WRITING CONTEST

Developing Physically Fit Lifestyles:

THE CRITICAL YEARS

I CERTIFY THAT THE FOLLOWING IS ENTIRELY MY OWN WORK.

SIGNATURE DATE

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ABSTRACT

America's children are becoming more obese and less fit. This trend may devastate our nation. To reverse this, our national health organizations recommend 30 minutes of physical activity each day, and endorse improving physical education instruction at primary and secondary schools. Neurology studies show that people develop better skills and interests if they start learning at a young age. Daily physical education from a young age would provide exercise that our children need, and increase their interest and ability to maintain lifelong physical fitness. Despite this encouragement, our schools are slow to raise physical education to priorities of traditional core subjects. Our Department of Defense Dependent Schools lag behind almost all states in meeting the 30 minutes per day objective.

THESIS

The physical fitness of America's children has declined over the past 30 years. Department of Defense Dependent Education Activity (DoDEA) schools may be contributing to this trend. Before attending the Army Management Staff College (AMSC), I documented weakness in the Physical Education (PE) program at my daughter's elementary school. The local School Advisory Council (SAC) and School Principal responded positively to my concerns and have already taken action toward strengthening this local weakness.

I am researching this issue to determine if this was only a local weakness or consistent across all of DoDEA's schools. I also want to determine if the elementary school years are a critical time to develop abilities and interest in lifelong physical fitness. My research compares DoDEA with the rest of the nation's schools in their PE performance against national standards.

My objective, if I find DoDEA-wide weakness in PE, is to recommend tangible solutions that will lead to PE programs that are equitable with state-level school programs and help reverse the negative trend in children's physical fitness.

INTRODUCTION

I chose to study this subject after noticing that the schedule for my daughter's second grade Department of Defense Dependent School (DoDDS) class showed only three sessions of PE per month. There are over 1,100 students enrolled in my daughter's school and only one certified PE instructor on the staff. Before departing for AMSC, I convinced my daughter's school principal to add one certified PE instructor to the staff for the next school year. While I applauded the positive movement, I still wanted to learn if DoDEA had baseline standards for staffing or instruction time.

This experience led me to compare my daughter's school with my own elementary school. In 1963, my second grade class went to PE three times per week. In February 1999, my elementary school (still operating) schedules only one class of PE per week for their second grade classes.

Before further researching the status of PE in our schools, I looked at the case of one of the greatest athletes that our American school system has ever produced, Mr. Michael Jordan. The entire world views Michael Jordan as being one of the greatest basketball players of all time. But even with all of his incredible athletic skills, Mr. Jordan could not learn to hit a professionally pitched baseball. In Why Michael Couldn't Hit and Other Tales of Neurology in Sports (1998), Harold L. Klawans, M.D. discusses why Mr. Jordan struggled to the worst batting average in all of AA baseball in 1994. Michael Jordan had almost no chance of success in professional baseball because he only briefly played the sport as a youth before focusing his efforts on basketball. Because of that, he never developed the neural pathways required for processing information and initiating gross and fine motor movements in a split second.

The Jordan case and other cases in Dr. Klawans' book demonstrate how critical the childhood years are for developing our lifelong physical skills. After the brain grows and matures through puberty, it becomes increasingly difficult to develop the neural pathway foundations. These neural pathways enable people to develop their coordination further for routine exercise and participating in lifetime fitness activities. If exercise is not a regular activity during primary and secondary school, there is little chance of people developing interest and comfort in exercise and fitness for the rest of their lives. Dr. Klawans' book also supports the idea that skill development in the core areas of science, math, language, reading, music, art, and computer skills are just as critical as developing physical fitness skills during the primary years.

THE CRITCAL YEARS

Over the past thirty years, fitness proponents have published more books and articles promoting regular physical activity and the benefits of being physically fit than during all of the rest of recorded history. Ironically, after the same thirty years, our Surgeon General reported in 1996 that more than twice as many young people have grown overweight and less physically fit.

Why are overweight children such a concern, and why do fitness proponents try to change the values of those who don't care about physical fitness? The National Centers for Disease Control & Prevention published the following facts in 1996:

- Obesity-related diseases cost the U.S. economy more than $100 billion annually.
- Inactivity and poor diet cause at least 300,000 American deaths per year.
- Only tobacco use causes more preventable deaths than obesity.

The Surgeon General's report also shows that 60 percent of American adults are not regularly active, and that 25 percent of our adults are not active at all. Using Dr. Klawans' theories, overweight children who are not physically fit will not easily adapt to a physically active lifestyle or lose weight as they grow older. Increasing obesity in our adult population will cause total health care costs to increase. All U.S. citizens will have to shoulder part of these burdens, through higher health care premiums and taxes. This generation of overweight children has the potential to affect our health care system in the same way that the baby boom is currently threatening both Social Security and health care. In a nutshell, the population paying into the system will not provide enough funds to support the requirements put on it by the overweight and inactive population.

On the contrary, the American Medical Association proved the following benefits of physical activity in 1998:

- Decreased risk of cancer, heart disease, stroke, and overall risk of dying.

- Enhanced bone growth and calcium retention.
- Better mental state, weight management, sleep, and stress management.
- Lower medical costs, better self-image.
- Enhanced strength, endurance, cardiovascular health, and longevity.

With those facts in mind, let's focus back to the children. Dr. Klawans' book supports the idea that developing children's neural pathways for physical activities makes them more likely to be capable and interested in continuing those activities throughout their lives. Along this line, the National Association for Sport and Physical Education (NASPE) published similar philosophies in 1996. "Children do not automatically develop the skills, knowledge, attitudes, and behaviors that lead to regular and enjoyable participation in physical activity. Responsibility for instruction is vested primarily in primary and secondary school physical education programs. Children in school today will not be adults in today's world. Educators have the challenge of preparing children to live as adults in a world that has yet to be clearly defined or understood."

When I presented my concerns on the lack of PE to my daughter's SAC and principal, they countered by noting that today's youths have more opportunities for after school sports programs than the youth of 30 years ago. The following table shows the number of hours and minutes that children spend in various activities on a weekly basis, and it supports the SAC's philosophy.

A Week in the Life of a Child

	Ages 3-5		Ages 6-8		Ages 9-11		Average		**Average**
Activity	1981	1997	1981	1997	1981	1997	1981	1997	**Trend**
Art	0:33	1:05	0:28	0:45	0:23	0:56	0:27	0:56	+ 0:29
Outdoors	0:36	0:45	0:36	0:32	1:58	0:47	1:26	0:42	- 0:44
Playing	27:04	17:00	15:15	11:26	8:29	8:44	15:54	12:05	- 3:49
Reading	0:49	1:25	0:49	1:14	1:05	1:16	0:57	1:18	+ 0:21
School	11:25	20:05	24:20	33:54	26:15	33:50	21:22	29:34	+ 8:12
After School Sports	0:31	2:56	3:00	4:38	3:09	5:14	2:20	4:20	+ 2:00
Studying	0:12	0:36	0:44	2:03	2:49	3:37	1:25	2:14	+ 0:49
Watching TV	13:19	13:28	12:47	12:38	18:20	13:36	15:12	13:17	-1:55

Education Week Magazine, November 1998.

While the above table shows an increase in after school sports, NASPE has published several reasons why these are insufficient to replace the PE program role in overall physical fitness.

- Athletic programs are essentially designed for youngsters who are eager to specialize in specific sports. Developmentally appropriate PE programs, in contrast, are designed for every child, from the physically gifted to the physically challenged.
- Many families do not have sufficient time or money to participate in after school sports.
- Many parents and children have no interest in participating in after school sports.

Congress, specialized agencies, and national organizations have supported stronger PE programs for more than a decade. In 1987, U.S. Congress passed Resolution 97, which encouraged state and local education agencies to provide high quality physical education programs for all children in grades K-12 on a daily basis. In 1994, NASPE published a program appraisal checklist with 94 goals and objectives. The highlights of this checklist looked for teachers to be specifically trained to teach elementary PE. It also looked for school administrators to ensure 150 minutes of physical education instructional time (in addition to time allotted for supervised play and recess) each week. In 1998, the U.S. Department of Health and Human Services strongly recommended daily PE classes for grades one through twelve. In 1995, the National Institutes of Health concluded that both children and adults should set a goal of accumulating at least 30 minutes of moderate-intensity physical activity on all days of the week. Points from the Surgeon General's 1996 report indicate that school PE programs may be our best opportunity to reverse this trend.

- Childhood and adolescence may be the pivotal times for preventing sedentary behavior among adults. Evidence shows that success in this arena is possible.
- Communities should provide quality daily physical education classes in each grade and hire physical education specialists to teach those classes.

Despite this encouragement from high levels, there is no federal mandate or funding targeted to support these goals. Each state decides how much and what kind of physical education program they will instruct to their children. NASPE tracked and published the impact of this encouragement in their Shape of the Nation Report in 1997. The following table shows varying certification levels for PE teachers and varying amounts of PE instructional time across the nation. Please refer to the key below the table for an explanation of the values shown.

Elementary School Data

State	Teachers	Classes	Total	State	Teachers	Classes	Total
Alabama	4	5	9	Montana	3	1	4
Alaska	4	1	5	Nebraska	2	1	3
Arizona	1	5	6	Nevada	5	1	6
Arkansas	2	1	3	New Hampshire	3	1	4
California	1	4	5	New Jersey	3	5	8
Colorado	3	2	5	New Mexico	3	1	4
Connecticut	4	3	7	New York	3	4	7
Delaware	5	4	9	North Carolina	3	5	8
*DoDEA/DoDDS	2	0	2	North Dakota	3	3	6
Florida	3	2	5	Ohio	4	3	7
Georgia	3	4	7	Oklahoma	1	2	3
Hawaii	1	4	5	Oregon	2	1	3
Idaho	5	4	9	Pennsylvania	3	1	4
Illinois	5	5	10	Rhode Island	3	4	7
Indiana	4	4	8	South Carolina	3	1	4
Iowa	3	1	4	South Dakota	5	0	5
Kansas	3	1	4	Tennessee	3	1	4
Kentucky	3	1	4	Texas	3	1	4
Louisiana	3	5	8	Utah	4	1	5
Maine	3	1	4	Vermont	4	3	7
Maryland	3	1	4	Virginia	2	0	2
Massachusetts	4	1	5	Washington	1	1	2
Michigan	5	2	7	West Virginia	3	1	4
Minnesota	4	1	5	Wisconsin	3	4	7
Mississippi	3	0	3	Wyoming	2	1	3
Missouri	5	2	7				

***DoDEA/DoDDS data comes from DoDEA Internet site, February 1999.**

"Teachers" shows who may (or must) teach PE.

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0 = No PE instruction
1 = Only classroom teachers instruct PE
2 = Mostly classroom teachers, and some PE or health certified instruct PE
3 = An even mix of classroom teachers and PE or health certified instruct PE
4 = Mostly PE and health certified instruct PE
5 = Only PE and health certified instruct PE, in accordance with the NASPE objective

"Classes" shows the state or local requirement for PE.

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0 = No requirement for PE
1 = PE is a mandated program, but no time requirements
2 = 50 or more minutes per week, or required by state but local levels determine time requirements
3 = 75 or more minutes per week
4 = 100 or more minutes per week
5 = 30 minutes or more per day, in accordance with the NASPE objective.

Why should only certified physical education or health specialists teach the classes? Schools could hire teams of uncertified assistants to supplement certified specialists at each school. This would be more affordable and still meet goals of daily instruction and 150 minutes of PE per week. Dr. Judith C. Young, Ph.D., Executive director of NASPE and the American Alliance for Health, Physical Education, Recreation and Dance responds with a comparison: "Do we allow uncertified teachers to instruct the other core subjects on a regular basis? The answer is no. Effective PE programs require certified specialists to meet baseline curriculum standards, just as the rest of the core subjects require this."

DoDEA publishes K-12 curriculum standards on the Internet for their core subject areas of language arts, reading, mathematics, science, and social studies. DoDEA does not classify PE as a core program, but they have a thorough program guide with daily and weekly lesson plans. Despite the program guide, there are no published minimum time requirements for PE classes or staffing. With no baseline requirements for PE staffing, administrators may move their PE staff positions to cover requirements in higher priority core programs, as they did at my daughter's school.

At the same time that DoDEA seems to be leaving PE in a low priority, DoD debuted a campaign called "Operation Be Fit" in April 1998. The intent is to improve the health of all DoD personnel and their families. Both Mr. Fred Pang, DoD Assistant Secretary for Force Management Policy and Ms. Carolyn Becraft, DoD Deputy Assistant Secretary for Personnel Support endorsed the program, and cited findings on the 1996 Surgeon General's report as concerns. "We know that if you grew up in a home where you -- as a child -- were doing physical activity, that's become part of your family culture," said Ms. Becraft. "We want our people to continue those fitness patterns because it promotes a healthy lifestyle that pays benefits all of your life."

As they work to gain funding support for sufficient PE specialist positions, DoDEA must prepare to fit this enhanced PE program into limited facilities and a full teaching schedule. DoDEA should consider the following recommendations as they work toward solutions:

- Move physical education classes outside except during severe cold or precipitation.
- Seek access to military community fitness centers.
- Develop baseline standards for floor space and request hard construction or "bubble gyms".
- School leaderships and teachers must be willing to reapportion the amounts of time devoted to each of the core subject areas.
- Lengthen the school day to allow for additional physical education classes. Use the daily physical education time as a planning period.

CONCLUSIONS

1. The time-honored cliché: "An ounce of prevention costs less than a pound of cure".
2. The negative trend in physical fitness and overweight children will not get better without a catalyst. Within DoDEA, parents, teachers, administration, and oversight must recognize the criticality of the elementary years toward lifelong physical fitness, and raise PE to the same priority as the rest of the important subjects that we teach to our children.
3. DoDEA should seek DoD support for a baseline standard with sufficient PE certified positions to ensure daily PE totaling 150 minutes per week for every DoDDS elementary student.
4. Our children are our future. With healthy lifestyles, they will reduce their own health care expenses and their dependence on treatment for obesity related diseases.
5. Our military personnel are entitled to the same quality of life for which they are pledged to defend. Considering that, DoDEA should make every effort to raise their PE program to a level that is more equitable with the school PE programs across America.

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