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Athletes with Visual Impairments: Attributes and Sports Participation

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Abstract

The United States Association of Blind Athletes was developed to provide sports access to athletes with visual impairments through annual regional, national, and international competitions. The organization has also added to its goals: sports education, information and referral, elite training, and integration of athletes with visual impairments into mainstream sports. The results of a programmatic evaluation have lent valuable information about the attributes and sports participation of visually impaired athletes. Perhaps the most significant finding of this research is the discovery of the effect of school activities on subsequent sports participation.

Athletes with Visual Impairments: Attributes and Sports Participation

Sports activities are among the most familiar facets of life. Newspapers and nightly television newscasts focus on noteworthy aspects such as huge salaries of professional players, the eccentric behaviors of famous athletes, or the heroics of Olympians. However, sports, which Humphrey (1993) defines as "organized interactions...in competitive and/or cooperative team or individual enjoyable physical activities" (p.3) surely provide their greatest benefits to those of us who play them on a day-to-day basis. Jansma and French (1994), along with Auxter, Pyfer, and Huettig (1997) and many others describe the benefits of sports in building fitness, teaching healthy fitness habits, teaching healthy competition, developing self-esteem, building social skills and friendships, and providing pleasure.

Understanding the benefits of sports activities, educators routinely include physical education as a standard part of the elementary and secondary school curricula. However, access to physical education, which prepares us for sports participation, is not equally available to everyone, particularly to those with visual impairments (Lieberman & Houston-Wilson, 1999; Ponchillia, 1995). The lack of access to physical education in mainstream schools appears to be a function of the degree to which attention can be given to children with visual impairments in regular physical education classes, the physical education teacher's general lack of knowledge of the adaptive techniques required to include students with limited vision, and usually, the special education teacher's lack of knowledge of specific sports skills (Ponchillia, 1995).

The consequences of lack of participation are known to include poor physical fitness (Kobberling, Jankowski, & Leger, 1991; Short & Winnick, 1986; Winnick, 2000)

and limited physical skills (Craft, 1986). Craft suggested that physical education can promote the acquisition of daily living skills and orientation and mobility skills needed by students with visual impairments by helping to develop their physical fitness and psychomotor abilities. It would also appear to follow that these limitations and the lack of experience with complex sports activities would also severely limit sports participation later. Ironically, it seems that those who need to be the most fit actually have the least opportunity. Buell (1984) suggested that physical fitness deficits may be especially problematic for those with visual impairments because they experience extra demands in dealing with their environments.

The United States Association of Blind Athletes

One outlet for sports participation for individuals with visual impairments is The United States Association of Blind Athletes (USABA), which was established in 1976 (Sherrill, 1993) to provide sports access through annual regional, national, and international competition. The USABA has now broadened its activities beyond competitive opportunities to include sports education, information and referral, elite training, and integration of athletes with visual impairments into mainstream sports. Even from its early days, the USABA was seen as beneficial to athletes with visual impairments who, like individuals without disabilities, wished to have organized competitive sports opportunities. In all sports except goalball, which utilizes blindfolds for all players, athletes in USABA events compete in one of three visual categories, (a) B1-- no functional vision, (b) B2 – A visual acuity of less than 20/400 or a visual field of less than 5 degrees, and (c) B3 – visual acuity of 20/200-20/400 or a visual field from 5-20 degrees. Today, the USABA is a member organization of the International Blind Sports Association (IBSA)

which together serve as an international network of organized competitive opportunities for athletes with visual disabilities.

Obviously, the existence of organized sports opportunities is a boon to those who wish to be involved and there are likely some measurable benefits. However, little is known about USABA members or other athletes with visual impairments. In a study focusing on sports socialization among athletes, Sherrill, Pope, & Arnhold, (1986) surveyed USABA members participating in national championships and found that they had a mean age of 21.3 years, 61% were males, 64% were white, 61% had congenital visual impairment, and approximately half were educated in residential schools. Sherrill and colleagues also reported that the summer sports offered through the USABA were, in descending order of degree of participation: track, goalball, field, swimming, wrestling, power lifting, and gymnastics. They also reported that other USABA-sponsored sports were downhill slalom, and Nordic skiing.

Although the pioneering study by Sherrill et al (1986) gave us significant insight into the attributes and predictors of sports socialization of athletes with visual impairments, many questions remain unanswered. Among these are: Have the athlete's attributes changed over time?, What are the athlete's reasons for joining USABA?, To what degree do USABA athletes participate in mainstream sports?, and What are the predictors of success among USABA athletes? Consequently, the purpose of this study was to describe present-day USABA athletes, to identify their level of participation in athletics, and to determine the predictors of athletic success in USABA athletes.

Method

This study was conducted as part of a USABA program evaluation, which utilized a

telephone survey to gather athlete perceptions. This paper does not contain the evaluation data.

Participants

Data were gathered from 159 randomly selected athlete members of the USABA. While the organization's membership includes athlete members, as well as non-athlete members, such as coaches and other volunteers, this study was limited to those who were current members with athlete status. The participants represented a sample of more than 25% of all USABA athletes and represented all three vision categories.

Instrument

A 54-item questionnaire was developed for the USABA program evaluation, which addressed four topic areas, including (a) the personal attributes of the respondents, such as age, gender, degree of vision, and ethnicity; (b) the respondents' background information, including education and the nature of past sports experiences; (c) the respondents' opinions regarding USABA's overall effectiveness as an organization; and (d) the athletes' opinions regarding competition, sports, and winning.

Procedure

A telephone survey which utilizes a computer-based telephone data gathering system was conducted. Following standard interviewer training and a pre-test sample, interviews were conducted on three weekday evenings and one Saturday. An attempt was made to call everyone on the USABA athlete membership list.

Validity, Reliability, and Data Analysis

Prior to the survey, an eight-member panel of USABA athletes, which was composed of members from a range of ethnic, gender, and age backgrounds, was

selected to validate the content of the instrument. They responded to the items on the instrument by telephone just as the participants would. Each individual was asked to respond in one of the following ways: (a) accept the item as written, (b) delete the item, or (c) make changes to the item. Whenever reviewers indicated change was needed, they were asked to suggest alternate wording. In addition, a high degree of reliability was established using a randomly selected 30-member pre-test sample. Data were tabulated as frequencies and analyzed using cross tabulations and chi square statistics.

Results

Personal Descriptors

Sixty four percent of the USABA members polled were male. Their average age was 25.4 years. Nearly one-quarter (23.9%) were under the age of 15 and another 30.8% were between 16 and 28 years of age. Most members were white/non-Hispanic (67.3%) while the bulk of the remaining members included: 19% black, 3.5% Native American, and 7.7% Hispanic.

Vision Descriptors

Nearly 75% of the respondents reported an early onset of visual impairment, with 55% being affected at birth and another 19% before age 12. Degree of visual impairment among respondents was nearly evenly distributed among the USABA visual categories (37% in B1, 27% in B2, 36% in B3).

Education Descriptors

The majority of the group either had not yet completed a secondary level education (47.8%) or had completed at least some post-secondary training or education (44.7%). A strong majority of members received their education either fully in the

mainstream (58%) or mostly in the mainstream (19.1%) while only 10.2% received their education entirely in a residential school setting.

Physical Education and Sports Descriptors

A majority of the athletes reported that they were included in school physical education (65.7%), while nearly 10% (9.8%) were never enrolled. In addition to a high level of participation in physical education, many athlete members also said they played school or college sports (61.6%), and that they had participated in sporting events open to the public (67.7%). The athletes also reported that they were still active in sports. They spent an average of 12.9 hours per week practicing their sport. However the median was 5 hours and the standard deviation was 23.1 hours per week, which indicates that the median is probably a more reliable indicator of practice.

The members also reported that they had individually finished, or belonged to a team that had finished in the top three places of a USABA event (59.6%). Many had attended a USABA training camp or competed on a USABA international team as well (57.4%). Not all member athletes were interested in elite sports, since their answers about purpose for belonging to the USABA were equally divided among (a) to gain access to recreation activities and social interaction with others, (b) to gain access to competitive sports activities, and (c) to become an elite athlete at the international level.

Attitude and Belief Descriptors

A large number of respondents indicated that they felt sharing experiences is more important than winning (93%), although almost half (47%) felt winning is the object of competition. Many reported that they concentrate on improving their personal best rather than winning (92%), but 94% responded that they like to test their athletic abilities against

others. Finally, when asked questions related to their perceptions about the reasons for winning or losing, 88% of the participants agreed that winning was not just a matter of luck and 58% reported that they thought that losing was due to their own shortcomings.

Factors Affecting Participation in Sports

Those who received physical education in junior high or high school were more likely to participate in school or college sports than those who did not ($X=20$, $p<0.0001$). Sixty-nine percent of the group receiving physical education in school played on sports teams in school or college, while only 20% of the group who had reported being left out of their physical education classes did so. Similarly, 75% of those who played on school or college sports teams later participated in events open to the general public, while only 40% of the group that never played in school competed against sighted athletes. In nearly the same vein, having participated in high school or college sports appears to predict participation in USABA track programs ($X=7.3$, $p<.03$). Among those who had played sports in school, approximately 50% were in USABA track programs, but only 25% of those with no school sports experience participated in USABA track.

Factors affecting athlete's attitudes

The athletes who were the highest performers in USABA, as demonstrated by their participation in international competitions or elite training camps, were less likely than the others to feel that winning is a matter of luck ($X=7.8$, $p<0.04$). Approximately 80% of the training camp athletes (elite athletes) disagreed with the statement: "Winning is a matter of luck," while 80% of the other members (non-elite athletes) agreed with it. In addition, those athletes who had placed among the top three in a USABA competition were less likely to strongly disagree with the statement: "Winning is the objective of competitive

sports” than were those who had never won a medal ($X=11.7$, $p<0.008$). Seventy-five percent of the non-winning group strongly disagreed, compared with 25% of the winning group.

Discussion and Implications for practice

The present members of USABA appear to be similar to those reported by Sherrill, et. al., (1986), since the athlete’s personal characteristics are virtually unchanged. However, the number of athletes who received residential education has apparently decreased. Sherrill and her colleagues (1986) reported that 50% of their subjects were educated in special schools. Our results show that 77% of the participants reported receiving most or all of their education in the mainstream. Only 10% of this group was educated fully in residential settings. Although Sherrill, et. al. (1986) reported no data relating to participation by athletes who are blind in mainstream activities, it has surely increased. Nearly two-thirds of the USABA athletes had been fully included in school physical education class, had been on a school sports team, and had participated in an athletic event open to the public. Surely this integration is a function of the desire for athletic participation among a group defined as athletes. It is also likely a result of mainstream education and of USABA’s recent practice of holding regional and national competitions in conjunction with mainstream sports organizations, such as U.S. Judo and others.

The responses to the items relating to sports attitudes show a great deal of maturity among the USABA members. They tend to indicate that they strongly desire competition, but about half (47%) are not win-oriented. They also indicate that they know that luck plays little role in winning. However, many feel that losing is not necessarily a

result of their own shortcomings. Since many participants play the team sport of goalball, it is possible that they feel that losing may relate to their teammates.

Perhaps the most significant finding of this research is the discovery of the effect of school activities on subsequent sports participation. Although many authors have offered opinions about the benefits of physical education, supporting data have been scarce. Our data provide strong evidence of the value of inclusion in physical education classes and benefits of school sports participation.

There are also interesting conclusions relating to the sports psychology of the group. The USABA athletes who have reached the highest levels of performance appear to realize that winning has little to do with luck, but those who have not attained those levels feel it does. Since the difference between these two groups is so striking, it appears that higher competition results in a more realistic view of the role that luck plays in winning. Perhaps this belief has been a disincentive to higher competition for some athletes. However, another reason for not competing at a higher level may be disinterest in winning. The athletes in the group that has never won a medal had strong disagreement with the statement "winning is the primary objective of competition".

In conclusion, it appears that athletes who are visually impaired are making significant strides towards integration, both in schools and in sporting events open to the public. Anecdotal evidence also supports this contention, since three USABA athletes were among those competing for inclusion in the 2000 Olympic Games in Sydney, Australia. Two judo athletes participated in the Olympic trials and one female who runs the 1500 meters qualified, competed with fully sighted Olympians, and made it to the finals. It is also our opinion that specialized training, such as that provided by

the USABA and its affiliates is a necessary part of the development of athletes with severe visual impairments. This is, of course, especially true of children in developmental stages. The implications for practice relate to the need for continued and increased emphasis on physical education inclusion for children with visual impairments. The benefits of regular physical education, sports, and fitness activities are widely accepted, yet not all individuals have regular opportunities. School administrators must recognize the necessity for including all children in physical education. Teachers should (a) become familiar with the modifications for sports inclusion (Ponchillia, 1993), (b) include students in regular physical education opportunities, and (c) assist visually impaired students in seeking out competitive opportunities rather than having students with visual impairments “just keep score”.

One program, the Sports Education Camp for Children with Visual Impairments based at Western Michigan University, has shown the value of even short term intervention to teach the basics of sports and physical education skills (Ponchillia, Ponchillia, & Benson, 1999). The camp model, used in other locations as well, was funded for dissemination in 2000 by the United States Department of Education, Office of Special Education Programs. A partnership between Western Michigan University and USABA was forged to initiate annual camps in nine new sites around the U.S. over the next three years. A total of 18 sports camps are planned to provide learning opportunities for children with visual impairments, their parents, and their teachers.

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