Children's Socialization into Sports

by Vicki Novak Johnson

Introduction

The status of children's fitness in this country has received increasing scrutiny during recent years by health science researchers, physical educators, public health officials and medical professionals. Evidence from several studies demonstrates a surprisingly high degree of physical inactivity among children and adolescents, with potentially serious health consequences.

Significant numbers of youngsters are not sufficiently physically active for maintaining cardiorespiratory fitness, according to the second National Children and Youth Fitness Study.[1] Many children have at least one risk factor for developing coronary heart disease as adults; namely, hypertension, elevated blood lipids and/or obesity.[2,3] The latter appears to be a significant problem. The Health and Nutrition Examination Surveys (HANES) have documented an increased prevalence of childhood obesity during the past two decades.[4]

Does a physically active lifestyle have a significant impact on a child's health? Although more research is needed to provide definitive information concerning the long-term impact, a growing body of evidence indicates that regular physical activity has specific positive effects on a child's physical health, heart disease risk factors and psychosocial well-being. These findings provide support and rationale for increasing our efforts to engage more children in physical activities and sports.

Dr. Carl Gabbard, director of the Child Movement Laboratory, and Dr. Steve Crouse, director of the Physiology and Conditioning Laboratory, both at Texas A&M, have identified several specific health benefits resulting from regular physical activity for children.[5] As has been well documented for adults, vigorous aerobic activity improves the cardiovascular system by increasing heart muscle strength, lowering resting heart rate, improving circulation and decreasing resting blood pressure in hypertensive individuals.

A variety of aerobic and strengthening exercises and sports have positive effects on body mass by reducing body fat, building greater lean body tissue and increasing strength. Several sports and exercises improve flexibility and consequently can decrease neuromuscular tension and reduce the risk of muscle injury. Regular participation in exercise, recreational and organized sports can contribute to reducing psychological stress.

The Melpomene Institute Study

The purpose of the Melpomene study, begun in 1986, was to determine the factors which motivate children to become and/or stay active.

Melpomene's study is documenting the physical activity patterns of children and mothers and various behavioral, social and institutional influences which may be critical to children's participation in exercise and sports. This year we plan to update our analysis of completed surveys and to conduct a follow-up survey of mothers of children aged one to 18 years.

Telephone interviews and mail surveys of parents nationwide have provided valuable information about the process of sports socialization. In addition, some of the children have been interviewed by telephone to ascertain their positive and negative feelings and experiences related to sports and physical activities. Reports on these surveys have been published in recent issues of the Melpomene Journal.

The most recent questionnaires from the 1987-88 mail survey have been added to the analysis, completing results on 95 women. The surveyed women have a total of 185 children (93 girls and 92 boys). Of these, 147 have been involved in at least one physical activity. Seventy-three of these children are girls and 74 are boys.

Our research supports findings from other studies of children's physical activity patterns that indicate family, school and community factors contribute significantly to the degree of children's participation in physical activities and sports. Parental physical activity patterns and the time parents spend with their children in physically active pursuits were two of the most influential factors.

On the basis of detailed data on both maternal and children's physical activity patterns during the year prior to survey completion, we calculated physical activity

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levels for both groups. To determine how strongly the mothers' and children's levels were related, a Chi-square test of association between these two variables was made. The test demonstrated a statistically significant relationship. (See Table 1.) Children whose mothers were more physically active have higher average physical activity levels.

Detailed summaries of the specific physical activities and sports in which these children participated, as well as the factors which most influenced their levels of participation, were published in the Spring 1988 issue of *The Melpomene Report*. The 1987-88 survey also obtained maternal reports on their children's physical education programs. Those results were reported in the Fall 1988 *Melpomene Journal*. Since that time, additional surveys have been received and the remainder of this report focuses on the topic of school physical education.

TABLE 1: CHI-SQUARE TEST OF ASSOCIATION FOR PHYSICAL ACTIVITY LEVEL RELATIONSHIP

MOTHERS' PHYSICAL ACTIVITY LEVELS	CHILDREN'S PHYSICAL ACTIVITY LEVELS 1	2	3	4	5	
5	0 (0.31)	1 (4.55)	6 (6.91)	5 (5.97)	11 (5.34)	23
4	1 (0.57)	7 (8.29)	13 (12.58)	8 (10.87)	13 (9.72)	42
3	1 (0.68)	9 (9.86)	15 (14.96)	18 (12.92)	7 (11.56)	50
2	0 (0.29)	6 (4.15)	6 (6.29)	6 (5.43)	3 (4.86)	21
1	0 (0.15)	6 (2.18)	4 (3.30)	1 (2.85)	0 (2.55)	11
	2	29	44	38	34	147 Total

2/1/89 Analysis

Key: Activity Levels
1. Not Very Active
2. Somewhat Active
3. Moderately Active
4. Very Active
5. Exceptionally Active

$X^2 = \sum (f-F)^2 / F$ where f = observed frequency, F = expected frequency

$X^2 = 28.44$ with 16 degrees freedom

p-value of statistical significance: $.05 > p > .025$*

*at $X^2 = 28.85$, $p = .025$, (d.f. = 16)

Daycare and Preschool Physical Activity Programs

Mothers surveyed by Melpomene in late 1987 and early 1988 had a combined total of 88 children enrolled in daycare or preschool. Eighty of these children attended centers offering regular physical activity programs. Of these, 63 children participated "most of the time" in the physical activities offered; 12 participated "sometimes" and one did not participate. (See Table 2.)

TABLE 2: PROFILE OF DAYCARE & PRESCHOOL PHYSICAL ACTIVITY PROGRAMS

Number of children attending daycare/preschool at survey time: 88
Number of children whose daycare/preschool offers regular physical activity programs: 80

	Scale:	1	2	3	Average
n=76*	Frequency of child's participation in program	never 1	sometimes 12	most of the time 63	2.8
n=76*	Degree child enjoys physical activities offered	not very much 0	somewhat 5	very much 71	2.9
N=75*	Extent mother is satisfied w/physical activity program	not at all 1	somewhat 20	very much 54	2.7

*Remainder of respondents stated they had not given this question much thought.

The respondents were also asked how much their children enjoyed these activities. The vast majority (89%) enjoyed their center's physical activities very much. Table 2 shows the remaining breakdown. The third factor surveyed was the level of maternal satisfaction with the physical activity programs. In 54 cases (68%), mothers were very satisfied and, in 20 cases (25%), mothers were only somewhat satisfied with the programs. One respondent was not at all satisfied.

Several suggestions for improving daycare and preschool physical activity programs were made by the mothers who participated in the survey. Most frequently, mothers suggested the programs should provide a greater variety of physical activities, should offer more activities for physical development and motor skills and should teach the benefits of exercise, stretching and strengthening. The mothers suggested that programs should also emphasize cooperation in play and organized activities as a foundation for learning good sportsmanship. Finally, the mothers believed the centers should provide more opportunity for parental input and involvement.

Elementary and Junior High School Physical Education Programs

Sixty-nine children in the survey were enrolled in elementary school or junior high (66 and three, respectively). Sixty-one (88%) of the children attended a school providing a physical education program for that child's grade. The Melpomene survey focused on the types of activities offered in the physical education curricula and the extent of children's participation in these activities, as known by their mothers.

In light of educators' and health professionals' concerns that many physical education programs are not adequately designed to teach and enhance health-related physical fitness skills, it is interesting to note that a significant number of children in this survey were not participating in lifetime or aerobic activities. According to the mothers' reports, this is primarily due to the lack of such activities in the P.E. programs. When lifetime or aerobic activities are offered, there is a high rate of participation. (See Tables 3 and 4). It may be, however, that parents are not adequately informed about the specific P.E. activities

TABLE 3: PROFILE OF SCHOOL PHYSICAL EDUCATION PROGRAMS

Number of children attending school at survey time: 69
(66 in elementary school; 3 in junior high school)
Number of children whose school offers a Physical Education program for that child's grade: 61*

Physical Education Program Activity (Descriptions below)	Number of children for whom the activity was: Not Available	Unknown**	Available
Lifetime Activities	32	12	17
Sports Skills Training	7	6	47
Aerobic Activities	30	11	20
Periodic Skills Tests	3	7	51
Extracurricular Sports	22	13	26
Coaching	28	28	5

* 5 = P.E. not offered; 3 = data not reported.

** Respondents did not know whether activity was available.

Program Activity Descriptions

Lifetime Activities/Sports: Those such as swimming or tennis which may be engaged in throughout the lifespan.

Sports Skills Training: Instruction in specific sports.

Aerobic Activities: Those which raise heartrate and are performed at least 3 times per week for at least 20 minutes per session.

Periodic Skills Tests: Such as sprints, sit-ups, etc.

Extracurricular Sports: After-school teams, practice.

Coaching: Team or individual instruction.

and how they contribute to health-related physical fitness. One of the surveys planned by Melpomene will be designed for physical education specialists in order to obtain more accurate data on P.E. program content, objectives and results.

The P.E. activities offered most frequently to the children in this survey were specific sports skills training and periodic skills tests. Approximately one-half of the children had access to extracurricular sports programs. As for team coaching or individual sports instruction, in most cases parents reported these activities were not available or they did not know whether the school offered them.

Seven aspects of physical education programs were selected for this survey to obtain a preliminary impression of maternal satisfaction with the secondary school P.E. programs. Ninety-eight percent of the respondents were either very satisfied or somewhat satisfied with the competency of the P.E. teachers or specialists.

The second aspect with which mothers were most satisfied was the length of P.E. classes (96% were very or somewhat satisfied). Mothers were also satisfied on the whole with the number of weekly P.E. classes and with the variety of sports and other physical activities offered. Only 72% were either very or somewhat satisfied with the priority the school places on physical education. There was also significant dissatisfaction with extracurricular sports programs. Parents were least satisfied with the opportunities for parental input in their children's P.E. programs. (See Table 5.)

TABLE 4: SCHOOLCHILDREN'S PARTICIPATION IN AVAILABLE PHYSICAL EDUCATION PROGRAM ACTIVITIES

PROGRAM ACTIVITY (Numbers of children for whom that program activity is available are in parentheses)	Never	Sometimes	Most of the Time	Not Known*	Average	Percent Rate**
Lifetime Activities (17)	0	8	9	0	2.5	100%
Sports Training (47)	0	21	21	5	2.5	90%
Aerobic Activities (20)	0	12	8	0	2.5	100%
Skills Tests (51)	2	31	16	2	2.3	92%
Extracurricular (26)	5	8	8	5	2.1	62%
Coaching (5)	1	2	2	0	2.2	***

* Respondents did not know whether their children participated in the activity.

** Rate of participating: Calculated by adding known participation (categories 2 & 3) and dividing sum by total number of children for whom activity was available. Example: Skills Tests rate = (31+16)/51 = .92.

*** Known availability too small for meaningful rate.

As with daycare programs, mothers were asked to identify ways to improve secondary school physical education programs. Respondents suggested that schools offer more lifetime physical activities and place greater emphasis on aerobics and physical fitness. Other suggestions included emphasizing self-competition rather than interpersonal competition, rewarding effort regardless of skill level and promoting greater non-sexist emphasis in all activities.

Parents said schools should offer more activities for the kindergarten level, expand gymnastics and creative movement activities and include instruction on exercise benefits. An important recommendation voiced by some mothers was that schools should ensure that teachers and coaches are trained in and use up-to-date instruction in exercise effectiveness, safety and injury prevention.

Discussion

Many schools and physical education specialists have revised their objectives and implemented program changes in recent years to more effectively improve children's motor skills, physical fitness skills and status, knowledge of physical activity benefits and psychosocial skills related to building self-esteem, practicing sportsmanship, etc. However, as James Ross and Russell Pate state in their 1987 summary of the second National Children and Youth Fitness Study (NCYFS), the physical education classes, testing programs and extracurricular activities in elementary schools do not adequately meet or support lifetime fitness objectives.[1]

Melpomene Institute believes there is a critical need for a team effort among schools, parents and the community to increase children's physical activity participation and improve their health-related fitness. This need is

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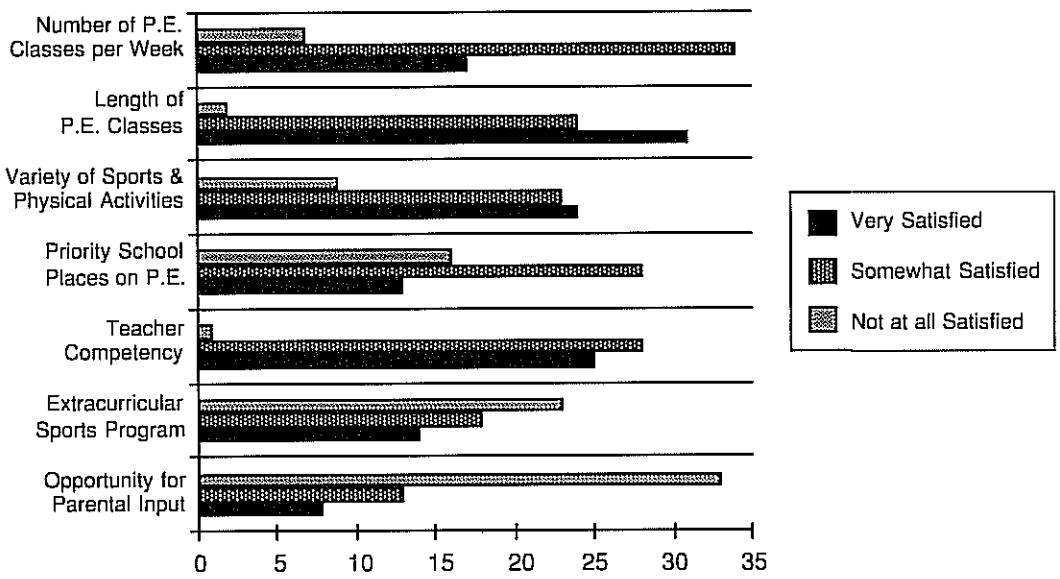
TABLE 5: MATERNAL SATISFACTION LEVELS FOR 7 ASPECTS OF THEIR CHILDREN'S SCHOOL PHYSICAL EDUCATION PROGRAMS



borne out by the recommendations of many scholars and practitioners in the field.

Charles Corbin points out that P.E. programs with activities and instruction geared toward increasing children's physical activity levels will only have a lasting impact if these programs go beyond merely teaching the "how to's" of sports skills and competition. The programs need to teach children exercise benefits, how to evaluate their own fitness and how to plan and carry out their physical activities outside of school.[6] Ralph Wilcox, an NCYFS researcher, emphasizes the importance of involving parents in physical education program design, implementation, evaluation and policy-making.[7]

Planned Study Activities

The next stage of Melpomene's longitudinal study will encompass several activities. Recruitment of study participants is currently being expanded to include mothers who are not currently physically active. A follow-up survey will be conducted focusing on maternal and children's physical activity patterns, significant factors influencing the sports socialization process and maternal perceptions of the positive and negative health and psychological consequences of children's sports participation. In addition, we will be seeking additional funding for a new survey designed to gather more comprehensive data on physical education programs from teachers and specialists at the secondary school level. O

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