

A Study to Examine the Job Competencies of Sport Facility Managers

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The purpose of this study was twofold. First, to identify the job competencies determined to be essential for upper level and first or entry level sport facility managers. Second, to examine and profile selected demographic variables related to sport facility managers. A survey instrument was developed, tested, and mailed to a total of 200 sport facility directors who were randomly selected from a national directory. A total of 108 sport facility directors responded for a 54% response rate. The top rated competencies for upper level sport facility managers included budgeting, communication skills, setting priorities, ability to delegate, decision-making, goal setting, problem solving, understanding legal issues, and personnel evaluation skills. The top rated competencies for first or entry level sport facility managers included written and oral communication skills, recognizing facility safety hazards, problem solving, decision-making, computer knowledge, time management, and risk management. Exploratory factor analysis uncovered ten key competency cluster factors for upper level management positions and seven competency cluster factors for first or entry level management positions.

INTRODUCTION

Over two hundred college or university professional preparation programs in sport management currently exist in the United States (Alsop & Fuller, 2001). These programs are offered at the graduate and/or undergraduate levels. A close examination of sport management programs listed on the North American Society for Sport Management web site (<http://www.nassm.org>) reveals that a variety of career paths have been identified by sport management programs as potential future employment settings for graduates. A number of these programs have created specialization "tracks" or "options" within the sport management major. Sport facility management is often listed as

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one of the specialization “tracks” or “options”.

Although there is recognition of the general duties and responsibilities of sport facility management professionals, no studies have looked at the specific job competencies of first or entry level and upper level sport facility management positions. Because a number of sport management professional preparation programs are identifying sport facility management as a career path for which training is being provided, it is important that sport management college curricula be designed to include the course content and competencies that are necessary to effectively educate and train future sport facility managers.

As one looks across the landscape of the United States, it is clear that sport facilities are numerous and varied. In many communities, multiple sport facilities have been constructed in order to meet the growing demand for youth sport leagues, golf and tennis centers, health and fitness clubs, municipal swimming pools, high school athletic programs, and minor league professional sport teams. For example, in Virginia Beach, Virginia, a Sportsplex was built with the hopes of attracting professional soccer teams to the Hampton Roads area. The facility not only helped to attract professional soccer teams to the region, but it added value to Virginia Beach’s bid to serve as the national training center for women’s field hockey. Sport facilities also provide the potential to attract large sporting events and/or tournaments which, in turn, attract spectators who spend money while attending the sporting events. This creates a positive economic impact for host communities (Agarwal, Yocum, & Case, 2000).

In the future, sport facility management as a career option within sport management professional preparation programs will likely become more specialized (Ammon, 1998). As new curriculum models emerge, competency based education research may provide insight into sport facility management curriculum development and course content requirements. According to Jamieson (1987), competency based education research “involves identifying competencies or composite skills in practice and then relating them to the training and education needs of students and personnel...It is by developing competencies in sport management that a foundation is established for training, education, and self-regulation of the profession” (p. 49).

A number of research methods have been used to identify competencies in various settings. For example, taxonomies, critical incidents, and checklists have been used in the past. The Delphi technique of consensus development has been another popular technique. Job analysis of practitioners through the use of competency statement ratings has received recent research attention. Jamieson (1987) writes that, “Regardless of the method used for listing composite skill requirements for a given field, there is increased interest in delineating actual job or knowledge requirements and integrating them into educational and training objectives, thus linking theory and practice” (p. 49).

Although no studies have been completed that examine the job competencies of first or entry level and upper level sport facility managers, a limited number of competency studies have been completed in other sport related areas. For example, Jamieson (1980) studied entry, middle, and top level competencies of recreational sport program personnel in municipal, educational, and military settings. Risk management and safety concerns were two of the top competencies identified at the entry level. Decision-making and communication skills were the two top rated competencies at the middle management level and decision-making, budgeting, and communication skills were the highest rated competencies at the top or upper management level.

In a multi-faceted study of sport management curricula, Ulrich and Parkhouse (1982)

examined the attitudes of sport management alumni toward the perceived relevance of coursework content areas. The highest rated coursework content areas included the internship experience, public relations, communications, administration of athletics, management principles, current issues in sport, and facility management.

Williams and Miller (1983) investigated the job responsibilities of athletic directors at the collegiate level. They reported that a common set of "core" competencies could be identified regardless of the division level within the NCAA or AIAW. These "core" competencies included skills in communications, business, and public relations. In another study, Bretting (1983) examined the job competencies of directors of sport information, sport marketing, and sport business management at various levels. A competency questionnaire was developed and tested for use in the study. Findings revealed that a group of common "core" competencies could be identified, along with a set of "specific" job setting competencies. The "core" competencies included leadership, supervision, decision-making, budgeting, communications, and problem-solving skills.

In two recreational sport studies, Jennings (1984) and Ellard (1984) utilized versions of the Jamieson (1980) competency questionnaire. Jennings (1984) examined the competencies needed for entry level recreational sports personnel. He compared competency ratings identified by recreational sport practitioners with the competency ratings of chairpersons from both physical education and recreation departments. He found that recreational sport practitioners rated safety/accident prevention, sport science, philosophical foundations, officiating, and programming techniques as the top five and most important competencies. Chairpersons of physical education departments identified philosophical foundations, safety/accident prevention, communications, governance, and officiating as being the five top and most important competencies. Chairpersons of recreation departments rated philosophical foundations, safety/accident prevention, communications, governance, and management techniques as being among the most important competencies for entry level recreational sports personnel. In a related study, Ellard (1984) examined job competencies in commercial recreational sport settings. Managers and assistant managers participated in the study. Five competency clusters were identified which included business procedures, resource management, personnel management, planning and evaluation, and programming techniques.

Hatfield, Wrenn, and Bretting (1987) compared and contrasted the job competencies and responsibilities of intercollegiate athletic directors and professional sport general managers. A total of fifty job competencies were grouped into six major categories. The six categories included marketing, labor relations, financial management, administration, public relations, and personnel evaluation. The athletic directors identified marketing, financial management, administration, and public relations as being most important and the general managers rated labor relations and personnel evaluation as being most important. In a competency study involving sport and athletic clubs of varying sizes, Lambrecht (1987) found that communications, customer relations, decision-making, and supervision skills were among the highest rated competencies.

Chen (1993) studied the job competencies, course content requirements, and academic backgrounds of commercial sport managers in Taiwan. A questionnaire was developed that listed 33 job competencies and 30 course content areas. Results of the study revealed that first aid and safety procedures, communication skills, employee motivation, budget preparation, and the handling of complaints were the top rated competencies. The top five rated coursework content areas included communication skills, business management, facility design, financing, and facilities and equipment management.

Toh (1997) developed a competency instrument that was sent to 1,334 sport managers located in private athletic clubs, YMCAs, and park and recreation departments. Factor analysis revealed six factors that explained 51.4 percent of the total variance. The six factors included governance, sport foundations, budgeting, risk management, computer skills, and communications. Kim (1997) examined the competencies of sport center managers located in Korea. The researcher used a version of the Jamieson (1980) competency instrument. The questionnaire was sent to a sample of 1,575 sport center managers. Job competencies at the entry, mid-level, and top-level were analyzed. The top rated job competencies included risk management, understanding the nature of sport, effective communication skills, leadership development, and the ability to locate adequate funding sources.

In one of the few competency studies involving college recreation and sport facilities, Skipper (1990) researched the job competencies of college recreation and sport facility managers. A modification of the Jamieson (1980) survey instrument was used in the study. The results showed that knowledge of event operations management, facility energy conservation, and concession operations were considered to be the top job competency areas identified by college recreation and sport facility managers. Li, Song, and Hancock (1999) used the Delphi technique in their research efforts aimed at forecasting trends in the public assembly facility industry. A panel of twenty-nine managers or executives of sport arenas and/or stadiums participated in the study. When attempting to identify facility management job competencies that would be considered important over the next two decades, the respondents identified planning, communications, program assessment, and operational management skills as being important.

The purpose of this study was to examine the job competencies of first or entry level and upper level sport facility managers with the hopes of enhancing future sport management curriculum development in the area of sport facility management.

METHODS

Subjects

Two hundred sport facility directors were randomly selected from a national directory of sport facility managers. College or university sport facility managers were not included in the sample. A study completed by Skipper (1990) previously examined the college or university setting.

Procedures

The subjects were sent a questionnaire that listed 100 competency statements. They were asked to rate each competency statement on a scale that ranged from a low score of 1 (unnecessary) to 2 (questionable) to 3 (average importance) to 4 (very important) to a high score of 5 (essential). Respondents were asked to rate each competency statement for first or entry level sport facility management positions and upper level management positions.

Bridges and Roquemore (2000) note that first or entry level managers are often called "first-line" managers. They possess technical and human-personal skills. Technical skills include "knowledge of operations, activities, processes, inventory, and the mechanics of performing job tasks" (Bridges and Roquemore 2000, p. 35). Human-personal skills involve supervising, interacting, and communicating effectively with employees. Effective upper or top level managers, according to Bridges and Roquemore (2000), must possess conceptual skills. Strategic planning, decision-making, leadership,

and coordinating are major management activities at the upper management level. They should be able to see the "big picture" and understand how each part of the organization relates to the whole.

Measures

The 100 competency statements were developed after an extensive review of the research literature (Jamieson, 1980; Ulrich & Parkhouse, 1982; Bretting, 1983; Williams & Miller, 1983; Ellard, 1984; Jennings, 1984; Hatfield, Wrenn, & Bretting; Lambrecht, 1987; Skipper, 1990) and recommendations from a jury of sport facility management experts. A pilot instrument was developed and tested with 100 competency statements being retained for the final instrument. In addition, a series of questions were included to obtain selected demographic information from each respondent.

Statistical Analysis

SAS 8.00 System for Windows was used for all statistical analyses (SAS Institute Inc., Cary, NC 27513, USA, 1999). Descriptive statistics (x+SE, 95%CI, percentages) were assessed for selected demographic variables. Mean scores for all job competency listings were calculated and then ranked for each management level. Differences between first or entry level and upper-level rankings for each of the 100 management competencies were determined by dependent t-tests. Exploratory factor analysis was employed to uncover the structure of the data set and to reduce the 100 competencies to key factors for each management level. The number of retained factors at each management level was determined by the Cattell scree test plot criterion. Varimax rotation generated orthogonal factors which were identified on the basis of the competency loadings with 0.3 as a minimum factor loading. An independent panel of facility management experts examined the factor loadings and corroborated the factor names based on face validity. Each factor received a weighted score on the original 1 to 5 Likert-type scale which was calculated as follows: Σ of competency values within the factor divided by the number of competencies loading on the factor. For each management level, weighted factor scores were analyzed by MANOVA. The criterion for statistical significance was set at the 0.05 level with a Bonferroni adjustment for post-hoc factor score comparisons.

RESULTS

The survey instrument was returned by 108 facility directors for a 54% response rate. Demographic characteristics of the respondents are presented in Tables 1 and 2. Briefly, the typical respondent was a 44-year-old male earning over \$70,000 per year with a baccalaureate degree in business and 15 years of facility management experience. He directs the operation of a multi-purpose facility that is best described as an enclosed arena. Over 70% of the respondents indicated that their facility seats at least 8,000 spectators.

As mentioned previously, the 100 job competencies were rated by the 108 sport facility directors on a Likert-type scale ranging from 1 (unnecessary) to 5 (essential). For the upper-level management positions, budgeting, communication skills, setting priorities, ability to delegate, decision-making, goal setting, problem solving, liability and negligence issues, and evaluation skills received the highest ratings (Table 3). Written and oral communication skills, recognizing facility safety hazards, problem solving, decision making, computer knowledge, time management, and risk management skills

were the top rated job competencies for the lower level management positions (Table 4).

TABLE 1
Characteristics of facility managers - continuous demographic variables

Variable	\bar{x}	Median	SE	95%CI
Age (yrs)	44.7	44.5	0.8	43,46
Education (total yrs)	16.3	16.0	0.2	16.0,16.6
Facility management experience (yrs)	14.7	15.0	0.7	13,16
Years in present position	7.3	6.3	0.6	6.2,8.4

TABLE 2
Characteristics of facility managers - categorical demographic variables

Variable	Category	n	%
Sex	Male	88	83.8
	Female	17	16.2
Job Title	Director	52	48.1
	General Manager	45	41.7
	President	3	2.8
	Vice-President	8	7.4
Degree	AA/AS	8	8.7
	BA/BS	59	64.1
	MA/MS	18	19.6
	MBA	5	5.4
Undergraduate Major	JD	2	2.2
	Business	25	27.8
	Administration	9	10.0
	Education	6	6.7
	Marketing	6	6.7
	Accounting	5	5.6
	Other (19)	39	43.2
Salary	<\$30,000	2	1.9
	\$30,000-\$39,999	11	10.3
	\$40,000-\$49,999	13	12.2
	\$50,000-\$59,999	19	17.8
	\$60,000-\$69,999	17	15.9
	≥ \$70,000	45	42.1
Multi-purpose Facility	Yes	97	98.0
	No	2	2.0

TABLE 3
Rankings of top competency statements for upper level sport facility management positions

Competency statement	Rank	Score
*Prepares and defends a budget proposal	1	4.91
*Maintains effective communications with staff	2	4.79
*Demonstrates effective written and oral communication skills	3	4.75
*Develops priorities for facility usage	4	4.66
*Demonstrates ability to effectively delegate duties and responsibilities	5	4.66
*Utilizes effective decision-making skills	6	4.64
*Plans and implements short and long term organizational goals and objectives	7	4.63
*Displays effective problem-solving skills	8	4.60
*Comprehends various liability and negligence laws for the management of sport facilities	9	4.60
*Evaluates personnel for appointment, promotion, leave and termination	10	4.59

TABLE 4
Rankings of top competency statements for first or entry level sport facility management positions

Competency statement	Rank	Score
*Demonstrates effective written and oral communication skills	1	4.23
*Recognizes facility safety hazards which may cause injury	2	4.21
*Displays effective problem solving skills	3	4.16
*Maintains effective communications with staff	4	4.10
*Utilizes effective decision-making skills	5	4.08
*Knows basic computer terminology	6	3.96
*Utilizes time management techniques	7	3.90
*Conducts routine inspections of facility and equipment	8	3.78
*Demonstrates ability to use at least one word processing computer program	9	3.76
*Maintains effective communications with patrons and clients	10	3.75

The cohort considered 88 of the 100 management competencies to be of greater importance for upper-level managers compared to first or entry level managers ($p < 0.05$). However, six competencies (conducting facility inspections; understanding computer terminology; computer hardware/software; word processing; equipment maintenance; safety) were considered to be similarly important at both management levels (Table 5). Maintenance of equipment, recording concession inventory, oversight of custodial care, supervision of set-up and break-down, conducting facility tours, and CPR/first aid certification were considered more important ($p < 0.05$) for first or entry level managers (Table 6).

Exploratory factor analysis uncovered seven key competency cluster factors among

TABLE 5
Shared competencies by first (entry) level and upper-level sport facility managers

Competency	Upper $\bar{x} \pm SD$	Entry $\bar{x} \pm SD$	n	Difference $\bar{x} \pm SD$	95%CI of Difference
Conducts routine facility inspection	3.8 \pm 0.9	3.8 \pm 1.0	107	0.06 \pm 1.15	-0.16,0.28
Understands computer terminology	3.9 \pm 0.9	3.9 \pm 0.8	106	-0.07 \pm 0.89	-0.24,0.10
Ensures safety through equipment maintenance	3.6 \pm 1.0	3.6 \pm 1.1	104	-0.05 \pm 1.38	-0.32,0.22
Knows computer hard/software difference	3.2 \pm 0.8	3.1 \pm 0.9	106	0.13 \pm 0.98	-0.06,0.32
Able to use word processing programs	3.9 \pm 0.9	3.8 \pm 1.0	105	0.11 \pm 0.81	-0.04,0.27
Develops preventive maintenance sched.	3.4 \pm 0.9	3.3 \pm 1.1	105	0.14 \pm 1.35	-0.12,0.40

first or entry level management positions. These factors accounted for 58 percent of the common variance. The seven factors, ranked from highest to lowest by mean scores, included computer/communications, facility management, employee relations, operations, general management, financial planning, and sales/marketing. As shown in Figure 1, significant differences were observed between the weighted computer/communications, facility management, and employee relations factor scores ($p < 0.05$), followed by similar ($p > 0.05$) scores for operations, general management, and financial planning ($p > 0.05$). The lowest weighted factor score was sales/marketing, which was significantly

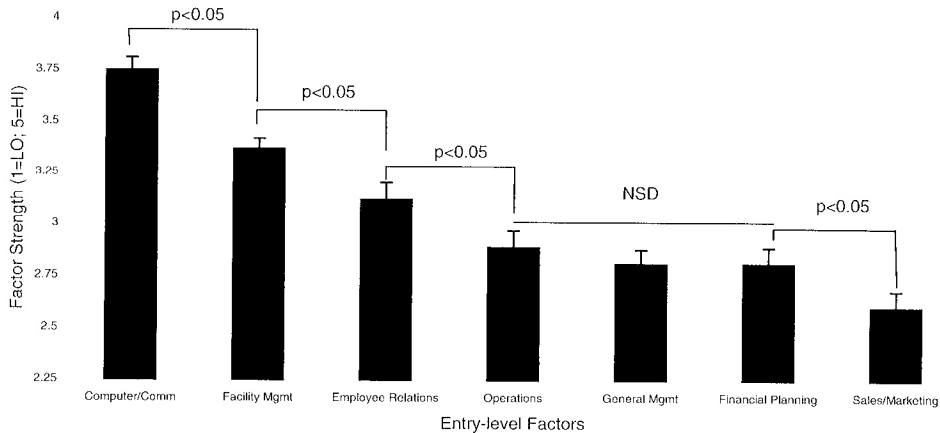
lower than financial planning ($p < 0.05$).

TABLE 6
Competencies which are more important for first or entry level facility managers

Competency	Upper $\bar{x} \pm SD$	Entry $\bar{x} \pm SD$	n	Difference $\bar{x} \pm SD$	95%CI of Difference
Maintains equipment inventory	2.8±1.0	3.5±1.1	106	-0.73±1.43*	-0.99,-0.46
Oversees custodial care	3.1±1.0	3.5±1.1	104	-0.32±1.44*	-0.59,-0.04
CPR/First Aid certification	2.8±1.1	3.2±1.2	106	-0.40±0.90*	-0.57,-0.22
Supervises setup and takedown	2.9±1.0	3.6±1.2	103	-0.69±1.52*	-0.99,-0.39
Conducts tours of facility	2.8±1.1	3.5±1.0	103	-0.70±1.41*	-0.97,-0.42
Maintains concession inventory	2.3±1.0	2.8±1.2	104	-0.52±1.18*	-0.75,-0.29

* $p < 0.05$, Entry > upper

FIGURE 1
Weighted Scores for entry-level management factors



Ten key factors were uncovered among upper-level management competencies (Table 7). These factors explained 52% of the common variance and are ranked from highest to lowest by mean scores as general management, employee relations, purchasing, safety/security, accounting, leadership, facility planning and construction, risk management, facility management, and sales/marketing. The highest weighted factor scores were observed for general management and employee relations ($p < 0.05$ vs. all other weighted factor scores). Purchasing and safety ($p < 0.05$ vs. employee relations) were next, followed by accounting, leadership, and facility planning and construction ($p < 0.05$ vs. safety). Similar scores were observed for risk management and facility management, with the lowest weighted score for sales/marketing ($p < 0.05$ vs. facility management).

In the *Industry Profile Survey* (1996) published by the International Association of



TABLE 7
Factor analysis of upper-level facility management competencies

Factor	Top competencies within factors	Competency Factor Loadings									
		0.78	-0.05	0.15	0.14	0.07	0.06	0.29	0.02	-0.10	0.03
Facility Management	Develops preventive maintenance	0.78	-0.05	0.15	0.14	0.07	0.06	0.29	0.02	-0.10	0.03
	Oversees custodial care	0.72	0.00	0.06	-0.04	-0.01	-0.01	0.07	0.05	0.06	0.06
	Supervises setup/breakdown	0.70	-0.11	-0.07	-0.00	0.17	-0.03	0.04	0.20	0.04	0.13
	Establishes maintenance needs	0.61	0.03	0.15	0.06	0.10	0.11	0.16	-0.05	0.24	-0.07
Employee Relations	Ensures equipment safety/maintenance	0.61	0.24	-0.15	-0.13	0.10	0.01	0.21	-0.01	0.07	0.01
	Develops employee motivation methods	0.16	0.71	0.06	0.07	0.31	0.10	0.09	0.11	-0.07	-0.02
	Effectively delegates duties	0.09	0.60	0.10	0.05	0.16	0.14	0.26	0.14	0.23	-0.03
	Implements short/long term objectives	0.04	0.58	0.45	0.07	-0.03	-0.01	-0.06	0.11	0.05	0.03
General Management	Plans for capital expenditures	0.03	0.56	0.09	0.03	0.40	0.21	-0.08	0.04	-0.03	0.08
	Effective problem-solving skills	0.22	0.54	0.26	-0.01	0.00	0.30	0.21	-0.18	0.06	0.04
	Recognizes sport program needs	-0.03	0.12	0.69	0.01	0.22	0.10	0.09	-0.04	0.00	0.05
	Establishes user rental fees	0.13	0.18	0.66	0.04	0.10	0.13	0.00	0.09	0.11	0.20
	Knows licensing/leasing issues	0.13	0.23	0.55	0.17	0.13	-0.10	-0.01	0.38	0.09	-0.13
	Plans booking procedures	0.31	0.30	0.51	0.12	0.09	0.22	0.15	0.11	0.16	0.08
	Works with diverse interest groups	0.13	0.43	0.49	0.10	0.17	0.07	0.11	0.02	0.02	-0.03
	Uses concessions pricing principles	0.05	0.11	0.21	0.68	0.06	-0.06	0.24	-0.03	0.17	0.02
	Uses concession purchasing principles	0.10	0.05	-0.04	0.64	0.16	0.20	0.11	0.15	0.10	0.05
	Knowledge of program/novelty sales	0.20	0.10	-0.06	0.53	0.16	0.10	0.08	-0.01	0.00	-0.09
Sales/Marketing	Understands survey methods	0.20	0.24	0.05	0.51	0.27	0.08	0.09	0.28	0.00	-0.16
	Understands fund raising efforts	-0.13	0.02	0.13	0.48	0.24	0.10	0.04	0.22	-0.09	-0.18
	Understands construction budget	0.04	0.25	0.24	0.16	0.74	0.06	-0.03	-0.04	-0.11	0.05
	Understands facility construction	0.21	0.00	0.31	0.07	0.60	0.19	0.07	0.08	-0.10	-0.19
Construction	Comprehends design specifications	0.10	0.14	0.20	0.17	0.55	0.21	-0.09	0.19	0.07	0.04
	Conducts facility inspection	0.27	-0.01	-0.06	0.06	0.51	-0.07	0.35	0.08	0.21	0.15
	Recognizes computer hard/software	0.30	0.10	0.01	0.22	0.42	0.02	0.09	0.21	0.11	-0.15
	Uses leadership skills	0.21	0.28	0.27	0.00	-0.01	0.68	-0.10	0.04	-0.10	0.00
Leadership	Recognizes aggression patterns	0.12	0.00	0.25	0.09	0.28	0.63	0.29	-0.01	0.16	0.11
	Understands event setup needs	0.22	0.16	0.07	0.02	0.06	0.63	0.19	0.21	0.07	-0.05
	Knows employee/labor union policies	-0.01	0.25	0.06	0.33	-0.01	0.57	0.24	0.00	-0.07	-0.07
	Understands philosophical bases	-0.05	0.18	0.11	0.09	0.51	0.56	-0.02	0.02	0.00	0.11
Safety/Security	Analyses security needs	0.25	0.08	-0.02	0.12	0.05	0.06	0.21	0.12	0.12	-0.04
	Plans spectator conduct procedures	0.28	0.07	0.09	0.04	0.07	0.12	0.59	-0.01	0.00	0.03
	Conducts needs assessment	0.11	0.12	0.33	0.16	-0.01	0.09	0.53	-0.08	-0.01	0.09

TABLE 7 (cont.)
Factor analysis of upper-level facility management competencies

Factor	Top competencies within factors	Competency Factor Loadings								
		0.26	0.09	0.10	-0.07	0.15	0.44	-0.05		
Risk Management	Communicates effectively with staff	0.33	0.24	0.03	0.02	0.12	0.42	-0.01	0.15	
	Recognizes safety hazards	0.42	0.17	0.03	0.02	0.01	0.42	0.22	-0.04	
	Develops risk management strategy	0.31	0.26	0.10	0.08	0.21	0.11	0.56	-0.07	
	Knows heating/cooling/surface needs	0.24	0.09	0.23	0.37	0.11	-0.09	0.53	0.09	
Accounting	Knows competition levels in sport	0.02	0.21	0.21	0.15	0.35	0.06	0.44	-0.09	
	Knows basic bookkeeping/accounting	0.18	0.09	0.14	0.13	0.05	0.17	-0.09	0.11	
	Office procedures for bookings	0.34	0.19	0.27	-0.06	0.26	-0.01	0.61	-0.07	
	Applies affirmative action guidelines	0.22	0.31	0.02	0.03	0.15	0.09	0.55	0.05	
Purchasing	Organizes advisory board	-0.07	0.20	0.02	0.36	0.16	0.06	-0.33	0.04	
	Involved in contracts with vendors	0.31	0.23	0.11	0.15	0.19	0.22	-0.40	-0.03	
	Authorizes purchase requisitions	0.19	0.30	-0.03	0.21	0.01	0.19	-0.17	0.43	
	Understands computer terminology	0.20	0.19	0.12	0.26	-0.03	0.25	0.24	0.40	
Common variance explained by each factor		10.81	8.01	5.30	4.83	4.37	4.02	2.99	2.74	2.28

Assembly Managers, arenas were classified by seating capacity into small, medium, and large. Small arenas were listed as have a seating capacity at or below 7,500 and medium sized arenas were listed as having a seating capacity of 7,500 to 12,500 seats. Large arenas were identified as have a seating capacity of over 12,500. The same seating capacity demarcation points were used in this study to examine the differences between upper and first or entry level factor scores and seating capacity. No significant main effects were reported for respondents who work at large or medium sized sport facilities on the factor scores at the upper and first or entry levels. However, factor scores for upper-level purchasing and safety/security tended ($p < 0.07$ and $p < 0.10$, respectively) to be higher for smaller facility managers compared to medium and larger facilities.

DISCUSSION

A review of college and university sport management professional preparation programs in the United States reveals that a number of programs have identified sport facility management as a career path or option within the sport management major. Various publications point to the expansion of sport facility management career opportunities. For example, in a recent issue of the *Sports Business Journal*, Cameron (2002) writes that the number of sport facility construction projects under way in North America "has ballooned to 70, with a total project cost of \$7.8 billion, nearly 22 percent higher than at this time last year" (p. 1). These figures do not include the hundreds of smaller sport facilities (both public and private) that are being constructed in local communities. With the completion of each new facility, it is likely that a number of sport facility management positions will be created.

Results of this study have implications for sport facility management professional preparation programs in seven ways. First, the findings indicate a need to emphasize written and oral communication skills in the training of future sport facility managers for upper and entry or first level positions. This might include providing additional writing, business communications, public speaking, public relations, media relations, and/or computer courses in sport management professional preparation curricula. It is interesting to note that the findings of this study are consistent with the results of other sport competency studies that stress the importance of developing communication skills (Jamieson, 1980; Ulrich & Parkhouse, 1982; Williams & Miller, 1983; Bretting, 1983; Jennings, 1984; Chen, 1993; Toh, 1997; Kim, 1997; Li, Song, & Hancock, 1999).

Second, the competencies identified in this study are consistent with the graduate and undergraduate program approval standards endorsed by the North American Society for Sport Management and the National Association for Sport and Physical Education (NASSM/NASPE, 2000). For instance, the NASSM/NASPE (2000) publication of program approval standards includes communication skills, risk management, fiscal management, marketing, decision-making, problem solving, computer skills, time management, planning, and personnel management in the list of standards. These standards are closely aligned with the competencies identified in this study as being important for sport facility managers.

Third, according to Bridges and Roquemore (2000), upper level managers tend to be more involved with conceptual, leadership, and strategic planning activities whereas first or entry level managers are more involved with technical, human/personal, and supervisory activities. The findings of this study tend to support the distinctions between upper level and first or entry level management position competencies. The competencies that were rated very important to essential for upper level sport facility man-

agement positions by the respondents included budget preparation, setting priorities, developing effective delegation skills, planning long and short-term goals, and personnel evaluation (Table 3). The competencies rated very important for first or entry level facility management positions included safety and security needs assessment, risk management inspections, computer applications, and time management skills (Table 4).

Six competencies were determined to be significantly ($p < 0.05$) more important for first or entry level facility management positions than upper level positions. The six competencies include the following: maintaining equipment inventory; overseeing custodial care; CPR and first aid certification; supervising facility set-up and takedown; conducting tours of the facility; and, maintaining concession inventory (Table 6). Furthermore, six additional competencies were identified as being common to both upper and first or entry level positions (Table 5). These competencies ranged from conducting routine facility inspections to developing preventive maintenance schedules. Although these competencies are common to upper and first or entry level, they may eventually have implications for middle management positions.

Fourth, exploratory factor analysis uncovered seven factors that explained 58% of the variance for first or entry level competencies and ten factors that explained 52% of the variance for upper level competencies. When the factors were ranked by mean scores derived from a 5-point Likert-type scale (1 = unnecessary to 5 = essential), computer and communication skills, facility management, and employee relations competencies were ranked the highest at the first or entry level (Figure 1) and general management, employee relations, and purchasing were the top ranked competencies at the upper level. These findings once again underscore the importance of including computer and communication competencies in courses and curriculum plans, particularly at the undergraduate level.

Fifth, factor analysis identified a number of "specific" competencies clustering around general or global factors at both the upper and first or entry levels. At the upper level (Table 7), ten general or global factors were identified that ranged from "facility management" to "employee relations" to "risk management" to "purchasing". These ten global factors were supported by at least three to five "specific" competencies for each category (Table 7). In the development of future sport facility management curricula, these "general" factors and "specific" competencies may provide a starting point for the development of graduate and undergraduate sport facility management curricula.

Sixth, the demographic data collected in this study profiled sport facility directors as being established in their career paths. This is in contrast to positions in other sport professions. For instance, in describing sport and athletic club managers, Lambrecht (1987) noted that they have "limited club experience or club managerial experience and tend to be young" (p. 127). Sport facility directors, in comparison, were described in this study as being middle aged (average age, 44.7 years) and having almost 15 years of facility management experience (Table 1).

Seventh, there were trends toward higher factor score ratings for respondents from facilities with seating capacities at or below 7,500. Trends associated with "purchasing" (0.07) and "safety/security" (0.10) were identified. An explanation for these trends may be that facility directors from smaller facilities perceive that they need to wear "several hats" within their facility while being directly involved in selected facility management responsibilities such as "purchasing" and "safety/security". The seating capacity of a facility and its relationship to perceived competencies at different management levels appears to be a research area that is worthy of further study.

REFERENCES

- Agarwal, V.B., Yocum, G.R., & Case, R.W. (2000). *The 32nd Annual Athletic Union Junior Olympic Games: An analysis of the economic impact of participants and their facilities on the Hampton Roads (Virginia) metropolitan statistical area*. Paper presentation at the Third International Sport Management Alliance Conference, Sydney, Australia.
- Alsop, W.L., & Fuller, G.C. (2001). *Directory of academic programs in sport management*. Morgantown, WV: Fitness Information Technology.
- Ammon, R. (1998). Sport event and facility management. In J. Parks, B. Zanger, & J. Quarterman (Eds.), *Contemporary sport management* (pp. 185-196). Champaign, Illinois: Human Kinetics Publishers.
- Bretting, M. (1983). *A sports management personnel competency inventory model*. Unpublished doctoral dissertation, University of Maryland.
- Bridges, F.J., & Roquemore, L.L. (2000). *Management of athletic/sport administration: Theory and practice*. Decatur, Georgia: ESM Books.
- Cameron, S. (2002). Facilities projects total \$7.8 billion. *Street & Smith's Sports Business Journal*, 4(46), 1.
- Chen, H. (1993). *Comparison of academic background and competencies of commercial sports managers in Taiwan: A basis for curriculum development in sport management (China)*. Unpublished doctoral dissertation, University of Northern Colorado.
- Daly, J. (2000). *Recreation and sport planning and design*. (2nd ed.). Champaign, Illinois: Human Kinetics Publishers.
- Ellard, A. (1984). *A competency analysis of managers of commercial recreational sport enterprises*. Unpublished doctoral dissertation, Indiana University.
- Farmer, P., Mulrooney, A., & Ammon, R. (1996). *Sport facility planning and management*. Morgantown, WV: Fitness Information Technology, Inc.
- Hatfield, B.D., Wrenn, J.P., & Bretting, M.M. (1987). Comparison of responsibilities of intercollegiate athletic directors and professional sport general managers. *Journal of Sport Management*, 1(2), 129-145.
- International Association of Auditorium Managers. (1996). *Industry Profile Survey*. Irving Texas: Author.
- Jamieson, L.M. (1980). *A competency analysis of recreational sports personnel in selected institutional settings*. Unpublished doctoral dissertation, Indiana University.
- Jamieson, L.M. (1987). Competency-based approaches to sport management. *Journal of Sport Management*, 1(1), 48-56.
- Jennings, W. (1984). *Entry level competencies for recreational sports personnel as identified by chairs of preparatory institutions*. Unpublished doctoral dissertation, North Texas State University.
- Kim, H.S. (1997). *Sport management competencies for sport centers in the Republic of Korea*. Unpublished doctoral dissertation, United States Sports Academy.
- Lambrecht, K.W. (1987). An analysis of the competencies of sports and athletic club managers. *Journal of Sport Management*, 1(2), 116-128.
- Lambrecht, K.W. (1991). A study of curricular preparation needs for sport club managers. *Journal of Sport Management*, 5(1), 47-57.

- Li, M., Song, C., & Hancock, D. (1997). The Delphi technique in labor demand forecasting: A case in the public assembly facility industry. *International Sports Journal*, 1(1), 96-107.
- National Association for Sport and Physical Education & North American Society for Sport Management (2000). *Sport management program standards and review protocol*. Oxon Hill, MD: Author.
- Olson, J.R. (1997). *Facility and equipment management for sport directors*. Champaign, IL: Human Kinetics Publishers.
- Parkhouse, B. (2001). *The management of sport: Its foundation and application*. Boston: McGraw-Hill.
- Parks, J., Zanger, B., & Quarterman, J. (1998). *Contemporary sport management*, 2nd ed., Champaign, IL: Human Kinetics Publishers.
- Sawyer, T.H. (Ed.). (1999). *Facilities planning for physical activity and sport: Guidelines for development*, (9th ed.). Dubuque, Iowa: Kendall-Hunt Publishing Company.
- Skipper, W.T. (1990). *Competencies for collegiate sports facility managers: Implications for a facility management curricular model*. Unpublished doctoral dissertation, University of Arkansas.
- Solomon, J. (2002). *An insider's guide to managing sport events*. Champaign, IL: Human Kinetics Publishers.
- Toh, K. (1997). *Constructing and validating competencies of sport managers (COSM) instrument: A model development (sports management, recreational sport)*. Unpublished doctoral dissertation, Indiana University.
- Ulrich, D., & Parkhouse, B.L. (1982). An alumni oriented approach to sport management curriculum design using performance ratings and a regression model. *Research Quarterly for Exercise and Sport*, 53(1), 64-72.
- Walker, M.L., & Stotlar, D.K. (1997). *Sport facility management*. Boston: Jones and Bartlett Publishers.
- Williams, J.M., & Miller, D.M. (1983). Intercollegiate athletic administration: Preparation patterns. *Research Quarterly for Exercise and Sport*, 54(4), 398-406.
- Zeigler, E.F., & Bowie, G.W. (1983). *Management competency development in sport and physical education*. Philadelphia, PA: Lea & Febiger.