higher levels of team familiarity than lower levels of team familiarity.

Indirect Effect of Narcissism on Team Performance

Finally, we incorporate the more distal outcome of team performance into our model. Coordination is a leading predictor of team performance (LePine, Piccolo, Jackson, Mathieu, & Saul, 2008). When teams are highly coordinated, they effectively leverage each member's talent; but, when coordination is lacking, there can be process losses that negatively influence team performance (Fisher, 2014). Therefore, in addition to predicting that team-level narcissism diminishes team coordination, we further expect a concomitant decrease in team performance. In other words, our model represents a causal sequence: team-level narcissism affects coordination, which in turn influences team performance. Further, we posit that this causal sequence is strongest when teams have higher familiarity. This leads us to propose the following hypotheses:

> Hypothesis 5. The effect of team-level narcissism on team performance is mediated by coordination for each of the three operationalizations of team-level narcissism: (a) mean-level narcissism, (b) maximum-level narcissism, and (c) core role narcissism.

> Hypothesis 6. The effect of the team-level narcissism by team familiarity interaction on team performance is mediated by coordination for each of the three operationalizations of team-level narcissism: (a) mean-level narcissism, (b) maximum-level narcissism, and (c) core role narcissism.

DATA AND METHODS

Sample

Our sample consisted of team-level data from every game in the 2013–2014 regular season of the National Basketball Association (NBA). The NBA is a professional basketball league composed of 30 teams located in the United States and Canada. Each team plays 82 games per season. Thus, our data set consisted of 2,460 performance episodes (82 games for each of the 30 teams) that were collected over time, allowing us to assess the interactive influence of team familiarity and narcissism on coordination.

One feature of the NBA that makes it particularly well suited for addressing our hypotheses is that it likely fans the flames of narcissism because individual players are publicly celebrated via media interviews, endorsement deals, and nominations to all-star games. Thus, the NBA creates an environment that feeds players' egos—increasing the likelihood that latent narcissistic propensities will be activated. Furthermore, the NBA context provides ample opportunity for the expression of narcissism to impact team performance. To elaborate, team performance within the NBA depends to some extent on players sacrificing individual glory to coordinate with teammates even though accolades (e.g., most valuable player or scoring champion) and related financial rewards are generally tied to individual rather than team performance (Hamilton, 1997). Consequently, there is an inherent tension between the types of behavior that benefit individual players and those that benefit the team as a whole.

This becomes clear when considering possessions (when a team is in control of the ball). Each possession represents a limited resource in that only one of a team's five players on the court will have an opportunity to score, and players must decide whether to use this resource in a self-serving manner (e.g., a player who "hogs the ball") or in a way that benefits the team. For instance, it is common for players to be faced with the decision of whether to take a shot even when well defended or to pass to a less well-defended teammate who is more likely to score. Making a difficult shot may win the admiration of fans, whereas passing to a teammate would create greater opportunity to benefit the team as a whole. The use of physical energy and effort presents a similar resource allocation dilemma, in that players must at times choose between expending effort to benefit the team (e.g., vigorously defending opponents) or standing out individually (e.g., scoring points). In sum, we conclude that characteristically

self-centered behaviors associated with narcissism are applicable to the work performed by NBA teams.

In addition, basketball teams are considered to be "action teams"—teams that consist of skilled specialists who "physically manipulate their operating environment to carry out their plans" (Hirschfeld & Bernerth, 2008: 1429). Other examples of action teams include surgical teams, cockpit crews, and entertainment groups (Sundstrom et al., 1990). Action teams were a good fit for the hypotheses being addressed in the current paper because they necessitate that members work together closely to provide coordinated responses to unexpected events in real time (Sundstrom, 1999). Basketball teams are highly interdependent; passing, defending, rebounding, and scoring require substantial coordination and communication. Further, basketball games are dynamic and change rapidly. The need to shift from offense to defense can occur instantaneously, without warning, requiring coordination and adaptability.

Using NBA data also has other advantages, as follows: (a) NBA performance is episodic, allowing us to examine how aggregated team-level personality impacts team functioning as teams gain experience working together; (b) NBA performance is highly standardized—the rules of play and measures of performance are the same in all games; and (c) publically available archival databases provide objective performance outcomes for each team. Use of objective measures reduces concerns about methodological issues (e.g., common method bias) that often plague survey-based studies. The aforementioned advantages likely contribute to why the NBA has been used by past researchers to test a wide variety of organizational hypotheses (e.g., Ertug & Castellucci, 2013; Staw & Hoang, 1995; Swaab, Schaerer, Anicich, Ronay, & Galinsky, 2014).

Accounting for Membership Instability

A complexity associated with the longitudinal nature of our design is that the members who compose a team often change over time, and recent research has acknowledged the importance of modeling this instability (Bell & Outland, 2017; Mathieu, Tannenbaum, Donsbach, & Alliger, 2014). In the current study, over 84% of all roster spots (354 players) turned over prior to or during the 2013–2014 season as a result of a trade or free agency, and there was also instability in player rotations or lineups (unique five-player combinations). We found that ICC(1)s ranged from 84% for maximum narcissism to 91% for mean narcissism, which indicates that 9% to

16% of the variance in our narcissism measures occurs within teams. Thus, although the majority of variance was between teams, we observed non-trivial within team variance in narcissism that was associated with membership instability, providing evidence for the need to account for within team variation in narcissism.

We account for membership instability in the current manuscript when aggregating player-level data to the team level by computing weighted scores based on a player's ratio of minutes played during each game (i.e., a player's minutes divided by the total number of player minutes). For instance, team mean narcissism for the first game of the season was computed by multiplying a player's narcissism score by his playing time ratio and then averaging across players to form the team mean narcissism score for that game. Measures for which weighted averages were computed included mean narcissism, maximum narcissism, core role narcissism, average age, beginning familiarity, and player ability (estimated wins added; hereafter "EWA").

Measures

The data for all variables except narcissism were gathered from the basketball statistics website www.basketball-reference.com.

Team performance. We assessed the probability of winning (1 = win, 0 = loss) and victory margin at the game level. These outcomes were selected because winning is the ultimate objective and single most important indicator of success for sports teams. Further, examining victory margin allowed for a more fine-grained analysis of performance than winning probability, given that the measure is continuous rather than dichotomous.

Team coordination. To assess coordination, we used a count of a team's assists in each game. Assists are passes that lead directly to a made field goal (score), and generally result from coordinated actions that move defensive players out of proper position or location on the court. Coordinating well puts players in position to take shots that are not adequately defended, increasing the probability of scoring.

Team familiarity. Familiarity is often operationalized as the number of performance episodes spent working together (Espinosa et al., 2007; Harrison, Mohammed, McGrath, Florey, & Vanderstoep, 2003; Sieweke & Zhao, 2015). Games represent distinguishable performance episodes for NBA teams. As teams play games, they are likely to become more

familiar with each other, including becoming aware of teammates' playing styles, as well as their strengths and weaknesses. Thus, game of the season was used to measure team familiarity. Games were ordered chronologically (1 through 82) for each team. This operationalization captures a team's increasing level of familiarity arising from playing together over the course of the *current season*.

We argue that assessing familiarity using games in the current season is appropriate because the start of a new season likely represents a "salient temporal landmark" that enables players to relegate past team imperfections to prior periods and to engage in positively valenced, aspirational thinking about future team interactions and performance (Dai, Milkman, & Riis, 2014: 2563). This "fresh start" effect has been shown to effectively wipe the slate clean and enables a resetting of team dynamics. At the same time, we recognize that between-team differences in familiarity may exist at the beginning of the season (e.g., one team returns the full roster of players while another team dramatically alters the composition through personnel changes in the off-season), and that players may acquire familiarity when playing together on other teams in a previous season. Thus, we include prior team member familiarity as a covariate in our analyses, which is described below in the section about control variables.

Team-level narcissism. Narcissism was first measured at the level of individual players. Trait narcissism is most frequently assessed using the Narcissistic Personality Inventory (NPI) (Raskin & Terry, 1988), but high-profile athletes are unlikely to complete lengthy scientific surveys. Thus, we relied on unobtrusive indicators of player narcissism instead. Unobtrusive indicators are encouraged because they overcome response biases, demand characteristics, and subject reactivity limitations that are common to other methods (Webb, Campbell, Schwartz, & Sechrest, 1966). Indeed, in a classic primer on personality, Eysenck (1953) emphasized that the understanding of personality should not be confined by a limited methodological approach. Instead, researchers should embrace multiple manifestations of personality by going beyond questionnaires and inventories to also apply alternative methods. Consistent with this advice, past studies have used unobtrusive indicators to evaluate narcissism in professional baseball executives (Resick, Whitman, Weingarden, & Hiller, 2009), in high-tech industry CEOs (Chatterjee & Hambrick, 2007), and Fortune 500 CEOs (Zhu & Chen, 2015).

In the current study, we used Twitter to develop an unobtrusive narcissism measure. Narcissists tend to be preoccupied with their own popularity and are prone to indiscriminant self-promotion out of a need to demonstrate superiority (Raskin & Terry, 1988). Thus, Twitter is a rich source of information about narcissism because it enables users to instantly share information with a network of followers, assess one's popularity (e.g., number of followers), and promote accomplishments. The contention that Twitter data can be used to assess narcissism is supported by several studies showing that there is a link between narcissism and tweeting volume (Davenport, Bergman, Bergman, & Fearrington, 2014; McKinney, Kelly, & Duran, 2012; Panek, Nardis, & Konrath, 2013). In the current study, our narcissism measure consisted of two indicators taken from a player's Twitter page: (1) the percentage of tweets deemed to be narcissistic (based on content coding), and (2) a subjective rating of profile pictures. To create our overall narcissism index, the percentage of narcissistic tweets and profile picture coding scores were standardized and then summed. The Cronbach's alpha for these two indicators at the player level was .61. We describe the development of each of these individual components of our narcissism measure in more depth below.

We began developing narcissism scores for each player in the NBA by downloading the 2013–2014 season rosters for all teams. We then manually searched Twitter for player accounts. Of the 483 unique players that recorded playing time during the season, 396 (82%) had Twitter accounts; 391 of these were verified and five were not. An account is assigned "verified" status when Twitter establishes the authenticity of the account holder's identity. Unverified accounts were only included in our data set if there was evidence that the account was controlled by the player (e.g., the unverified account was mentioned in tweets from a verified player or from verified NBA team accounts). Although players are not required to have Twitter accounts, clearly, the norm is to use Twitter as an outlet for self-promotion, so we interpreted the choice not to have a Twitter account as indicating low narcissism and assigned those players a narcissism score of 0.

We compared players with and without Twitter accounts and found them to be similar in terms of team tenure (with Twitter = 2.31, without Twitter = 1.95; $t = 1.38$, $p > .05$); however, they differed in terms of average age (with Twitter = 27.32, without Twitter = 29.05; $t = 3.52$, $p < .05$) and minutes

played per game (with Twitter = 20.64, without Twitter = 16.71; $t = 3.40$, $p < .05$). Thus, as we describe in more depth later, we controlled for player age and individual ability in our analyses.

Narcissistic content of tweets. To assess player narcissism using tweets, a random sample of player tweets was analyzed for narcissistic content by four independent research assistants, and then the proportion of tweets identified as narcissistic compared to the total number of tweets sampled for each player was computed to facilitate comparability. Prior to the random sampling and content coding, player tweets sent between July 1 and October 28 of 2013 were downloaded. This period was selected for two reasons. First, this time period was the off-season after the NBA draft and before the new season began, which is when tweeting is more likely to be at a player's discretion and connected to personality rather than to team performance or comments about the season. Also, the off-season period preceded the measurement of team outcomes, eliminating concerns over reverse causality.[3] In a few instances ($n = 48$), tweets were unavailable because players lacked Twitter accounts at the beginning of the time period. In these cases, tweet counts for the same period one year later (when available) were used, which is appropriate, given empirical evidence that personality is stable over time (Caspi & Roberts, 2001). Comparison revealed no significant differences in average age (2013 = 27.69, 2014 = 27.09; $t = .916$, $p > .05$), average team tenure (2013 = 2.29, 2014 = 1.84; $t = 1.29$, $p > .05$), or average minutes played per game (2013 = 19.92, 2014 = 20.04; $t = 0.08$, $p > .05$) between players from the original time period and those collected one year later.

The players in our sample sent 91,664 tweets during the period of our download. To limit the tweets to a more manageable number, a random selection was then assessed for narcissistic content. The number of tweets evaluated for each player was capped at the median number of tweets in the sample

(median = 134). For players with more tweets than the median, 134 tweets were randomly selected. For players with 134 tweets or fewer, all tweets were evaluated. This selection process produced a sample of 34,914 tweets to be assessed. The first step in assessing the tweets for narcissistic content was to develop a coding guide. The guide was created using the *Diagnostic and Statistical Manual of Mental Disorders*' definition of narcissism (American Psychiatric Association, 2000)[4] and a holdout sample of NBA player tweets. Research assistants were then trained in the use of the guide. In the first part of the training, the authors and the research assistants all coded a common subsample of tweets independently. Tweets were coded as either "narcissistic" or "non-narcissistic." Afterward, the group met to discuss disagreements in coding decisions. This process helped to clarify conceptual questions regarding the attributes of narcissism, the characteristics of tweets, and any related coding decisions. The training session was four hours long. Research assistants then commenced coding on their own (approximately 320 hours divided among four independent coders who worked four hours a day, five days a week, for four consecutive weeks). Of the tweets in the sample, 6,947 were identified as narcissistic (20%) and 27,967 as non-narcissistic (80%). An example of a narcissistic tweet included a player tweeting a photo of himself looking in the mirror with the caption, "What do you think when you look in the mirror? Greatness." To assess the reliability of our coding procedure, we had all of our raters code the same subsample of 200 tweets independently and found 87% agreement among the coders.

Profile picture. Twitter profile pictures, a central component of Twitter pages, were also evaluated to assess player narcissism. Twitter users have complete discretion over selection of their profile picture, so they are likely to select images that indicate

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[3] Players might be prone to tweet more in the off-season if their team performed well in the prior year. To assess the possibility that Twitter behavior is an endogenous proxy for prior performance, we conducted an analysis in which we regressed the total number of off-season tweets for each team on prior-year regular-season performance (number of wins) and performance in the playoffs (number of playoff wins). Neither of these variables was a significant predictor of the Twitter behavior of the team. Thus, it does not appear that prior performance is a driver of our measures of narcissism.

[4] This definition was chosen because it provided a detailed and comprehensive description of narcissism. Although some may be concerned that we used a clinical definition, it should be noted that the most common trait measure of narcissism (i.e., the NPI) was also developed using the *Diagnostic and Statistical Manual of Mental Disorders* (Raskin & Hall, 1979). In addition, past research has shown that trait narcissism and clinical narcissism do not differ in kind, but in degree. That is, trait narcissism is thought to have the same features as clinical grandiose narcissism, but is measured using a continuous scale and tends to manifest at lower levels than narcissistic personality disorder (Miller & Campbell, 2011).

their dominant characteristics and personality type (Meyer, Dalal, & Hermida, 2010; Mischel, 1977). In addition, empirical evidence indicates that photos can be used to accurately judge personality (Ekman, Friesen, O'Sullivan, & Scherer, 1980; Naumann, Vazire, Rentfrow, & Gosling, 2009). For example, Chatterjee and Hambrick (2007) assessed CEO narcissism using photos that appeared in companies' annual reports.[5]

Profile pictures were downloaded from players' Twitter accounts. Two trained research assistants who were not part of the research team and were blind to our hypotheses independently coded all of the photos ($n = 396$) on a scale from 1 (*low narcissism*) to 7 (*high narcissism*). The coding guide to rate photos was based on the same narcissism definition provided above for tweet content. For example, photos in which players were seen asserting physical dominance (e.g., flexing muscles) or displaying their bodies (e.g., shirtless) were considered to indicate higher narcissism, whereas photos in which players were seen spending time with family or friends were considered to be indicative of lower levels of narcissism. Difficult-to-code photos were flagged for review. After the initial coding, photos marked for review were discussed until agreement was reached. Because the coding system was based on a Likert-type continuous scale rather than using a categorical or binning approach, inter-rater reliability was assessed using Cronbach's alpha (Cortina, 1993). Inter-rater reliability was .94.

Narcissism validation study. Although the idea that Twitter usage is indicative of narcissism seems face valid, and empirical evidence has established a link between tweeting and narcissism (Davenport et al., 2014; McKinney et al., 2012; Panek et al., 2013), we conducted an additional study to support the construct validity of our unobtrusive narcissism measure. Respondents were recruited via social media (a link to the survey and a very brief description of the study were posted on Facebook and Twitter). Participants completed a personality survey, which included the 40-item NPI (Raskin &

Terry, 1988). They also responded to demographic questions and provided their Twitter handle (username), if they had an account. In exchange for participation, respondents received a customized personality report.

We received complete information from 104 respondents, the average age of whom was 27.71 years old (the players in our NBA sample averaged 27.67). We computed narcissism scores using the same method that was described for the NBA sample. Respondent tweets totaled 188,730. However, Twitter accounts varied by origination date, and we could not apply a bounded time period such as the NBA off-season. Thus, for the validation sample, we chose to use the median number of participants' total tweets, which was 96 tweets. This resulted in a total of 4,731 tweets coded.

Ratings of overall narcissism from the NPI correlated significantly with the composite measure ($r = .31$, $p < .01$). To help interpret the size of this validity coefficient, it is necessary to provide context from the personality literature regarding the expected correspondence between self-rated personality and unobtrusive behavioral indicators of personality. In a review of the literature, Vazire and Carlson (2010) found average validities for a variety of different traits ranged from .14 to .34 (across seven different studies). As our observed validity coefficient (i.e., .31) is at the high end of this range, our results provide support for the convergent validity of our composite measure of narcissism. In addition, our narcissism measure demonstrated adequate incremental validity, as it had a statistically significant relationship with the NPI even after controlling for the Big Five personality traits and self-esteem.

Team-level narcissism operationalization. All team-level narcissism scores were computed on a game-by-game basis. Team mean narcissism was operationalized as the mean of each team's weighted player narcissism scores (we provide a description of our weighting above when we discuss team membership instability). Team-level maximum narcissism was assessed as the highest weighted narcissism score. Core role narcissism was computed as the weighted average narcissism of those who played the position of point guard. This position was selected because the point guard is generally the player responsible for initiating the offensive and defensive plays, and is thus in a position to set the tone for the other players regarding appropriate conduct, interaction style, and resource allocation.

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[5] Another intuitively appealing way to assess narcissism is to observe the use of first-person language (e.g., "I," "me," "my" rather than "we," "our," "ours") in written text, but a recent meta-analytic study reported a "consistent near-zero" relationship between narcissism and the use of first-person singular pronouns across 15 samples (Carey et al., 2015: e1). Thus, we chose to not use first-person singular language in player tweets as a narcissism indicator.

Control Variables

We followed the recommendations outlined by Carlson and Wu (2012) in identifying covariates to statistically control in our analyses. To account for the well-established home team advantage, we controlled for playing at *home* ("1") or *away* ("0"). In addition, the *pace* of the game (speed with which teams utilize their possessions) can determine the number of coordination and scoring opportunities, so we controlled for the total number of possessions in each game. Because opponent quality impacts winning and losing, we also accounted for an opponent's offensive and defensive quality using the offensive and defensive ratings. These ratings represent the average points scored (*offensive rating*) or allowed (*defensive rating*) per game by an opponent up to that point in the season. We controlled for the *average age* of players on each team because age might affect players' social media use, such that younger players are more likely to have an active Twitter presence than older players. Player age may also be associated with expertise, accumulation of skills, and, in turn, performance.

Because familiarity between team members may arise from shared playing experience in prior seasons, we controlled for *beginning familiarity* (familiarity arising from shared experiences before the 2013–2014 season). This was important, given our prediction that experience performing together in the current season influences the relationship between team-level narcissism and coordination. Beginning familiarity was computed by summing (as of the beginning of the season) the number of games in which each player had played with each other member of their team. The sum includes games played together on the current team in prior seasons as well as games played together on other teams. A player's beginning familiarity score was therefore the total number of times that he had played with each other member of the team during his *entire* professional career in the NBA. This approach captures initial differences between teams whose members have worked together for several years versus teams whose members are all relatively new. It also captures the possibility of familiarity arising from shared experiences on other teams.

Next, it was important to account for stage of season effects, such as the possibility that narcissistic players might alter their behavior as the stakes get higher (e.g., making it to the playoffs), because our measure of familiarity also varies by stage of the season. Thus, we developed dichotomous dummy variables that assessed whether a team had *qualified* or been *eliminated* from playoff contention at the point when a particular game was being played (e.g., we assigned a "1" to games after qualification and a "0" to games before). Finally, given the influence of individual player ability in determining team performance, we controlled for the average ability of the players on a team, measured as prior season *Estimated Wins Added* (EWA) as has been done in other studies in the NBA context (Halevy, Chou, Galinsky, & Murnighan, 2012; Swaab et al., 2014). EWA is an estimate of the number of wins a player adds (above that of an average replacement player) to a team's season win total, and is therefore a measure of a player's overall contribution to the team.[6]

Analytical Procedures

We conducted the analysis using generalized estimating equations (GEE) (Ballinger, 2004; Liang & Zeger, 1986) in SPSS (version 22). GEE accounts for nonindependence of observations and uses robust standard errors to derive effect size estimates (Zorn, 2001). Dependency is accounted for by allowing the specification of the correlation structure for nested observations of the dependent variable (Zorn, 2001), which improves standard error estimates. Other approaches (mixed and random effects models) estimate a between-level (team- or game-level) disturbance term to account for dependence, which is problematic when the number of between-level units is high but the number of within-unit observations is low, as is the case with game-level

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[6] Although empirical studies indicate that there is not generally a significant relationship between narcissism and individual employee performance (O'Boyle et al., 2012), we nevertheless tested the possibility that our narcissism measure was related to individual performance. We found a small correlation between individual narcissism and individual performance as assessed by EWA ($r = .19$). We also performed an additional analysis in which we regressed season-level individual performance and coordination metrics on narcissism at the individual player level (controlling for minutes per game). This more in-depth analysis indicated that narcissism did not exhibit a significant relationship with points scored ($\beta = .02$, $p > .05$, n.s.), assists ($\beta = -.01$, $p > .05$, n.s.), or EWA ($\beta = .06$, $p > .05$, n.s.) at the player level when playing time was taken into consideration. In other words, after controlling for players' opportunity to affect team outcomes, narcissists' seeming performance advantage disappeared.

dependency (two teams are nested within each of the 1,230 games) (Zorn, 2001).

To account for the dependencies in our data, a GameID was created to link the two observations associated with each game;[7] a TeamID was created to connect the observations associated with each team; and a MatchupID was created to link observations in which two teams played each other more than one time in the season. The working correlation matrix structure was then specified as first-order autoregressive, and the ID variables were selected as grouping factors. In building our models, we specified a normal distribution and an identity link function when coordination and victory margin were the outcomes and a binomial distribution and logit link function when win or loss was the outcome (effect size estimates for win or loss are reported in log-odds units, the same as for logistic regression). Robust estimators were used in all models. All variables except win or loss were standardized by computing z-scores prior to conducting the analyses in order to produce standardized effect size estimates and facilitate comparison of effects. The first game for each team was excluded from analysis because current year opponent quality measures were unavailable until after the first game was played. Thus, our analysis included 2,430 observations.

RESULTS

Table 1 shows descriptive statistics and correlations for all variables. Results of hypothesis testing are reported in Table 2. Effect size estimates are standardized.

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[7] To assess the potential influence of the negative nonindependence associated with games (where the outcome for one team is inversely dependent on the outcome for the other team), we conducted a bootstrapped analysis to replicate our findings for the coordination to win or loss and coordination to victory margin relationships. We first generated 1,000 data sets by repeatedly sampling one observation from each game ($n = 1,230$) on a random basis. GEE analysis was then run on each of these data sets, and average standard errors, effect size estimates, and estimates of statistical significance were computed from across the 1,000 sets of results. We found that the results of the random draws analysis were consistent with the results from the full sample. Thus, we conclude that our findings are robust to the negative nonindependence resulting from the inverse relationship between the two observations associated with each game.

Direct Effects

In the models assessing mean narcissism, the standard deviation was also included to ensure the mean result was not being driven by the variance, as is common practice in this type of analysis (e.g., Gonzalez-Mulé, DeGeest, McCormick, Seong, & Brown, 2014). As indicated in Table 2 (Model 2), mean narcissism was significantly associated with team coordination ($\beta = -.07$, $p < .01$). Thus, Hypothesis 1 was supported. In Model 4, the relationship between maximum narcissism and team coordination was tested. Team mean-level narcissism, excluding the maximum, was computed and entered as a control consistent with best practice recommendations (Humphrey et al., 2009). Maximum narcissism exhibited a negative effect on coordination ($\beta = -.09$, $p < .01$), supporting Hypothesis 2. In Model 6, team mean-level narcissism, excluding the core role player, was computed and entered as a control variable to ensure that the core role effects were not being driven by the mean. We found that the direct effect of core role narcissism on team coordination was significant and negative ($\beta = -.04$, $p < .05$), providing support for Hypothesis 3.

Interactive Effects

The influence of team familiarity on the relationships between the team-level narcissism variables and team coordination was tested in Models 3, 5, and 7. The interaction of mean narcissism and team familiarity exhibited a negative effect on coordination ($\beta = -.06$, $p < .01$) as reported in Model 3. A plot of this interaction (at plus or minus one standard deviation), depicted in Figure 2, and tests of the simple slopes showed that the relationship between mean narcissism and team coordination was negative when familiarity was high ($\beta = -.12$, $p < .01$), but was non-significant when familiarity was low ($\beta = .01$, $p > .05$). This pattern of results suggests that mean narcissism impaired team coordination more so in high team familiarity than low familiarity contexts, supporting Hypothesis 4a. A further examination of the figure revealed that teams low in narcissism and high in familiarity appeared to coordinate most effectively.

As reported in Model 5, the interaction of maximum narcissism with team familiarity was not significant ($\beta = -.02$, $p > .05$), failing to provide support for Hypothesis 4b. In Model 7, the

TABLE 1
Correlations and Descriptive Statistics

	Variable	Mean	SD	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Home or Away Game	0.50	0.50																		
2	Pace (Possessions)	93.35	5.32	.00																	
3	Opponent Offensive Rating	106.02	4.18	.00	.10																
4	Opponent Defensive Rating	106.00	3.67	−.01	−.01	.02															
5	Average Age	27.67	1.96	.00	−.16	−.01	−.01														
6	Beginning Familiarity	32.86	25.28	.01	−.11	.00	.00	.55													
7	Qualified for Playoffs	0.05	0.23	.00	−.10	.04	.11	.15	.20												
8	Ineligible for Playoffs	0.06	0.24	.01	−.04	.11	.05	−.24	−.16	−.04											
9	Avg. Prior Year Performance	0.48	0.21	.01	−.06	.02	−.01	.34	.51	.11	−.23										
10	Team Familiarity	41.50	23.67	.00	−.04	.23	.27	−.07	−.07	.35	.37	−.07									
11	Mean Narcissism	0.03	0.06	.01	−.04	.05	.02	.19	.15	.01	.01	.33	.06								
12	SD Narcissism	0.17	0.05	.02	−.17	.00	−.01	.20	.09	.04	.07	−.06	.00	−.09							
13	Maximum Narcissism	0.31	0.13	.02	−.11	.03	.01	.30	.13	.04	.03	.13	.03	.57	.63						
14	Mean Narc. without Max.	0.00	0.05	.00	−.02	.04	.03	.15	.14	.00	−.01	.33	.05	.98	−.27	.38					
15	Core Role Narcissism	0.02	0.14	.00	.07	.03	.00	.14	.20	.05	−.01	.25	.00	.55	−.10	.26	.55				
16	Mean Narc. without Core Role	0.03	0.06	.00	−.09	.04	.03	.19	.08	.00	.03	.27	.08	.89	−.04	.55	.86	.16			
17	Coordination	22.00	5.01	.12	.24	−.06	.19	.11	.07	.03	.01	.02	.08	−.03	−.08	−.06	−.02	.00	−.03		
18	Victory Margin	0.00	13.50	.19	.00	−.25	.19	.21	.19	.05	−.10	.18	.00	.07	−.04	.01	.08	.07	.05	.43	
19	Win or Loss[a]	0.50	0.50	.16	.00	−.21	.16	.19	.18	.05	−.09	.18	.00	.07	−.04	.01	.08	.07	.05	.32	.81

Notes: $n = 2,460$. Correlations greater than $|.06|$ are significant at $p < .01$. Home or Away Game was coded as Home = "1" and Away = "0." Victory margin had a natural mean of zero.

[a] Win or Loss was coded as Win = "1" and Loss = "0." Means and standard deviations are reported in the natural metric of the unstandardized variables.

TABLE 2
Direct and Interactive Effects of Team Level Narcissism and Team Familiarity on Coordination

Variable	Team Coordination						
	1	2	3	4	5	6	7
Intercept	.004 (.02)	.003 (.02)	.006 (.02)	.003 (.02)	.003 (.02)	.003 (.02)	.003 (.02)
Control Variables							
Home Game	.12** (.02)	.12** (.02)	.12** (.02)	.12** (.02)	.12** (.02)	.12** (.02)	.11** (.02)
Pace (Possessions)	.27** (.02)	.26** (.02)	.26** (.02)	.27** (.02)	.27** (.02)	.28** (.02)	.28** (.02)
Opponent Offensive Rating	−.09** (.02)	−.10** (.02)	−.10** (.02)	−.10** (.02)	−.10** (.02)	−.10** (.02)	−.10** (.02)
Opponent Defensive Rating	.19** (.02)	.17** (.02)	.17** (.02)	.17** (.02)	.17** (.02)	.17** (.02)	.17** (.02)
Average Age	.15** (.02)	.17** (.02)	.17** (.02)	.18** (.03)	.17** (.02)	.16** (.02)	.16** (.02)
Beginning Familiarity	.03 (.03)	.04 (.03)	.04 (.03)	.03 (.03)	.03 (.03)	.03 (.03)	.03 (.03)
Qualified for Playoffs	.02 (.02)	−.01 (.02)	−.01 (.02)	−.01 (.02)	−.01 (.02)	−.01 (.02)	−.01 (.02)
Ineligible for Playoffs	.04* (.02)	.03 (.02)	.03 (.02)	.03 (.02)	.03 (.02)	.02 (.02)	.02 (.02)
Avg. Prior Year Performance	−.02 (.02)	−.01 (.02)	−.01 (.02)	−.01 (.02)	−.01 (.02)	.00 (.02)	.00 (.02)
Mean Narcissism							
Team Familiarity (TF)		.07** (.02)	.07** (.02)				
Mean Narcissism		−.07** (.02)	−.06** (.02)				
SD Narcissism		−.08** (.02)	−.08** (.02)				
Mean Narcissism × TF			−.06** (.02)				
Maximum Narcissism							
TF				.07** (.02)	.07** (.02)		
Maximum Narcissism				−.09** (.02)	−.09** (.02)		
Mean Narcissism without Maximum				−.01 (.02)	−.01 (.02)		
Maximum Narcissism × TF					−.02 (.02)		
Core Role Narcissism							
TF						.07** (.02)	.07** (.02)
Core Role Narcissism						−.04* (.02)	−.03 (.02)
Mean Narcissism without Core Role						−.04* (.02)	−.04* (.02)
Core Role Narcissism × TF							−.07** (.02)
Pseudo R^2	.14[a]	.15	.15	.15	.15	.15	.15

Notes: n = 2,430 Performance Episodes. Standardized coefficients are reported in all cases. Standard errors of estimates are reported in parentheses. Traditional fit statistics (e.g., χ^2) are not used with GEE because GEE is not a likelihood based method (Hardin and Hilbe, 2003; Pan, 2001). All tests reported in the table are two-tailed.

[a] Comparing pseudo R-squared values across models when there is more than one level (e.g., within and between levels) in the data is often misleading because adding or removing explanatory variables may increase or decrease estimates of the variance components (please see Snijders & Bosker, 1999: 99–109).

* $p < .05$
** $p < .01$

interactive effect of core role narcissism by team familiarity on team coordination was significant ($\beta = -.07$, $p < .01$), supporting Hypothesis 4c. A plot of this interaction (at plus or minus one standard deviation), depicted in Figure 3, and a test of the simple slopes showed that the relationship between core role narcissism and team coordination was negative when familiarity was high ($\beta = -.10$, $p < .01$), but was not statistically significant when familiarity was low ($\beta = .04$, $p > .05$).

Indirect Effects

We next tested the indirect effects of the team-level narcissism variables on victory margin and winning probability through coordination, as proposed in Hypotheses 5a–c and 6a–c. All indirect effects were tested using Andrew Hayes' (2013) MCMED macro for SPSS, which utilizes Monte Carlo simulations to generate confidence intervals based on a user-defined number of random samples. For purposes of

FIGURE 2
The Interactive Effect of Team Mean Narcissism and Team Familiarity on Team Coordination
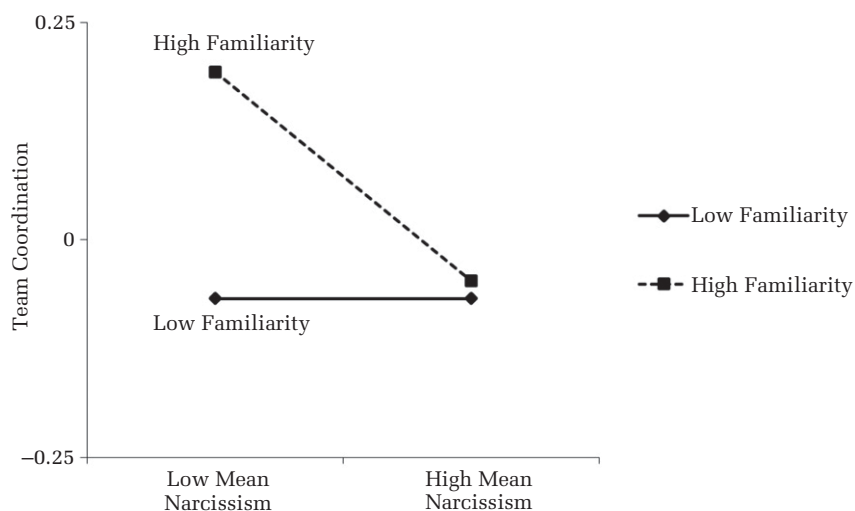

this study, 10,000 random samples were selected. Estimates of the relationship between the predictor and mediator, the mediator and outcome, the standard error of these estimates, and the covariance between the estimates were entered into the SPSS macro, which then produced a Monte Carlo confidence interval for the indirect effect based on the 10,000 samples. Estimates used as input into the simulation procedure were taken from the models in which hypothesis testing was conducted. Indirect effects are only reported for hypothesized variables

that exhibited significant effects on coordination. Thus, an indirect effect is not reported for the maximum narcissism by team familiarity interaction (Hypothesis 6b).

The indirect effects of mean narcissism on victory margin (indirect effect = −.03, $p < .01$) and on the probability of winning (indirect effect = −.05, $p < .01$) were significant, supporting Hypothesis 5a. We also found that maximum narcissism exhibited significant indirect effects on victory margin (indirect effect = −.03, $p < .01$) and on the probability of

FIGURE 3
The Interactive Effect of Core Role Narcissism and Team Familiarity on Team Coordination
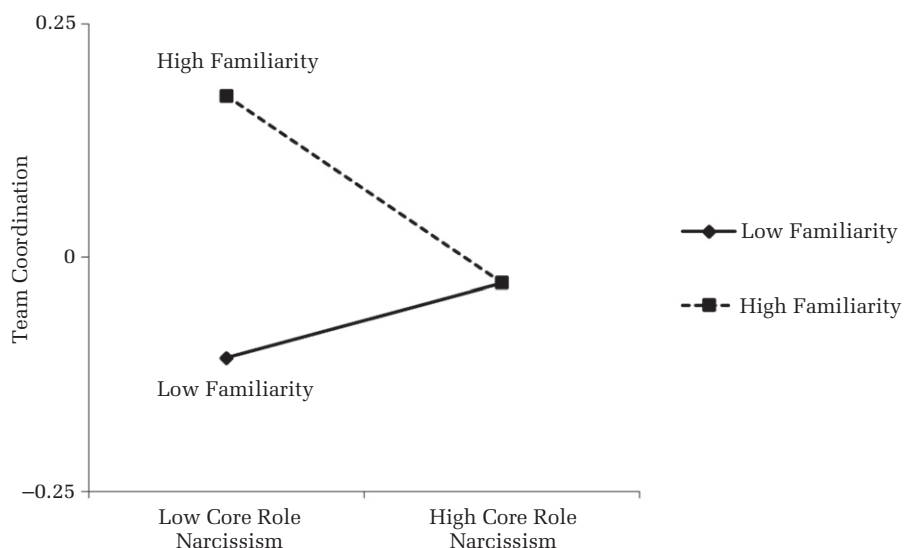
winning (indirect effect $= -.06$, $p < .01$). Thus, Hypothesis 5b was supported. In addition, Hypothesis 5c was supported, given that core role narcissism exhibited significant indirect effects on victory margin (indirect effect $= -.03$, $p < .05$) and on the probability of winning (indirect effect $= -.03$, $p < .05$).

The indirect effects of the hypothesized interactions that were found to have a significant impact on coordination were tested next. We found a significant indirect effect of the mean narcissism by team familiarity interaction on victory margin (indirect effect $= -.02$, $p < .01$) and on the probability of winning (indirect effect $= -.04$, $p < .01$), supporting Hypothesis 6a. The indirect effect of the core role narcissism by team familiarity interaction was also significant on victory margin (indirect effect $= -.02$, $p < .01$) and on the probability of winning (indirect effect $= -.05$, $p < .01$), supporting Hypothesis 6c.

To further contextualize our findings, we compared lower versus higher narcissism teams' improvement in coordination over the course of the season. We found that, as familiarity increased, teams with lower mean narcissism experienced an improvement in coordination that translated to lower narcissism teams winning three to four more games in the second half of the season compared to the first half. Although winning three more games may not seem like a significant number, it becomes significant when considering the reality that the difference between qualifying for the playoffs or not is often determined by fewer than three games. For instance, at the end of the 2013–2014 season, only a single game separated the final qualifying team from the next best team in both the Eastern and Western conferences. Without question, the three or four best teams that did not qualify for the playoffs would likely have been willing to make significant sacrifices for an additional three wins, especially since management and coaching changes are often predicated on missing the playoffs. This suggests that the difference in coordination between low and high narcissism teams had substantial real-world implications in our sample.

Robustness Checks

We also performed several additional analyses to check the robustness of our results. First, we examined an alternative measure of coordination. In particular, some studies in the NBA context have assessed coordination using a composite of assists, defensive rebounds, turnovers, and field goal percentage (Halevy et al., 2012; Swaab et al., 2014). In the current sample, however, this composite measure produced a very low Cronbach's alpha of .23. Despite this low reliability, we also tested our hypotheses using this composite measure of coordination. All of the hypothesized findings were consistent, regardless of how coordination was measured, except in the case of core role narcissism, which exhibited a statistically significant direct effect on coordination when measured as assists but did not exhibit a significant main effect on the composite measure of coordination ($\beta = .01$, $p > .05$). The interaction between core role narcissism and familiarity remained significant ($\beta = -.07$, $p < .01$). Given the low reliability associated with this composite measure, however, any findings using this alternative measure of coordination should be interpreted with extreme caution.

Second, reviewers suggested that we capture a more fine-grained measure of team member familiarity beyond the game of the season measure that we described above. To do so, we also measured familiarity by calculating shared playing time (minutes) in the current season. This was done in multiple steps. First, we calculated how much time each player spent on the court in the current season with each of his teammates on a game-by-game basis. We then summed each player's shared minutes up to that point in the season, weighted the sum by the proportion of minutes played in the current game, and averaged across players to create game-level familiarity scores for each team. Notably, despite the increased complexity involved in its calculation, this alternative familiarity measure was highly correlated with the game of season measure of familiarity ($r = .80$). Further, a comparison of results revealed that all statistically significant hypothesized effects remained significant when using the alternative measure, except for the interaction of mean narcissism by team familiarity on coordination. However, we note that restricting the familiarity measure to focus only on interactions that occur on the court may not accurately account for the full breadth of situations that contribute to team member familiarity (e.g., interactions during practice, while traveling, and informal socialization). Given the high correlation between the two measures of familiarity and the potential advantages associated with a broader measure, we chose to retain the game of the season measure for our main analyses.

In addition, we also followed best practice recommendations (e.g., Simmons, Nelson, & Simonsohn, 2011) to examine whether our conclusions remained

consistent after the control variables were removed from our analyses, including the removal of the alternative operationalizations of narcissism. After control variables were excluded, we found that the direct and indirect effects of mean and core role narcissism approached but did not reach statistical significance. Follow-up analyses revealed that the results were most sensitive to the removal of beginning familiarity. However, we provide a rationale for the inclusion of beginning familiarity as a control variable. Indeed, without controlling for beginning familiarity, our results would be difficult to interpret, because narcissism's effects change over time as familiarity increases and the only way to accurately capture familiarity in the current season is to account for beginning familiarity. Thus, we argue that the findings for mean and core role narcissism continue to be persuasive because controlling for beginning familiarity is rationally justified and indeed necessary to accurately estimate our models.

In addition, player influence in the NBA is determined by not only position, but also by player status (i.e., "the extent to which an individual or group is respected or admired by others" [Magee & Galinsky, 2008: 359]). For example, well-known, influential players such as LeBron James, Shaquille O'Neal, Michael Jordan, Kobe Bryant, and Tim Duncan are not (or were not) point guards. Given this reality, in addition to the core role, we also examined an alternative operationalization of team-level narcissism focused on player status (regardless of position). To capture status, we used player salary. Salary was chosen because it is an indication of the value an individual is believed to contribute to the team, with higher salaries suggesting that the team feels a player is more important to their success (Finkelstein, 1992; Halevy et al., 2012). We found that the narcissism of the highest-status player did not have a main effect on coordination ($\beta = .01$, $p > .05$), but that high-status narcissism did interact with team familiarity ($\beta = -.04$, $p < .05$), displaying the same interaction pattern observed for our other operationalizations. Altogether, these results were similar to those reported for core role, except that we found a main effect for core role but not status. We encourage future researchers to continue to examine how the narcissism of team members in core roles and those of higher status may influence team functioning.

Finally, two of our team-level narcissism measures relied on individual members (i.e., the maximum and core role), but we are interested in team-level effects. To assess if the negative effects of core role and maximum narcissism on coordination extend beyond the assists directly contributed by these focal players, we conducted supplemental analyses in which we controlled for the assists of the max or core role player. Our results were robust to the introduction of these controls, which suggests that maximum or core role narcissists' behavior spread to affect interactions in which they were not directly involved. This lends credence to the idea that we are observing a team-level phenomenon rather than an individual-level effect on a team-level outcome.

DISCUSSION

Many organizations suffer from an "all-star" performance mentality, and choose to fill teams with the most individually talented candidates without taking into consideration intrinsic attributes that affect team members' willingness and ability to work together toward common goals (Mathieu et al., 2014). In the sports context, there are countless notable examples of the downfalls associated with an exclusive focus on individual ability. A well-known illustration includes the disappointing performance of the 2004 U.S. men's Olympic basketball team, which failed to win the gold medal despite including famous and talented professional players such as LeBron James, Dwayne Wade, Carmelo Anthony, and Allen Iverson. More recently, the Oklahoma City Thunder struggled in the first half of the 2017–2018 NBA season after the "Big Three Experiment" in which "stacking three stars" (i.e., Carmelo Anthony, Russell Westbrook, and Paul George) was supposed to propel the team to the highest levels of achievement, but instead resulted in accusations of underperformance relative to expectations (Young, 2017). Of course, many factors can contribute to underperformance; nevertheless, when talented individuals are on a poorly performing team, people often attribute the difficulties to the team having "too many egos." Little research, however, has examined the veracity of this assumption—does team member narcissism really interfere with team performance?

This paper offers one of the first attempts to map out how team narcissism composition operates in tandem with team design and processes to influence team outcomes. Specifically, we integrated social exchange theory with the agency model of narcissism to examine whether narcissistic team members hinder coordination and in turn curb team performance. As expected, our longitudinal study demonstrated that team-level narcissism generally had a negative influence on teams. Teams with higher mean and maximum levels of narcissism as well as

higher narcissism members in core roles (i.e., central and influential roles) had poorer coordination than teams with lower levels. In addition, we found that having higher team familiarity served to amplify the effects of narcissism for mean and core role narcissism.

The nature of the observed interactions, however, were surprising. Originally, we hypothesized that narcissism would lead to greater decrements in coordination as familiarity increased over the course of the season. Instead, we found that teams with higher mean and core role narcissism stagnated, maintaining the same levels of coordination over time. In contrast, teams with lower narcissism experienced improvements in coordination. Thus, the negative influence we observed was not consistent with the arguments we initially proposed that team-level narcissism causes "bad" things to happen (i.e., a disruption of coordination), but, rather, team-level narcissism appeared to prevent "good" things from happening. That is, we found that higher levels of team narcissism prevented teams from being able to take advantage of gains in coordination that normally accrue as team members get to know one another better.

Theoretical Implications and Future Research

Our findings contribute to the organizational narcissism literature by providing a more nuanced perspective of narcissism's workplace impact, shifting the focus from individual-level to team-level outcomes. Before this study, researchers had concluded that narcissism was unrelated to task performance (meta-analytic $r = -.02$; O'Boyle et al., 2012). By examining more theoretically relevant outcome variables (team coordination and team performance) at a higher level of analysis, we show that narcissism affects organizational performance, but does so through its influence on employees' ability to work together. Teamwork differs from individual work because it relies on team members establishing interconnections and adopting a shared team purpose. Thus, the antecedents that predict team performance may fail to predict individual performance and vice versa (Hu & Liden, 2015; see also Hollenbeck, Beersma, & Schouten, 2012). Because narcissism has clear interpersonal implications, studying narcissism's collective influence on teams provides an ideal match between the characteristics of narcissism and the demands of the criterion under examination.

We hope that, by demonstrating the importance of narcissism to coordination and team performance,

this study encourages additional interest in how narcissism and other dark traits impact teams. Team composition research has tended to neglect dark traits and instead examine more positively valenced traits such as the Big Five and emotional intelligence (Bell, 2007; cf. Baysinger, Scherer, & LeBreton, 2014). This initial work on team personality has been essential because it legitimizes the importance of personality to understanding team functioning (e.g., Barrick et al., 1998). At the same time, given the general psychological principle that "bad is stronger than good," such that negative acts are often more memorable and evoke stronger emotional reactions (Baumeister, Bratslavsky, Finkenauer, & Vohs, 2001; Felps et al., 2006: 189), we argue that interpersonally relevant negative traits, such as narcissism, also deserve additional attention within the team context.

In addition, we contributed to the growing literature that examines time and its effects on organizational phenomena (e.g., Shipp & Cole, 2015). Using a longitudinal design was essential for going beyond the team-level narcissism–coordination main effect to capture the complete picture of how narcissism's influence becomes stronger as team members become better acquainted. In this way, our results are consonant with the idea that traits' impact on teams may evolve over time (as familiarity increases)—highlighting the danger of using static measurement designs. For example, if a researcher were to sample an organization at a single point in time, they could come to different conclusions about the effect of narcissism on teams—a low familiarity sample may suggest a null effect of narcissism on teams, whereas a high familiarity sample, alternatively, would suggest a negative relationship. As such, we reiterate recent calls to use longitudinal designs when studying team personality to develop a fuller understanding of how and when particular personality traits influence team processes and outcomes (Bell & Outland, 2017).

One aspect of our longitudinal results that bears further mention is the nature of the interactions observed between team-level narcissism and familiarity. Past research has found that narcissists generally make a positive first impression but begin to wear on people over time (Paulhus, 1998). This led us to speculate that narcissism may initially have a positive effect on team coordination early in the season. Our mean and core role interaction plots (Figures 2 and 3), however, revealed that higher narcissism teams did not coordinate better than lower narcissism teams under conditions of low familiarity (i.e., the simple slopes for low familiarity did not differ from zero).

Thus, we conclude that having more narcissistic team members on average and more narcissistic members in core roles is not particularly beneficial nor detrimental to team functioning early in a team's lifecycle.

That being said, it is also clear that narcissism's influence was strengthened as familiarity increased. As we mentioned above, however, the nature of the interactions we observed between mean or core role narcissism and familiarity did not align with our initial theorizing. To elaborate, we initially proposed that *higher* levels of narcissism would become more *harmful* over time—but, in fact, we found that *lower* levels of narcissism became more *beneficial* over time. This means that teams with lower mean or core role narcissism start out with similar or even slightly lower levels of coordination, but are able to capitalize more fully on the benefits that accompany getting to know one's teammates. These results help us to better understand how narcissism influences teams over time, suggesting that narcissism is detrimental not because it harms social exchange relationships (e.g., resulting in the accumulation of distrust and conflict), but because it prevents the accumulation of positive social exchanges that are necessary to build positive relationships among group members. A fertile area for future research is to delineate and test more fine-grained mechanisms through which team narcissism influences team coordination. For example, scholars could directly measure variables such as norms, trust, and the enactment of selfish behaviors.

Practical Implications

The current paper provides evidence that high levels of team narcissism undermine a team's capability to pool task competence and coordinate effectively. This is perhaps best illustrated with an example. In our 2013–2014 NBA sample, the Charlotte Bobcats had the lowest team mean narcissism score and were one of the most surprising teams of the year—dramatically outperforming expectations. Looking at preseason predictions, the Bobcats were forecasted by basketball writers (CBSSports.com) and betting websites (Sportsbook.com) to obtain approximately 26 wins (Moore, 2013). This reflects a preseason expectation that the Bobcats would be one of the last placed teams in the NBA. Instead, the Bobcats had 43 wins that season and made the playoffs. Thus, the low narcissism Bobcats in fact performed much better than their talent level in the preseason suggested they would perform. By contrast, the New York Knicks had the highest team mean narcissism score and performed well below preseason expectations. In particular, the Knicks were forecasted by CBSSports.com sportswriters and Vegas oddsmakers to be one of the best teams in the NBA (i.e., 49 wins). In actuality, the Knicks only achieved 37 wins, which meant that they did not make the playoffs. The Knicks, therefore, coordinated well below a level their summed talent alone would have predicted.

This anecdote helps to showcase an important point. Although basketball writers and expert oddsmakers seem to be good at understanding the talent levels of multiple team members and summing these talent levels to forecast team performance, an exclusive focus on talent may ultimately lead to prediction errors. In particular, our results suggest that people attempting to predict team performance are potentially missing an important piece of information if they are not considering a team's narcissism composition. Indeed, the tendency to over rely on talent-related information to compose teams is not unique to the NBA, but also likely true for everyday managers attempting to build teams within organizations.

As such, our foremost piece of practical advice is that organizations should consider narcissism when forming teams and proactively monitor teams' narcissism composition to allow interventions before problems arise. In particular, we recommend that companies should avoid putting highly narcissistic members in the most critical team roles (e.g., roles that are more central to a team's workflow). Although this advice may seem obvious, is important to point out that narcissists tend to be attracted to prestigious and powerful positions (Roberts & Robins, 2000) and to emerge as leaders (Grijalva, Harms, Newman, Gaddis, & Fraley, 2015). Thus, narcissists will likely pressure organizations to put them into more influential or "core" roles. In the face of this pressure, managers must be aware that capitulating to narcissists' demands may be easier in the short term, but result in long-term costs to team performance. Finally, our findings also make clear that the effects of narcissism are more pronounced in high team familiarity contexts, so avoiding non-optimal team narcissism configurations is likely particularly important for teams that must coordinate with one another over longer time frames.

We hope that organizations can proactively avoid putting narcissists on teams, yet, at the same time, we acknowledge that this might not always be possible. This raises the following question: What can organizations do to promote coordination and performance in teams that have non-optimal narcissism

compositions? We suggest that one approach is to base at least some compensation on team performance (in addition to individual performance), and thus force team members to depend upon one another for extrinsic rewards (Aguinis, Gottfredson, & Joo, 2013). This should improve performance, because narcissists behave more collegially in situations when their goals are aligned with those of the collective (Rosenthal & Pittinsky, 2006). This is consistent with a broader stream of research showing that "other-orientation [i.e., concern for others] is higher when employees are told that payment depends on how well they do as a group rather than a person" (De Dreu & Nauta, 2009: 914; see also De Dreu, Weingart, & Kwon, 2000).

Limitations

As with all empirical work, this study has limitations that future research might address. Our measure of narcissism was based on information obtained through Twitter. The strength of unobtrusive measures is that they avoid self-report bias, are reliable, and inconspicuous to participants. However, it is often difficult to assess psychological variables using unobtrusive or archival data. To ensure that we were indeed measuring the construct that we intended to measure, we offered evidence of our narcissism measure's validity. Nevertheless, we encourage future researchers to supplement our approach with questionnaire measures of narcissism to ensure that our results are consistent across measurement methods.

In addition, we used a sample of NBA teams, which may limit the generalizability of our findings. As mentioned above, NBA teams are considered "action teams" (i.e., teams that focus on the "execution of manual or psychomotor tasks as opposed to intellectual tasks" [Dirks, 2000: 1010; see also McGrath, 1984]), so our results will likely generalize best to other action teams. In particular, because NBA teams are highly visible and interdependent, they have been compared to action teams that work in the entertainment industry, "such as the members of an orchestra or the cast of a play" (Halevy et al., 2012: 403). Further, NBA teams operate in a dynamic, competitive environment that has many individual performance incentives (e.g., all-star team nominations, "most valuable player" awards, and high salary dispersion) and is characterized by immediate, measurable, and publicly available performance feedback. In terms of teams that may share some of these features with the NBA, we recommend

considering teams of Wall Street traders, hedge fund managers, or even corporate boards of publically traded firms that get immediate feedback from stock price reactions and have competitive incentive structures.

Further, another notable feature of NBA teams is that they have rotating memberships and team members have varying degrees of experience working together. Other teams characterized by membership instability can include cockpit crews, as well as firefighting and consulting or audit teams in which different members are frequently reconfigured based on availability or the expertise required to accomplish a particular task. Membership instability and high turnover may be important features to consider because it is possible that they contributed to participants in the current study feeling that they were getting a fresh start at the beginning of each season, which was potentially strengthened by the occurrence of an off-season when players spent time away from one another. In other professions that do not experience this clean-slate effect (Dai et al., 2014), the negative influence of narcissism on teams may be stronger because there is more time for the effects to accumulate uninterrupted. Finally, when discussing issues related to generalizability, it is important to emphasize that our core role results are only relevant to teams that have differentiated roles and responsibilities; for example, teams in which one member's role is more central to the workflow (e.g., a surgeon in a surgical team). Given the many ways in which teams can differ, we encourage future research to examine whether our results extend to different types of teams in various industries and countries to ensure the generalizability of our results.

Finally, our theoretical arguments did not specify a precise time frame for team familiarity to become more negative in narcissistic teams. Scholars have noted that such a level of precision is not initially expected "because specific process dynamics will be strongly influenced by contextual factors, cumulative factors, and other local contingencies relevant to the phenomenon" (Kozlowski, 2015: 279). Thus, we recommend that future research examine issues related to the timing of familiarity's effects. The timeline will likely vary based on myriad contextual variables and should be examined across various samples, rather than in a single study, to detect patterns.

CONCLUSION

We demonstrated that teams with higher levels of narcissism tend to have poorer coordination, which

in turn curbs team performance. Further, the costs of having one or multiple narcissists on a team increases as team members become more familiar with one another. Teams with higher narcissism levels are unable to capitalize on the benefits usually associated with getting to know one's teammates better. Thus, our findings suggest that there may be some truth to the old adage, "There is no 'I' in team"—at least, not if the team needs to maintain functional working relationships in highly interdependent contexts over time.

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