

The Relationship Between Organizational Commitment, Perceived Relatedness, and Intentions to Continue in Canadian Track and Field Officials

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The purpose of this study was to examine the relationship between organizational commitment, perceived relatedness between officials, and intentions to continue officiating track and field over the next two years. Participants (N = 80; all certified officials with Athletics Canada) completed a questionnaire containing instruments assessing organizational commitment, perceived relatedness, continuance intentions, and demographics. Descriptive statistics indicated minimal levels of commitment to Athletics Canada and endorsed a strong bond in terms of perceived relatedness with fellow officials. Hierarchical multiple regression analyses supported the centrality of perceived relatedness as a predictor of continuance intentions after controlling for the influence of organizational commitment ($R^2 = .14$) and demographics ($R^2 = .21$). Overall, these results imply that fulfilling relatedness needs but not commitment to the organization represents a viable mechanism for promoting sustained involvement in track and field officials. Future research examining motivational issues in track and field contexts may benefit from propositions put forth by Self-Determination Theory (Deci & Ryan, 2002).

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There has been growing recognition for the importance of understanding the experiences of officials involved in sport settings (Rainey, 1995; 1999). One trend that has fuelled much of this research attention on sport officiating has been the alarming rates of attrition from certified officials noted across multiple sports (Deacon, 2001; VanYperen, 1998). Deacon, for example, reported that thirty percent of registered officials annually terminate their involvement with the Canadian Hockey Association. Moreover, data from the National Association of Sport Officials (NASO; 2001) in the United States of America indicate that this trend is prevalent with eighty-five percent of high school sports administrators reporting that officiating registrations within their state are currently declining. These attrition data present two specific problems. First, increased attrition from the pool of available officials creates incongruity between the demand for qualified officials and the availability of certified personnel to officiate sporting events (NASO). Second, the increased attrition rates levy a financial burden on sporting organizations given the fiscal costs required to train new officials (Deacon; NASO; VanYperen). Collectively, these participation trends appear problematic given the importance of officiating for the delivery of sport programs and suggest that research examining the factors promoting continued involvement in sport officials seems worthwhile.

Early attempts to understand officiating experiences in sport settings focused on issues predicting termination decisions and subsequent disengagement behavior (Rainey, 1995; Taylor, Daniel, Leith, & Burke, 1990). An initial study by Taylor et al. noted that levels of burnout mediated the relationship between multiple sources of stress (i.e., fear of failure, role-culture conflict, and interpersonal conflict) and turnover intentions in Canadian soccer officials. Subsequent research, however, suggests that additional factors may impact the stress-intention relationship such as age given that older officials exhibit less stress than younger officials (Kaissidis & Anshel, 1993) and coping strategies that impact acute and chronic stress responses in sport officials (Anshel & Weinberg, 1999; Burke, Joyner, Pim, & Czech, 2000). Extrapolating from the work of Taylor and colleagues, Rainey conducted a series of studies examining the relationship between stress-based models, burnout, and termination intentions in officials from baseball/softball (Rainey, 1995), basketball (Rainey, 1999), and rugby union (Rainey & Hardy, 1999). The overall result of these investigations suggest that different causes of stress appear salient in different sports for predicting burnout; however, elevated levels of burnout consistently predicted intentions to terminate irrespective of the sports officials under investigation.

While these aforementioned studies are informative, and show a consistent pattern of findings between elevated levels of burnout and greater termination intentions in officials from various sports, there appears to be considerable scope for additional inquiry into the intentions of sports officials to continue their involvement. First, the focus of previous investiga-

tions has been restricted largely to stress-based models that account for the onset or development of termination intentions in sport officials (Rainey, 1995; Rainey, 1999; Rainey & Hardy, 1999; Taylor et al., 1990). Second, the criterion of interest in the studies by Taylor et al. and Rainey (1995; 1999) was intentions to terminate sport officiating with scant attention focusing on continuance intentions in this cohort. Finally, a careful examination of Rainey's studies indicates that stress-based models combined with age account for between no more than eight percent of the termination intention variance reported in sport officials leaving a considerable portion of variability in termination intentions unexplained. Considering the importance of intentions for understanding attrition behavior in sport, it would appear that an investigation of different models that can explain behavioral intentions in sport officials appears warranted.

One model that has demonstrated some utility for understanding intentional behavior is Meyer and Allen's (1991; 1997) multi-component framework for understanding organizational commitment. According to this model, organizational commitment is comprised of three inter-related dimensions that together represent a psychological link between an employee and an organization which reduces the likelihood that the employee will leave the organization voluntarily (Meyer & Allen). The first dimension, labeled continuance commitment, reflects a sense of having to stay with the organization and conceptually represents an evaluation of the cost-to-investment ratio associated with terminating personal involvement with the organization (Becker, 1960; Meyer & Allen). The second dimension of organizational commitment, labeled affective commitment, represents the individuals emotional sense of wanting (as opposed to having) to stay with the organization (Meyer & Allen; Mowday, Porter, & Steers, 1982). The final commitment dimension proposed in Meyer and Allen's framework is labeled normative commitment and is characterized by an individual's sense of having to stay with the organization due to feelings of loyalty and moral obligation (Meyer & Allen; Weiner, 1982). A meta-analytical study provided general support for the influence of organizational commitment dimensions on turnover behaviors and intentions noting that normative commitment was the strongest correlate of withdrawal cognitions ($\rho = -0.53$) and turnover behaviors ($\rho = -0.17$), followed by affective (ρ 's = -0.16 and -0.33) and continuance (ρ 's = -0.10 and -0.16) dimensions of commitment respectively (Meyer, Stanley, Herscovitch, & Toplonysky, 2002).

Despite the utility of Meyer and Allen's (1991; 1997) organizational commitment model for understanding intentional behaviors, previous research examining the reasons underpinning volunteerism has highlighted the central role of social relationships in continuance behaviors. For example, research by Green and Chalip (1998) suggests that opportunities to interact with valued others in social settings appear to be integral processes attracting volunteers (such as officials) to engage in sport settings. Complimenting this work, a qualitative

study by Stergios and Carruthers (2003) indicates that a desire to connect with youth represents an important factor underpinning investment behaviors in adult volunteer groups. Despite the centrality of social relationships to behavioral investment (Green & Chalip; Stergios & Carruthers), a careful examination of the conceptual boundaries demarcated by Meyer and Allen's model suggests that the notion of being connected with others in social contexts is not clearly encompassed by affective, normative, and continuance dimensions of organizational commitment.

One variable that encapsulates the degree to which social contexts afford opportunities for people to form meaningful connections with others is perceived relatedness as proposed by Deci and Ryan (2002) within Self-Determination Theory (SDT). According to Deci and Ryan, perceived relatedness represents one of three innate psychological needs that warrant satisfaction in a given domain to promote internalized regulation of the task or behavior and optimize eudaimonic well-being (Ryan & Deci, 2001). In the context of SDT (Deci & Ryan), perceived relatedness refers to feeling a meaningful connection with others whom one interacts with in a social milieu. While the majority of studies examining SDT-based propositions in sport settings have focused on the roles of perceived competence (i.e., interacting effectively with one's environment while mastering challenging tasks; Deci & Ryan) and autonomy (i.e., perceiving one's behaviors to emanate from an internal locus of causality and thereby feeling autonomous as opposed to controlled by external agenda; Deci & Ryan), an emerging line of research has begun to examine the importance of perceived relatedness in physical activity settings including sport. An early study by Kowal and Fortier (1999) demonstrated that relatedness was the strongest correlate of flow experiences in Canadian master's level swimmers, while a more recent study by Reinboth and Duda (2005) indicated that perceived relatedness to both the coach and teammates was associated with greater psychological well-being in young British university athletes. Complimenting this line of inquiry, an investigation of French youth handball players indicated that perceived relatedness distinguished persistent from dropout players across a 21-month period (Cohen's $d = -0.53$) and was negatively correlated ($\phi = -.34$) with dropout intentions (Sarrazin, Vallerand, Guillet, Pelletier, & Cury, 2002).

The purpose of the present study was to examine the relationship between organizational commitment, perceived relatedness to fellow officials, and continuance intentions in track and field officials. Athletics Canada was selected as the target organization for the commitment dimensions given that it is the governing body representing the highest level of organizational structure within the sport of track and field in Canada. The hypotheses were drawn from previous theoretical (Deci & Ryan, 2002) and conceptual (Meyer & Allen, 1991; 1997) literature, as well as, research examining correlates of organizational commitment (Meyer et al., 2002) and perceived relatedness in sport (Kowal & Fortier, 1999; Sarrazin et al., 2002).

First, it was hypothesized that normative commitment, continuance commitment, affective commitment, and perceived relatedness would be positively correlated with continuance intentions. Second, it was hypothesized that organizational commitment dimensions and perceived relatedness would contribute to the prediction of continuance intentions beyond the influence attributable to select demographic considerations (i.e., age, years with organization) and alternative foci of commitment to the sport of track and field, the role of being a track and field official, and the athletes competing in track and field. These demographic variables were selected on the basis of previous organizational commitment research that suggests they have salient effects on behavioral intentions (Meyer & Allen; Meyer et al.), while the alternative commitment foci were selected to explore potential dimensions of commitment that may be salient to track and field officials that were not accounted for in the model of organizational commitment informing the development of this study (Meyer & Allen; Meyer et al.).

Method

Participants

Participants ($N = 80$; 67.5 percent men) were certified track and field officials drawn from seven provincial areas located across Canada. Participants represented a broad age range ($M = 58.83$ years, $SD = 12.14$ years; Range = 22 to 83 years), were considered educated based on their self-reported academic history, and represented the full array of certification levels offered for officials through Athletics Canada. A complete demographic profile for the men and women in this sample is provided in Table 1. Participants reported being a member of Athletics Canada for varied lengths of time ($M = 18.80$ years; $SD = 12.29$ years; Range = 1 to 50 years), and reported a strong sense of commitment to the sport of track and field ($M = 6.24$; $SD = 1.31$), the athletes competing in track and field ($M = 6.00$; $SD = 1.39$), and the role of being a track and field official ($M = 6.25$; $SD = 1.21$).¹

Measures

Demographics. Participants provided demographic information (see Table 1 for specific variables) and responses to three exploratory items targeting the degree of perceived commitment each official felt to the sport of track and field, the role of being an official, and the athletes competing in track and field.

¹. The values for these commitment variables were rated on a 7-point Likert scale anchored at the extremes by 1 (Not at all true) and 7 (Very true). Each item was preceded by the following phrase: "To what extent are you committed to each of the following...".

Table 1.
Demographic composition of the study sample by gender

Variable	Men (<i>n</i> = 54)	Women (<i>n</i> = 26)
Age (years)	56.96 (13.00)	56.52 (10.10)
Years with ATC	18.74 (12.21)	18.93 (12.48)
Commitment to sport	6.15 (1.39)	6.42 (1.14)
Commitment to athletes	6.19 (1.21)	6.38 (1.20)
Commitment to role	5.83 (1.51)	6.35 (1.06)
Education		
some grade school	1.90	7.70
completed high school	11.50	7.70
some post secondary	19.20	42.30
some graduate school	21.20	7.70
completed graduate school	46.20	34.60
Income		
<\$20,000-\$39,000	10.00	8.00
\$40,000-\$79,000	44.00	64.00
\$80,000-\$100,000	46.00	28.00
Main discipline officiated		
Jumps	24.50	30.70
Throws	13.20	7.70
Finish line	17.00	11.40
Referee/Umpire	11.30	30.70
Starters assistant	5.70	7.70
Starter	17.00	7.70
Combined events	3.80	3.80
Technical manager	1.90	-
Meet director	1.90	-
Sprints/Hurdles	3.80	-

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Variable	Men ($n = 54$)	Women ($n = 26$)
Certification level		
I	11.30	3.80
II	5.70	23.10
III	32.10	23.10
IV	15.10	7.70
V	35.80	42.30
Province		
Ontario	65.3	66.7
Quebec	7.7	-
British Columbia	7.6	9.5
East Coast	7.6	-
Saskatchewan	5.8	4.8
Alberta	3.8	14.3
Manitoba	1.9	4.8

Note. $N = 80$. ATC = Athletics Canada. Percentages of officials by province represent the segment of the final sample represented by each province not the percentage of officials within the province officiating track and field. Values for education, income, main discipline officiated, certification level, and province are percentages.

Organizational Commitment. Participants completed a modified set of 18 items drawn from the work of Meyer, Allen, and Smith (1993) to measure organizational commitment to Athletics Canada. The items were modified to target Athletics Canada as the focus of commitment and reflected normative commitment ($n = 6$; Sample item = "I would feel guilty if I left Athletics Canada now"), continuance commitment ($n = 6$; Sample item = "I feel that I have too few options to consider leaving Athletics Canada"), and affective commitment ($n = 6$; Sample item = "I would be happy to spend the rest of my career with Athletics Canada"). Following a stem that focused each item on Athletics Canada as the target of organizational commitment

(“The following questions concern your feelings of commitment to Athletics Canada. Please indicate how true each of the following statements is for you given your experiences as a track and field official.”), participants responded to each item on a Likert scale anchored at the extremes by 1 (Not at all true) and 7 (Very true). Previous research has supported the discriminant and structural validity, as well as internal consistency reliability, of scores derived from these items in occupational research (Meyer & Allen, 1991; Meyer et al., 2002); however, the reliability and validity of scores from the modified instrument used in this study has yet to be examined.

Perceived Relatedness. Participants completed a set of items assessing the degree of meaningful connection felt by track and field officials to one another in this sport. Each item was modified from the Basic Psychological Need Satisfaction Scale (BPNS; Gagné, 2003) to target relationships with other officials during track and field competitions ($N = 8$; Sample item = “I really like the people I officiate with”). The major modification made to the original BPNS items was to alter the wording to target other officials as the focal point of each relatedness item (e.g., “I get along with people I come into contact with” was modified to “I get along with people I officiate with”). Participants responded to each item on a Likert scale anchored at the extremes by 1 (Not true at all) and 7 (Very true). Previous research has supported the internal consistency reliability and criterion validity of scores derived from these relatedness items with reference to prosocial behavior (Gagné); however, the reliability and validity of scores from the modified instrument used in this study has yet to be examined.

Continuance Intentions. Participants completed eight items based on the work of Yiu, Au, and Tang (2001) to assess intentions to continue officiating track and field. Intention represents the cognitive manifestation of a person’s readiness to perform a given behavior and is considered the proximal determinant of behavioral participation (Ajzen, 2005). Eight items examined official’s intentions and likelihood of continuing over the next two years using a graded item format (Sample item: “I will continue officiating over the next 6/12/18/24 months”) that were differentiated using two separate stems for the four intention and four likelihood items (Yiu et al.). Participants responded to each intention item using a Likert scale anchored at the extremes by 1 (Strongly disagree) and 5 (Strongly agree) and the likelihood items using a series of bipolar adjective response foils ranging from -3 (Extremely Unlikely) to 3 (Extremely Likely). Consistent with the work of Yiu et al., participant responses were standardized and aggregated to form item pairs for the corresponding time period across intention and likelihood scores (i.e., scores were paired for items questioning intention and likelihood at six, twelve, eighteen, and twenty-four months respectively). Item pairs were then summed to form an overall continuance intention score. Previous research with voluntary workers has supported the internal consistency reliability and criterion validity of scores derived from these items (Yiu

et al.); however, the reliability and validity of scores from the modified instrument used in this study has yet to be examined.

Procedures

A cross-sectional survey was administered between January and April (2005) both electronically and in person to a sample of track and field officials. All officials approached during this recruitment period held certification via Athletics Canada at levels I-V (see Table 1 for the distributional profile of certification levels in this sample of officials). Participants were contacted either directly by the principal investigator or using a snowball sampling recruitment procedure whereby the principal investigator contacted the head official within each province who in turn advertised the study to the officiating membership within that province who subsequently contacted the principal investigator if they were interested in participating. The final sample reported in this investigation represents 26.67 percent of the officials contacted for this study. No official gave any reason for non-participation and all officials provided informed consent before completing the surveys comprising this investigation.²

Data analysis proceeded in sequential stages. First, the data were screened for missing values, out of range responses, and examined for conformity with relevant statistical assumptions. Second, descriptive statistics, internal consistency reliability estimates, and bivariate correlations were computed. Third, hierarchical multiple regression analyses (HMRA) were used to determine the predictive influence of organizational commitment and perceived relatedness on continuance intentions. In the HMRA, organizational commitment dimension scores were entered on the first step of the analysis (Model 1) to represent a direct test of Meyer and Allen's (1991; 1997) model while perceived relatedness was entered on the second step (Model 2) to determine the contribution afforded this variable beyond the influence attributable to dimensions of organizational commitment. Demographic considerations and alternative commitment foci were entered on the third step (Model 3) in the HMRA to determine if the relationships observed between organizational commitment and perceived relatedness with continuance intentions were expunged when considering the predictive influences of other demographic variables noted as salient factors in previous studies (Meyer et al., 2002; Rainey, 1995; 1999; Rainey & Hardy, 1999) or included in the present study to examine alternative foci of

². Despite the non-probability based sampling approach taken, several strategies were undertaken to try and enhance the size (and subsequent representation) of the sample recruited for the present study. First, a recruitment poster containing the details of the study and the contact information of the principal investigator was placed in the National Officials Committee Newsletter (2005) which was posted on the Athletics Canada website. Second, the chairperson of the officiating committee and three head officials advertised the study to the members within their respective provinces. Third, snowball sampling methods were employed with participants who provided a response to the initial recruitment strategies to expand the size and external validity of the sample data with respect to the target population.

commitment. Structure coefficients (r_s) were used to interpret the results of the HMRA given that they are less susceptible to distortion from collinearity than standardized regression coefficients (Coureville & Thompson, 2001). The r_s 's were calculated using the following formula: $r_s = r_{yx1} / R$ where r_{yx1} is the bivariate correlation between the predictor scores and the criterion (Y) score per regression model and R represents the multiple correlation coefficient from each regression model estimated in the analysis.

Results

Preliminary Data Analysis

Prior to conducting the main analyses, the data were screened for out of range responses, missing values, and examined for conformity with relevant statistical assumptions. No extreme responses were noted and less than 11.26 percent of the data were missing on any one variable. Inspection of the missing values revealed no systematic pattern of non-response in the missing data which were subsequently replaced using the expectation maximization algorithm which provides maximum-likelihood estimates of elements contained within the variance-covariance matrix generated from the sample data (Graham, Cumsille, & Elek-Fisk, 2003). No major distributional concerns were evident with the sample data (see Table 2), although it is noted that the distributional evidence concerning continuance intentions, commitment to the sport of track and field, and commitment to the athletes competing in track and field events deviated from normality in the present sample. Internal consistency reliability estimates (Cronbach's Coefficient α ; Cronbach, 1951) ranged from 0.70 to 0.92 across scores derived from each instrument in the present sample (see Table 2 for specific values). An inspection of the scatterplots and distribution of standardized residuals suggested that linearity and homoscedasticity were tenable assumptions in the present data for all regression models. Joint consideration of the variance inflation factor (1.05 to 2.51) and tolerance values (0.40 to 0.95) suggested the possibility of collinearity in the data; however, a closer inspection of the variance proportion values for each condition index exceeding ten indicated that only the affective and continuance commitment scores in the first regression equation (Model 1) and commitment to the sport of track and field and the athletes competing in the sport in the third regression equation (Model 3) exceeded Pedhazur's (1997) recommended threshold value of 0.50 in this sample. Consequently, any definitive conclusions regarding the predictive influence of these variables on continuance intentions should be tempered with caution priori to cross-validation in other samples.

Table 2.

Descriptive statistics for commitment variables, perceived relatedness, and continuance intentions

Variables	<i>M</i>	<i>SD</i>	Skew.	Kurt.	Coefficient α
Affective Commitment	3.90	1.28	0.08	-0.22	0.78
Normative Commitment	3.31	1.32	0.60	-0.79	0.80
Continuance Commitment	2.46	1.24	0.71	-0.08	0.85
Perceived Relatedness	5.90	0.74	-0.53	-0.12	0.70
Commitment to Sport	6.24	1.31	-2.18	4.47	-
Commitment to Role	6.00	1.39	-1.59	1.75	-
Commitment to Athletes	6.25	1.21	-2.30	6.07	-
Continuance Intentions	-0.01	6.90	-1.83	2.73	0.92

Note. $N = 75$. *M* = Mean. *SD* = Standard Deviation. Skew. = Univariate Skewness. Kurt. = Univariate Kurtosis. α = Cronbach's (1951) coefficient of internal consistency.

Main Data Analysis

Descriptive statistics (see Table 2) indicated that track and field officials in this sample felt minimal commitment to Athletics Canada as an organization and greater commitment to the sport of track and field, the role of being an official, and the athletes competing in track and field events. Alternatively, officials reported strong intentions to continue officiating over the next two years and an enhanced sense of relatedness with other track and field officials. An examination of the bivariate correlations (see Table 3) revealed a number of interesting relationships. First, organizational commitment dimensions were weak-to-moderately correlated with one another, and weakly associated with other foci of commitment. Second, organizational commitment dimensions appear largely distinct from perceived relatedness although weak correlations were observed between these variables in this sample of track and field officials. Third, perceived relatedness and role commitment were the strongest correlates of continuance intentions showing positive associations with increased intentions to continue track and field officiating over the next two years. Finally, organizational commitment dimensions were weakly correlated with continuance intentions.

Table 3. *Bivariate correlations between organizational commitment dimensions, perceived relatedness, continuance intentions, and demographic considerations*

<i>Variables</i>	<i>1.</i>	<i>2.</i>	<i>3.</i>	<i>4.</i>	<i>5.</i>	<i>6.</i>	<i>7.</i>	<i>8.</i>	<i>9.</i>	<i>10.</i>
1. Age	-									
2. Years with Athletics Canada	.53	-								
3. Affective Commitment	.37	.13	-							
4. Normative Commitment	.10	.03	.11	-						
5. Continuance Commitment	.27	.12	.62	.53	-					
6. Perceived Relatedness	.20	.22	.10	.20	.14	-				
7. Commitment to Sport	.01	.25	.24	.16	.14	.32	-			
8. Commitment to Role	.03	.03	.17	.29	.22	.39	.43	-		
9. Commitment to Athletes	.04	.24	.13	.24	.15	.29	.64	.38	-	
10. Continuance Intentions	-.04	-.06	-.01	.13	.13	.35	.07	.27	.19	-

Note. $N = 75$. r 's reported greater than $|.22|$ significant (two-tailed) at $p < .05$. All r 's reported greater than $|.35|$ significant (two-tailed) at $p < .01$

To further explicate the relationship between organizational commitment dimensions and perceived relatedness with continuance intentions, a HMRA was computed in which continuance intention scores served as the criterion variable. The results of the HMRA are presented in Table 4 and several noteworthy patterns are evident in the data. First, commitment dimensions targeting the organization of Athletics Canada have minimal predictive influence accounting for a portion of the variance in continuance intentions (i.e., three percent) that is consistent with small effect sizes (Cohen, 1992). Second, perceived relatedness to other officials was the dominant predictor of continuance intentions based on the strength of the observed r 's and accounted for a largest portion of the continuance intention variance (i.e., 9.10-12.25 percent unique variance across regression models 2 and 3 displayed in Table 4). A closer inspection of the regression and structure coefficients indicates that a greater sense of relatedness to other track and field officials was positively associated with increased intentions to continue officiating over the next two years. Further inspection of the regression and structure coefficients indicates that all other predictive values aside from the perceived relatedness-continuance intention relationship were weak in the present sample of track and field officials. Demographic considerations (age and years with Athletics Canada) and alternative commitment foci had no substantial predictive influence on continuance intentions beyond the influence ascribed to perceived relatedness between track and field officials.

Discussion

The purpose of this study was to examine relationships between the dimensions of organizational commitment proposed by Meyer and Allen (1991; 1997) and perceived relatedness to others (Deci & Ryan, 2002) with continuance intentions in track and field officials registered with Athletics Canada. More specifically, this study examined the contributions of normative, affective, and continuance dimensions of commitment forwarded by Meyer and Allen and perceived relatedness to other track and field officials drawn from SDT (Deci & Ryan) in conjunction with select demographic and alternative commitment foci as predictors of continuance intentions over a two year period in Canadian track and field officials. The results of this study make it apparent that track and field officials feel minimally committed to the organization of Athletics Canada and a stronger sense of commitment to the sport of track and field, the athletes competing in track and field events, and the role of being a track and field official. Moreover, track and field officials report a strong sense of perceived relatedness with other track and field officials which on the basis of the regression analyses conducted in this study appears to be the salient predictor of continuance intentions in track and field officials.

Table 4. HMRA predicting continuance intentions from dimensions of commitment, perceived relatedness, and demographics

Predictor variables	<i>F</i>	<i>df</i>	<i>p</i>	ΔF	Sig Δ	<i>R</i> ²	β	<i>r</i> _s	<i>t</i>	<i>p</i>
Model 1										
Affective Commitment							-.12	-.06	-0.79	.43
Normative Commitment							.05	.74	0.32	.75
Continuance Commitment	0.71	3, 70	0.55	0.71	0.55	.03	.18	.74	0.96	.34
Model 2										
Affective Commitment							-.16	-.03	-1.04	.31
Normative Commitment							-.02	.32	-0.17	.87
Continuance Commitment							.18	.32	1.04	.30
Perceived Relatedness	3.09	4, 69	0.02	9.97	0.01	.15	.36	.94	3.16	.01
Model 3										
Affective Commitment							-.13	-.02	-0.79	.43
Normative Commitment							-.08	.27	-0.52	.61
Continuance Commitment							.17	.27	0.99	.33
Perceived Relatedness							.34	.79	2.71	.01
Age							-.02	-.04	-0.12	.91
Years with Athletics Canada							-.13	-.12	-0.91	.36
Commitment to sport							-.19	.14	-1.18	.24
Commitment to role							.15	.59	1.13	.26
Commitment to athletes	1.91	9, 64	0.07	0.97	0.44	.21	.20	.42	1.29	.19

Note. *N* = 75. *F* = omnibus *F*-statistic ΔF = change in *F*-values sequentially across models tested in HMRA. β = standardized Beta coefficient. *r*_s = Structure Coefficients (Coureville & Thompson, 2001). The Multiple *R* values used in the calculation of the *r*_s's were as follows: (a) Model 1 Multiple *R* = 0.171; (b) Model 2 Multiple *R* = 0.390; and (c) Model 3 Multiple *R* = 0.460 respectively.

An inspection of the descriptive statistics provided in Table 2 offers minimal support for the importance of commitment to the organization of Athletics Canada in this sample of track and field officials. Alternatively, officials reported a strong sense of commitment to the sport of track and field, the athlete's competing in track and field events, and the role of being a track and field official. While these data are not entirely consistent with previous organizational commitment research (Meyer & Allen, 1991; 1997; Meyer et al., 1993; Meyer et al., 2002), they do nothing to undermine the importance of commitment as a psychological bond between the person and a target but merely question the extent to which track and field officials feel committed to the sport's governing organization in Canada. One practical implication of these results concerns the manner in which officiating retention programs are structured to sustain participation over time and questions the utility of targeting Athletics Canada as the focal point of these interventions given official's lack of commitment to the sport's administrative organization.

A major aim of the present investigation was to examine the relationships between dimensions of organizational commitment, perceived relatedness, and continuance intentions in Canadian track and field officials. An examination of the data presented in Table 3 corroborates the descriptive statistics and suggests that organizational commitment dimensions have minimal relationship with continuance intentions in this sample of track and field officials. By contrast, perceived relatedness was associated with greater intentions to continue officiating as was commitment to the role of being a track and field official. These findings lend support to propositions put forth within SDT (Deci & Ryan, 2002; Ryan & Deci, 2003) and suggest that satisfying a key psychological need in the form of relatedness has important implications in terms of energizing internalization processes such as continuance intentions that are linked with future participation (Ajzen, 2005). The finding that role commitment was associated with continuance intentions can also be interpreted within the framework of SDT given that the assimilation of multiple roles with the person's sense of self is central to the notion of integrated regulation which in turn is theorized to foster enduring patterns of intentional behavior (Deci & Ryan).

While not entirely consistent with the original hypotheses, the pattern of relationships between normative and continuance commitment dimensions as proposed by Meyer and Allen (1991; 1997) is consistent with previous research (Meyer et al., 2002) in a novel sample of track and field officials comprising this investigation. Despite this observation, it is hard to reconcile the data pertaining to affective commitment with previous research applying Meyer and Allen's framework to the study of commitment issues within organizations. In their meta-analytic review of the organizational commitment literature, Meyer et al. note that affective commitment is differentially correlated with normative ($\rho = .59$) and continuance ($\rho = .05$)

dimensions of organizational commitment in studies using North American employees while normative and continuance dimensions are at best weakly linked ($\rho = .18$). Contrary to the data reported by Meyer et al., the present investigation (see Table 3) indicates a small relationship between affective and normative commitment and stronger relationships between continuance commitment and both affective and normative dimensions of organizational commitment. Collectively, these data suggest that track and field officials who perceive an inability to terminate their investment in officiating this sport also report feeling a moral obligation to continue and an emotional bond associated with wanting to retain their involvement in track and field officiating. One plausible interpretation of these data is that commitment to Athletics Canada as the target organization functions differently in certified track and field officials compared with studies examining the commitment of employees to other organizations (Meyer et al.).

Although the findings of this study are informative and hold practical appeal, a number of limitations should be recognized and future directions outlined to advance study in this area. First, this study used a small sample of experienced Canadian track and field officials that were selected using non-probability based techniques that limit the data's external validity. Consequently, the results of this study should be considered cautiously prior to replication across more diverse samples that suitably represent different sports and athletic organizations. Attention to data collected from multiple countries within the same sport may be useful in terms of examining issues of cross-national and cross-cultural equivalence with reference to factors shaping continuance intentions in sport officials. Second, this study employed a non-experimental design and used cross-sectional data that offer minimal insight into the causal mechanisms associated with intention formation. Future research may wish to address this issue more carefully using experimental designs or collecting longitudinal data over time periods corresponding to natural transitions in officiating retention or attrition. Third, this study modified instruments developed originally for employer-employee based investigations without specific attention to construct validation issues in sport officials. Messick (1995) contends that the process of construct validation is ongoing and requires the evaluation of evidence from multiple sources to inform test score interpretations. Consequently, it seems prudent to suggest that additional research be undertaken with the modified instruments used in this study to determine their utility for further research on track and field officials with specific attention to issues of item content relevance and representation, as well as, structural and criterion validity (Messick, 1995). Finally, this study focused exclusively on the contributions of perceived relatedness to continuance intentions in track and field officials. Future studies may wish test the importance of SDT's other basic psychological needs, namely perceived competence and autonomy (Deci & Ryan, 2002), to determine their influence on continuance intentions over time. Such endeavors would do well to consider examining trends in psycho-

logical need satisfaction in conjunction with organizational commitment indices to determine if changes in these motivational variables impact continuance intentions across important transitional periods for track and field officials. Given the results of the present study, it would seem that future research interested in elucidating the motivational dynamics responsible for shaping track and field officials' decisions to continue may wish to use SDT as a guiding framework.

Despite the limitations inherent in this investigation, the results of this study do offer a number of practical insights that could be useful in addressing the problem of officiating retention (Deacon, 2001; NASO, 2001; VanYperen, 1998). Administrators interested in cultivating prolonged involvement in track and field from certified officials may consider focusing on the development of relatedness during officiating training and continuing education programs. Deci and Ryan (2002) suggest that demonstrating genuine interest and empathy while concomitantly avoiding excessive and unnecessary criticism or blame will encourage a sense of relatedness which has been linked with adaptive motivational consequences in organizational settings (Baard, 2002) and sport contexts (Reinboth & Duda, 2005; Sarazin et al., 2002). Officiating retention programs may wish to hold regular meetings that make administrators accessible to all officials irrespective of certification rank, set reward structures within the organization for advancement that support rather than penalize cooperation, and share information where feasible and practical with organizational members (Baard). Such a focus seems more pragmatic than expecting that officials' sense of commitment to the organization of Athletics Canada will promote sustained involvement, which given the present data, seems a questionable assertion at best notwithstanding the limitations of this study.

In summary, the overall purpose of this investigation was to examine the relationship between dimensions of organizational commitment proposed by Meyer and Allen (1991; 1997) and perceived relatedness to other officials drawn from SDT (Deci & Ryan, 2002) with continuance intentions in track and field officials. The results of this study support the importance of establishing meaningful connections that lead to an enhanced sense of relatedness with other officials' in the sport of track and field given that such feelings foster greater intentions to continue officiating over the next two years. Moreover, the results of this study provide initial insight into the motivational dynamics at play in track and field official's decisions to terminate or continue their involvement with the sport and support the importance of need satisfying experiences within this domain. Notwithstanding the limitations of this study, it does seem reasonable to suggest that satisfaction of relatedness needs is an important consideration in programs designed to enhance ongoing involvement in track and field officiating and future research examining additional propositions put forth by SDT in this context appears justified.

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