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ARTICLE

Relationship between Organizational Support and Performance of College Coaches: A Mediation Model

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ABSTRACT Two hundred and sixty-seven NCAA Division I coaches participated in the investigation of the mediator effects of affective commitment (AC) on the relationship between college coaches' perceived organizational support (POS) and athletic performance. Social exchange theory predicts that the relationship between POS and performance should be mediated by AC. Confirmatory factor analysis showed acceptable model fit measures. Both scales presented good internal consistency and construct validity. Using structural equation modeling, three models were compared. A fully mediated model was chosen to explain the indirect effects of POS on athletic performance through AC. The path coefficients from POS to AC and from AC to athletic performance were both significant. The indirect effect was also significant. Implications of these results for theory and practice are discussed.

KEYWORDS: Affective commitment; mediation; organizational support; social exchange

It has long been recognized that employees of an organization are the mainstay of organizational performance. Thus, cultivating a committed workforce is a major responsibility of management (Collins & Smith, 2006; Pfeffer, 1994). It has also been established that appropriate human resource practices would motivate employees toward a sense of commitment and, in addition, to higher performance. While organizational commitment on the part of all workers is important, it is much more critical in the case of those who perform knowledge-based work that is directly involved in producing the goods or services of the organization (Kwon, Bar, & Lawler, 2010). Further, the task of retaining these workers becomes difficult as they are heavily recruited by competing organizations. Given this predicament, human resource management scholars

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and practitioners have focused on the human resource practices that would motivate these valuable employees to higher performance and facilitate their retention. Following this logic, we focus on the processes that can cultivate employees' affective commitment (AC) to the organization. This study is framed by social exchange theory (Blau, 1964; Gouldner, 1960), which suggests that employees are likely to reciprocate the support they receive from the organization by being committed to the organization and improving productivity (Eisenberger et al., 1986; Homans, 1974; Levinson, 1965; Rhoades, Eisenberger, & Armeli, 2001). Perceived organizational support (POS), positive reactions of employees to this kind of support in terms of AC, performance, and interrelationships among them are the focus of this investigation.

Perceived organizational support, defined as "an experience-based attribution concerning the benevolent or malevolent intent of the organization's policies, norms, procedures, and actions as they affect employees" (Eisenberger et al., 2001, p. 42), has been investigated as an important organizational factor influencing performance in sport settings (Dixon & Sagas, 2007; Kim & Cunningham, 2007; Pastore, Goldfine, & Riemer, 1996). Sport management scholars have been concerned about the effects of POS on attitudinal outcomes such as job satisfaction and commitment. We extend these initial efforts by studying the effects of POS on actual athletic performance as mediated by an attitudinal outcome. Based on social exchange theory (Blau, 1964; Gouldner, 1960), our purpose in this study was to investigate three plausible models to explain the relationships among POS, AC and athletic performance of college coaches.

Literature Review

Relationships between organizations and employees are usually described as reciprocal interdependent relationships (Blau, 1964). People depend on organizations to achieve their objectives, and organizations depend on people to carry on their productive processes and attain their goals. Molm (2003) conceptualized a reciprocal interdependent relationship as one that does not include explicit bargain. Reciprocal exchanges are based on the understanding that one party depends on the other. According to Cropanzano and Mitchell (2005), the process of reciprocal exchange starts when one participant (usually the organization) makes a move; then the other participant (an employee) reciprocates. Social exchange theory and the norm of reciprocity (Blau, 1964; Gouldner, 1960) are based on the reciprocal interdependent relationships that exist between people and organizations. When someone perceives support from the organization, he or she tends to repay the organization. As part of this repayment process, people become emotionally attached to it and expend extra efforts to help the organization attain its goals. That is, the perception of being valued and cared about by the organization would encourage increased affective attachment and pro-social acts conducted on behalf of the organization (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Levinson, 1965).

In this sense, social exchange theory and the norm of reciprocity form the basis for organizational support investigations (Eisenberger et al., 1986; Shore & Tetrick, 1991). According to previous investigations, employees' perceptions of positive support from the organization translate into a feeling that the organization values their contributions and cares about their personal needs. This feeling tends to trigger employees' willingness to care about the organization's welfare and to help the organization to fulfill its objectives (Eisenberger et al., 2001). Rhoades and Eisenberger (2002) noted that affective connection to the organization is one of the most common consequences of POS. Previous research has shown that POS is positively related to organizational affective commitment (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Rhoades, Eisenberger, & Armeli, 2001; Settoon, Bennett, & Liden, 1996; Wayne et al., 2002).

Meyer and Allen (1991) conceptualized commitment as a three-component construct. According to their theory, employees could develop commitment to their organizations because (a) they "want to" (affective commitment), (b) they "need to" (continuance commitment) or (c) they "ought to" (normative commitment). According to Eisenberger and colleagues, perceptions of organizational support are linked to affective commitment (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Rhoades & Eisenberger, 2002; Rhoades, Eisenberger, & Armeli, 2001), but not to continuance or normative commitment. In fact, Shore and Tetrick (1991) and Rhoades and Eisenberger (2002) suggested that POS might increase feelings of affective commitment, but decrease feelings of continuance commitment. The latter arises when employees are forced to stay with an organization due to perceptions of high costs associated with leaving. Rhoades, Eisenberger, and Armeli (2001) suggested that supported employees are affectively committed to their organizations because they *want to* return the support they have received. This is consistent with social exchange theory which asserts that organizational support creates a feeling of caring and indebtedness from the employee toward the organization. Organizational support theory (Eisenberger et al., 1986) assumes that employees form beliefs concerning how much the organization values their contributions and cares about their well-being, in order to meet their socio-emotional needs (Rhoades, Eisenberger, & Armeli, 2001). If those beliefs are positive, employees perceive support from their organization. This support tends to produce an affective relationship between employees and their organization (Eisenberger et al., 2001).

One could argue that the direction of the relationship between POS and AC is not well established. For instance, people could perceive support from their organizations because they are affectively attached to them. However, Cropanzano and Mitchell (2005) suggested that the process of reciprocal exchange usually starts when the organization makes the first move. That is, employee commitment to the organization is a function of the attractive elements of the organization and one such element is the support provided by the organization. Accordingly, employees tend to commit themselves to the organization as they perceive support from it. This perspective has been

empirically supported by Rhoades, Eisenberger, and Armeli's (2001) findings, which showed that prior changes in POS led to subsequent changes in employees' AC to their organizations. In contrast, changes in AC did not explain subsequent changes in POS. These findings support the causal direction of the relationship between POS and AC proposed by our models. Affective commitment increases employees' sense of belonging, identification, involvement, intention to stay, and willingness to pursue the organization's objectives (Meyer & Allen, 1991; Mowday, Porter, & Steers, 1982; Rhoades, Eisenberger, and Armeli, 2001). Researchers have reported negative associations between AC and absenteeism and turnover (Mathieu & Zajac, 1990; Meyer & Allen, 1997; Mowday, Porter, & Steers, 1982). That is, the more a person is affectively attached to her organization, the less she intends to be absent from work or leave the organization. Since absenteeism and turnover are measures relatively easy to collect, they have been used as dependent variables in studies aimed to show the importance of AC. They are often claimed to be "effectiveness indicators" (Iverson & Buttigieg, 1999; Mowday, Porter, & Steers, 1982). However, presence and intention to stay do not necessarily imply good job performance and productivity. Job performance, usually a very subjective measure, involves many other aspects. There is some empirical support for the notion that AC is associated with improvements in employees' performance and productivity (Eisenberger, Fasolo, & Davis-LaMastro, 1990; Mathieu & Zajac, 1990; Shanock & Eisenberger, 2006). However, those studies relied on subjective measures of performance, such as supervisor evaluations. Although subjective measures are valuable, the use of objective measures of performance is equally important in studying the importance of AC. To the extent the vast majority of studies in the AC literature are based on subjective measures, the use of an objective measure of performance in the present study partially fills the void.

POS, AC, and Athletic Performance in a Coaching Context

As previously discussed, positive relationships among support, commitment and effectiveness indicators, such as consistent attendance and intention to stay, have been reported in the literature (Eisenberger et al., 2002; Somers, 1995). However, investigations about the relationships among support, commitment, and objective measures of performance are missing in the literature. Objective measures of performance are usually difficult to be gathered in general management investigations (Dess & Robinson, 1984).

Studies with sport organizations offer an excellent opportunity to investigate relationships between attitudinal variables and objective measures of performance. In sport organizations, athletic success is an objective measure of performance, which is collected relatively easily. Numbers of wins over losses or conference standings are good examples of objective measures of athletic performance of the teams. In sport management literature, the performance of the teams has been assumed to have a great relationship with the performance of their coaches (Bowen & Levin, 2003;

Cunningham, 2002; Turner & Chelladurai, 2005; Zimbalist, 1999). Cunningham and Dixon (2003) assert that performance of coaches and teams have a reciprocal interdependence. That is, the performance of the team depends on the coach's performance, and vice-versa. Therefore, the performance of a team is a good proxy for the performance of the coach of this team. It is important to note that this relationship is not perfect. Even the greatest coach in the world can have his or her personal record damaged by external factors such as injuries to star athletes or off-the-field problems. With this caveat in mind, we followed the literature and considered the performance of the teams as a surrogate measure for the performance of their coaches.

In the literature, the relationships among POS, AC, and effectiveness indicators have been tested in samples of general employees, such as electronic and appliance salesmen (Rhoades, Eisenberger, & Armeli, 2001; Shanock & Eisenberger, 2006), state agency employees (Fasolo, 1995), brokerage firm clerks (Eisenberger, Fasolo, & Davis-LaMastro, 1990), manufacturing hourly workers (Eisenberger, Fasolo, & Davis-LaMastro, 1990), and mail-processing clerks (Eisenberger et al., 2001). Although the relationships between POS and AC of employees are established in business and industry (Eisenberger et al., 2002; Rhoades, Eisenberger, & Armeli, 2001), these findings cannot be directly extrapolated to the coaching context. Coaches represent a unique occupational subculture (Massengale, 1974). Competing and winning is part of coaches' occupational subculture in such an idiosyncratic manner that coaching cannot be compared to any other occupation. Dixon and Bruening (2007) described college-coaching as a

multifaceted, high-paced work setting full of practices, recruiting, off-season workouts, administrative responsibilities, and teaching duties [that] has created an environment in which only those willing to work 12 hour days, 6 days a week, for 50 weeks a year can thrive (p. 384).

In the industry, front-line employees who work under these conditions are rarely found. Certainly, pressure for winning, time-consuming and non-traditional schedules, search for excellence, and job instability make the context of coaching very unique when compared to occupations in which the relationships among POS, AC, and effectiveness indicators has been investigated. Moreover, coaches are engaged in zero-sum games (i.e., winning or losing in competitions) which is rare in business and industry. Further, the coaches render human services, which have the main objective of modifying people's behaviors and attitudes to achieve a goal (Chelladurai, 2009). It is rare indeed to have human services performed in the context of zero-sum games. Thus coaching sport is a unique kind of occupation. Nevertheless, POS has also been investigated as an important organizational factor influencing performance in the coaching context (Dixon & Sagas, 2007; Kim & Cunningham, 2007; Pastore, Goldfine, & Riemer, 1996). Sport management scholars have been concerned about the effects of POS on attitudinal outcomes such as job and life satisfaction, and commitment.

Dixon and Sagas (2007), for instance, found that support from athletic departments had positive and significant influences on coaches' job and life satisfaction. They also reported that work-family conflict experienced by coaches partially mediated the relationships between POS and both job and life satisfaction. Similarly, Kim and Cunningham (2007) found that affective support and financial support were positively correlated with each other, and both positively influenced job satisfaction of intercollegiate coaches. Pack et al. (2007) found positive and significant relationships between POS and the commitment of students who worked in recreational sport departments. The current study extends the above-cited initial efforts, by investigating the effects of POS on actual athletic performance of college coaches as mediated by AC.

Three Models

Three possible models exist to explain the relationships among POS, AC, and coaches' athletic performance. First, the relationship between POS and coaches' athletic performance can be fully mediated by AC (Figure 1—Model A). This model is based on social exchange theory and the norm of reciprocity to explain the influence of POS on performance. Coaches who perceive support from the organization tend to become affectively attached to it and improve their in-role performance. In turn, coaches who perceive support, but do not intend to repay this support would not improve their performance. Results from investigations in the industry lend support for this model (Loi, Hang-yue, & Foley, 2006; Mathieu & Zajac, 1990; Rhoades, Eisenberger, & Armeli, 2001). Rhoades, Eisenberger, and Armeli (2001), for example, found no significant direct effects from POS to turnover intention. They reported that the relationship between POS and effectiveness indicators should be fully mediated by AC.

Secondly, POS and AC can have direct influences on coaches' athletic performance (Figure 1—Model B). The thrust of this model is that both POS and AC could have direct influence on performance, but they do not necessarily influence each other. Although it sounds contrary to social exchange theory, some studies in the literature have found direct effects from POS to effectiveness indicators (e.g., Moorman, Blakely, & Niehoff, 1998; Settoon, Bennett, & Liden, 1996). Also, some structural models created to explain job performance or effectiveness have not considered POS as an antecedent of AC (e.g., Lee & Gao, 2005; Sinclair et al., 2005). This is an indication that POS and AC could have no causal relationships between them in a model to explain job performance.

Thirdly, the relationship between POS and coaches' athletic performance can be partially mediated by AC (Figure 1—Model C). According to this model, social exchange theory could explain, only partially, the relationship between POS and coaches' performance. That is, over and beyond the mediational role of AC, POS has some direct influences on coaches' performance. Some studies have investigated the relationships among POS, AC, and performance from this perspective (e.g., Allen, Shore, & Griffeth, 2003; Loi, Hang-yue, & Foley, 2006; Rhoades & Eisenberger, 2002). In

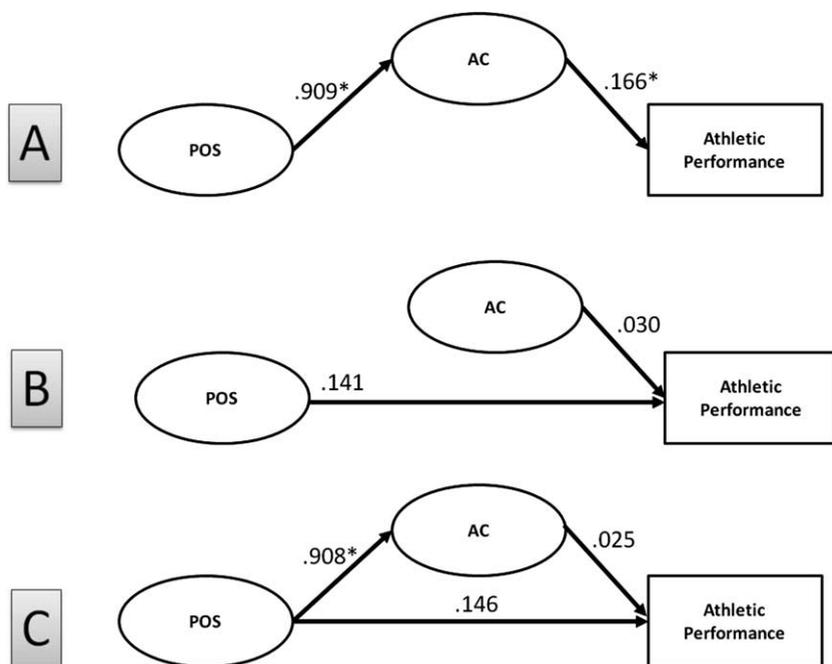


Figure 1. The three models (A—Fully mediated model; B—Direct effects model; and C—Partially mediated model). Note: * $p < .01$

summary, the present investigation was concerned with testing and comparing these three models empirically in the coaching context.

Method

Participants and Procedures

In conducting this web-based survey, we sent a pre-notification via e-mail one week before sending the questionnaires (Kent & Turner, 2002). A cover letter accompanying the questionnaire informed respondents about the procedures used to select them, the confidentiality of their responses, and the deadline to return the questionnaire (Porter & Whitcomb, 2003). Follow-up messages were sent to non-respondents two and four weeks after the initial e-mail.

We used the College Coaches Online (2011) website to determine the number and names of schools sponsoring Division I teams. In the next step we checked for coaches to avoid duplications. We found some coaches who had coached two or more teams (e.g., men's and women's track and field teams). After eliminating all duplicates we determined there were 5078 head coaches working in Division I athletic departments. A simple random sampling technique was used to select 1000 coaches. After the first communication, 88 e-mails bounced back due to either invalid addresses or full mailboxes. Exactly three hundred (32.9%) coaches responded to the questionnaire. From these, 12 questionnaires were eliminated because of the irresponsible nature

of the responses (e.g., the same response for all items), 10 were eliminated because the respondents did not respond to 20% or more of all the items, and an additional 11 were eliminated because the respondents did not respond to 50% or more of items that represented a particular construct. The final sample size was 267 coaches (29.3% of response rate). The actual response rate produced a 95% confidence level with 5.8% of sampling error. Seventy-three percent of all respondents ($n = 194$) were males, and 89% of all respondents were Caucasians ($n = 238$). The age of the respondents ranged from 23 to 76 years old ($M = 42.6$, $SD = 9.8$). The tenure of the respondents ranged from 0.5 to 45 years ($M = 9.0$, $SD = 8.2$).

Controlling for non-response error, we compared late respondents to early respondents (Miller & Smith, 1983) on all variables. Late respondents were those who responded to the questionnaire after the first follow-up message. Using t -tests, no differences were found in any of the responses or demographic characteristics. Thus, non-response error should not be an issue of concern in this research (Dooley & Linder, 2003; Kim & Cunningham, 2005).

Measures

Following Shanock and Eisenberger (2006), six items from Eisenberger et al.'s (1986) scale were selected to measure POS. Five items from Meyer, Allen, and Smith's (1993) instrument were used to measure coaches' AC. POS and AC were measured using a Likert scale, where the respondents indicated their level of agreement ranging from one (*very strongly disagree*) to six (*very strongly agree*). Age, gender, and tenure were used as control variables in all analyses to avoid the possibility of spurious relationships based on these types of personal characteristics. Age and tenure were treated as continuous variables, while gender was dummy-coded (males = 0; females = 1).

Following Turner and Chelladurai (2005), we employed an objective measure of coaches' athletic performance. Coaches were asked to indicate their team's position in their conference's standings and the number of teams in their conference during the last three seasons. From the mean of their last three season standings, a standing percentile was calculated by subtracting the mean number of teams ahead of that particular coach's team from the total mean number of teams in the conference. This number was, then, divided by the total mean number of teams in the conference in the last three years. For example, assume that a coach indicated that he or she finished in third, second, and fourth place during the last three seasons in a conference with a constant number of 10 schools in those three seasons. For the last three seasons, his or her team's mean standing was three, and his or her standing percentile was 0.8 ($[10 - 2]/10 = 0.8$). If a coach reported to be with a college for less than three years, we considered only the results reported by the coach during the period he or she had been with the current institution. For example, for a coach who reported to be with his or her current institution for only two years, we considered his or her standing percentile of these two years only to compute the standing percentile. For

coaches reporting to be with an institution for less than one year, we treated it as a missing value for conference standings.

We opted to use conference standings instead of percentage of wins for three different reasons. First, we sought to consider coaches of team and individual sports. For coaches of individual sports (e.g., swimming), it is very difficult to precisely estimate performance based on wins (i.e., first place) and losses. For example, in a single swimming contest, a second or a third place finish could be considered a loss, but these results are still important in measuring a swimming coaches' athletic performance. In this sense, a team's (or group of athletes coached by the same head coach) conference final standing is a better index of athletic performance for coaches of either team or individual sports. Secondly, to avoid any confusion about what games or contests should be counted we used conference final standings. That is, had we simply asked a coach how many games he or she had won last season, he or she could count (or not) pre-season or preparatory games. Usually the results of these games have little relevance on coaches' athletic performance, because their purpose is to prepare the team for the season. Thirdly, we asked coaches about their performance in the last three seasons. Although coaches may forget the exact number of wins and losses they had in a past season, it may be easier to recall their final place in conference standings.

Data Analysis

To assess the direct and indirect effects of POS and AC on performance, we followed the two-step approach proposed by Anderson and Gerbing (1988). In the first step, we tested the measurement model through confirmatory factor analysis in Mplus 6.01. At this stage, we verified the construct validity and reliability of the scales. As for the measures of model fit, we used the root mean square error of approximation (RMSEA), standardized root mean square residual (SRMR), comparative fit index (CFI), and Tucker-Lewis index (TLI). Chi-square value divided by degrees of freedom was presented as an ancillary measure for comparing the models. For CFI and TLI, values higher than .90 are considered to have a close fit (Hair et al., 2009). For RMSEA, values equal to or less than .06 indicate a close fit of the model, values equal to or less than .08 indicate a reasonable fit, and values higher than .10 indicate poor fit (Hu & Bentler, 1999). For SRMR, values less than .08 are indicative of close fit (Hu & Bentler, 1999). Regarding the individual contributions of items to their assigned factors, Anderson and Gerbing (1988) suggested that if an item's common variance was not larger than this item's unique variance, this item should be dropped from the scale. This means that items should present a factor loading of, at least, .707 on their assigned factors to be part of the scale.

Still in the measurement model, we present the constructs' reliability (internal consistency) measured by Cronbach's alpha. Based on Lance, Butts, and Michels (2006), we used the cutoff value of .80 for an acceptable internal coefficient. We also reported the average variance explained (AVE). According to Fornell and Larcker (1981), when the value of AVE for a

certain scale is less than .50, the variance due to measurement error is larger than the variance explained by the construct, indicating that the validity of the individual indicators and the validity of the construct are questionable.

In the second step, we used structural equation modeling via MPlus 6.1 to test the fit of all three proposed structural models and estimate the values of path coefficients. To control for confounding variables, we regressed the endogenous variables on their antecedents and on age, gender, and tenure as well. We compared the structural models based on the same above-mentioned fit indices and the significance of the path coefficients. After defining the best structural model to explain the relationships among POS, AC, and coaches' athletic performance, we tested the significance of the indirect effects. Mplus uses the product of coefficients strategy (MacKinnon, Lockwood, & Hoffman, 1998) to determine a point estimate for specific indirect effects. Standard errors and confidence intervals for the point estimates are output. However, the product of coefficient strategy assumes that the product of regression coefficients (from the predictor to the mediator, and from the mediator to the outcome variable) is normally distributed (Sobel, 1982, 1986). The problem with this assumption is that the product of coefficients is generally positively skewed and kurtotic (Preacher & Hayes, 2004; Shrout & Bolger, 2002). To deal with this problem, we also applied a bootstrapping strategy, a nonparametric resampling technique that does not assume normal sampling distribution of the product coefficient to test the indirect effects (Bollen & Stine, 1990; MacKinnon, Lockwood, & Williams, 2004; Preacher & Hayes, 2008).

Results

Analysis of the measurement model showed that only one item from the AC scale ("I feel like 'part of the family' at my athletic department") did not load sufficiently high on its latent variable. After examining carefully the content of this item, we dropped it from further analysis without any loss in the definition of the construct. The results of the measurement model showed adequate fit (RMSEA [90% CI] = .062 [.039; .085]; CFI = .986; TLI = .978; SRMR = .027; $\chi^2/df = 2.04$). Descriptive statistics, factor loadings, internal consistencies, and AVE are presented in Table 1. The correlations between POS and AC ($r = .737$), POS and athletic performance ($r = .168$), and AC and athletic performance ($r = .311$) were all significant ($p < .01$).

Table 2 presents the fit statistics of all three models and the standardized path coefficients. The goodness-of-fit statistics indicated that mediational models, Models A and C, fit the data better than Model B, the direct effects model. Although, the fit measures of Model B were still acceptable, both path coefficients in this model were not significant ($\beta_1 = .030$, $p = .886$; $\gamma_2 = .141$, $p = .488$). Therefore, Model B does not offer the best possible structural representation for the relationship among POS, AC, and coaches' athletic performance. Model A and Model C fit the data equally well. There are small differences in the fit measures favoring Model A, the fully mediated model, but these would not be enough to prefer Model A over Model C. However, the path coefficient from POS to athletic performance in

Table 1. Means, standard deviations, factor loadings (λ), internal consistency (α), and average variance explained (AVE) for POS and AC scales.

Items	M	SD	λ	α	AVE
POS (adapted from Eisenberger et al., 1986)				0.91	0.65
The athletic department values my contribution to its well-being.	4.28	1.16	0.847		
The athletic department is willing to help me when I need a special favor.	4.37	1.10	0.733		
The athletic department takes pride in my accomplishments at work.	4.17	1.23	0.843		
The athletic department appreciates any extra effort from me.	3.80	1.17	0.716		
The athletic department cares about my general satisfaction at work.	3.93	1.24	0.835		
The athletic department cares about my opinions.	3.86	1.21	0.865		
AC (adapted from Meyer et al., 1993)				0.91	0.71
I feel a strong sense of “belonging” to my athletic department.	4.11	1.29	0.898		
I feel “emotionally attached” to this athletic department.	3.95	1.25	0.777		
This athletic department has a great deal of personal meaning for me.	4.13	1.26	0.795		
I would be very happy to spend the rest of my career with this AD.	3.93	1.41	0.890		
Performance	0.63	0.24			

Model C ($\gamma^2 = .146$; $p = .493$) was not significant. Thus, Model C became equivalent to Model A (see Figure 1). Accordingly, we chose the fully mediated model as the best structural representation for the relationships among POS, AC, and coaches’ athletic performance.

Table 2. Goodness-of-fit indices and path coefficients for the tested models.

	RMSEA				γ^1 (POS → AC)	β^1 (AC → Perf)	γ^2 (POS → Perf)	
	[90% CI]	CFI	TLI	SRMR	χ^2/df	[90% CI]	[90% CI]	
Model A	.064 [.048; .079]	.967	.957	.038	2.04	.909 [.878; .939]	.166 [.063; .269]	NA
Model B	.067 [.052; .082]	.963	.953	.048	2.14	NA	.030 [−.310; .369]	.141 [−.194; .476]
Model C	.064 [.049; .080]	.967	.956	.038	2.06	.908 [.878; .939]	.025 [−.330; .379]	.146 [−.203; .494]

Considering the fully mediated model, the indirect effect from POS to athletic performance through AC was significant ($\gamma_1\beta_1 = .151$, $SE = .058$, $t = 2.585$, $p = .01$). Bootstrapping results, which did not assume normal sampling distribution of the product coefficient, ratified the results of the product of coefficients. The bootstrap for the indirect effect produced a 95% bias corrected and accelerated confidence interval (.055; .246) which does not contain zero. None of the confounding variables (age, gender, and tenure) were a significant predictor of either AC or performance (the endogenous variables of model A).

Discussion

The objective of this study was to investigate three plausible models to explain the relationships among POS, AC and athletic performance of intercollegiate athletic coaches. Confirmatory factor analysis showed acceptable goodness-of-fit measures for the measurement model. Latent variable scales used in this study had very good internal consistency and construct validity. Structural equation modeling was applied to compare the three plausible models based on previous literature. Path coefficients in the direct effects model (Model B) were not significant. In the partially mediated model (Model C), the path coefficient from POS to athletic performance was not significant, which made this model equivalent to the fully mediated model (Model A). Considering social exchange theory and the variables involved in the current study, this finding was not surprising.

Results of the current study indicate that social exchange theory and the norm of reciprocity (Blau, 1964; Gouldner, 1960) can be applied to college sport contexts. Social exchange theory states that reciprocal relationships exist between people and organizations. People tend to repay the organization when they feel it supports them emotionally or financially (Eisenberger et al., 1986). Confirming this view, POS explained a large amount of variance (i.e., 82%) in AC, in our sample of Division I coaches. In other words, the surveyed coaches seemed to express their gratitude with received support by becoming more affectively committed to their organizations. Rhoades, Eisenberger, and Armeli (2001) and Allen, Shore, and Griffeth (2003) reported that large amounts of variance in commitment could be explained by POS. Our results showed that the unique characteristics of coaching did not change the literature-reported relationship between POS and AC.

Findings of positive and significant relationships between AC and athletic performance seemed to indicate that AC increases coaches' willingness to pursue the organization's objectives (Meyer & Allen, 1991; Mowday, Porter, & Steers, 1982; Rhoades, Eisenberger, & Armeli, 2001). Meyer and Allen (1991) reported that AC is directly related to on-the-job behaviors and performance. The more employees want to be part of the organization, the more they are willing to perform better and help the organization to attain its objectives. In the current study, this relationship was true for the athletic performance of coaches. Although the variance of athletic performance explained by AC was small (about 3%), this is also consistent with previous

research. Turner and Chelladurai (2005) found that commitment could explain roughly 5% of the variance in college coaches' athletic performance. Rocha and Turner (2008) found that 3% of the same variance could be explained by commitment. Both studies reported that, although the significance of explained variance could be considered small, in the context of American college sports it can be quite relevant.

However, it is important to remember that 97% of the variance in performance can be explained by factors other than AC. Other critical mediators are very likely to exist between POS and performance. Mowday, Porter, and Steers (1982) called the weak correlations between commitment and objective measures of performance "the least encouraging finding" in the whole commitment literature. Results of Mathieu and Zajac's (1990) meta-analysis confirmed it by reporting small correlations of .135 between commitment and supervisors' ratings of performance, and .054 between commitment and objective measures of performance. Therefore, a correlation of .161 between AC and coaches' objective measures of athletic performance is an encouraging finding. Due to the special and unique nature of coaching as an occupational subculture, it is possible that AC plays a very important role in coaches' performance. Affective attachment, sense of belonging, identification, and involvement with the athletic department seem to have a good deal of importance for coaches' professional performance.

Also encouraging was the finding that social exchange theory could explain some variance of the athletic performance of coaches. Two interdependent findings support this statement. First, the path coefficient from POS to athletic performance was not significant (in both Models B and C), suggesting that the full mediation was the best model to explain the structural relationships among the selected variables. Secondly, the indirect effect from POS to coaches' athletic performance through AC was significant in the fully mediated model. Taken together, these results implied that the effects of POS on performance can only be accounted for by one or more mediators. In this study, we tested the mediation role of AC in this relationship. To our knowledge, the indirect effect from POS to job performance through AC had not yet been formally tested (i.e., using the product of coefficients strategy).

Scholars (e.g., Rhoades, Eisenberger, & Armeli, 2001) have investigated this relationship using the causal steps approach (Baron & Kenny, 1986; Kenny, Kashy, & Bolger, 1998). As noted by Preacher and Hayes (2008), Baron and Kenny's causal steps approach relies on a set of individual tests of path coefficients, instead of testing the actual product of path coefficients, yielding neither point estimate nor standard error of the mediation effect per se. Therefore, comparisons between previous studies and the current one should be viewed with caution. While previous investigations suggested the mediator role of AC between POS and effectiveness indicators as somewhat important (Rhoades, Eisenberger, & Armeli, 2001; Stinglhamber & Vandenberghe, 2003), the current study added to the literature to the extent to which it tested formally this indirect effect (using parametric and non-parametric strategies) and applied an objective measure of

performance, instead of using either effectiveness indicators or supervisors' ratings as measures of performance.

Since previous studies indicated possible influences of gender (Guzzo, Noonan, & Elron, 1994; Meyer et al., 2002), age (Miceli & Mulvey, 2000; Mowday, Porter, & Steers, 1982), and tenure (Beck & Wilson, 2000; Morrow & McElroy, 1987; Yoon & Lim, 1999) on POS and AC, we controlled for these variables in our structural models. Effects of these variables were accounted for in the SEM analysis, but they were not substantively interpreted, due to the focus of the study on the specific relationships between POS, AC, and athletic performance. Statistically controlling for these variables prevented any spurious relationship to be found as a consequence of the influences of gender, age, or tenure on POS or AC. Given the wide range of age and tenure among intercollegiate coaches found in the current study, this is an important point of the analysis. Therefore, results of the current study showed a significant indirect effect from POS to athletic performance of coaches through AC, controlling for gender, age, and tenure. In other words, keeping gender, age, and tenure constant, there is a significant indirect effect from POS to coaches' athletic performance through AC, and significant and positive direct effects from POS to AC, and from AC to performance.

Implications, Limitations, and Future Research

From a practical point of view, athletic managers should recognize that POS leads to AC, which in turn improves coaches' athletic performance. Given that POS explained a large amount of the variance in AC, athletic departments could invest more in supporting their coaches in order to improve their affective attachment to the organization. Although it is very difficult to pinpoint specific strategies to improve perceived support, small actions such as noticing coaches' accomplishments and caring about coaches' well being and satisfaction can have an important impact on their perceptions of support and, consequently, affective attachment to the organizations. In general, these attitudes come from direct supervisors, who play an important role in individualized treatments (Shanock & Eisenberger, 2006).

Employees tend to ascribe the support they received from supervisors to the organization, as supervisors are the agents of the organization (Shanock & Eisenberger, 2006). As a consequence, athletic directors and assistant directors should notice the personal efforts, needs, and accomplishments of their coaches. Small indications from athletic directors can have a great impact on perceptions of support and affective attachment, and ultimately athletic performance of coaches and teams. Naturally, athletic performance is such a complex process affected by many other factors. The athletic quality of the players, facilities, coaching staff, support professionals, schedules, and the quality of opponents among many other factors have huge influences on the athletic performance of coaches and teams. However, while many of these aspects cannot be controlled by athletic managers, support can be deliberately delivered. Therefore, support represents an

interesting practical managerial alternative to improve coaches' performance via affective commitment.

As any other research, this one has some limitations. First, we just considered one dimension of coaching performance. Although well accepted that athletic achievement plays a central role in coaches' performance (Cunningham & Dixon, 2003; MacLean & Chelladurai, 1995), this is not the only dimension of coaching. Future studies should consider a multidimensional approach to evaluating coaches' performance, in order to test the influence of social exchange theory on other dimensions of coaching. Secondly, only AC was considered as a positive response to perceived support. As noted by MacKinnon (2008), in mediational models it is always possible that important mediators have been omitted. Some potential mediators, such as job satisfaction, remuneration satisfaction, and citizenship behaviors can be added to the model and tested as mediators in future investigations. The small variance of performance explained by AC indicates that other variables can mediate the relationship between POS and performance. Yet, other variables can mediate the relationship between AC and performance. Future investigations should consider more complex models with the insertion of multiple mediators. Thirdly, we considered the performance of the team as a surrogate measure of the performance of the coach. The use of multiple seasons is likely to have attenuated the influence of other factors, such as players' injuries, quality of own players, quality of opponents, bad refereeing decisions, among others on coaches' athletic performance. Nevertheless, future studies should try to control for these variables when measuring coaches' athletic performance.

Conclusion

The current research added to the sport management literature in as much as it tested the relationship among perceived support, commitment, and coaches' athletic performance that had not yet been tested in sport settings. Moreover, instead of assuming affective commitment as a very desirable attitude (and consequently investigating it as ultimate dependent variable), this research proposed that this construct should be understood as a valuable mediator between organizational support and performance. From theoretical and practical standpoints, initial results were encouraging and should stimulate new investigations in this line of inquiry.

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