

Testing mediating and moderating effects of team identification on the vicarious achievement to BIRGing/CORFing relationship

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Abstract 8**

Sport researchers have examined the relationship between identification, vicarious achievement, basking in reflected glory (BIRGing), and cutting off reflected glory (CORFing) and sport consumption (Madrigal, 1995; Trail, Fink, & Anderson, 2003; Trail, Anderson, & Fink, 2005; Wann & Branscombe, 1993); however until recently, previous researchers had examined the relationships between these variables and sport consumption individually, without considering the interrelationships among the variables. Based on identity theory and self-esteem theory, Trail, Kwon, and Lee (2007) developed and compared three models (direct effects, partial mediation, and full mediation) that depicted the direct and indirect (through team identification) effects of vicarious achievement on both BIRGing and CORFing separately. Their results supported a full mediation model in the BIRGing situation and a partial mediation model in the CORFing situation. However, their results did not support the hypothesized relationship between vicarious achievement and BIRGing. Baron and Kenny (1986) suggested that when there were unexpectedly weak or inconsistent relationships between a predictor and outcome variable (vicarious achievement and BIRGing/CORFing in Trail et al's study), it would be helpful to examine the moderating effect of the third variable, however, Trail et al. did not test a moderation model. In addition, they did not explicitly test the mediating effects of team identification by determining that a significant relationship existed between vicarious achievement and BIRGing/CORFing before comparing the partial and full mediation models. Thus, the purpose of the present study was to investigate the influence of vicarious achievement and team identification on BIRGing and CORFing behaviors by testing and comparing five hypothesized models (moderation, main effects, direct effects, partial mediation, and full mediation).

Data were collected from individuals affiliated with two Mid-Eastern universities before and after the 2007 NCAA collegiate football championship game. Out of 1450 emails sent out requesting completion of the online-survey before and after the event, 464 pre-game questionnaires and 466 post-game questionnaires were completed. The questionnaire included the vicarious achievement (Achievement) subscale from Trail and James (2001), identification with the team (Team ID) from Robinson and Trail (2005), and the BIRGing and CORFing items from Trail, Anderson, and Fink (2005). First, we tested if Team ID functioned as a moderator for the relationship between vicarious achievement and BIRGing or CORFing. Following Jöreskog's (2000) and Schumacker's (2002) analysis protocols, we tested the moderating effect using latent variable scores. Next, following Baron and Kenny's (1986) strategy, we tested the mediating effect. Finally, we compared the direct effects model to the main effects model and the full mediation model to the partial mediation model.

The CFA on the seven subscales showed good fit (RMSEA = .057). AVE values ranged from .61 to .85 and the alpha coefficients ranged from .82 to .95 showing good construct reliability and internal consistency. When BIRGing was set as the dependent variable, the moderation model fit the data well (RMSEA = .058). However, the path coefficient from the product term (of Achievement and Team ID) to BIRGing was not significant at .05 level ($\beta = .05$) indicating no significant interaction effect. The main effects model showed reasonable fit (RMSEA = .073) but the direct effects model showed poor fit (RMSEA = .11). In addition, the chi-square difference test indicated that the main effects model fit better than the direct effects model ($\chi^2(1, N = 151) = 28.57, p < .001$). In the test for mediation, Achievement significantly predicted BIRGing ($\beta = .35$) and Team ID ($\beta = .46$) separately. The partial mediation model and full mediation model performed equally well. Both indicated reasonable fit, RMSEA (partial) = .073 and RMSEA (full) = .070. The chi-square difference test between the partial mediation and full mediation models was not significant ($\chi^2(1, N = 151) = 0.18, p > .05$). However, the effect of Achievement on BIRGing was not significant ($\beta = .03$) when the indirect path from Achievement to BIRGing through Team ID was included in the model, thus establishing that Team ID completely mediated the Achievement-BIRGing relationship.

When CORFing was set as the dependent variable, the moderated model fit the data well (RMSEA = .039). However, the path coefficient from the product term (of Achievement and Team ID) to CORFing was not significant at .05 level ($\beta = .03$), thus indicating no significant interaction. The main effects model indicated good fit (RMSEA = .046), but the direct effects model showed mediocre fit (RMSEA = .080). In addition, the chi-square difference test indicated that the main effects model fit better than the direct effects model ($\chi^2 = 16.77, p < .001$). In the test for mediation, Achievement significantly predicted Team

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ID ($\beta = .35$) but did not predict CORFing ($\beta = -.02$), thus failing to establish that there is a relationship that could potentially be mediated. Both the model that included an indirect and direct path from achievement to CORFing (RMSEA = .046) and model that only included an indirect path (RMSEA = .053) had close fit, and performed equally well [$\chi^2(1, N = 151) = 2.87, p > .05$].

Our results indicated that the full mediation model best described how vicarious achievement and team identification influenced BIRGing, which supports Trail et al.'s (2007) findings. Trail et al.'s finding that the partial mediation model worked best in the CORFing situation was only partially supported. The main effects model, the model that had both an indirect and direct effect of achievement on CORFing (labeled partially mediating by Trail et al.), and the model that only had an indirect effect on CORFing (labeled fully mediating by Trail et al.), all fit similarly and well.

We found that Team ID was a significant predictor of both BIRGing (49% variance explained) and CORFing (25% variance explained). Our findings were similar to Trail et al.'s results that showed that team identification accounted for 42% and 30% of variance in BIRGing and CORFing, respectively. Our findings of a significant relationship between Vicarious Achievement and BIRGing (12% variance explained) did not support Trail et al.'s findings (no significant amount of variance explained). The differences between the results might be due to the fact that Trail et al. did not constrain the path between Team ID and BIRGing to be zero, when they estimated direct path between Vicarious Achievement and BIRGing. We found that Vicarious Achievement did not significantly predict CORFing when it is separately regressed on CORFing but explained a significant amount of variance in CORFing (3%) when adding the path from Achievement to Team ID, suggesting that Team ID might function as suppressor variable. This was different from Trail et al.'s finding that vicarious achievement accounted for 14% and 17% of variance in CORFing in the direct effects and partial mediation models, respectively. To our understanding, this is the first study to test the moderating and mediating effects using Structural Equation Modeling in sport management research. Moreover, we believe our study provides a valuable framework for integrating identity theory and self-esteem theory, thus describing why people are motivated to be fans and why they might BIRG or CORF.