

Sources of Stress and Intention to Terminate Among Jordanian Referees

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Abstract

This study investigated sources of stress and intention to terminate refereeing among sports referees in Jordan. One-hundred and seventeen sports' officials responded to a 34-item modified version of the Soccer Officials Stress Survey (SOSS). Factor analysis using a principal axis factoring with oblique(oblimin) rotation revealed five correlated sources of stress factors (Performance Concerns, Time Pressures, Lack of Recognition, Verbal Abuse, and Fear of Physical Harm) accounting for 61.80% of the variance. The referees believed the first four factors to be moderately related to their stress. Also, regression analysis indicated that fear of physical harm was a significant predictor of intention to terminate officiating. Suggestions for future research were also proposed.

Introduction

Stress is present in all aspects of our lives including our jobs. Occupational stress is present in every profession although it is perceived and handled differently by everybody (Dingle, 2002). With societies in general becoming much more aware of how stress can have a negative impact on persons' quality of life (Benson, 1979). The study of the relationship between stress and individual's work environment began to appear (Bernstein & Borkovec, 1973). Along this line of study, research started to appear on the effects of stress among sports officials

(e.g., Anshel, 1990; Constable, 1996; Goldsmith & Williams, 1992; Kaissidis-Rodafinos, Anshel & Porter, 1997; Rainey, 1995a, 1995b, 1999; Rainey & Hardy, 1999; Stewart, Ellery, Maher & Ellery, 2002).

Sports' officiating is one particular occupation that experiences a great deal of stress. Athletes, coaches, and spectators often behave in a hostile manner toward sport officials. Reports of serious conflicts with sport officials include incidents involving assaults. For example, one little league coach assaulted an umpire with an aluminum baseball bat (Coach Gets Year in Jail, 1991). Another coach was arrested for firing a handgun after he had been ejected from a game by the umpire (Mano, 1991). In addition, a youth basketball coach, during a tournament game for 6th grade boys, assaulted the referee knocking him unconscious. The referee who lost three teeth and required 26 stitches was then hit with a metal chair by a 12-year old player, sustaining a broken ankle. The coach pleaded guilty to an assault charge and was sentenced to five years in prison (Coach Gets Five Years for Ref Beating, 1995). Such examples suggest that sport officials are involved in a profession which can be stressful and dangerous. Another aspect of stress may be due to the fact that this type of a job is a second rather than the primary one (Sundell, 1999). Zoller (1985) reviewed a series of case studies and concluded that in most cases stress in officiating was high because it "is a vocation done in addition to a fulltime job" (p. 48).

The role of the referee is filled with stress and anxiety. Sport referees are often seen as friendless, while post-game comments from coaches and players are almost always negative. Winning athletes rarely mention the quality of officiating, and players who have lost a game may blame at least part of the loss on the referees (Constable, 1996). Moreover, the threat of assault from a player, coach, or fan towards a referee or umpire is always present (Constable, 1996). Referees often experience various forms of acute stress during a single contest, such as making an error or dealing with verbal abuse (Anshel, 1990, Anshel & Weinberg, 1995; Goldsmith & Williams, 1992; Kaissidis-Rodafinos, Anshel & Porter, 1997).

Experiencing high levels of stress while officiating probably leads to decreased health, performance, and satisfaction with officiating (Goldsmith & Williams, 1992). Taylor and Daniel (1987) suggested that stress can cause officials to increase introspection and worsen their perfor-

mance by failing to maintain an appropriate broad external focus of attention. In a later cross sectional and longitudinal study of 529 soccer officials, Taylor, Daniel, Leith, and Burke (1990) found that stress from interpersonal conflicts, role culture conflict and fear of failure relates to officiating burnout. It is also suggested in the literature that stress affects health and job performance in a number of settings and this is likely to be true for sport officials, too (Helsen & Bultynck, 2004). Moreover, there is a concern that stress might lead some individuals to quit officiating. Taylor et al., (1990) found some support for the hypothesis that stress factors have indirect effects on dropout intentions among soccer officials.

Literature Review and Theoretical Framework

The Stress Construct

Perhaps the most difficult aspect of studying stress is deriving a widely accepted definition of it. Most theorists agree that stress is (or can be) adaptive, that it is associated with threatening or harmful events, and that it is typically characterized by aversive or unpleasant feelings and mood. Beyond this, there are few areas of universal agreement (Dougall & Baum, 2001). Some theorists have argued that stress can be positive, whereas others have insisted that it is a fundamentally aversive state (e.g., Baum, 1990; Seyle, 1984). Some have pointed out apparently simultaneous biological and psychological activation, suggesting that stress is an emotion, and some have described stress as a general state of arousal associated with taking strong action or dealing with strong stimulus (Baum, 1990). Stress has been variously defined as a stimulus, as a response, and as a process involving both. It has been described as both specific and nonspecific responses to danger with little evidence to support one or another contention. However, it appears to be a fundamental component of adjustment and adaptation to environmental change (Dougall & Baum, 2001). Consistent with the previous emphasis on adjustment and adaptation, stress can be described as “a negative emotional experience accompanied by predictable biochemical, physiological, and behavioral changes that are directed toward adaptation either by manipulating the situation to alter the stressor or by accommodating its effects”(Baum,

1990, p. 653). McGrath (1970) defined stress as “a substantial imbalance between demand [physical and/or psychological] and response capability, under conditions where failure to meet that demand has important consequences” (p. 20).

Investigators have proposed several models to address the nature, sources and consequences of stress in athletic competition. Most of these have focused on the effects of stress on performance. Examples include the inverted-U hypothesis (Martens & Landers, 1970), multi-dimensional anxiety theory (Martens et al., 1990), the cusp catastrophe model (Hardy & Parfitt, 1991) and reversal theory (Kerr, 1989). Other investigators have examined the relationship between stress and burnout. One prominent example is the cognitive affective model developed by Smith (1986). He proposed that stress and burnout are parallel phenomena, each influenced by four factors: situational demands and resources, physiological arousal, cognitive appraisal, and behavioral responses. Smith developed this model primarily to examine the stress and burnout of athletes, but the model can also be applied to the experiences of sport officials. Competition contributes to stress when its demands overwhelm the resources available to officials. For example, novice officials may not have developed the knowledge of the rules or the powers of concentration to keep pace with a fast moving, highly competitive match, and this can lead to stress. Physiological arousal can be a source of stress if an official's conditioning is not adequate, or if there is a threat of physical harm. Cognitive appraisal can contribute to stress when officials believe they have lost control of a contest, or when they assess their performance as inadequate.

Finally, an official's behavioral responses can contribute to stress when those responses are inappropriate, inadequate or inflexible. For example, officials could create conflict and stress if they refuse to reverse obvious errors, or if they relate to older, more mature athletes in the same way they relate to younger competitors. Smith (1986) pointed out that burnout can be a consequence of any or all of these four stress factors, especially when the stress is intense or prolonged. Burnout is characterized by feelings of emotional exhaustion, depersonalization and low accomplishment (Maslach, Jackson & Leiter, 1996),

and it can have several negative consequences. Among sport officials, intention to terminate officiating activities is one negative consequence that investigators have examined (Taylor et al., 1990).

Stress Among Sports Officials

In recent years, several researchers have studied sources of stress among sport officials. Taylor and Daniel (1987) developed the Soccer Official's Stress Survey (SOSS) to examine the major sources of stress among soccer referees. The researchers identified six factors involved in the stress experienced by those officials. These factors included interpersonal conflicts (dealing with abusive players), fear of physical harm (assault by a player), time pressures (officiating versus family demands), peer conflicts (personality clashes with other officials), fear of failure (making bad calls), and role-culture conflicts (little recognition for good officiating).

Goldsmith and Williams (1992) examined the sources of stress among a sample of volleyball and football officials. Five major factors of stress emerged from their study. Three factors (Fear of Failure, Fear of Physical Harm, and Time Pressure) were similar to those identified by Taylor and Daniel (1987). The two remaining factors in Goldsmith and Williams' study were termed "Pressure Game" and "Verbal Abuse" by players and coaches. Fairness in a promotion system is another cause for stress for volleyball officials (Jarvis, Dean, & Bratton, (1981). In a related study, VanYperen (1998) found that enjoyment, involvement alternatives, personal investments, social constraints and involvement opportunities were predictors of why individuals leave officiating.

The SOSS was revised in 1990 by Taylor, Daniel, Leith, and Burke, with the new form being titled the Ontario Soccer Officials' Survey (OSOS). This was slightly modified and used in Rainey's (1995a) study of baseball and softball umpires. Rainey found that the factors of fear of failure, fear of physical harm, interpersonal conflict, and time pressure emerged from the umpires' responses. Stewart and Ellery (1998) administered the SOSS to certified high school volleyball referees and reported the same four factors as Rainey (1995a). Similar results were also found by Constable (1996) who administered the OSOS to 112

hockey officials. He found that interpersonal conflict, fear of physical harm, time pressures, and peer conflicts were the major sources of stress for hockey officials.

In 2002, Stewart et al., surveyed 324 high school basketball referees during the season. They found that Fear of Physical Harm, Fear of Failure, Lack of Respect, and Time Pressure were the most significant sources of referees' stress. These sources and magnitude of perceived psychological stress reported mid-season were consistent with previous research on perceived psychological stress among officials who were surveyed following the end of the season. Rainey and Hardy (1999) and Rainey (1999) examined the sources of stress, burnout and intention to terminate among rugby union referees and basketball referees using a modified version of the OSOS and Maslach Burnout Inventory (MBI). Exploratory and confirmatory factor analyses revealed four correlated sources of stress factors (performance concerns, time pressure, interpersonal conflict and fear of physical harm), which accounted for 49.6% and 50% of the variance, respectively. Referees believed the first three factors to be mildly related to their stress. They believed fear of physical harm to be unrelated to their stress. The results also indicated that interpersonal conflict and time pressure were common sources of stress for sport officials and were frequently related to their burnout experiences. Moreover, age and burnout are frequently, although only marginally, related to intention to terminate.

In summary, sports officiating is very psychologically demanding and the stress associated with officiating can negatively affect the physical and mental health of sports officials. The majority of research on officials from a variety of sports suggests that they have similar sources of stress in their work. Sources of stress for an official include verbal abuse, fear of failure, time pressures, interpersonal conflicts, and fear of physical harm.

Researchers conduct studies on various sports hoping to eventually aid the referees of various sports in dealing with the stressors that are associated with officiating. If a sport psychologist hopes to counsel official with their concerns, it is imperative that the psychologist should be aware of the various factors that can lead to stress in those same officials (Constable, 1996).

Significance of the Study

It is apparent that the refereeing profession is very psychologically demanding and the stress experienced by referees during their work could have a negative impact on their ability to respond appropriately to the situation in hand. Such responses may include poor decision-making and improper interaction with others. Jordanian referees, a group not focused on in previous studies taken place in Jordan, may be vulnerable to experiencing stress. Anecdotal evidence suggests that referees frequently complain of frustration, anxiety, and burnout from negative arguments with players and/or coaches (Goldsmith & Williams, 1992).

Sources of stress among sport referees need to be examined and identified. By identifying and uncovering the referees' most relevant stressors, sport psychologists would be able to work with these referees in an attempt to reduce their levels of stress. Additionally, strategies will be developed to combat and minimize those stressors which may have negative effects on referees' personal and professional lives. Finally, any attempts to more thoroughly understand the causes of stress involved in the refereeing profession would be very beneficial and appreciated.

Statement of the Problem

Research on referees has indicated perceived psychological stress intimates from a variety of sources. When surveys have been administered in a variety of sports following the conclusion of the season, the sources and magnitude of perceived psychological stress among referees have been fairly consistent. The main purpose of this study was to examine the major sources of acute stress among sports referees in Jordan. A second purpose was to examine the relationships between sources of stress and intention to terminate refereeing.

Methodology

Research Design

This study is quantitative in nature and was conducted using a survey methodology.

Participants

The participants, who volunteered to participate in this study, were

117 certified male referees from Jordan. They ranged in age from 21 - 51 years, with a mean age of 33.22 years ($SD = 6.32$). Their refereeing experience ranged from 1 - 24 years, with a mean of 9.12 years ($SD = 5.72$). Thirty nine of the referees (33.3%) refereed a second sport in addition to their major sport, while 78 referees (66.7%) refereed only one sport.

Instrumentation

The data for this study came from a three-section questionnaire. The first section requested demographic information, including, age, type of sport, and number of years of refereeing experience.

The second section was a modified version of the Soccer Official's Stress Survey (SOSS; Taylor & Daniel, 1987). The modified version of SOSS contained 34 items to assess perceived stress using a 5-point Likert-type scale. Responses ranged from 1 (did not) to 5 (very strongly) to the question "How much did this (source of stress) contribute to the amount of stress you felt? The items represented one of seven subscales of perceived stress (derived from a factor analysis in the pilot study; Taylor & Daniel, 1987). The subscales were labeled fear of failure, fear of physical harm, peer conflicts, time pressures, intrapersonal conflicts, role-culture conflict, and fitness concerns. Validity and reliability for the SOSS dimensions have been demonstrated through different studies (e.g., Goldsmith & Williams, 1992; Rainey, 1995, 1999; Rainey & Hardy, 1999, Taylor, 1989)

The third section of the survey was a one-item measure assessing respondents' intentions to continue or quit refereeing at the end of the season "are you going to quit refereeing after this season?" The referees responded on a 3-point scale (1 = yes, 2 = maybe, and 3 = no).

Instrument Translation

The instrument used in this study had been originally developed in English and were translated into Arabic for use with Jordanian referees. Because the quality of translation is the key to ensuring the functional equivalence between the English and Arabic versions of the measures, a forward-backward translation process was used. This process drew on the cross-cultural instrument development work of Sperber, Devellis, and Boehlecke (1994). The goal of the translation process was to produce an Arabic version of the items that were equivalent in meaning

to the original English version. Thus our objective was an equivalent translation not an identical word-by-word translation of items. A standard three-step protocol suggested by Blaschko and Burlingame (2002) was used when translating the questionnaire. First, the instrument was translated from English into Arabic by a professional scholar who is fluent in both English and Arabic languages. Second, the instrument was back-translated from Arabic into English by a second scholar who is also competent in both English and Arabic languages. In the final step, a third professional scholar, fluent in both English and Arabic languages compared and evaluated the original English and the translated-back copies in order to verify the accuracy and equivalency of the translation.

Pilot Test

The Arabic version of the survey was pilot tested with a group of 15 referees in Jordan to collect feedback about instrument content and usage. This feedback did not lead to any fundamental changes.

Procedures

Surveys were distributed to the sample referees by either the supervisor of officials or mailed directly to the official by the researcher. Soccer referees were administered the questionnaires during their meeting. Participants answered their surveys anonymously. In those instances when the respondents enclosed a return address label to receive feedback, the completed survey forms and address labels were immediately separated, so that the confidentiality of their responses could be secured. Of the initial 150 questionnaires distributed, and with a follow-up letter, 120 surveys were returned. From the total returned, 3 were omitted from all analyses because of missing or unusable data. The final usable return rate was 78% (N = 117).

Data Analysis

Statistical analysis was conducted using the Statistical Package of Social Sciences (SPSS) version 11.5 software. Data were analyzed descriptively to determine the basic characteristics of the participants (age, and refereeing experience). Exploratory factor analysis was conducted to identify the major sources of stress reported by sports referees. Linear regression analysis was also utilized to investigate the

effects of sources of stress on referees' intention to terminate refereeing. Additionally, the internal consistency of the instruments used in this study was determined by calculating Cronbach alpha coefficients.

Results

Results are presented in two sections. In the first section, the major sources of stress reported by sports referees in Jordan were identified. The second section presents the results pertaining to the relationships between sources of stress and termination intentions.

Factor Analysis

When interpreting the data, the researcher used a principal axis factoring with oblique (oblimin) rotation to aggregate items in subscales. The data from this study yielded a Kaiser-Meyer-Olkin Measure of Sampling Adequacy score of .704, and a Bartlett's Test of Sphericity score of 3806.93, both of which are considered acceptable (Dzuiban & Shirkey, 1974).

The initial extraction yielded seven factors with eigen values of 1.0 or greater (see Table 1).

Factors which had fewer than three items, items loading above ± 0.40 on two or more factors, and items not loading at least ± 0.40 on a factor were eliminated (Tabachnick & Fidell, 1996). The same criteria were used by Goldsmith and Williams (1992) when they identified five factors on the SOSS. Based on these criteria, the oblique rotation produced a five-factor solution accounting for 61.80% of the variance. The factors were labeled Performance Concerns, Fear of Physical Harm, Time Pressures, Lack of Recognition, and Verbal Abuse. As suggested by Rainey (1999), the factor label Performance Concerns replaced the label Fear of Failure used in earlier studies for a factor composed of such items as "Making a bad call", "Dealing with abusive players", and "Working with poor official." It was felt that the label Performance Concerns described the factor better and had fewer negative connotations than Fear of Failure (Rainey, 1999). The items associated with each factor and their factor loadings are reported in Table 2.

Table 1
Factor Loadings of the Modified SOSS - First Extraction

Item No.	Factor						
	1	2	3	4	5	6	7
1	.165	.126	.732	-.116		.135	
2	.235		.345	.537	-.318	.142	.178
3	.522	.133	.124		-.150	.255	
4		.778	.173	.101			.153
5	-.110	.234	.719			.176	.105
6		.166		.455	.133	.453	
7	.717			.189		.137	
8	.317	.513	.310		-.189		-.169
9			.864		.151	.106	
10	.496			.132	.337		
11	.458	.157	-.194		.232	.111	.118
12	.278	.536	-.161	-.142	.385	.174	
13	.260	-.156	.568	.227	.131	.100	
14		.350	-.243	.266		.219	.261
15		.140	.549			.352	.394
16	.158	.582		.184		.154	
17		-.148	.517	.380	.110	.281	.148
18	.686	.151					
19		.162	.150	.666		-.166	.217
20	.129		.198	-.268	.251		.628
21	.130	-.313	.591	.129	.293	.169	.196
22	.575	.154	.140		.197		.142
23	.190		.140	.508	.370	-.249	
24		.144	-.153	.126	.312		.482
25	.630		.524		.157	.134	
26	.484				-.168	.240	.352
27	.107		.135	-.218	.255	.231	.181
28	.634	.115		.188			.117
29	.168	-.217	.505	.106			.279
30	.410			.354			.425
31				.205		.104	.711
32		.160		.601	.225	.113	.100
33			.774	-.134		.214	
34	.159		.809		.213		

Table 2
Factor Loadings for Referees' Sources of Stress

Sources of stress items	Factor Loading				
	I	II	III	IV	V
Performance Concerns					
Dealing with abusive players	.717				
Critical game to one or both teams	.686				
Making a bad call	.634				
Critical decisions during game	.575				
Dealing with over-excited or hostile coaches	.522				
Working with poor official	.496				
Keep up with play	.484				
Players' or coaches' who protest decisions when they don't know the laws of the game	.458				
Fear of Physical Harm					
Physical assault from a spectator		.864			
Violence / fighting in the game		.809			
Personality clash with the co-official		.774			
Physical assault from a player		.732			
Physical assault from a coach		.719			
Threat of assault by a spectator		.591			
Threat of assault by a player		.568			
Personality clash with coach and/or player		.549			
Threat of assault by a coach		.517			
Dismissing or ejecting players		.505			
Time Pressures					
Conflict between officiating and family demands			.778		
Others wish you spent more time with them instead of officiating			.582		
Conflict between officiating and social demands			.536		
Conflict between officiating and work demands			.513		
Lack of Recognition					
Little recognition for officials				.666	
Competition and jealousy between officials				.601	
Failure to be selected for important games				.537	
Lack of recognition for good games				.508	
Verbal Abuse					
Verbal criticism from player and/or coach					.711
Being accused of bias					.628
Verbal criticism from spectators					.482
Eigen values	13.70	2.62	1.94	1.65	1.10
Percent Variance Accounted For	40.29	7.71	5.71	4.85	3.24

Note. Extraction method: Principal Axis Factoring.

Rotation method: Oblimin with Kaiser Normalization.

Table 3 shows the correlation between the five factors. As can be seen, none of the correlations between the factors is strong, with the highest inter-correlation rating being .488.

Table 3
Correlation Matrix between the Five Factors

Factor	1	2	3	4	5
1	1.00				
2	.222	1.00			
3	.488	.081	1.00		
4	.364	.213	.308	1.00	
5	.360	.064	.185	.227	1.00

Table 4 shows the means, standard deviations, skewness, and kurtosis for each factor. As can be seen, performance concerns were the strongest source of stress reported by the referees ($M = 3.15$, $SD = .83$) and accounted for 40.29% of the variance in referees' stress, followed by time pressures ($M = 3.09$, $SD = 1.04$), lack of recognition ($M = 3.02$, $SD = 1.03$), and verbal abuse ($M = 2.94$, $SD = 1.10$). Stress from fear of physical harm was the least reported by the referees ($M = 2.80$, $SD = 1.02$), though, it accounted for the second largest percentage of the variance in referees' stress (7.71%; see Table 2). Table 4 also presents the kurtosis and skewness values for all of the variables. Examination of the values in the table showed that all of the values were within 1 from zero, indicating no substantial departure from normality.

Table 4
Means, Standard Deviations, Skewness, and Kurtosis
for the Five Sources of Stress Factors

Factor	M	SD	Skewness	Kurtosis
Performance Concerns	3.15	.83	-.159	-.188
Time Pressures	3.09	1.04	-.396	-.639
Lack of Recognition	3.02	1.03	-.133	-.931
Verbal Abuse	2.94	1.10	.055	-.934
Fear of Physical Harm	2.80	1.05	.024	-.974

Note. The response rating scale for items making up each factor was 5 = very strongly, 4 = strongly, 3 = moderately, 2 = rarely, 1 = did not.

Instrument Reliability

In order to assure the psychometric properties of the translated survey, internal consistency measures of reliability were computed for the five factors by calculating Cronbach's alpha coefficients. The results are reported in Table 5. As shown in the table, all coefficients were judged to be acceptable based on Nunnally and Bernstein's (1994) criterion of alpha being greater than .70.

Table 5
Cronbach's Alpha Reliability Coefficients for the Modified SOSS

Factor	Alpha	No. of Items
Fear of Physical Harm	.92	10
Performance Concerns	.84	8
Time Pressures	.84	4
Lack of Recognition	.82	4
Verbal Abuse	.80	3

Intention to Terminate Refereeing

In order to find the most significant source of stress on referees' intention to terminate refereeing, linear regression analysis (forward method) was utilized using all five sources of stress (performance concerns, fear of physical harm, time pressures, lack of recognition, and verbal abuse) as predictors, and referees' intention to terminate refereeing as criterion.

The results presented in Table 6 show that fear of physical harm was the only significant predictor of referees' intention to terminate refereeing ($F_{(1, 115)} = 16.411, p < .0001$) and accounted for 11.7% of the variance of referees' intention to terminate refereeing. Examination of the standardized regression coefficients (b), presented in Table 7, revealed that fear of physical harm was the most important predictor of referees' intention to terminate, whereas, all other sources of stress did not impact referees' intention to terminate refereeing.

Table 6
Linear Regression with Sources of Stress as Predictors and Referees' Intention to Terminate Refereeing as Criterion

Variables	R	R ²	Adjusted R ²	F	p
Fear of Physical Harm	.353	.125	.117	16.411	.0001

Table 7
The Influence of the Five Sources of Stress on Referees' Intention to Terminate Refereeing

Variable	β	t	p
Fear of Physical Harm	.353	9.196	.0001
Performance Concerns	.018	.197	.844
Time Pressures	.041	.451	.653
Lack of Recognition	.022	.222	.825
Verbal Abuse	-.008	-.085	.932

Discussion

The main purpose of this study was to investigate and identify the main sources of acute stress among sports referees in Jordan. The study also examined the relationships between sources of stress and intention to terminate refereeing.

With regard to the major sources of referees' stress, five sources of stress emerged from the factor analysis of the SOSS. These were labeled performance concerns, fear of physical harm, time pressures, lack of recognition, and verbal abuse. These factors were consistent with those found in earlier research (e.g., Constable, 1996; Rainey, 1995a, 1995b, 1999; Rainey & Hardy, 1999; Stewart & Ellery, 1998; Goldsmith & Williams, 1992; Taylor & Daniel, 1987). The factors fear of physical harm, performance concerns, and time pressures were similar to those reported by Rainey (1999), Constable, 1996, Goldsmith and Williams (1992), and Taylor and Daniel (1987), although Taylor and Daniel identified seven factors in their study.

The factor, labeled lack of recognition, emerged from the factor analysis in this study, was similar to that reported in other studies (Rainey, 1999; Taylor & Daniel, 1987). Rainey reported a factor labeled lack of recognition for basketball officials, and Taylor and Daniel (1987) reported a factor labeled role-culture conflict. Constable (1996)

reported a factor labeled “Peer conflicts” and two of the three items loaded on that factor (‘failure to be selected for important games’ and ‘Competition and jealousy between officials’) were similar to those loaded on lack of recognition factor emerged in this study (see Table 2).

A factor labeled lack of recognition, emerged from the exploratory factor analysis, in Rainey and Hardy’s study (1999), but it was not replicated in the confirmatory factor analysis when only two items loaded significantly on the factor. The two items loaded on lack of recognition for rugby referees (‘little recognition for officials’ and ‘lack of recognition for good refereeing’) were among the four items loading on the same factor emerged in the current study. The items loading on this factor reflect officials’ concerns about not receiving adequate acknowledgement for their efforts and accomplishments (Rainey & Hardy, 1999). It appears likely that this factor might be reported as a concern by many sport referees if other items assessing lack of recognition were added to the SOSS. Verbal abuse, a source of stress emerged in the current study, was recognized by Goldsmith and Williams (1992) when they studied football and volleyball officials. Recent evidence indicates that a substantial number of fans believe it is acceptable for players and coaches to express verbal hostility towards umpires of baseball in some situations (Rainey, Schweickert, Granito & Pullella, 1990).

The results of this study were in line with those of earlier studies, because the mean ratings for all five sources of stress were relatively moderate. Performance concerns, time pressure, lack of recognition, verbal abuse, and fear of physical harm were all rated as ‘moderate’ sources of stress. As the results of this study have shown, no one single factor was seen as contributing a high level of stress by the referees. However, any reductions in stress would be beneficial to referees and, presumably, the league as a whole. The fact that some combination of the five factors have emerged in all of the above mentioned studies of referees would seem to suggest that these five factors should be considered when devising stress management and mental preparation techniques for sports referees (Constable, 1996).

The second purpose of the study was to examine the relationship between sources of stress and intention to terminate refereeing. The regression analysis demonstrated unique contributions of sources of

stress to the variance explained in referees' intention to terminate. The results from this analysis revealed that fear of physical harm was a significant predictor of intention to terminate and accounted for 11.7% of the variance in referees' intention to terminate refereeing (See Table 6). Surprisingly, fear of physical harm was the only source of stress that predicted termination intentions among sports referees. The factor of fear of physical harm is a life strain which seems to accompany the role of the referee due to the referee's knowledge that physical assault could occur at any time during the game. However, the actual occurrence of some form of physical harm towards a referee would be classified as a major life event, and therefore would be seen as creating a great deal of stress in the referee involved (Constable, 1996).

Conclusions and Directions for Future Research

Tentative conclusions about stress and its consequences for sports referees may be drawn from the results of this investigation, as well as from previous investigations. First, a number of settings exist in the area of sports officiating which are sources of stress for referees. Officials from different sports and from within a sport, place different ratings of stress levels on different situations. Second, it is possible that there are some common sources of stress among sports referees. Fear of Failure (Performance Concerns), Fear of Physical Harm, Time Pressures, and Lack of Recognition may be sources of stress for referees of many different sports. At the same time, it is clear that some sources of stress affect referees in some sports but not in others (Rainey, 1995b), and it is very likely that other important sources of stress have not yet been identified.

At this point, intention to terminate is the only consequence of stress among sport referees that researchers have studied. The research does indicate that there is a relationship between stress and intention to terminate among sport referees. However, two cautions are important in this context. First, in the current study only a small minority of referees indicated a strong intention to terminate (16.2%), and only 11.7% of the variance in termination intention was accounted for by stress (Fear of Physical Harm). Second, reports of intention to

terminate and actual termination are not identical. For example, Steel and Ovalle (1984) reported an average relationship between intentions to terminate and actual employee turnover of only .50.

These tentative conclusions suggest that there is a need for more research. First, it is still worthwhile to examine sources of stress and burnout among sport officials from other sports and other cultures. Sources of stress may be more salient in other settings. Second, much could be learned about stress among sport officials by designing effective methods for identifying the minority of officials who do experience significant stress and providing prevention or intervention programs to help them. Third, all of the respondents from previous research were males. Thus, future studies should attempt to include female referees to uncover whether male and female referees experience similar stressors. Finally, future studies should examine the possible relationships between stress, burnout, and other negative consequences, such as reduced satisfaction, somatic complaints, and impaired performance.

مصادر الضغوط التي يتعرض لها حكام الألعاب الرياضية في الأردن ونيتهم لترك التحكيم

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ملخص

هدفت هذه الدراسة إلى تعرف مصادر الضغوط التي يتعرض لها حكام الألعاب الرياضية في الأردن ونيتهم لترك التحكيم. شارك في هذه الدراسة مائة وسبعة عشر حكماً رياضياً أجابوا على نسخة معدلة من مقياس الضغوط لدى حكام كرة القدم تحتوي على ٣٤ مفردة. أشارت نتائج التحليل العاملي إلى وجود خمسة مصادر للضغوط (مخاوف الأداء، ضغوط الوقت، قلة التقدير والاحترام، الإهانة اللفظية، والخوف من الاعتداء البدني) وقد فسرت ٦١,٨٠٪ من التباين. وحسب اعتقاد الحكام فإن المصادر الأربعة الأولى تسبب لهم الضغوط بدرجة معتدلة. كذلك بين تحليل الانحدار أن الخوف من الاعتداء البدني كان المصدر الوحيد للضغوط المرتبط بنية الحكام لترك التحكيم. واعتماداً على النتائج التي توصلت إليها الدراسة، تم تقديم عدد من الاقتراحات للبحث المستقبلي.

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Appendix

The Official's Stress Survey

The items focus on the experiences which involve interactions with others including players, coaches, spectators, and co-officials.

We are interested in how much each item contributed to the degree of stress you felt as an official during the last season you officiated.

Please don't spend much time on any single item, and please respond to all items.

	How much did these contribute to the amount of stress you felt?	Very strong-ly	Strong-ly	Mod-erately	Mildly	Did not
1	Physical assault from a player	5	4	3	2	1
2	Failure to be selected for important game	5	4	3	2	1
3	Dealing with over-excited or hostile coaches	5	4	3	2	1
4	Conflict between officiating and family demands	5	4	3	2	1
5	Physical assault from a coach	5	4	3	2	1
6	Having an aggressive game	5	4	3	2	1
7	Dealing with abusive players	5	4	3	2	1
8	Conflict between officiating and work demands	5	4	3	2	1
9	Physical assault from a spectator	5	4	3	2	1
10	Working with poor official	5	4	3	2	1
11	Players' or coaches' who protest decisions when they don't know the laws of the game	5	4	3	2	1
12	Conflict between officiating and social demands	5	4	3	2	1
13	Threat of assault by player	5	4	3	2	1
14	Maintaining ideal physical condition	5	4	3	2	1
15	Personality clash with coach and/or player	5	4	3	2	1
16	Others wish you spent more time with them instead of officiating	5	4	3	2	1
17	Threat of assault by coach	5	4	3	2	1
18	Critical game to one or both teams	5	4	3	2	1

	How much did these contribute to the amount of stress you felt?	Very strong-ly	Stron-gly	Mod-erately	Mildly	Did not
19	Little recognition for officials	5	4	3	2	1
20	Being accused of bias	5	4	3	2	1
21	Threat of assault by spectator	5	4	3	2	1
22	Critical decisions during game	5	4	3	2	1
23	Lack of recognition for good games	5	4	3	2	1
24	Verbal criticism from spectators	5	4	3	2	1
25	Post game security problems	5	4	3	2	1
26	Keep up with play	5	4	3	2	1
27	Not selected for important games	5	4	3	2	1
28	Making a bad call	5	4	3	2	1
29	Dismissing or ejecting players	5	4	3	2	1
30	Maintaining concentration during strenu-ous game	5	4	3	2	1
31	Verbal criticism from player and/or coach	5	4	3	2	1
32	Competition and jealousy between officials	5	4	3	2	1
33	Personality clash with the co-official	5	4	3	2	1
34	Violence / fighting in the game	5	4	3	2	1

