

## Predicting Stay/Leave Behavior Among Volleyball Referees

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This study aimed to predict stay/leave behavior among volleyball referees. The predictor variables reflect commitment aspects from the literature: attraction, perceived lack of alternatives, personal investments, and feelings of obligation to remain. Intent to quit was assumed to mediate the link between these predictor variables and actual turnover. Participants were 420 volunteer volleyball referees officiating at the international, national, or local level. Predictor variables explained 50% of variance of intent to quit, which was the only significant predictor of actual turnover several months later. The percentage of correctly classified subjects was 86.2%. Intent to quit mediated the link between enjoyment and involvement alternatives and stay/leave behavior. Furthermore, the results demonstrate that intent to quit is conceptually and empirically separable from the predictor variables, albeit that strong overlap was observed between enjoyment and involvement alternatives. It is concluded that the most promising way to reduce actual turnover among volleyball referees is to enhance positive affective responses to officiating, particularly by ensuring procedural fairness in the promotion system and paying more attention to referee training and supervision.

The purpose of this study was to predict stay/leave behavior among volleyball referees. The Dutch Volleyball Association initiated this research because the estimated turnover rate among referees (20%) was considered too high. Voluntary separation of referees whom the Dutch Volleyball Association prefers to retain can be classified as organizationally dysfunctional turnover (Abelson & Baysinger, 1984). Losing referees who are making positive contributions increases turnover costs, including recruiting and training new referees.

The starting point of this research was the Sport Commitment Model (Scanlan, Carpenter, Schmidt, Simons, & Keeler, 1993), which builds heavily on Rusbult's (1980) Investment Model. Commitment is a multifaceted psychological state that strongly determines stay/leave behavior (Meyer & Allen, 1997; Rusbult & Buunk,

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1993). In Scanlan et al. and Rusbult's models, *attraction*, *alternatives*, and *investments* constitute commitment determinants. In this case, attraction is equated with enjoying officiating. Involvement alternatives involve comparing the attractiveness of officiating versus other options. Investments are resources put into officiating, usually but not necessarily with the intent to improve the long-term value of the activity (see Farrell & Rusbult, 1981). Investments can be restraining forces or barriers that keep individuals from quitting (see Becker, 1960). Although restraining forces and barriers were initially subsumed under one global term (e.g., Becker's "side bets" and Rusbult's "investments"), researchers have recently begun examining specific barriers, such as social network variables (Cox, Wexler, Rusbult, & Gaines, Jr., 1997; Felmlee, Sprecher, & Bassin, 1990; Johnson, 1991). In turn, Scanlan, Carpenter, et al. (1993) distinguished three categories of investments or barriers:

1. Personal investments, such as time, effort, and money
2. Social constraints, which address the sense of social pressure to continue officiating
3. Involvement opportunities (i.e., valued opportunities that are present only through continued involvement)

The Sport Commitment Model has been primarily applied to the youth-sport domain. Results of Scanlan, Carpenter, et al.'s (1993) study about girls and boys playing softball and baseball, respectively, in a suburban Little League program revealed that sport enjoyment, personal investments, and involvement opportunities were significantly correlated with sport commitment. Similar results were found by Carpenter, Scanlan, Simons, and Lobel (1993) among young male and female athletes involved in football, soccer, and volleyball. Relationships with actual stay/leave behavior were not examined. In contrast, research on Rusbult's Investment Model showed that attraction, lack of alternatives, and investments enhance the probability of persistence (Rusbult & Buunk, 1993). However, evidence about the hypothesized mediating role of commitment in predicting stay/leave behavior is mixed (see Bui, Peplau, & Hill, 1996; Rusbult & Martz, 1995).

Although empirical evidence supports the Sport Commitment and Investment Models, the measure of commitment in both confounds two theoretically different concepts, commitment and intent to quit. Scanlan, Carpenter, et al. (1993) defined *commitment* as "a psychological state representing the desire or resolve to continue participation" (p. 6). According to Rusbult and Martz (1995), *commitment level* is "the degree to which the individual intends to maintain a relationship, feels psychologically attached to it, and sustains a long-term orientation toward it" (p. 559). In line with the conceptual overlap between commitment and intent to quit suggested by both definitions, Scanlan, Simons, et al.'s (1993) commitment scale consists of items referring to intent to quit (e.g., How determined are you to keep . . . ?) or to theoretically and empirically distinguishable components of commitment from the literature (Meyer & Allen, 1991, 1997), namely affective (e.g., How dedicated are you to . . . ?) and continuance (e.g., How hard would it be for you to quit . . . ?) (for similar conceptualizations, see Bui et al., 1996; Farrell & Rusbult, 1981; Rusbult & Martz, 1995).

A more fundamental issue is whether variables such as perceived alternatives, personal investments, and a feeling of moral obligation should be conceptualized as commitment components or "causal conditions" (see Kelley, 1983). Meyer and

Allen (1991, 1997) considered these variables as commitment components.<sup>1</sup> Rusbult (1980) and Scanlan, Carpenter, et al. (1993) viewed the same variables as commitment predictors (e.g., Bui et al., 1996; Felmlee et al., 1990; Johnson, 1991). In the present study, it is assumed that enjoyment, personal investments, involvement alternatives, social constraints, and involvement opportunities reflect the latent, multifaceted construct of commitment. That is, the three components of commitment as distinguished by Meyer and Allen (1991, 1997), namely, affective, commitment, and normative. Hence, it is proposed that intent to quit, defined as the degree to which the referee is determined to stop officiating (see Bandura, 1986; Warshaw & Davis, 1985), operates as the mediator variable (see Figure 1). This supports research demonstrating that (multiitem) behavioral intention measures are superior to affective variables for predicting actual turnover (Koslowsky, Kluger, & Yinon, 1988; Steel & Ovalle, 1984; Tett & Meyer, 1993; but see Mathieu & Zajac, 1990).

The hypotheses in this study were as follows (also see Figure 1):

1. Enjoyment, personal investments, involvement alternatives, social constraints, involvement opportunities, and intent to quit are conceptually and empirically separable constructs.
2. A strong relationship exists between intent to quit and enjoyment, personal investments, involvement alternatives, social constraints, and involvement opportunities.
3. Intent to quit mediates the link between stay/leave behavior and enjoyment, personal investments, involvement alternatives, social constraints, and involvement opportunities.

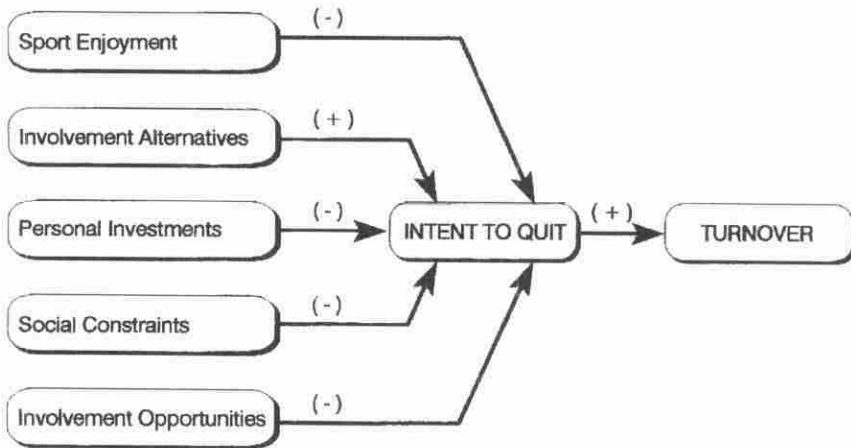


Figure 1 — The research model.

<sup>1</sup>Meyer and Allen (1991) argued that it was more appropriate to consider affective, continuance, and normative commitment to be components rather than types of commitment because the relationship between an individual and some other entity might reflect varying degrees of all three.

## Method

### Procedure

About 2 months before the end of the volleyball season (T1), questionnaires were mailed to the entire population of Dutch international and national level referees ( $n = 258$ ) and a representative sample of volleyball referees officiating at the local level in the Netherlands ( $n = 322$ ). The response rate was 72% ( $n = 182$  and 221, respectively; level unknown,  $n = 17$ ). Because of the complex structure of the Dutch Volleyball Association (23 autonomous local offices), collecting actual turnover data from the Dutch Volleyball Association was difficult. Therefore, during the course of the next volleyball season (about 6 months later, T2), brief questionnaires were mailed to all T1 respondents, who were asked to indicate whether they were still officiating. A total of 350 (83%) returned the T2 questionnaire. A sample of the self-report turnover data was compared to files from the Dutch Volleyball Association. Of the 25% that could be checked, there was 100% agreement.

Owing to occasional missing data and list-wise deletion, the number of participants was 392 in the cross-sectional analyses and 326 in those with actual turnover.

### Sample

The typical referee was age 41 ( $M = 41.35$ ,  $SD = 10.27$ ), male (90%), married (80%), a parent (65%), gainfully employed (83%), and highly educated: senior secondary vocational (25%), higher vocational (33%), or university education (10%). Most (70%) local-level referees were still competing in volleyball, and 26% used to compete.<sup>2</sup> For referees at the international level, these percentages were 35 and 61%, respectively. Compared to local-level referees, those at the international level had more years officiating volleyball,  $t(398) = 8.33$ ,  $p < .001$  ( $M = 10.54$  and 16.81,  $SD = 7.66$  and 7.34, respectively) and a lower intent to quit,  $t(394) = 7.28$ ,  $p < .001$  ( $M = 2.89$  and 1.83,  $SD = 1.75$  and 1.13, respectively). Hence, years of officiating was accompanied by a lower intent to quit ( $r = -.20$ ,  $p < .001$ ), but age and intent to quit were not correlated ( $r = -.01$ ,  $ns$ ). In line with the difference in intentions reported at T1, 15.1% of local- and 10.4% of international-level referees had stopped officiating at T2. The Dutch Volleyball Association estimated the annual turnover rate at 20%. Indeed, a discriminant analysis with all the variables, including intent to quit, as dependent variables suggests a selection effect,  $\chi^2(6) = 14.8$ ,  $p < .05$ . T2 nonrespondents distinguished themselves from T2 respondents by a higher intent to quit at T1 ( $M = 2.88$  vs. 2.24,  $p < .01$ ), less enjoyment when officiating ( $M = 3.41$  vs. 3.72,  $p < .05$ ), more perceived alternatives ( $M = 3.00$  vs. 2.67,  $p < .01$ ), and fewer personal investments ( $M = 2.73$  vs. 2.96,  $p < .05$ ).

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<sup>2</sup>In the Netherlands (15.6 million inhabitants), volleyball is a popular sport: About 150,000 people (an equal number of men and women) play volleyball in competitive leagues. Only soccer (more than a million people), tennis (730,000), and gymnastics (250,000) are more popular. Swimming (including water polo), skiing, skating, and volleyball share the fourth place.

## Measures

*Enjoyment* is defined as a positive affective response to officiating that reflects generalized feelings, such as pleasure, liking, and fun (see Scanlan, Carpenter, et al., 1993, p. 6). Enjoyment was assessed by four items (Scanlan, Carpenter, et al., 1993):

1. Do you enjoy officiating?
2. Do you find it pleasant to officiate?
3. Do you have fun officiating?
4. Do you like officiating?

Response categories ranged from 1 (*not at all*) to 5 (*very much*). Cronbach's alpha was .96.

*Involvement alternatives* are defined as the attractiveness of options versus continuing officiating (see Scanlan, Carpenter, et al., 1993, p. 7). Scanlan and co-workers reported that this construct is difficult to assess (see Carpenter et al., 1993; Scanlan, Carpenter, et al., 1993). Therefore, a new three-item five-point scale was developed:

1. Do you ever think that activities other than officiating are more interesting?
2. Do you ever think that activities other than officiating are more enjoyable?
3. Do you ever think that you prefer other activities to officiating?

Response categories ranged from 1 (*never*) to 5 (*very often*). Cronbach's alpha was .92.

*Personal investments* are defined as personal resources that are put into officiating and cannot be recovered if this duty is discontinued (see Scanlan, Carpenter, et al., 1993, p. 7). The three items of the five-point scale were as follows:

1. How much of your time have you put into your referee career?
2. How much effort have you put into your referee career?
3. How much of your own money have you put into your referee career?

Response categories ranged from 1 (*not at all*) to 5 (*very much*). Cronbach's alpha was .81.

*Social constraints* are social expectations or norms that create feelings of obligation to continue officiating (see Scanlan, Carpenter, et al., 1993, p. 7). This measure contains three five-point scale items:

1. I feel I cannot quit officiating because my friends and acquaintances would be very disappointed.
2. I feel I cannot quit officiating because my family members (spouse, children, parents) would be very disappointed.
3. I feel I have to keep officiating so that people won't think I'm a quitter.

Response categories ranged from 1 (*completely disagree*) to 5 (*completely agree*). Cronbach's alpha was .71.

*Involvement opportunities* are "valued opportunities that are present through continued involvement" (Scanlan, Carpenter, et al., 1993, p. 8). This construct was measured by four five-point scale items (*not at all* to *very much*):

Would you miss *X* if you quit? (where *X* represents officiating, the volleyball atmosphere, the good times you have had officiating, and the excitement). Cronbach's alpha was .91.

*Intent to quit* was the degree to which referees were determined to stop officiating (see Bandura, 1986; Warshaw & Davis, 1985) and was assessed by a three-item seven-point scale:

1. Do you intend to stop officiating at the end of this season?
2. Are you planning to officiate again next season (reversed)?
3. If it were possible to quit officiating right now, would you quit?

Response categories ranged from 1 (*absolutely not*) to 7 (*100% definitely*). Cronbach's alpha was .89.

Actual turnover was assessed at T2: Did you quit officiating at the end of the last volleyball season? Response categories were 1 (*Yes, permanently*), 2 (*Yes, temporarily*), and 3 (*No, I still officiate*). Participants who had stopped officiating permanently were grouped, as were those who had not quit. Three individuals who had quit temporarily were excluded from analyses.

## Results

### *Empirical Separateness of the Constructs*

To test Hypothesis 1, the 20 items representing the six constructs (see Figure 1) were subjected to a factor analysis (principal-components method). The initial six-factor solution accounted for 80.4% of total variance. Factor loadings on the rotated factors (oblique rotation, see Ford, MacCullum, & Tait, 1986) are presented in Table 1. Interfactor correlations, means, and standard deviations are shown in Table 2. (Similar results were obtained with varimax rotation and maximum likelihood analysis). Table 1 shows that intent to quit is both conceptually and empirically separable from the predictor variables. Because the eigenvalue of Factor 6 was  $< 1$ , a subsequent factor analysis with a specified five-factor solution was performed. The initial solution accounted for 76.5% of total variance. Enjoyment and involvement opportunities loaded highest on the first rotated factor ( $\geq .79$ ). The other four were identical to Factors 2, 3, 4, and 5 in Table 1, with item loadings even higher than those in Table 1 ( $\geq .74$ ). Thus, with the exception of enjoyment and involvement opportunities, which seem to represent one factor (Positive Affective Responses to Officiating), predictor variables and criterion (intent to quit) could be clearly distinguished. In all cases, items loaded highest on the factor representing the appropriate construct, indicating that the proposed concepts are empirically distinguishable components. For parsimony, only the enjoyment scale will be used in the following analyses. Compared to involvement opportunities, enjoyment is a more highly established construct (e.g., Scanlan & Simons, 1992).

The same factor analysis was conducted with the variables of Scanlan, Carpenter, et al.'s (1993) Sport Commitment Model. This analysis revealed that a four-factor solution fits the data best: Attraction (Factor 1, which includes all items representing enjoyment, involvement opportunities, and commitment), Social Constraints (Factor 2), Personal Investments (Factor 3), and involvement alternatives

**Table 1** Specified Six-Factor Solution (Oblique Rotation) of a Factor Analysis (Principle-Components Method) of Intent to Quit and Predictor Variable Items ( $n = 392$ )

|                                  | Factor |       |       |       |       |       |
|----------------------------------|--------|-------|-------|-------|-------|-------|
|                                  | 1      | 2     | 3     | 4     | 5     | 6     |
| <b>Enjoyment</b>                 |        |       |       |       |       |       |
| 1                                | .685   | .075  | .441  | -.562 | -.550 | .865  |
| 2                                | .612   | .050  | .448  | -.517 | -.438 | .916  |
| 3                                | .626   | .070  | .456  | -.522 | -.479 | .920  |
| 4                                | .671   | .086  | .480  | -.564 | -.483 | .917  |
| <b>Involvement alternatives</b>  |        |       |       |       |       |       |
| 1                                | -.431  | -.043 | -.256 | .949  | .419  | -.407 |
| 2                                | -.453  | -.059 | -.266 | .956  | .450  | -.466 |
| 3                                | -.523  | .013  | -.277 | .871  | .529  | -.516 |
| <b>Personal investments</b>      |        |       |       |       |       |       |
| 1                                | .428   | .042  | .895  | -.276 | -.169 | .398  |
| 2                                | .416   | .068  | .881  | -.294 | -.200 | .320  |
| 3                                | .228   | -.099 | .776  | -.190 | -.133 | .403  |
| <b>Social constraints</b>        |        |       |       |       |       |       |
| 1                                | -.158  | -.821 | -.092 | .135  | .105  | -.140 |
| 2                                | .103   | -.816 | .091  | -.083 | -.082 | .050  |
| 3                                | .043   | -.719 | .009  | .098  | -.270 | -.183 |
| <b>Involvement opportunities</b> |        |       |       |       |       |       |
| 1                                | .871   | .074  | .459  | -.603 | -.450 | .663  |
| 2                                | .873   | -.029 | .290  | -.468 | -.393 | .462  |
| 3                                | .902   | .018  | .398  | -.468 | .354  | .572  |
| 4                                | .851   | .043  | .405  | -.358 | -.346 | .507  |
| <b>Intent to quit</b>            |        |       |       |       |       |       |
| 1                                | -.399  | .033  | -.158 | .455  | .914  | -.371 |
| 2                                | -.461  | .007  | -.249 | .554  | .905  | -.481 |
| 3                                | -.524  | -.031 | -.299 | .582  | .802  | -.590 |
| Eigenvalue                       | 9.30   | 1.94  | 1.83  | 1.19  | 1.03  | 0.79  |

(Factor 4).<sup>3</sup> Scanlan, Simons, et al.'s (1993) factor analyses also showed that their commitment variable was empirically confounded with involvement opportunities and enjoyment. Apparently, commitment is neither conceptually nor empirically separable from the predictor variables.

### *Predicting Intent to Quit*

Hypothesis 2 was tested by conducting a cross-sectional regression analysis of intent to quit on enjoyment, involvement alternatives, personal investments, and social

<sup>3</sup>Results can be obtained from the author on request.

**Table 2** Interfactor Correlations, Means, and Standard Deviations ( $n = 392$ )

| Variable                  | 2   | 3    | 4    | 5    | 6    | <i>M</i> | <i>SD</i> |
|---------------------------|-----|------|------|------|------|----------|-----------|
| Involvement opportunities | .02 | .39  | -.47 | -.42 | .54  | 3.02     | 1.05      |
| Social constraints        | —   | -.01 | -.06 | .07  | .10  | 1.42     | 0.58      |
| Personal investments      |     | —    | -.26 | -.18 | .41  | 2.92     | 0.87      |
| Involvement alternatives  |     |      | —    | .45  | -.48 | 2.73     | 0.90      |
| Intent to quit            |     |      |      | —    | -.36 | 2.35     | 1.58      |
| Enjoyment                 |     |      |      |      | —    | 3.66     | 0.99      |

constraints. Predictors were forced into the regression equation altogether. Results are presented in Table 3, including the zero-order correlations between the predictor variables and criteria. Hypothesis 2 is not completely supported: No link was observed between social constraints and intent to quit. The regression analysis revealed that the predictor variables explained 50% of variance for intent to quit, with enjoyment and involvement alternatives making significant contributions,  $F(4,388) = 100.62, p < .001$ . The percentage of explained variance for intent to quit does not significantly increase when involvement opportunities is included.

### *Predicting Actual Stay/Leave Behavior*

More important, however, is the prediction of stay/leave behavior 6 months later (Hypothesis 3). As reported earlier (see Method section), 15.1% of local- and 10.4% of international-level referees had stopped officiating. Differences between those who stayed and left were examined by executing a discriminant analysis with enjoyment, involvement alternatives, personal investments, social constraints, and intent to quit as dependent variables. The discriminant function was significant,  $\chi^2(6) = 130.5, p < .001$ . As expected, the best discriminating variable was intent to quit. Table 4 also shows that stayers and leavers could be distinguished by enjoyment and involvement alternatives. No differences were observed for personal investments and social constraints. The percentage of correctly classified respondents based on discriminant analysis is high (86.2%). The percentage of correctly classified stayers and leavers is 87.9 and 76.6%, respectively.

To test the proposed mediation model (see Figure 1 and Hypothesis 3), a logistic regression analysis was executed. This is a multivariate statistical technique that can be used for predicting whether an event will occur as well as identifying useful variables for making the prediction (see Huselid & Day, 1991). A logistic regression analysis of actual turnover on enjoyment ( $B = .48, SD = .31, ns$ ), involvement alternatives ( $B = .20, SD = .31, ns$ ), personal investments ( $B = .47, SD = .27, ns$ ), social constraints ( $B = -.02, SD = .39, ns$ ), and intent to quit ( $B = 1.14, SD = .20, p < .001$ ) revealed that this last variable was the only significant predictor of actual turnover several months later. A larger positive estimated coefficient ( $B$ ) indicates a higher probability of leaving (Knapp, Kostas, & Missiakoulis, 1982). The significant Model chi-square, Model  $\chi^2(5) = 91.39, p < .001$ , which is comparable to the overall  $F$  test in ordinary least squares regression (Huselid & Day, 1991), indicates that the model represents an improvement over one with



**Table 3** Zero-Order Correlations and Summary of Regression Analysis for Variables Predicting Intent to Quit ( $n = 392$ )

| Predictor variable       | Zero-order $r$ | $\beta$ |
|--------------------------|----------------|---------|
| Enjoyment                | -.65*          | -.47*   |
| Involvement alternatives | .62*           | .36*    |
| Personal investments     | -.29*          | .07     |
| Social constraints       | -.01           | -.07    |

Note.  $\beta$  refers to the standardized Beta coefficient. Adjusted  $R^2 = .50$ .

\* $p < .001$ .

**Table 4** Pooled-Within-Groups Correlations Between Predictor Variables and Canonical Discriminant Function, With Stayers ( $n = 281$ ) vs. Leavers ( $n = 45$ ) as Grouping Variable

|                          | Function 1 | Stayers |      | Leavers |      |
|--------------------------|------------|---------|------|---------|------|
|                          |            | $M$     | $SD$ | $M$     | $SD$ |
| Enjoyment                | -.33*      | 3.81    | 0.91 | 3.16    | 1.04 |
| Involvement alternatives | .51*       | 2.54    | 0.82 | 3.42    | 0.96 |
| Personal investments     | .01        | 2.96    | 0.84 | 2.96    | 0.98 |
| Social constraints       | -.04       | 1.43    | 0.58 | 1.38    | 0.57 |
| Intent to quit           | .93*       | 1.91    | 1.13 | 4.32    | 1.90 |

\* $p < .001$ .

only the constant. The model does not improve when involvement opportunities is included. Altogether (see Baron & Kenny, 1986, for the statistical procedure to test mediation), these results partially support Hypothesis 3: Only greater enjoyment and less attractiveness of alternatives indirectly predict stay/leave behavior through a decreasing/increasing intent to quit.

## Discussion

Based on the present research model, stay/leave behavior among volleyball referees can be reliably predicted: 87.9% of stayers and 76.6% of leavers were correctly classified. Intent to quit was the single direct predictor of stay/leave behavior. Although enjoyment and involvement alternatives were also strongly related to stay/leave behavior (see Table 4), these two variables could not explain additional variance of actual turnover. Mediation is further suggested by the finding that enjoyment and involvement alternatives were strongly related to intent to quit. That

is, in this sample intent to quit was particularly inspired by lack of enjoyment and involvement alternatives. In turn, actual turnover is mainly determined by intent to quit.

Other studies also showed that a congruent behavioral intention measure best predicts actual behavior (see Steel & Ovalle, 1984; Tett & Meyer, 1993). In line with Fishbein and Ajzen's (1975) theoretical notions, Hulin (1991) pointed out that when research models are judged according to predictive validity, so-called "intention-single behavior models" are most adequate. However, if generalization to similar, unstudied behaviors is used as the criterion, more global models are preferred, with general attitudes as predictors of global, multiple behaviors (e.g., aggregated measures of withdrawal or adaptation behaviors; Hulin, 1991). In line with Fishbein and Ajzen (1975), who made a strong argument against expecting general attitudes to predict specific behaviors, there should be congruence of attitudes (as predictors) and behaviors (to be predicted) at a specific or more general level.

Furthermore, results clearly show that intent to quit is both conceptually and empirically distinct from its proposed antecedents. In contrast, empirical overlap was observed between enjoyment and involvement opportunities, which suggests that positive affective responses to officiating are not sufficiently distinct from the perceived experiential benefits of being associated with officiating. To accomplish a more parsimonious model with conceptually and empirically separable constructs, involvement opportunities has been eliminated from the model, as Enjoyment is a more highly established construct (see Scanlan & Simons, 1992). Results show that the model fits the data equally well without this variable.

With the exception of social constraints, high zero-order correlations were observed between the predictor variables and intent to quit (see Table 3). Apparently, a referee's intention to quit does not deteriorate due to social constraints (see Scanlan, Carpenter, et al., 1993). The significant but low, negative relationship between social constraints and commitment reported by Carpenter et al. (1993) was contrary to the assumed direction in their Sport Commitment Model. However, research on close relationships suggests that social constraints enhance stability, which may be due to the anticipated negative sanctions from others if involvement is terminated (Cox et al., 1997; Felmlee et al., 1990; Johnson, 1991). Indeed, dissolution of a close relationship may have far-reaching consequences for both partners' social networks (e.g., children, families, and friends), which is less true when terminating officiating or sport participation. Furthermore, as noted by Carpenter et al. (1993), feelings of obligatory participation in a voluntary activity may undermine personal control and self-determination. Personal prescriptions, based on the self-conviction that one should remain (Cox et al., 1997), may contribute more to persistence in voluntary activities, such as officiating. This should be examined in future research. This sense of self-constraint was identified by Johnson (1991) as a distinct type of restraining forces in addition to social constraints (see Cox et al., 1997; Rusbult & Buunk, 1993).

In contrast to most turnover research among employees (see Carsten & Spector, 1987; Johns, 1991), the perception of alternatives was an important correlate of the intent to quit officiating. One explanation is that the volunteer referees were not highly restricted in terms of economic constraints, resulting in more varied, perceived alternatives and a higher intent to quit in case of discontentment. Furthermore, compared to youngsters in studies by Scanlan and coworkers

(Carpenter et al., 1993; Scanlan, Carpenter, et al., 1993), adult volunteer referees may experience more conflict between desirable free-time activities (see Scanlan, Simons, et al., 1993), which may have resulted in a reliable assessment of the construct (i.e., conflicts between alternatives were a more significant issue to them) as well as a higher degree of predictive validity.

The practical goal of this research was to reduce the high turnover rate among volleyball referees. Results suggest that involvement alternatives and enjoyment indirectly predict stay/leave behavior through intent to quit. Accordingly, a program may be developed to reshape the way referees view their alternatives (i.e., aiming at rejecting and devaluing alternatives). As argued by Johnson and Rusbult (1989), changes in the attractiveness of alternatives is much a function of cognitive restructuring as any "objective" reality with respect to available alternatives. However, a more promising way to effectively impact referees' intent to quit is to enhance positive affective responses to officiating (represented by enjoyment and its correlate involvement opportunities; see Carpenter et al., 1993; Scanlan & Simons, 1992). Drawing on social exchange principles, VanYperen and Jeronimus (1994) assumed that officiating would be more enjoyable as rewards increased or costs decreased. Their study revealed that rewards associated with officiating were primarily intrinsic, including loving the sport and perceiving officiating as a challenge. Officiating costs included cognitive anxiety (worrying about making mistakes), abuse from players, coaches, and fans (see Rainey, 1994), and lack of recognition (i.e., concerns about the promotion system) and supervision. These findings suggest that, owing to their intrinsic nature, rewards are difficult to increase. In contrast, perceived costs among referees can be reduced by ensuring procedural fairness in the promotion system and paying more attention to referee training and supervision (see Jarvis, Dean, & Bratton, 1981). Similarly, Barnett, Smoll, and Smith (1992) suggested that more explicit support from program administrators can reduce coach attrition. Like referees, adult coaches in nonschool sports are usually volunteers who are expected to invest a lot of time and energy. When they do not feel proportionally rewarded, they may restore equity by quitting (see VanYperen, 1997).

In this study, a parsimonious turnover model is presented with theoretically and empirically separable constructs. In line with Meyer and Allen (1991, 1997), it is maintained that the four proposed predictor variables reflect the multifaceted construct commitment. Two of these components (enjoyment and involvement alternatives) are related, via intent to quit, to actual stay/leave behavior. Results further suggest that the predictive validity of the model is impressive: The percentage of correctly classified subjects is 86.2%. Thus, the proposed model may facilitate explaining why individuals quit or continue involvement in any domain, albeit a hobby (such as officiating), sport, job, or intimate relationship.

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