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Recreational Sports Journal 2005, 29, 127-142 © 2005 NIRSA Foundation

### The Financial and Facility Status of Campus Recreation Programs at NIRSA Colleges and Universities

### William F. Stier, Jr., Robert C. Schneider, Steve Kampf, Greg E. Wilding, and Scott Haines

Directors of campus recreation at NIRSA colleges and universities in the US and Canada were surveyed to determine: (a) the number of schools that have built, within the preceding three years, major indoor as well as major outdoor campus recreation facilities and the number of institutions planning to do so within the next three years; (b) the usage and scheduling priorities covering all campus recreation facilities; (c) the sources of funding for the construction of these major facilities and sites; and (d) the sources of funding for operational activities for campus recreation. The data were analyzed in terms of school size, location, and whether public or private in nature. The findings revealed that 56% of the institutions surveyed had either recently built new major indoor student recreation centers or were planning to do so, within the next three years. In terms of major outdoor facilities or sites, the percentage was 41%. The majority of construction funds for indoor and outdoor facilities/sites as well as operational funds for programs and activities came from future student fees at most of the public schools. Typically, private schools had the majority of their monies for bothindoor and outdoor facilities emanating from private sources while the majority of operating costs was covered through the general fund of the institutions. The sharing of facilities continues with both physical education and with athletics; and, the directors of campus recreation, generally speaking, felt comfortable with such arrangements, even when such arrangements include having athletic and physical education activities take precedence in usage over those of campus recreation.

Key Words: funding, facilities, construction, planning, status

There has been an increase in emphasis placed on campus recreation programs and activities among the nation's colleges and universities. In addition to the greater emphasis on activities, there have also been significant increases in funding for both new campus recreation facilities and related personnel to staff and support campus recreation programs and activities. Campus recreation programs and activities, as well as the facilities that

house such activities, have certainly changed from the early years of intramurals and campus recreation offerings. In the late 1920s, the University of Michigan reportedly became the first US institution of higher education to construct a facility dedicated solely to collegiate intramural sports activity. Interestingly, that same facility is still in use today (Popke, 2001).

The last two to three decades have seen especially large minbers of campus recreation buildings constructed and/or renovated on college campuses. Davis and Shepley (2002) indicated that only in recent years have colleges begun to design and construct " . . . facilities dedicated solely to recreational sports." And, Turman and Brown (2002) suggested that it was not until the 1970s that college campus recreation programs began to evolve from the model of nominal funding with little, if any, responsibility of facility management—to the business model in which sophisticated facilities are constructed, renovated, and then managed within a financially responsible (business) mode by the office of campus recreation. This change or evolution was echoed by Young and Ross (2000) in their investigation of trends in campus recreation in which they found that today's campus recreation programs (and facilities) are now financially supported more through student activity fees rather than through an individual school's general fund, which was much more common in years past.

The result has been an explosion in the past two decades of multimilliondollar, multipurpose recreation centers designed to meet the programmatic needs of students, faculty, staff, and various institutional constituencies (Stier, 2000). The justifications for these facilities are many but they primarily center around their attractiveness to prospective students, meeting the users' physical and psychosocial needs, and generally increasing the quality of life on the college campus for those who take advantage of the programs and activities offered as part of the student recreation center or experience (Dalgarn, 2001; Haines, 2001; Lewis, Barcelona, & Jones, 2001).

Many recreation facilities have been considered both artistic and architectural showplaces. In recent years, campus recreation programs have gained a great deal of autonomy (Hallinan, 1998). The importance of having adequate campus recreation facilities [student recreation centers or complexes (SRCs)] cannot be overlooked in today's competitive marketplace (for students) in which colleges and universities find themselves. However, the negative aspect of securing facilities that are judged acceptable in meeting the needs of students lies in the enormous costs associated with planning and building such structures. Nevertheless, this obstacle is readily overcome when viewed in light of all of the benefits that such a structure can bring to the campus. For example, benefits can include a positive effect on student recruitment and retention, the ability to meet the health and fitness needs of the students and other members of the college's community, as well as reinforcing a healthy lifestyle during and after the college experience. All of these are reasons supporting the justification for expenditure of significant resources to plan, construct, and operate a state-of-the-art campus recreation facility, indoor and/or outdoor (Reisberg, 2001).

A college in Illinois with a student population of less than 1,000 is an example of an institution highly motivated to finance over \$55 million to build a state-of-the-artrecreation complex for its students, faculty, and staff. Typically, institutions are able to afford such tremendous sums of money through a combination of private funding (donors), state allocations (if a public institution), student referenda, as well as anticipated income (proceeds) from profit centers such as pro-shop sales, locker and towel rentals, sales of guest passes, and space/facility rental to both internal and external groups and organizations (Steinbach, 2000).

### A Paradigm Shift—In Some Quarters

Traditionally, student centers and campus recreation centers have been entirely separate entities, with their respective mission statements and independent programs. However, this separate but equal existence has been undergoing a gradual, but nevertheless significant shift on some campuses. As a result, a new paradigm is emerging redefining the relationships, both physical and programmatic, between student union and student recreation center (Cheng, Stier, Kim, Koshimizu, & Koozechian, 2002).

This paradigm shift revolves around a single comprehensive center/ structure designed to meet the goals and objectives of both a traditional student center as well as a traditional campus recreation center (SRC). One of the recent trends reflecting this change can be found in the design differences of new buildings, especially on smaller college and university campuses where there is an effort to integrate into a common facility the activities of both campus recreation departments and those of the student center. The advantages of such a single structure serving two "masters" seem to be greater for smaller institutions (less than 5,000 students) than for the larger schools (over 15, 000 students) according to Viklund and Damon (2002).

### Financing and Fiscal Management of Student Recreation Complexes

The cost of new student recreation centers/facilities has seemingly reached unprecedented levels in recent years. For example, a \$39 million student recreation center was authorized in 1997 for the Washington State University campus. With such big dollars being involved with these larger and more complex centers, the question of how such structures can be financed and built as well as operated and maintained becomes of paramount importance. In the case of Washington State University, the 159,155-square foot structure was made possible by a combination of factors. First, there is a mandatory \$100 per semester student fee (passed by 63% of the students in 1997). Second, additional funding, secured on an annual basis, is made possible by the marketing of various categories of memberships to non-students (faculty, staff, alumni, spouses, and the general public). Finally, additional annual income is derived from various profit centers associated with the

facility (in-house programs, stand-alone mini-businesses, etc.) coupled with outright fundraising via corporate sponsorships (Popke, 2001). Other examples include the University of Georgia, which completed a \$40 million project in 1995 and The Ohio State University where a \$139 million project was completed in the spring of 2005 (personal communication, January 31, 2005).

Student user fees form a most important cornerstone for the overall financing plan for many student recreation centers or complexes. These per-semester fees make the facilities possible by providing sizeable sources of income over a long period of time. The student fees can range from a nominal amount of \$10, \$25 to \$50 per semester (Ferris State University) to as high as \$100 (University of Michigan) or even higher (University of Miami, Ohio) (Popke, 2001). However, student fees alone typically do not provide for all of the necessary funding for the construction, maintenance, and operational costs of such facilities. Consequently, on many campuses there is still a very real need to operate the SRC as a small business, with any number of profit centers and other fundraising efforts being initiated, all generating net income to help pay for debt service and operational expenses.

### **Indoor Facilities**

NIRSA (2004) reported in a national survey of NIRSA institutions that 60% of the schools possessed a stand-alone indoor recreational facility (student recreation complex – SRC) and that 80% had a shared indoor recreational center/complex. In terms of the age of the facilities used by campus recreation, the study also revealed that since 1995 almost half of the indoor stand-alone facilities (SRCs) have been either constructed or renovated and that since 2000 nearly a quarter have been similarly built or upgraded. The study also found that 60% of the NIRSA schools had planned construction of new indoor facilities.

### **Outdoor Facilities**

In the same survey conducted by NIRSA (2004), almost two-thirds (62%) of the respondents had at least one stand-alone outdoor student recreation field complex while 68% utilized at least one shared field complex. In terms of new or recently renovated stand-alone outdoor recreational facilities, over half (52%) were new or recently renovated since 1995. Of these new or renovated facilities, 71% were new and the remaining were renovations of previously existing sites. In terms of shared facilities, almost every school (97%) had access to outdoor fields and two-thirds of the schools had fields that were lighted for campus recreation programs and activities. Almost seven out of ten (69%) of the schools surveyed revealed plans for new outdoor facilities.

### The Purpose of the Study

This national investigation of NIRSA institutions was conducted to determine the current status of campus recreation facilities (indoor and outdoor), the number of campuses that have recently constructed campus recreation facilities, and the source of funding for the construction and operation of such facilities. Specifically, directors of campus recreation were surveyed to determine: (a) the number of major indoor as well as outdoor campus recreation facilities built on individual campuses within the preceding three years; (b) usage and scheduling (priorities) of such facilities; (c) the source of funding for construction of these sites; and (d) the source of funding for operational activities for campus recreation.

The data were analyzed by the locations of the responding institutions within the six regions of NIRSA, the size of the institutions, and whether the schools were classified as public or private. This type of applied research was conducted in an effort to assist practitioners in the field to better understand how NIRSA members are coping with the trend for new and renovated facilities and the financing associated with same. Jamieson, Ross, and Swartz (1994) emphasized the need for such applied (practical) research to keep abreast of the "... dynamic changes in our field."

### Method of the Investigation

Following a review of the current literature and consultation with professionals and practitioners in the recreation field, the researchers created a survey instrument. A pilot study was conducted among selected experts in the field of campus recreation who were asked to evaluate the completed survey instrument for its suitability, readability, and content validity for this investigation. As a result, the survey was further adapted and revised in line with the recommendations of this panel of experts.

The final version was then sent to all 682 NIRSA colleges and universities in the US and Canada. The returned surveys that were completed and useable numbered 269, a 39.4% rate of return. Seventy percent of the responding institutions were private while the remaining 30% were classified as public institutions of higher education.

### The Findings of the Study

Almost half (44%) of the responding institutions were in urban locations, 28% were in rural communities and 28% were in suburbia. The smallest college had a student population of only 900 while the largest had an enrollment of 46,000. The average student population of the responding schools was 11,563. For the purposes of this study, responding institutions

were arbitrarily classified as small (5,000 or less; 32%), medium (5,001 to 15,000; 37%), and large (over 15,000; 28%).

### Recently Constructed Major Indoor Campus Recreation Facilities

Table 1 provides a snapshot of those institutions that have constructed new indoor/outdoor campus recreation facilities according to size of school, whether public or private, and location by NIRSA region. A quarter of the responding schools had constructed major indoor campus recreation facilities on their campuses within the past three years. This was almost evenly broken down by public (26%) and private (23%) schools as well as by size of the institutions—large (30%), medium (25%) and small (20%).

### Sources of Funding for New Indoor Facilities

Table 2 illustrates all six funding sources for indoor facilities according to public/private classification, by size and by location within the six NIRSA regions. Fundingfor these new (major) indoor facilities came from a variety

	New Indoor Facilities All Schools: Yes 25%	New Outdoor Facilities All Schools: Yes 16%		
Size of institution				
Large	30%	18%		
Medium	25%	20%		
Small	20%	9%		
Public	26%	17%		
Private	23%	14%		
Region I	19%	15%		
Region II	23%	29%		
Region III	117	15%		
Region IV	21 %	22%		
Region V	87	5%		
Region VI	197	15%		

# Table 1Descriptive Characteristics of Schools (Percentages)That Constructed Major New Indoor and/or Outdoor CampusRecreation Facilities within the Previous Three Years

	Sources of Funding (percent)							
	Student Government	State Coffers	Future Student Fees	Private Sources	Profit Centers	Other	N/A	
All schools	12	7	44	17	2	17	1	
Public	14	10	55	5	2	12	2	
Private	6	_	18	47	—	29	_	
Size of institution								
Large	11	5	63	5	_	16	_	
Medium	18	5	49	9	1	18		
Small	6	13	19	44	—	18	—	
Region I	_	10	50	30	_	10	_	
Region II	17	17	33	8		25		
Region III	_	_	50	—	_	50	_	
Region IV	9	_	45	27	_	19	_	
Region V	—		50	25	—	25		
Region VI	20	—	50	15	—	15	—	

Table 2Sources of a Majority of Funding for New Indoor Facilities Built Within the Previous Three Years,According to Size and Location of Institution and Whether Private or Publicly Supported

of sources. For the purposes of this study, all funding sources were categorized within six different categories of funding. The majority of monies for indoor facilities of all schools emanated from student fees (44%), followed by private funding (17%), and "other" sources (17%). Less frequent sources of funding for all schools came from student government coffers (12%), state funds (7%), and lastly, profit centers (2%). The "other" sources category included athletics, grants, capital funds, investments, current student fees, and operating budget monies.

When private schools were compared with public institutions, a distinction is noted in that public schools relied much more on student fees (55% of the responding institutions) while private institutions used private sources of funds. Interestingly, among public institutions, only 10% of the money for these new buildings came from so-called state funds.

### Future Building Plans—Indoor Facilities

Looking toward the future, respondents were asked whether they planned to construct an indoor campus recreation facility sometime within the next three years. Almost a third of the schools (31%) were planning to do so. • f those schools planning to build, slightly more than a third are in Region III. Of the private schools, 22% planned to construct a facility/site while 35% of the public institutions had similar plans. The majority source of monies required to build these new structures was expected to come from future student fees. For public schools, this percentage is 64%. For private institutions only 19% of the schools will use such fees as the major source of funding with the majority of monies coming from private sources. When all of the respondents are looked at as a group, large institutions are much more likely (87%) to count on funding from future student fees as the majority of funding than are small schools (19%). Conversely, 56% of the small schools count on monies from private sources for the majority of funds for their future building project while no large schools count on private sources for the majority of the money.

### Recently Constructed Major Outdoor Campus Recreation Facilities

Only 16% of the schools surveyed had constructed major outdoor campus recreational facilities within the previous three years. Slightly more public schools (18%) had built outdoor sites than private institutions (14%). A significantly smaller percentage of small colleges (9%) had built outdoor recreation facilities than medium (20%) and large (18%) institutions of higher education.

Financial support for the new (major) outdoor facilities/sites also came from a variety of different sources classified, although with a different proportion of monies being derived from each of the six categories of funding, in terms of where the majority of monies for the facilities came from. Future student fees (31%) was the source for the majority of monies for the purpose of building outdoor campus recreation facilities/sites during the previous three years. "Other" sources of funds (athletics, grants, capital funds, investments, current student fees, and operating budget monies) accounted for 29% of the monies used to construct such facilities. Both state sources of money and private sources tied at 17% while student government funds were the primary source of monies to fund 7% of the costs of the project.

As in the construction of indoor facilities, the majority source of funding for major outdoor sites for campus recreation differed greatly when viewed from the private school and the public school perspective. The greatest source of monies for these outdoor sites at public schools was future student fees (35%) with state funds and "other sources" (athletics, grants, capital funds, investments, current student fees, and operating budget monies) accounting for 23% each. However, for private schools, the largest single source of funding was from sources such as athletics, grants, capital funds, investments, current student fees, and operating budget monies (45%). Other funding sources included private sources (36%) and student fees (18%).

When public and private schools were compared, a distinction was noted in that public schools relied much more on student fees (35% of funds) while private institutions used private sources of funds (38% of funds). Interestingly, among public institutions, only 10% of the money for these new buildings came from so-called state funds. Table 3 provides a complete breakdown of funding sources by public/private classification, by size, and by location within the six NIRSA regions.

### Future Building Plans—Outdoor Facilities

Plans for future outdoor campus recreation facilities/sites were in place at 25% of the institutions surveyed. Similar percentages of public (26%) and private (23%) institutions were represented in this group. Over half (52%) of the institutions planning on constructing outdoor major complexes were located in NIRSA Regions I and II. For outdoorfacilities, the majority source of funds will come from future student fees in 53% of the public schools while this same percentage (53%) of the private schools anticipate that the majority of funding for their future building will come from private sources. This is similar to indoor facilities in terms of where the majority of funds will come from in paying for the facilities to be built within the next three years. It is interesting to note that for 29% of the private institutions responding, the category "other," including sources such as athletics, grants, capital funds, investments, current student fees, and operating budget monies, was the major source of funds to finance the construction of the new facility.

When the schools are viewed irrespective of their private/public status, large institutions (44%) are more than twice as likely to be building an outdoor complex than small institutions (20%) while only 15% of the medium-sized institutions indicated that they were going to be building within the next three years. Similarly, when taken as a whole, 67% of

	Sources of Funding (percent)							
	Student Government	State Coffers	Future Student Fees	Private Sources	Profit Centers	Other	N/A	
Public	10	23	35	10	_	23	_	
Private	—		17	38	—	45	—	
Size of institution								
Large	23	_	47	_	_	30	_	
Medium		_	33	28	_	22	_	
Small	_	_	_	24	_	38	—	
Region I	_		33	17	_	33	_	
Region II	8	8	51	25	_	8	_	
Region III	17		17	33	_	33	_	
Region IV		45	22	_	_	33	_	
Region V	_	_	_	50	_	50	_	
Region VI	17	_	33	_	_	50	—	

Table 3Sources of a Majority of Funding for New Outdoor Facilities According to Size, Locationof Institution, and Whether Private or Publicly Supported

the large schools will count on future student fees compared to 0% of the small schools. Further, 56% of the small schools were counting on private sources for the majority of the funding for their outdoor building projects. Only 7% of the large schools found themselves in this same position as a majority source of money.

### Sources of Financing of Campus Recreation Programs—Operational Budgets

The respondents also indicated the sources of operational funds used for campus recreation. Overall, there were five major sources of monies identified by the directors of campus recreation to support (i.e., pay for) the operational activities of campus recreation. These five sources of money for medium size institutions include: (a) general budget (43%); (b) special student fees (26%); (c) student government fees (23%); (d) various profit centers (5%); and (e) participation/user fees (3%). Table 4 indicates the sources of funds according to whether the schools were publicly or privately supported, the size of the institution, and the location of the school by NIRSA region.

### Existence of an Annual Campus Recreation Fee

Almost two-thirds (62%) of the responding schools had no campus recreation fee that is funded through the student government. More public schools (45%) than private schools (19%) had such a fee. And, in terms of size of the institutions, the larger the school the greater the likelihood of having such a fee generated through the student government's assessment of all students. Fifty-three percent of the large schools had such a fee as compared with 37% of the medium sized schools and only 21% of the small schools. With respect to whether the fee is assessed on a semester or annual basis, 60% of the schools assessed the fee on a semester basis.

### Shared Indoor/Outdoor Facilities with Other Departments

An overwhelming percentage (80%) of schools' campus recreation departments share facilities with one or more departments on campus. This percentage remains fairly constant when viewed from the perspective of public (79%) and private (83%) and in terms of size (large, 76%; medium, 78%; small, 87%). Typically, this sharing of facilities is done with athletics (72%) and/or physical education (66%). Table 5 summarizes those institutions sharing campus recreation facilities (indoor and outdoor) with other departments by public or private status and by size of institutions. In terms of priorities for the use of commonly shared indoor/outdoor facilities, both athletics and physical education (58%) have priority over campus recreation

	General budget	Participation fees	Special student fees	Student government fees	Profit centers
Public	28	4	32	31	5
Private	78	3	10	6	3
Size of institution					
Large	21	5	42	24	8
Medium	43	4	27	22	4
Small	64	2	10	23	1
Region I	56	2	22	15	5
Region II	48	2	31	17	2
Region III	38	6	32	15	9
Region IV	39	0	33	28	0
Region V	33	6	11	50	0
Region VI	26	8	24	32	10

## Table 4Sources of Funding (Percent) for Operational Costs of Campus Recreation Activitiesand Programs

in the scheduling of programs and activities. For those departments commonly sharing facilities with campus recreation, a majority of respondents (63%) were satisfied with the sharing arrangements, including priorities, involving both indoor and outdoor facilities.

### Conclusion

This study supports the findings of earlier investigations indicating that many colleges and universities are continuing to expand their indoor SRCs as well as major outdoor facilities or sites. The present study revealed that a sizeable number of institutions had either built new major indoor and outdoor SRCs or were planning to do so within the next three years. When viewed as an aggregate, over half (56%) of the institutions surveyed had either built a major indoor campus recreation facility in the previous three years and/or were planning to build such a facility in the future (within three years). With respect to major outdoor facilities or sites, the percentage was 41%.

There was no appreciable difference in the percentage of public versus private schools having built indoor facilities during the previous three-year time frame. However, when the responding institutions are viewed in terms of size, a lower percentage of small institutions had built such facilities than either medium or large institutions.

When considered as a whole, the most prevalent source of funding for indoor SRCs for the responding schools is future student fees. However, when viewed from the perspective of privately and publicly supported institutions, a greater percentage of public schools secure the majority of funds for indoor and outdoor facilities/sites from future student fees while yet a sizeable percentage of the private schools had the majority of their monies for the indoor and outdoor facilities emanating from private sources.

When viewed from the perspective of institutional size, the larger the school the more likely that future student fees would comprise the majority of funds necessary for the construction of indoor and outdoor campus recreation facilities. Private schools are more likely than public schools to have used a majority of funding for construction of both indoor and outdoor facilities from such sources as current student fees, general college fund, and the school's capital fund.

A similar pattern of reliance on student fees (special student fees as well as student government fees) can be found in public colleges and universities, in terms of the major source of financing to cover operating costs. For private institutions, their operating costs were covered overwhelmingly (78%) through the general budget. When looking at the size of the institution, a sizeable minority of small schools (33%) received the majority of operational funds from special student fees as well as student government fees.

In general, recreation fees (assessments) continue to play a major role in providing for the operating costs of institutional recreation programs and activities. Public schools as well as large institutions are more likely than

	Size of Institutions				
	Large	Medium	Small	Public	Private
Indoor Facilities Shared					
All Schools: Yes 80% WithAthletics: 72%	76%	78%	87%	79%	83%
With Physical Education: 66%	68 <b>%</b>	67%	84%	68%	80%
Satisfied with Sharing					
All Schools: Yes 63%*	66%	62%	62%	61 %	68 <b>%</b>
Outdoor Facilities Shared					
All Schools: Yes 69%	71%	63%	62%	65%	78%
WithAthletics: 60%					
With Physical Education: 47%	71%	637	62%	55%	70%
Satisfied with Sharing					
All Schools: Yes 63%*	62%	62%	62%	64%	61%

# Table 5 Percentage of Schools Where Campus Recreation Shares Indoor/Outdoor Facilities with Other Departments on Campus

\*Five schools failed to indicate size of institution

private schools and small institutions to use such fees to cover operating expenses.

As in the past, the sharing of facilities used for campus recreation with athletic and/or physical education departments continues in those situations where such departments exist. Perhaps faced with the inevitability of the situation coupled with the historical precedent for such arrangements, the directors of campus recreation remain overwhelmingly supportive of such arrangements, even in light of the fact that in a majority of institutions the offerings of physical education as well as athletics take precedence over those of campus recreation.

Directors of campus recreation as well as central administrators of colleges and universities can benefit by being aware of what other similar institutionshave done and are contemplating doing in terms of constructing new indoor and/or outdoorfacilities as well as the usage and scheduling priorities of all campus recreation facilities. Similarly, obtaining a snapshot view of the funding sources used by other institutions to finance the construction of new facilities and to cover operational costs of campus recreation programs and activities can prove to be of significant assistance in making appropriate decisions affecting the recreation program on one's own campus.

### References

- Cheng, P., Stier, W.F., Jr., Kim, C., Koshimizu, E., & Koozechian, H. (2002). The International Comparative Study on Recreational Sport Participation Model of University Students. National Conference of the North American Society for Sport Management (NASSM), Canmore, Alberta.
- Dalgarn, M.K. (2001). The role of the campus recreation center in creating a community. NIRSA Journal, 25, 66-72.
- Davis, R. W., & Shepley, M.M. (2002). Architecture for wellness: A post-occupancy evaluation of a university student recreation center. *Recreational Sports Journal*, 26, 31-40.
- Haines, D.J. (2001). Undergraduate student benefits from university recreation. NIRSA Journal, 25, 33.
- Hallinan, C.J. (1998). Dimensions of gender differentiation and centrality in the employment structure of university recreation centers. *Journal of Sport Behavior*, 21, 256-264.
- Jamieson, L.M., Ross, C.M., & Swartz, J.E. (1994). Research in recreational sports management: A content analysis approach. NIRSA Journal, 19, 12-14.
- Lewis, J.B., Barcelona, R. & Jones, T. (2001). Leisure satisfaction and quality of life: Issues for the justification of campus recreation. *NIRSA Journal*, 25, 57-64.
- National Intramural-Recreational Sports Association. (2004). Recreational sports expenditure survey. In: The Value of Recreational Sports in Higher Education. Champaign, IL: Human Kinetics.
- Popke, M. (2001, April). At a price. Athletic Business, 41-42, 44, 46, 48, 50, 52.
- Reisberg, L. (2001). Colleges replace drab gyms with sleek, playful facilities. *The Chronicle of Higher Education*, 47, A38-A39.
- Steinbach, P. (2000, August). Ground-Floor Lobbying. Athletic Business, 47-48, 50, 52, 54-56.

- Stier, W.F., Jr. (2000). Expectations of a fitness/wellness manager/professional in the 21st century. Proceedings—Aerobic Fitness & Health Association of the Republic of China, Taiwan, Taipei. Presentation made August 13, 1999 at the 8th international convention of the National Sport Council of Taiwan (Taipei City).
- Turman, J.C., & Brown, A.K. (2002). A proposed recreation field standard for institutional master planning. *Recreational Sports Journal*, 26, 31-39.
- Viklund, R.V., & Damon D.L. (2002, November). Centers of attention. Athletic Business, 119-120, 122, 124.
- Young, S.J., & Ross, C. M. (2000). Recreational sports trends for the 21st century: Results of a delphi study. *NIRSA Journal*, 24, 25-37.