Believing in ‘us’: Exploring leaders’ capacity to enhance team confidence and performance by building a sense of shared social identity

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Abstract

The present study examined the impact of athlete leaders’ perceived confidence on their teammates’ confidence and performance. Male basketball players ($N = 102$) participated in groups of four. To manipulate leaders’ team confidence, the appointed athlete leader of each newly formed basketball team (a confederate) expressed either high or low team confidence. The results revealed an effect of team confidence contagion such that team members had greater team confidence when the leader expressed high (rather than low) confidence in the team’s success. Second, the present study sought to explain the mechanisms through which this contagion occurs. In line with the social identity approach to leadership, structural equation modeling demonstrated that this effect was partially mediated by team members’ increased team identification. Third, findings indicated that when leaders expressed high team confidence, team members’ performance increased during the test, but when leaders expressed low confidence, team members’ performance decreased. Athlete leaders thus have the capacity to shape team members’ confidence—and hence their performance—in both positive and negative ways. In particular, by showing that they believe in ‘our team’, leaders are able not only to make ‘us’ a psychological reality, but also to transform ‘us’ into an effective operational unit.

Keywords: athlete leaders, collective efficacy, team identification, social identity approach, coaching, sport psychology
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Leaders in fields ranging from sports, politics, to business, acknowledge that, in order to succeed, they have to strengthen team members’ confidence in the capabilities of their team. For example, the importance of team confidence was highlighted by the successful American college football coach, Joe Paterno, when he observed: “When a team outgrows individual performance and learns team confidence, excellence becomes a reality” (Benson, 2008, p. 199). Yet, the question remains as to how leaders inspire such confidence among team members. Is confidence a bug that followers catch from the leader? In other words, is the confidence of leaders contagious such that team members will mimic the level of confidence that the leader displays? Or, can this process instead be explained by the ways in which leaders’ activities serve to strengthen team members’ attachment to, and belief in, the team? These are the questions that the present paper addresses.

Prior research has paid attention to the ways in which leaders’ mood has an impact on the mood of followers (Avey, Avolio, & Luthans, 2011; Bono & Ilies, 2006; Johnson, 2009; Sy, Cote, & Saavedra, 2005). This transfer of mood can be seen as a form of contagion, which has been defined as the tendency to automatically mimic and synchronize expressions, vocalizations, postures, and movements with those of another person and, consequently, to converge emotionally (Hatfield, Cacioppo, & Rapson, 1994, p. 5). Furthermore, research attention has been devoted to examining the impact of leaders’ self-confidence on followers’ performance (De Cremer & van Knippenberg, 2004; De Cremer & Wubben, 2010). However, little research has examined the role of leaders’ expression of confidence in the team as a whole and, more specifically, whether (and how) this expressed leader confidence can influence followers’ shared belief in the team’s future success. In addition, little research
attention has been devoted to studying the impact of leaders’ expression of team confidence on members’ actual performance.

**Leaders’ Confidence as Means of Enhancing Perceived Effectiveness**

Theory and research on positive psychological capital and transformational leadership suggest that a critical component of leaders’ effectiveness derives from their positive psychological capital—that is, their “positive appraisal and belief in the situation, and available and/or potential psychological resources that can be used to attain success” (Norman, Avolio, & Luthans, 2010, p. 351). Along these lines, it has been argued that leaders’ success in galvanizing followers’ energies is dependent on the degree to which they possess and express positivity in the form of hope, resilience, efficacy, and optimism (e.g., see Avolio & Gardner, 2005; Youssef & Luthans, 2007). For instance, Bono and Ilies (2006) found that leaders’ positive emotional expressions determined followers’ perceptions of leaders’ effectiveness (see also Walter & Bruch, 2009). In addition, leaders’ displays of positivity have also been found to enhance team members’ trust in leaders (Norman et al., 2010).

These insights from previous research pertain primarily to leaders’ impact on team members’ evaluations of leaders’ effectiveness. However, leaders’ impact on team members’ own confidence and their capacity to perform has been largely ignored. To address these issues in more detail and to examine whether and how a leader’s confidence in the *team* can impact followers, we now turn to an approach that places the meaning of the group for followers at the center of its analysis: the social identity approach to leadership.

**Leaders’ Confidence in the Team as a Means of Strengthening a Sense of ‘Us’**

The social identity approach is a psychological meta-theory that encompasses the principles and assumptions articulated within social identity theory (Tajfel & Turner, 1979) and self-categorization theory (Haslam, 2004; Turner, Hogg, Oakes, Reicher, & Wetherell,
This approach asserts that people’s sense of self can be defined in terms of both their personal identity (i.e., their sense of themselves as unique individuals) and their social identity (i.e., their sense of themselves as group members who share goals, values, and interests with others). In other words, the psychology and behavior of team members is shaped not only by their capacity to think, feel, and behave as individuals (as ‘I’ and ‘me’), but also—and often more importantly—by their sense of themselves as group members (as ‘we’ and ‘us’; Haslam, 2004; Postmes & Branscombe, 2010; Tajfel & Turner, 1979; Turner et al., 1987).

In its more recent application to leadership, it has been argued that leaders are able to exert influence on team members (i.e., making them want to contribute to the achievement of shared goals) to the extent that they manage—that is create, embody, advance, and embed—a collective sense of ‘us’ (Ellemers, De Gilder, & Haslam, 2004; Haslam, Reicher, & Platow, 2011; Hogg, 2001; Reicher, Haslam, & Hopkins, 2005; Steffens, Haslam, & Reicher, 2014; Steffens, Haslam, Reicher, et al., 2014; Turner & Haslam, 2001; van Knippenberg & Hogg, 2003). In this way, the social identity approach points to particular social psychological mechanisms through which the leader’s confidence transfers to that of other team members. More specifically, leaders’ confidence should transfer to followers not through a mystical process of contagion (Reicher, 1987), but rather by means of group processes that strengthen team members’ collective sense of ‘us’, as manifested by their increased social identification with the team (i.e., the extent to which the group is valued and self-involving; Haslam, 2004).

We therefore expect that leaders’ expressed confidence in the collective should be capable of shaping team members’ confidence in ways that lead those team members to identify with, and internalize, a shared group membership.

**Leaders’ Confidence in the Team as a Means of Strengthening a Sense of “Yes, we can!”**

Previous literature has demonstrated that the more confident team members are in their team’s abilities, the more challenging goals they set, the more effort they exert, the
longer they persist when facing adversity, and ultimately, the better they perform (Greenlees, Graydon, & Maynard, 1999; Silver & Bufanio, 1996; Stajkovic, Lee, & Nyberg, 2009).

Bandura (1997, p. 477) termed this confidence ‘collective efficacy’ and defined it as “the group’s shared belief in its conjoint capability to organize and execute the courses of action required to produce given levels of attainment.”

Collins and Parker (2010) identified two kinds of collective efficacy; ‘team process efficacy’ and ‘team outcome efficacy’. Team process efficacy pertains to the team’s confidence in their ability to work collectively, whereas team outcome efficacy refers to the team’s belief in achieving the team goals. In the domain of sport, this outcome-oriented confidence in winning or performing better than one’s opponent has also been termed ‘competitive efficacy’ or ‘comparative efficacy’ (Myers & Feltz, 2007). However, because this outcome-oriented measure is not congruent with the process-oriented nature of collective efficacy as defined by Bandura (1997), this measure has recently been labeled ‘team outcome confidence’ (Fransen, Kleinert, Dithurbide, Vanbeselaere, & Boen, 2014). We will adopt this recent conceptualization in the current research and therefore distinguish between the process-oriented ‘collective efficacy’ and the outcome-oriented ‘team outcome confidence’.

Leaders’ expressed team confidence may not only influence team members’ social identification with the team, but also strengthens team members’ confidence in their ability to successfully perform the team-oriented behaviors that are needed to achieve collective success. More specifically, a leader’s expressed confidence is likely to enhance team members’ confidence in the team’s abilities to communicate effectively with each other, cheer each other up following failure, and react enthusiastically following successful activities (i.e., enhance process-oriented collective efficacy; Fransen, Kleinert, et al., 2014). Consistent with these ideas, previous research suggests that the more team members perceive athlete leaders to be of high quality (such that they act as a task leader, a motivational leader, a social leader,
and an external leader), the more confident they are about being able to achieve the team’s goals (i.e., having high team outcome confidence; Fransen, Coffee, et al., 2014). This process was found to be mediated by members’ process-oriented collective efficacy. In other words, perceptions of higher athlete leadership quality are linked to a team’s belief that it can be successful, through a strong belief in the processes within the team. Building on and extending this research, we suggest that leaders’ team confidence will feed into team members’ collective efficacy and their team outcome confidence to the extent that leaders’ behavior enhances members’ identification with the team.

**Leaders’ Confidence in the Team as a Means of Enhancing Team Members’ Performance**

Increased confidence of team members in their potential to succeed as a team is likely to increase those members’ internalization of the group’s goals as well as their motivation to exert effort on behalf of the team, thereby ultimately enhancing their performance (Haslam, Powell, & Turner, 2000). Several studies have confirmed these predictions by demonstrating that the higher team members’ confidence in the team and the stronger their identification with the team, the better they perform (Fransen, Decroos, et al., 2014; Solansky, 2011; Stajkovic et al., 2009). Based on the above reasoning, we expect that, by expressing team confidence, a leader will have a positive impact on team members’ identification with the team and their team confidence, and that this in turn will enhance team members’ performance.

In this regard, the Pygmalion and the Golem effect (i.e., two special cases of self-fulfilling prophecies) might further contribute to the impact of the leader’s confidence on team members’ performance. The Pygmalion effect refers to a phenomenon whereby the more that is expected from people, the better they perform. The opposite effect is termed the Golem effect, where low expectations lead to reduced performance. Although meta-analyses within
both educational and organizational settings provide support for Pygmalion and Golem effects (e.g., see Kierein & Gold, 2000), results in sport settings are more ambiguous. Moreover, the nature of the psychological mechanisms that underlie these various outcomes is poorly understood (Rejeski, Darracott, & Hutslar, 1979; Siekanska, Blecharz, & Wojtowicz, 2013; Solomon, Golden, Ciaiponi, & Martin, 1998). In particular, this is because it seems that inflated expectations of performance potential can create stress for an athlete, and, as a result, have a negative impact on actual performance outcomes. Nevertheless, to date, research on the Pygmalion and Golem effects in sport settings is limited and has focused only on the impact of a coach. As a result it is also unclear whether Pygmalion and Golem effects also hold for athlete leaders when they try to shape the performance of those they lead. In other words, is it the case that team members live up to the expectations set by their athlete leaders by performing better (or worse) when their athlete leaders express high (or low) team confidence?

**The Present Research**

Consistent with the ideas outlined above, the present study tests the core proposition that leaders are capable of transferring their own confidence to other team members and that this increased confidence translates into improved performance. Rather than assuming that expressions of confidence by the leader will automatically affect followers (as was suggested by the more classical theories on contagion; for a critique, see Reicher, 1987), the present research also aims to shed light on the underlying mechanisms of so-called contagion effects by looking at the role of potentially relevant social psychological processes—in particular, members’ social identification with the team. More specifically, the study tests the following hypotheses:

H1: Perceptions of team leader’s confidence in the team will transfer to members’ confidence in the team’s ability to succeed. In this way, when the leader is perceived
to express high (rather than low) team confidence, members will feel more confident about their team’s success themselves (H1a), and will perceive other members to be more confident too (H1b).

H2: The team leader will have a stronger impact on team members’ confidence than other team members (in both positive and negative directions).

H3: The effect predicted under H1a (i.e., confidence contagion) will be mediated by team identification and collective efficacy. That is, when the leader is perceived to express high (rather than low) confidence in the team, this will increase members’ identification with the team, which in turn will enhance those members’ team confidence (H3a). Furthermore, when the leader is perceived to express high (rather than low) confidence in the team, this will enhance members’ confidence in the processes within a team (i.e., collective efficacy) which in turn will make team members more confident in their team’s ability to succeed (H3b).

H4: Team leader’s perceived confidence in the team will affect team members’ performance over time such that performance will increase when the leader is perceived to express high confidence in the team’s ability to succeed. In contrast, team members’ performance is expected to decrease when the leader is perceived to express low team confidence.

**Method**

**Procedure**

We contacted the presidents of 47 Flemish basketball clubs, inviting their players to participate in our experiment. Seven clubs agreed to participate. Informed consent was obtained from all participants. A reward (basketball shirts signed by elite players) was offered to the team that ended up winning the shooting contest. All participants were guaranteed full
confidentiality. After the experiment, participants were informed about the aim of the experiment and the outcome of the shooting contest.

**Participants**

Participants were 104 Flemish basketball players, on average 14.6 years old ($SD = 1.3$) with 6.3 years of experience as a basketball player ($SD = 2.7$). Two players were excluded from analysis because their intellectual disabilities hindered an adequate understanding of the questionnaire (i.e., they did not understand the purpose of the questions despite further explanations by the experimenter). Twenty-six participants played at a national level in their club, the remaining players played at a provincial level. Participants were divided into 26 groups of four. In order to rule out prior familiarity between participants, each group consisted of players from different club teams in the included age range (12 – 17 years old).

**Experimental Design**

Each experimental session lasted about 40 minutes and took place on one half of a basketball court. Each team of four players was complemented by a confederate (hereafter termed ‘team leader’), introduced as captain of the team, and unknown to the other players. Two confederates of the same age and with similar basketball skills functioned alternately as team leader, randomly appointed to a team, but in such a way that both confederates participated equally in the two test conditions. The results of the present study were similar for both confederates. To enhance the external validity of these newly-assembled teams, we facilitated team identification by giving all players identical basketball shirts. Furthermore, the team participated in a short quiz about technical and tactical basketball knowledge, in which they had to generate answers through team discussion.

The cover story was that each team was participating in a national free-throw shooting contest. As a team, participants had to aim for the highest team score (i.e., a sum of the individual scores). A pilot study revealed that this cover story was very convincing, and, as a
consequence, made the participants eager to obtain a high team score and to win the competition against the other participating teams. Both the warm-up and the test condition followed the same procedure: each player took two free throws after each other, followed by the next player, until all players had taken 10 free throws. To control for possible influence of the performance of the team leader, our confederates had to score 5 out of 10 free throws during the test session, both in the high- and in the low-confidence test condition. Because both confederates were very skilled basketball players, whose scoring ability considerably exceeded 50%, they were able to manage the number of scored shots (by deliberately missing free throws if needed).

In order to ensure that participants perceived the confederate as leader of their team, we introduced him as team captain. Furthermore, based on suggestions of previous literature (Glenn & Horn, 1993; Price & Weiss, 2011), our confederate was on average six years older than the other team members and had greater basketball experience and competence. Because our confederate knew the correct answers to the quiz questions, he was able to affirm his leader status even further.

Furthermore, we manipulated the level of team confidence expressed by the team leader. More specifically, during the test session, the team leader clearly expressed high team confidence in half of the teams \( n = 13 \); randomly selected) and low team confidence in the other half. To determine the behaviors and actions that indicate high team confidence, we relied on the sources of team confidence identified by Fransen et al. (2012). To standardize this manipulation, we developed a detailed script with all the actions (and their frequency) that the team leader had to perform. For instance, the script for the high-confidence condition prescribed that the team leader encouraged his teammates, communicated his confidence in outplaying the opponent, reacted enthusiastically when his team scored, and displayed confident body language. The prescribed behavior and communications were outlined by
standardized phrases, such as “Great play team! If we keep playing like this, we will easily 
outscore the other team!”

In the other half of the teams (n = 13), the team leader clearly expressed low team 
confidence. Here again a detailed script was elaborated based on established sources of low 
confidence (Fransen et al., 2012). In these teams, the team leader was, among other things, 
recommended to react angrily and in a frustrated manner when teammates missed a free 
throw, to make demoralizing comments, and to display discouraged body language. This 
expression of low confidence was underlined by standardized phrases such as “This situation 
is really getting desperate. If we keep playing like this, we will never win this contest. Do we 
really have to keep on playing?”

Measures

A two-page questionnaire was completed after the warm-up session and after the test 
session. The following measures were included.

Manipulation check

Perceived leader status. The effect of instilling the team leader’s status as ‘leader of 
the team’ was assessed by means of the item “To what extent do you perceive each of your 
teammates to be a leader of your team?” Participants answered this item before the start of the 
test session for each of their teammates on a scale from -3 (not at all) to 3 (completely). The 
team leader’s score was compared with the leader status of the other players in order to obtain 
a manipulation check for the perceived leader status of the appointed team leader.

Perceived leader’s team confidence. To check whether the difference in the team 
leaders’ expressed team confidence (high versus low) was detected by the other players, 
participants responded to the item “To what extent does each of your teammates believe that 
your team will win the free throw competition?” Participants answered this question after the
warm-up and after the test session for each of their teammates on a scale from -3 (not at all) to 3 (completely).

**Relative impact of the leader on team confidence contagion.** To examine the influence of the leader on the confidence of his teammates relative to the influence of the other players, participants responded after the test to the item “To what extent did the behavior of each of your teammates affect your confidence that your team will lose/win the free throw contest?” on a scale ranging from -3 (his behavior made me strongly confident of losing) to 3 (his behavior made me strongly confident of winning).

**Process-oriented collective efficacy.** Process-oriented collective efficacy was measured after the test using the five-item Observational Collective Efficacy Scale for Sports (OCESS; Fransen, Kleinert, et al., 2014). Previous research stresses that, even though collective efficacy is defined as a shared belief, it still reflects individuals’ perceptions of team capabilities, and therefore should be measured by asking athletes to assess their own confidence in the team’s capabilities (Myers & Feltz, 2007). In line with these recommendations, all items in the OCESS focus on the individuals’ confidence in the team’s abilities. A sample item is “Rate your confidence, in terms of the upcoming contest, that your team has the ability to encourage each other during the contest”. Participants responded to the items on 7-point scales anchored by 1 (not at all confident) and 7 (extremely confident). Confirmatory factor analysis confirmed the psychometric structure of this 5-item scale ($\chi^2 = 4.20; df = 3; p = .24; CFI = .99; TLI = .99; RMSEA = .063; pclose = .34$). The internal consistency of this scale was excellent ($\alpha = .93$).

**Team outcome confidence.** In accordance with previous literature (Fransen, Kleinert, et al., 2014) outcome-oriented team confidence was measured after the test by the item “Our team believes that we are going to win this free throw contest”, scored on a scale anchored by -3 (strongly disagree) and 3 (strongly agree).
Team identification. Based on previous research (Boen, Vanbeselaere, Brebels, Huybens, & Millet, 2007; Doosje, Ellemers, & Spears, 1995) team identification was measured using three items; “I feel very connected with this team”, “Being a member of the team is very important for me”, and “I am very happy that I belong to this team”. Participants responded to these items after the test on a 7-point scale anchored by -3 (strongly disagree) and 3 (strongly agree). As in previous research, these items formed a highly reliable scale (α = .95). In addition, confirmatory factor analysis confirmed the structure of the present scale ($\chi^2 < .001; df = 0; p < .001; CFI = 1.00; TLI = 1; RMSEA < .001; pclose = 1.00)$.

Performance. An objective measure of team performance was used by registering the number of free throws scored by every player. This resulted in a score between 0 and 10 for both the warm-up and the test session.

Data Analysis

We used the Shapiro-Wilk Test (Razali & Wah, 2011) to assess whether the distribution of our data deviated significantly from the normal distribution. Because the data were not normally distributed, the Wilcoxon Signed Rank Test was used as a non-parametric alternative to the Dependent $t$-test, the Mann-Whitney U-Test was used as a non-parametric alternative to the Independent $t$-test, and the Aligned Friedman Rank Test was used as a non-parametric alternative to a Repeated Measures ANOVA.

Furthermore, because the individual players are nested within teams, a multilevel approach would provide the optimal framework for data analysis. However, the rule of thumb proposed by Hox (2002) and Kreft (1996) suggests that multilevel analyses should only be performed when there are at least 30 groups and 30 persons in each group (or 100 groups and 10 persons in each group). In the present case, the small number of players within each team ($n = 4$) thus made it inappropriate to perform multilevel analyses.
Results

Manipulation Check

**Perceived leader status.** On average, the appointed team leader was clearly perceived to be the player who had the highest leader status in the team ($M = 2.11; SD = .72$). With the appointed team leader excluded, the average leader status of the best leader in the team was $1.69 (SD = .62)$. A Shapiro-Wilk Test (Razali & Wah, 2011) revealed that the distribution of the leader status of both the team leader and the other players deviated significantly from the normal distribution ($p < .001$). Therefore, the non-parametric Wilcoxon Signed Rank Test was used and confirmed that the team leader was perceived to have significantly greater leader status than all other players ($p < .001$).

**Perceived leader’s team confidence.** Table 1 provides details of the extent to which players perceived each of their teammates (including the team leader) to believe that their team was going to win the competition (i.e., expressing team outcome confidence). The Shapiro-Wilk Test indicated that the distribution of these variables deviated significantly from the normal distribution ($p < .01$). The Mann-Whitney U-Test revealed no significant difference between the perceived team confidence expressed by the leader during the warm-up in both test conditions ($p = .09$), indicating a successful standardization of leader behavior across the test conditions. Furthermore, the Wilcoxon Signed Rank Test revealed that, in the high-confidence condition, the team leader was perceived to express significantly more team confidence than other players ($p < .001$). In the low-confidence condition, the players perceived their team leader to express significantly less team confidence than their teammates ($p = .001$). Moreover, when we compared the team confidence expressed by the team leader during the test with the leader’s expressed confidence during the warm-up, the Wilcoxon Signed Rank Test revealed a significant increase in the high-confidence test condition ($p < .001$) and a significant decrease in the low-confidence test condition ($p < .001$). These
findings confirm that the manipulation of the expressed confidence of the team leader (high versus low) was successful.

Team Leader’s Perceived Influence on Team Members’ Confidence

Table 1 displays players’ own team outcome confidence as well as their perceptions of teammates’ team outcome confidence for the warm-up and both test conditions. The distribution of the data for both constructs deviated significantly from the normal distribution ($p < .01$), as indicated by a Shapiro-Wilk Test. The contagion of leaders’ expressed confidence to team members’ confidence manifested itself in two ways.

First, a Mann-Whitney U-Test revealed a significant difference ($p < .001$) regarding members’ perceptions of their own team confidence (thereby confirming H1a). When the leader was perceived to express high confidence, players were more confident in the team’s success ($M = 1.14$) than when the leader was perceived to express low confidence ($M = -.39$).

To obtain greater insight into the difference between the positive and negative condition, we compared players’ team confidence after the test session with their confidence after the warm-up (i.e., when the leader had acted in a neutral fashion). For this purpose, we used the Aligned Friedman Rank Test as a non-parametric alternative to a Repeated Measures ANOVA, following the procedure recommended by Beasley and Zumbo (2003). Time was used as within-subjects repeated measure (warm-up versus test session) and the perceived confidence expressed by the appointed team leader (high versus low) served as a between-subjects variable. The results revealed a significant interaction effect ($F(1,100) = 35.14; p < .001$), which is presented graphically in Figure 1. Furthermore, one-tailed Wilcoxon Signed Rank Tests revealed that the simple effects for both positive and negative test conditions were significant. More specifically, when the leader expressed high team confidence, team members’ team confidence significantly increased relative to the warm-up ($p < .05$). In
contrast, when the leader expressed low team confidence, team members’ team confidence significantly decreased over time ($p < .001$).

Second, a significant difference ($p < .01$) emerged regarding members’ perceptions of their teammates’ team confidence (thereby supporting H1b). When the leader was perceived to express high confidence, players perceived their teammates (with exception of the leader) to be more confident in the team’s success ($M = .99$) than when the leader was perceived to express low confidence ($M = .17$). To compare the perceived team confidence of the teammates after the test session with their perceived team confidence after the warm-up, we performed an Aligned Friedman Rank Test. Here, as with participants’ own confidence in the team (discussed above), there was a significant interaction effect for the perceived team confidence of other team members ($F(1,100) = 26.34; p < .001$). One-tailed Wilcoxon Signed Rank Tests again provided insight into the simple effects here. For the positive test condition, the perceived team confidence of teammates was higher after the test session than after the warm-up, but this difference was not significant ($p = .13$). For the negative test condition the perceived team confidence of the teammates after the test session was significantly lower than after the warm-up ($p < .001$). In conclusion, when the leader was perceived to express high team confidence, participants felt more confident about their team’s success (H1a). Moreover, when the leader indicated that he had lost all confidence in his team, participants not only felt less confident about their team’s success themselves (H1a), but also perceived their fellow team members to be less confident (H1b).

**Relative Impact of the Leader on Team Confidence Contagion**

To explore these dynamics further, we compared the perceived impact of the leader on players’ team confidence with the perceived impact of the other players. The Shapiro-Wilk Test indicated that the distribution of the perceived impact of the leader deviated significantly from the normal distribution ($p < .001$). The Wilcoxon Signed Rank Test revealed that, if the
leader was perceived to express high confidence, players perceived the impact of the leader
\((M = 1.55; SD = 1.05)\) to be significantly more positive \((p < .001)\) than the impact of the other
players \((M = .95; SD = 1.18)\). In contrast, if the leader was perceived to express low
confidence, his impact \((M = -1.75; SD = 1.74)\) was perceived to be significantly more negative
\((p < .001)\) than the impact of the other players \((M = .18; SD = 1.36)\). The team leader was thus
perceived to have a greater impact on members’ team confidence than other team members,
both in positive and negative directions, thereby confirming H2.

**Mediating Role of Team Identification and Collective Efficacy**

The mediation model posited under H3, including the hypothesized mediating effects
of both team identification (H3a) and collective efficacy (H3b), was tested by performing a
Confirmatory Factor Analysis (CFA) using STATA. To test the mediation effects in this
model, we followed Holmbeck’s (1997) Structural Equation Modeling (SEM) approach. SEM
is the preferred method for testing mediation effects as a result of the information it provides
concerning the degree of ‘fit’ for the entire model after controlling for measurement error.
Table 2 includes the descriptive statistics and correlations between all variables included in
the hypothesized model.

First, as outlined in the Introduction, we explored whether team identification
mediated the relationship between the perceived confidence of the team leader and players’
collective efficacy (H3a). The first pre-condition for a mediation model (a significant
relationship between predictor and outcome variable) was fulfilled by the significant path
between the leader’s perceived team confidence and players’ collective efficacy \((\beta = .72; p <
.001)\). Furthermore, the paths between team identification as proposed mediator and both the
leader’s perceived team confidence and players’ collective efficacy were significant in the
predicted directions \((p < .001)\), thereby fulfilling the second and third pre-conditions. The
final step in assessing whether there is a mediation effect involved assessing the fit of the
model under two conditions: (a) when the path between the leader’s perceived team confidence and players’ collective efficacy was constrained to zero, and (b) when the given path was not constrained. A chi-square difference test between the unconstrained and the constrained model indicated a significant difference between the two models ($\Delta \chi^2(1) = 25.36; p < .001$), suggesting that the constrained model was improved by adding the direct path between the leader’s perceived team confidence and players’ collective efficacy. These results support H3a in indicating that the relationship between the perceived team confidence expressed by the team leader and players’ collective efficacy is partially mediated by team identification.

Second, we explored whether players’ collective efficacy mediated the relationship between the leader’s perceived team confidence and players’ confidence in winning the contest (i.e., their team outcome confidence), as proposed under H3b. All direct paths between the included variables were significant ($p < .001$), fulfilling the three pre-conditions for mediation as suggested by Holmbeck (1997). In the third step, the chi-square difference test between the unconstrained and the constrained model revealed a significant difference between the two models ($\Delta \chi^2(1) = 14.87; p < .001$), thereby providing support for the unconstrained model. These findings support Hypothesis 3b in showing that collective efficacy partially mediates the relationship between the leader’s perceived team confidence and players’ team outcome confidence. Similar analyses showed that collective efficacy fully mediated the relationship between players’ team identification and their confidence in winning. Based on the results of the different analyses, the final model, as shown in Figure 2, provided good fit to the data ($\chi^2 = 1.90; df = 1; p = .17; CFI = 1.00; TLI = .98; RMSEA = .09; pclose = .22$). The standardized regression path coefficients and the proportions explained variance are included in Figure 2.
Besides the reported direct effects, further analyses revealed that the leader’s perceived team confidence had a significant indirect effect (IE) on players’ collective efficacy \( (IE \approx .32; p < .001) \) and on players’ team outcome confidence \( (IE \approx .34; p < .001) \). In addition, the indirect effect of players’ team identification on their team outcome confidence was also significant \( (IE \approx .24; p < .001) \). The total effects are represented in Table 3.

**The Impact of Perceived Leader’s Confidence on Players’ Performance**

Players’ performance was measured objectively as the number of scored free throws out of 10 attempts. The Shapiro-Wilk Test indicated that the distribution of the performance both during the warm-up and during the test session deviated significantly from the normal distribution \( (p < .05) \). Accordingly, analyses involved non-parametric tests. Here a Mann-Whitney U-Test indicated that players’ performance during the warm-up did not differ significantly \( (p = .72) \) between the two test conditions (high-confidence condition: \( M = 4.14, SD = 2.20 \); low-confidence condition: \( M = 4.24, SD = 1.87 \)), indicating a successful randomization of the participants across the test conditions. During the test session, players with a high-confidence leader performed better \( (M = 4.86; SD = 2.17) \) than players with a low-confidence leader \( (M = 4.47; SD = 1.91) \), but a Mann-Whitney U-Test revealed that this difference was not significant \( (p = .32) \).

Because the leader behaved neutrally during the warm-up, the impact of the leader’s perceived confidence on performance was expected to manifest itself only gradually over the course of the test session. To test this hypothesis, we conducted an Aligned Friedman Rank Test on the test session as non-parametric alternative to a Repeated Measures ANOVA, thereby following the procedure recommended by Beasley and Zumbo (2003). Time was used as a within-subjects repeated measure (first five versus last five free throws) and the perceived confidence as expressed by the appointed team leader (high versus low) as a between-subjects variable. Results revealed a significant interaction effect \( (F(1,100) = 7.77; p = .006) \), which is
presented graphically in Figure 3. In addition, one-tailed Wilcoxon Signed Rank Tests revealed that the simple effects within the positive and negative test conditions were both significant (both $p < .05$). Thus, when the leader was perceived to express high team confidence, team members’ performance increased significantly over the course of the test session. In contrast, when the leader was perceived to express low team confidence, team members’ performance decreased significantly over time. These findings support H4 in showing that team members’ performance varied as a function of the perceived leader’s team confidence.

**Discussion**

The present experiment examined the impact that the confidence a leader was perceived to have in their team had on followers’ responses in a basketball shoot-out contest. More specifically, it tested the core hypotheses that team members’ perceptions of leaders’ confidence in their team would affect both the confidence team members have in their ability to succeed (H1) and those team members’ task performance (H4). Findings indicated that the level of perceived team confidence expressed by the team leader transferred to the confidence of team members such that team members were more confident in the team’s prospects of winning when the leader was perceived to express high (rather than low) team confidence, thereby confirming H1. The team leader’s perceived confidence had a greater impact on members’ team confidence than the perceived confidence of other team members, both in positive and negative directions, thereby confirming H2. Moreover, our findings indicate that these effects were mediated by team identification (H3a) and collective efficacy (H3b) suggesting that team members adapted to the perceived confidence standards set by the leader to the extent that they (a) identified more strongly with the team (H3a; Haslam, 2004; Van Dick, 2001), and in turn, (b) experienced more process-oriented collective efficacy (H3b; Fransen, Coffee, et al., 2014). Finally, there was also evidence that, in addition to the impact
upon team members’ psychological states (social identification, collective efficacy, and team outcome confidence), the leader’s persistent expressions of team confidence also contributed to team members’ capacity to perform (in both positive and negative ways), thereby confirming H4.

When critically evaluating these results, it should be noted that the present experiment did not contain a control group. As a result, it is unclear what the effect would be of having no leader or of having a leader who acts in a neutral fashion (i.e., with no clear expression of positive or negative team confidence). Without this neutral condition, we cannot conclude with certainty that the significant improvement in performance in the positive test condition was caused by the team confidence expressed by the team leader or by a learning effect. However, it should be noted that such a learning effect would imply that the negative impact of the leader on team members’ performance is underestimated in the present study. For this reason, it seems appropriate to underscore the conclusion that a leader who expresses low confidence not only has a negative impact on team members’ team confidence, but also brings about a decline in their performance.

**Theoretical and Practical Implications**

The present findings have a number of important implications. First, they extend prior research on leader confidence by demonstrating its significant impact on relevant outcomes. More specifically, findings indicate that leaders can inspire followers by expressing confidence in the team that they are leading. Moreover, whereas prior research has focused largely on the impact of leader’s self-confidence on team members’ reactions towards them (e.g., in terms of perceived effectiveness; Hoffman, Woehr, Maldagen-Youngjohn, & Lyons, 2011), the present research revealed that, to the extent that leaders display belief in the capacities of the collective, and are perceived to do so by team members, they inspire confidence among members that they can make a difference as a team. At the same time,
though, the findings also point to leaders’ capacity to have a negative effect on members’ team confidence and performance to the extent that they are perceived to express low confidence in the team’s abilities.

Second, and related to the previous point, the present research also contributes to research into leaders’ emotional influence on followers. In particular, previous research has shown that leaders are capable of inducing ‘contagion’ such that their expressions and feelings have a significant impact on those of fellow team members—for example, because leaders’ positive mood ‘spills over’ to the positive mood of followers (Avey et al., 2011; Bono & Ilies, 2006; Johnson, 2009). In this regard, a qualitative case study with a female curling team revealed that the team leader played an important role in the team by regulating the emotions of her teammates (Tamminen & Crocker, 2013). Furthermore, this leader was shown to engage in a high degree of emotional self-regulation (e.g., masking her own negative emotions) because she was aware of the contagious impact of her own expressed emotions on the emotions of her teammates. Likewise, in organizational settings, Wagstaff, Fletcher, and Hanton (2012b) highlighted the key role of leaders in a study showing that the new CEO of a sport organization was the catalyst for the spread of pride and passion for success throughout the organization.

Furthermore, evidence from a variety of domains (e.g., organizational, political) shows that team members’ emotions are affected not only by the leader, but also by fellow team members (Kelly & Barsade, 2001; Moll, Jordet, & Pepping, 2010; Totterdell, 2000; Uphill, Groom, & Jones, 2012). For example, semi-structured interviews with members of sport organizations (players, coaches, and directors) demonstrated that individuals attempted to manage others’ emotions through the deliberate expression or suppression of their own emotions (Wagstaff, Fletcher, & Hanton, 2012a). In addition, individuals who were better
able to manage their own emotions and the emotions of others were shown to develop and maintain more successful interpersonal relations (Wagstaff et al., 2012b).

Our findings thus confirm the suggestion by Tamminen et al. (2013) that the failure of team members to appropriately regulate emotions within a team can have negative consequences for performance outcomes. However, the present research extends this work in at least three ways. First, our findings provide quantitative evidence not only of positive confidence contagion but also of the potential for a negative confidence spiral, whereby leaders’ expression of low confidence reduces the team confidence of other members. Second, the present findings shed light on the processes that explain how leaders’ emotional expressions do (or do not) affect followers. Specifically, our findings show that leaders’ perceived confidence spreads to the confidence experienced by their team members partly because confident leaders encourage team members to internalize a sense of shared social identity (a sense of ‘us’) and consequently to strengthen their confidence that they will be able to work more effectively as a unit. This also implies that when leaders are seen to give up on their team, team members may be adversely affected by leaders’ lack of confidence because they distance themselves not only from the leader but also from other fellow team members, resulting in a weaker performance. Third, the results support the suggestion that beyond singular one-to-one relationships in which emotional expressions by the leader affect parallel expressions by team members (as encapsulated in the notion of ‘contagion’), leader’s behavior also has broader implications for team members’ relationship with their team.

Indeed, providing a more comprehensive view than the notion of ‘contagion’ would suggest, the present research indicates that team members’ perceptions of leaders’ team confidence not only determine team members’ own team confidence (through their capacity to enhance team identification and collective efficacy) but also their performance.
It should be noted however, that this performance advantage was not apparent from
the moment that the leader started to inspire confidence in team members but instead emerged
steadily over time. In this sense, the findings are consistent with dynamic accounts of leader–
follower influence processes, which point to the unfolding impact of leader expressions on
team members’ affective tone and perceived effectiveness (Sy, Choi, & Johnson, 2013). In the
present study, this meant that it was only in the final phase of the task that the leaders’ belief
in ‘us’ was observed to impact the performance of team members.

The present findings can also be interpreted as examples of two special cases of the
self-fulfilling prophecy — namely, a Pygmalion effect and a Golem effect. When the team
leader was perceived as highly confident in the abilities of the team to win the game, team
members lived up to the leader’s expectation and gradually performed better during the course
of the test session, consistent with the Pygmalion effect. Nevertheless, it should be noted that
because our experimental design did not include a control condition we cannot be certain that
the observed improvement in performance was caused by the behavior of the leader (i.e.,
consistent with the Pygmalion effect) rather than by a learning effect. At the same time, the
negative leader condition provides very clear evidence of the Golem effect. When the team
leader was seen to be convinced that the team would lose the game, team members gradually
acted in the expected way and their performance decreased. Moreover, this pattern can be
understood to have been even stronger to the extent it was potentially counteracted by a
learning effect.

Overall then our findings accord with previous evidence of these self-fulfilling
prophecy effects in educational and organizational settings (for a review see Kierein & Gold,
2000). Significantly, though, unlike most previous literature, in the present experiment we
observed such effects at the team level—with results flowing from the fact that the leader
expressed high versus low confidence in the team, rather than in a specific individual. And
Although these effects provide a useful descriptive framework for our results, it is also worth noting that by pointing to the role that team identification plays in this process, the present study advances beyond previous work which has hitherto shed little light on the psychological mechanisms that underpin Pygmalion and Golem effects. In particular, it helps us to understand why—when leaders fail to build team identification—such prophecies sometimes do not come to pass.

**Limitations and Future Research**

The present study provides experimental evidence of the impact of leaders’ expressed team confidence as perceived by their fellow team members. Nevertheless, the study also has a number of limitations. Most obviously, our experiment involved a design that includes a highly structured task. Although the experiment was dynamic in relying not merely on one-time performance measurements but instead tracked performance over time, it would be interesting (although logistically challenging) to examine the present relationships in more dynamic performance contexts. Similarly, it would be worthwhile examining these phenomena in natural groups in different contexts (e.g., different sport disciplines, different kinds of competitions) with varying degrees of skill levels and task interdependence (Van der Vegt & Janssen, 2003). Indeed, when members have to interact and rely on each other to successfully complete their given task, we expect that the persistent demonstration of leaders’ team confidence might have even more pronounced effects.

As noted earlier, the present experiment did not contain a control group. Adding a neutral condition to the experiment constitutes a fruitful avenue for further research for two reasons. First, this would help clarifying whether the observed increase in performance from warm-up to test session arose from the behavior of the team leader or instead resulted from a learning effect. Second, this neutral condition could provide insight into whether the strength
of the leader’s influence, on both team members’ team confidence and their performance,

differs as a function of its direction (positive versus negative).

Moreover, as noted above, because individual players are nested within 26 teams of
four players each, a multilevel approach would provide the optimal framework for analyzing
our data. However, the small number of players within one team ($n = 4$) made it impossible to
account for the possible interdependence within this nested data structure. Future research
may therefore benefit from using larger teams to shed further light on the processes examined
here.

Furthermore, it is noteworthy that the onset of the strong manipulation of leaders’
expressed team confidence from the warm-up to the test session was fairly abrupt. This may
have initially led team members to resist any novel influence attempts by the team leader and
may partly explain why team members’ perceptions of the leader’s expression of team
confidence showed a time-sensitive and ‘lagged’ effect on performance (such that they had
greater impact in the final phase of the experiment). Future research might employ
experiments with more subtle and gradual changes in leaders’ expressions of team confidence
in order to allow for a more fine-grained understanding of their unfolding impact.

Conclusion

The present research expanded upon prior research by pointing to the impact that
leaders’ perceived expressions of team confidence have on team members’ experience of
team confidence and also on their ability to perform as a team. At the same time, we also
extended upon prior work by suggesting that contagion phenomena are not mysterious and
free-floating but can be explained in terms of relevant team processes. More specifically, our
findings show that perceptions of leaders’ team confidence transferred to the confidence of
team members to the extent that leaders strengthened members’ psychological connection to
the team and fostered their belief in efficacious team behaviors. Finally, the present findings
demonstrate that by displaying disbelief in the team’s ability to succeed, a leader can also undermine team members’ capacity to perform on behalf of the team. Indeed, as alluded to at the beginning of this paper, it appears that the capacity to imbue team members with team confidence is a critical component of leaders’ ability to create a winning team. More particularly, by showing that they believe in us, leaders are able not only to make ‘us’ a psychological reality but also to transform ‘us’ into an effective operational unit. It is by such means, we suggest, that teams of champions become champion teams.
References


Table 1

Perceived team confidence of both team leader and other players, as well as own team outcome confidence in the warm-up and both high- and low-confidence test conditions. The standard deviations are presented between parentheses.

<table>
<thead>
<tr>
<th>High-confidence test condition</th>
<th>Team leader</th>
<th>Other players</th>
<th>Own team outcome confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>After warm-up</td>
<td>1.18 (1.21)</td>
<td>0.92 (1.25)</td>
<td>0.82 (1.52)</td>
</tr>
<tr>
<td>After test (high confident leader)</td>
<td>1.78 (1.38)</td>
<td>0.99 (1.43)</td>
<td>1.14 (1.44)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Low-confidence test condition</th>
<th>Team leader</th>
<th>Other players</th>
<th>Own team outcome confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td>After warm-up</td>
<td>1.52 (1.34)</td>
<td>1.01 (1.43)</td>
<td>1.14 (1.31)</td>
</tr>
<tr>
<td>After test (low confident leader)</td>
<td>-0.63 (1.82)</td>
<td>0.17 (1.61)</td>
<td>-0.39 (1.78)</td>
</tr>
</tbody>
</table>

Note. The perceived team confidence was rated on a scale from -3 to 3.
Table 2

Means, standard deviations, and correlations between all variables included in the hypothesized model.

<table>
<thead>
<tr>
<th></th>
<th>M</th>
<th>SD</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Perceived team confidence of the team leader</td>
<td>.58</td>
<td>2.01</td>
<td>1.00</td>
<td>.63**</td>
<td>.72**</td>
<td>.68**</td>
</tr>
<tr>
<td>2. Team identification</td>
<td>1.29</td>
<td>1.35</td>
<td>1.00</td>
<td></td>
<td>.76**</td>
<td>.63**</td>
</tr>
<tr>
<td>3. Process-oriented collective efficacy</td>
<td>1.06</td>
<td>1.41</td>
<td>1.00</td>
<td></td>
<td></td>
<td>.72**</td>
</tr>
<tr>
<td>4. Outcome-oriented team confidence</td>
<td>.37</td>
<td>1.79</td>
<td></td>
<td></td>
<td></td>
<td>1.00</td>
</tr>
</tbody>
</table>

Note. **p < .01
Table 3: Total effects (TE), standard deviations (SD), and confidence intervals (CI) for all paths in the postulated model between predictors (in rows) and outcomes (in columns).

<table>
<thead>
<tr>
<th>Team identification</th>
<th>Collective efficacy</th>
<th>Team outcome confidence</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>TE</strong></td>
<td><strong>SD</strong></td>
<td><strong>CI</strong></td>
</tr>
<tr>
<td>Perceived team confidence of the team leader</td>
<td>.63 .08 [.48; .78]</td>
<td>.72 .07 [.58; .85]</td>
</tr>
<tr>
<td>Team identification</td>
<td>.50 .07 [.36; .65]</td>
<td>.24 .04 [.17; .31]</td>
</tr>
<tr>
<td>Collective efficacy</td>
<td></td>
<td>.48 .09 [.30; .66]</td>
</tr>
</tbody>
</table>

Note. All total effects were significant at the .001 level.
Figure 1. The mean values of team members’ team confidence after the warm-up and after the test session for both high- and low-confidence test conditions. The error bars represent one standard error above and one standard error below the mean value.
Figure 2. The structural model of perceived leader’s team confidence and players’ team outcome confidence, with team identification and collective efficacy as mediators. The standardized regression coefficients are presented (all $p < .001$), as well as the proportions explained variance in italics.
Figure 3. The performance of the first and the last five free throws during both high- and low-confidence test conditions. The error bars represent one standard error above and one standard error below the mean value.