

PROMOTING PHYSICAL ACTIVITY AMONG YOUNG PEOPLE – THE EXPERIENCE OF AGITA GALERA

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ABSTRACT

Many studies pointed out the positive effects of involvement at different levels of physical activity to the health promotion among schoolboys and girls. Among those we can list better weight and adiposity control, increase in strength, speed, agility, flexibility and even improvement in aerobic and anaerobic power. But it seems that the impact of the potential benefits to the some biological health indices is not strong enough to change the enthusiasm of educational authorities, as well as of physical educators. In the **Agita São Paulo Program** intervention we tried to highlight not only the biological outcomes but also the psychosocial and educational benefits. Among the formers we included the improvement in self-image, self-esteem, well being, stress, and depression. Among the latter's we have: increase in classes assistance, academic performance, decline in discussions with relatives, and in behavior disturbances, better response to risk behaviors, such as alcohol or drugs, and an increase in responsibility. In this more holistic approach we have been trying to focus not the student itself, but its environment, that comprises relatives, teachers, peer group, channels of communication, community values and media. An annual mega-event is a key element to the youth strategy, giving more visibility to the program. It is called "**Agita Galera**" or the Active Community Day, and it involves about 6000 public elementary and high schools; and hundreds of private and special schools, as well 250.000 school teachers, comprising around 6 million students each edition among the last eight years. School administrators and teachers are prepared for the mega-event by a variety of communication channels, mainly coordinated by the Department of Education. Efforts are made to involve teachers of all subjects. Each school was encouraged to produce banners, brochures, t-shirts, and stickers, and to organize contests of drawings, slogans, and logos. Physical activity presentations and competitions were suggested to mobilize the school and nearby community to discuss the importance of physical activity. Materials also assisted students in reducing sedentary behaviors such as television watching. **Agita Galera** is used to stimulate permanent actions in schools, such as developing more activity programs, improving physical education, adding activity-related media materials to the library, and starting student peer groups to enhance physical activity at school. At school level attention was paid on the importance to improve the real time of involvement with physical activity during a PE class, in other disciplines, and outside school. When discussing the necessity for improving physical activity (P.A.) in general population, adolescents become a high priority target group. Among the

results of our intervention, it will be shown pilot studies as the one that tried to verify levels of physical activity before and after one year of a community – school intervention among high-school boys and girls of a private school. Media-community intervention included media warning about the benefits of active lifestyle; through TV and radio programs, newspaper and magazines interviews, and mega-events, such as the communicate active day. School actions comprised small talks during P.E. classes, flyers, posters, and interview in the school bulletin, inclusion of the program in the school home page. Results seemed to confirm a positive effect of a media-community-school intervention approach in promoting P.A. among adolescents, and suggest that a more holistic approach is crucial to improve P.A. as a sustained behavior.

EVIDENCES & JUSTIFICATION

Although a good program of physical education at school is of utmost importance in promote physical activity health and well being, many other factors can affect young people participation in physical activity and physical education; which may lead to a better health. Among those we may list: culture, understanding, values, beliefs, knowledge, environment, attitudes, skills, media, modeling, social, friends and family influence. To that list we may include genetics and central nervous system. Meijer, 85 compared 1537 monozygotic twins to 3507 dizygotic twins in a male Finnish adult sample, and concluded that the heritability estimate for physical activity was .62. Peruse et al, 89 analyzed 1610 related and unrelated siblings, and concluded that the heritability estimate for physical activity was 29%. Rowland, 98 recently postulated the existence of a control center for energy expenditure in the central nervous system that might control the level of spontaneous physical activity.

Why to promote physical education for children and adolescents? Among the many reasons the most common are: a- to promote physical and psychological well-being during adolescence; and b- to promote physical activity to enhance future health and increasing the probability of remaining active as an adult.

A second question would be: is childhood a model to adulthood physical activity behavior? To support this statement one may point out that: a- behaviors established during childhood may affect health status of adults (Coronary Prevention Group, 88; Loucks, 95); b- to prevent sedentarism in the childhood is better than to reverse it in adulthood (WHO, 90); and c- it is better to help children to develop habits than to alter when adult (Strong, 78). In terms of health another line of evidence was offered by studies of Barker, 90. they stated that biological changes in uterus start the chronic condition to develop a future disease that may lead to death.

It is clear that the case for Physical Education cannot be based upon the premise of good tracking for behavior between adolescence and adulthood. At the best,

scientific evidences support the idea that a sedentary child has a higher chance to be a sedentary adult; however, the reverse was not observed in the available data. We agree with Riddoch statement, in a recent review (Riddoch, 98), that the lack of definitive evidence on physical activity and its association with the physical health of youth is disappointing

Considering that fitness training is an important component of many P.E. programs, would be interesting to verify if the most active children would get the best scores in fitness. Data from boys(n:31) and girls (n:16) evaluated by Araújo et al., 97 evidenced just a light tendency (and no significant relationship) between level of physical activity and fitness. Then, these results just give a slight support to the quite tentative link: "more active, more fit". Because the important genetic component in the fitness profile, as well level of maturation, we may say that not necessarily the most active are the most fit.

Do the kids and adolescents get involved in activities at natural conditions that permit to enhance health-related fitness variables? Trying in answering this question, we have monitored daily heart rate of children from high socioeconomic level (Araujo & Matsudo, 1998). Data showed that boys and girls spent about 88% of the daily (8am-8pm) activities at low (HR < 120bpm) intensities. In other words, they spent about 12% of the time in intensities that may lead some impact on cardiovascular fitness; and this profile stayed about the same in weekdays and weekend days. One may argue that these results might reflect a culture-factor of high socio-economic groups. For that reason we replicated the study in a poor region (Matsudo et al., 97). A similar trend was observed: about 81% of the daily activities (8am-8pm) was spent at low intensities (HR < 120bpm), whereas less than 3% in the weekdays; and less than 2% on the weekend days were spent in high intensity (HR>160bpm) P.A.

It is quite popular the thinking that low socioeconomic children are more active. It is probable based upon old images of kids in developing countries running on the streets or working hard in the farms. It is still true for some of those populations. However, the quick transition observed with explosive urbanization declined the real number of children at rural areas. In the other hand, the deterioration of safe conditions at cities, particularly at peripheral regions of metropolitan areas, prevent the old popular street games. The final outcome of this scenario was observed in another study from our research center (Gonzaga, et al., 91): peri-pubertal boys from low socioeconomic groups (C, D, and E) were less involved in physical activities than high socioeconomic counterparts (A and B levels). Considering that world-wide the vast majority of our students belong to poorer classes (C, D and E) than to the healthier ones (A, and B), these results are a warning that one of the drawback of globalization is a progressive increase of sedentarism in the student population; suggesting again the importance that good P.E. programs may play. Some evidence of this statement came from a recent study from our group (Paschoal, et al., 96), that showed that Brazilian adolescents were less (66%) involved in P.A. than Americans (82%).

Andrade and other colleagues from our Center observed that girls from low socio-economical region were more involved in vigorous physical activity than boys at same age (Andrade, D et al., 97). It is a surprise because literature reported systematically superiority of boys in that behavior. However it was mostly based on samples from well-developed countries. In our case sample consisted of girls from Ilhabela, an ocean Island between Rio and São Paulo, local cultural probably played an important role, once when we analyzed deeper the data, it was observed that mostly of the differences was explained by the involvement in strenuous house keeping much more evident in girls (41.7%) than boys (5.9%), besides the fact that 70.5% of the boys answered that "not at all" were involved in strenuous house keeping activities! However, when transport to/from school was analyzed, 100% of the boys took active transport while only 57,1% of the girls did.

If from socioeconomic perspective globalization is adding more sedentarism to our school children, as described in the previous paragraph; what is the technological impact of globalization? What would be the consequences of TV, video, and Internet on health-related fitness? This behavior is quite documented in post-industrial societies. However, surveys from our research center have shown that Brazilian girls (4.2hs /d) and boys (4.0 hrs/d) are spending about 4 hours per day watching TV (Matsudo et al., 97); and it is constant among high socioeconomic classes, as well as in low socioeconomic groups. In other study (Matsudo S et al., 97), found a significant and negative impact of TV watch time and adiposity (.27), running speed (-.25), lower limb strength (-.28); and aerobic power (-.52).

Although good PE program plays a crucial role in the intention to build and active child, one common error to consider P.E. as the most important, the most effective, and sometimes the only factor. Would be wise to try learning what kids think about. With that purpose, an American survey (Food, Physical Activity & Fun- What kids think, 95) showed that although school was appointed (40%) to encourage children to do P.A., friends (53%) and family (59%) were more important still. In other words, a new P.E. curriculum cannot underestimate the strength of other players. Although there is no consensus about, it is interesting to remember a study from James Sallis group (Sallis et al., 92), showing that a child from an active mother has a double chance to be active; and the triple if the father is active. If both parents are active the child 5.8 more chance to be active!

In Science, when something is not going well is time to argue; and if necessary change the paradigm. That is also the case for the P.E. crisis. From the limits of this paper, considering the health and well being, many groups tried to express the concern on the decline of P.E. programs, increase of sedentarism; and the outcomes from that behavior. Before the present Summit, the Council on Cardio-Vascular Disease in Young, in 1986; the American Academy of Pediatrics, in 1987; the American College of Sports Medicine, in 1988; the American Medical Association, in 1992; the Panamerican Confederation of Sports Medicine, in 1996; the Working Group in Active Living of World Health Organization, in 1997; the Health Education Authority, in 1997; and more recently the Manifesto from São

Paulo to improve Physical Activity in the Americas, in 1999, are among the examples of warning, and call for action to overcome this negative scenario.

However, it is clear that this is not enough. We have reached a paradoxical situation. We never have discussed P.E., sports, fitness and physical activity than in this century. In one side, we never have accumulated the amount of knowledge about human movement; however, in the other hand we never have reached the level of sedentarism around the world !

A conclusion that comes from this is that knowledge “per se” cannot change behavior. And if one wish to improve physical activity in our population though P.E. we need to promote an effective intervention, making P.E. the important tool we think it is ! Beyond the motoric, leisure, recreational, ludic, and skill components, let’s try to compromise P.E. with the build of an active citizenship.

AGITA SÃO PAULO: THE BASIS OF PHYSICAL ACTIVITY PROMOTION

Many have been the attempts to develop programs that really could increase the P.A. at school setting. Two comprehensive reviews (Stone et al., 98; Sallis & Owen, 99) were recently published; and enlist the most successful ones. Among those, we highlight the SPARK (Sports, Play, Recreation for Kids)(Sallis et al., 97) and the CACTH (Child and Adolescent Trial for Cardiovascular Health) (Luepker et al., 96). They are probable the best designed; although the outcomes were not so optimistic; and they represent two proposals with financial expenses that schools from low socioeconomic regions cannot easily afford.

Agita São Paulo is a multifactorial intervention program to promote physical activity and the knowledge of the benefits of P.A in the State of São Paulo, with a population of over 34 million inhabitants (Matsudo, 97; Matsudo et al., 98). Agita is organized by the Center of Studies of the Physical Fitness Research Center (CELAFISCS) and the State Secretary for Health; with the help of more than 140 Governmental and Non-Governmental Institutions. The program was launched in February 1997, with three focus: a- students; b- workers; and elderly population

The main message of the program is accordance to the CDC/ACSM guidelines (Pate et al., 1995) and states that ***every person should take at least 30 minutes of physical activity per day, in at least five days of the week (preferably all days of the week), at moderate intensity (and even light for special groups), in continuous or accumulative sessions.*** For that reason, the mascot of the program is the “Half-hour Man”. Focusing on teenagers groups, an alternative message is also stressing, and states that young people should take at least 20 min of sustained vigorous physical activity, in three days of the week (Biddle, et al., 1998).

Agita strategy includes the emphasis on the biological, psychosocial, and the school-phase benefits of P.A. Among the health-related fitness benefits it was listed: better weight and adiposity control, increase in strength, speed, agility, flexibility and even improvement in aerobic and anaerobic power. Other health benefits are also pointed out such as: better blood pressure control, increase insulin sensitivity, improve joint function, lipid profile, muscular strength; and bone density increment (Surgeon General Report, 96).

But it seems that potential health benefits are not strong enough to change the enthusiasm of educational authorities, as well as of physical educators. For that reason, Agita São Paulo Program tried to highlight not only the biological outcomes but also the psychosocial and educational benefits. Among the formers we included the improvement in self-image, self-esteem, well being, stress, and depression. Among the latter's (Collingwood, 97) we have:

1. increase in classes assistance
2. academic performance
3. decline in discussions with relatives,
4. decline in behavior disturbances,
5. better response to risk behaviors, such as alcohol or drugs,
6. increase in responsibility.

In this more holistic approach we have been trying to focus not just the student itself, but its environment, that comprises relatives, teachers, peer group, channels of communication, community values and media. At school level attention was paid on the importance to improve the real time of involvement with physical activity during a PE class, in other disciplines, and out-side school.

THE “AGITA GALERA” DAY – INNOVATIVE PROCESSES

A mega-event is yearly scheduled to give more visibility to the program purposes. It is called “**Agita Galera**” or the Active Community Day, and comprises about 6000 public elementary and high schools; and hundreds of private and special schools. The preparation of the mega-event includes: a- teacher sensibilization; b- a cable TV conference; c- media contact; d- educational system networking; e- health system networking; and f- promote the idea in the peer group, among others.

The innovation processes and actions include:

1. Special attention is dedicated to the non-PE disciplines, trying to develop the culture of an active citizenship. For example, we oriented the teacher of Language to ask the students phrases, and wording on the topic; to the History teacher to discuss “Sports through History”; to the Sciences professionals, “Biological Benefits of P.A.”; to Psychology, “P.A. and Mental Health”; to Arts teacher, painting, dancing, and theater; to Math teacher, to assess P.A.

2. Because **Agita Galera** is an event in Agita São Paulo Program, permanent actions, such as, are stimulated:

- a- develop informal active events;
- b- increase active leisure time;
- c- increase P.A. in school and out-side school;
- d- the use of the concept of students peer groups (“tribes”);
- e- meeting discussion; and f- develop special libraries and video clubs.

3- Schools were advised to use the **Agita Galera** Day to develop:

- a- group discussions;
- b- educational material;
- c- web sites in the internet;
- d- active actions;
- e- thematic banners and T-shirts;
- f- physical activity assessment.

In that day, instead regular classes, students were involved in a 20-30 minutes discussion about the importance of P.A.; followed by a 30min walk to the next square or green area, through the neighborhood, trying to spread the message to the community around school. It is an impressive event that comprises more than 6 million students around the State

4- **Agita Galera** Best Practices Award: The best practices award is a good example of recognition of community efforts to overcome sedentariness. Best experiences from each of the 6000 schools were sent to the regional educational authority chapter, that selects the three best. A committee selected among those the three best at state level.

AGITA GALERA ORGANIZATION – SECTORS & PARTNERS INVOLVED –

The purpose of Active Community Day is to promote physical activity in children and school-age adolescents. It can and should involve the community surrounding the school and bring together neighborhood schoolchildren. Partnerships may be established with local merchants and governmental and nongovernmental institutions, for example, organizations working on issues related to children and adolescents. To involve the greatest number of people, programs should include a variety of activities, especially those that encourage family participation. Examples include exercise with older adults, walks, dances, gardening, painting, sculpture, and dance classes. Physical education and art teachers can be recruited to coordinate these activities and administer a questionnaire to diagnose the level of physical activity.

The following persons are implementers involved in the program operations:

- a- São Paulo State Health Secretariat
- b- Agita São Paulo Managers

- c- São Paulo State Education Secretariat
- d- Education Regional Directory
- e- Health Regional Directory
- f- Program participants (e.g. teachers & families)
- g- Government Officials
- h- School Officials

The main partners of **Agita Galera** event are:

- a- The Education Secretariat
- b- The institutions that are linked to Education Secretariat
- c- The services clubs like Industry and Commercial
- d- Health Secretariat
- e- Celafiscs / Agita São Paulo Coordination
- f- Agita São Paulo Executive Board and Partners
- g- The other state secretariats
- h- Prefectures (city halls)
- i- Public and private universities
- j- Societies and associations of health professionals
- k- Business and industry
- l- Service clubs
- m- Banks
- n- Social organizations
- o- Medical Associations

The material developed to promote PA in the school and the community include:

1. Manual – contains suggestions about activities for the Day and Permanent Actions
2. Posters
3. Flyers
4. Stickers
5. Banners
6. T-Shirts
7. Web Site
8. Chat
9. Video

Description of the plan to organize the **Agita Galera** event:

1. Identifying a date and place that has high significance for the community.
2. Identifying governmental and nongovernmental partners to collaborate in the
3. Planning, execution, and evaluation of the mega-event.
4. Preparing a project summary identifying the goal and objectives of the mega-event and the target group, dates, place, and list of activities that the partners intend to carry out.
5. Determining the type of printed matter to be disseminated (pamphlets, flyers, stickers, letters, etc.)

6. Graphic materials should display the logos of the institutional partners.
7. Mobilizing the media. Preparing and sending out information on the mega-event, indicating its importance, objectives, expected results, the public targeted, and the activities planned. Print materials should also be sent in advance to journalists who will be reporting on the event, and they should be kept informed about the preparations and provided with timetables to help them cover the event.
8. Enlisting a network of volunteers to work on the day of the event to distribute promotional materials such as T-shirts, sun visors, or certificates of participation and to direct physical and/or recreational activities.
9. Evaluating the expected results through data analysis for example: the number of participants, partner institutions, and publications issued before, during, and after the mega-event.

AGITA GALERA OUTCOMES - THE IMPACT OF AGITA APPROACH AT SCHOOL SETTING

Media impact of *Agita Galera* comprised 28 publications in state and 42 in regional newspapers; 2 publications in national and 8 in state magazines; 4 inclusions in national and 7 in state level TV programs. All this media effort represents that the message reached a potential audience of 21,4 million persons. Considering that among the strategies of Agita São Paulo included a non-paid approach, approximately 12.960.000 US dollars were saved from the state-taxes money.

Because Agita São Paulo and *Agita Galera* use lectures to try increase of the knowledge, some studies tried to determine the impact of one single lecture on the main message of the program, mentioned above. Andrade et al., 99 evaluated 49 (30 men; 19 women) P.E. students who attended a 2hs lecture. Pre-post questionnaire analysis showed a significant ($p < .05$) increase in corrected answers related to frequency (10.2 x 46.9%) and mode (18 x 33%).

A special multiple-factorial intervention was developed in a private school trying to verify levels of physical activity before and after one year of a community – school intervention among high-school boys and girls of a private school. Community and media intervention included media warning about the benefits of active life-style; through TV and radio programs, newspaper and magazines interviews, and mega-events, such as the communicate active day. School actions comprised small talks during P.E. classes, flyers, posters, and interview in the school bulletin, inclusion of the program in the school home page. Self-reported questionnaire was applied before (Pre) and after (Post) one year of intervention to two different samples of boys (Pre: 33; Post: 48) and girls (Pre 47; Post 71), with similar educational and age levels (14.04 x 14.62 years; and 13.97 x 13.79 Ys, for boys and girls, respectively. Time involved in vigorous and moderate P.A. was estimated; and a threshold of 150 min/week (continuous or accumulated) was taken as a criterion of

being regularly active. Data showed a significant ($p < .01$) increase in time involved in vigorous P.A. in girls and a tendency ($p < .01$) in boys, in the POST groups. A same trend was demonstrated for moderate P.A. among boys, but not in girls. Results seemed to confirm a positive effect of a multiple-factorial (media-community-school) intervention approach in promoting P.A. among adolescents, and suggest that a more holistic approach is crucial to improve P.A. as a sustained behavior.

**Agita Galera Evaluation –
Summary of the actions and indicators performed each year since 1997:**

Evaluation Questions	Indicators	Data Sources	Performance Indicators
1. How Agita Galera has been disseminated to 6000 schools and 645 cities?	Number of schools, teachers and students Number of material produced Number of teachers trained Number of media publication	School reports CELAFISCS CELAFISCS Clipping service	About 6000 schools, 250000 teachers and 6.000.000 students 18.000 manual and posters 6.000.000 flyers About 150.000 7.444.000 number of press copy of the newspaper 15 minutes of TV and radio program
2. How many permanents actions were developed after the event?	Number of schools, teachers, students, members of community and descriptions of the activities	Reports sent by schools to the prize 2003	Around 25 permanents actions
3. How many people are involved in this action?	Number of people	Reports sent by partners to the prize 2003 and the Agita News	Around 10.000.000 people directly
4. What are the partners involved in the event	Number of partners of the Agita São Paulo	Reports sent by partners to the prize 2003 and the Agita News	Around 300 partners
5. What activities this partners have developed?	Number and descriptions of the activities	Reports sent by partners to the prize 2003 and the Agita News	Sports, PA in worksite, Walking

Evaluation of the Event:

Each school receives a questionnaire, available in Internet, including the following information about the event, its organization and its impact:

1. Number of participants
2. Activities developed (during the day and permanent actions)
3. Teachers and Major's self perception about event
4. Physical activity levels
5. Local Newspaper Information
6. Number of papers distributed and time of exposition in Radio and TV
7. How many permanent actions were developed after the event?
8. What kinds of permanent actions were developed at the school?
9. How many people are involved in this action?
10. What are the partners involved in the event
11. What activities this partners have developed?
12. How many students and teachers know about 30 minutes message?
13. How many permanent actions were developed after the event?
14. How many people are involved in this action?
15. What are the partners involved in the event
16. What activities this partners have developed?
17. How **Agita Galera** has been disseminated to schools and communities?

Main Impact Outcomes of **Agita Galera** events:

1. Returned of physical education teacher at the school to teach students from 7 to 10 years old
2. Schools are open on weekends with different physical and cultural activities
3. Creation of the permanent Physical Activity Committee at the school in order to discuss the AGITA SÃO PAULO PROGRAM.
4. Permanent and regular training about physical activity promotion to the Physical education Teachers
5. Advisory to International programs: Based on the success of Agita Galera in Brazil similar events are organized in Colombia, Argentina, Ecuador, and Costa Rica

CONCLUSION

The development of effective interventions to face world epidemic of sedentariness is of utmost importance. Agita Galera is a mega-event involving over 6000 mostly public schools, representing about 6 million students, happening in the last Friday August during the last eight years. It is the largest event of Agita Sao Paulo program, which main purposes are to promote the benefits knowledge and the level of physical activity in a population of 38 million inhabitants.

Agita Galera uses the most recent advances in diffusion and dissemination of health promotion programs, as well as the social marketing strategies. Even using

an un-paid media approach, the event has taken the attention of TV, radio and newspapers, representing a potential audience/readers of almost 20 million people. Innovative educational material and the advantages of recent technology such as teleconferences and/or videoconferences were used to reach educational and health authorities. The best practices award is a good example of recognition of community efforts to overcome sedentariness.

Target messages were developed to maximize the impact on students, teachers, and school community. Inclusive approach is central in the strategy to involve school teachers from all disciplines, and not only physical educators. The use of a strong partnership system developed in Agita Sao Paulo program permitted to address different focus at relative low financial costs.

The positive impact on physical activity levels in students from schools where Agita Program was adopted suggests the possibility of this model to serve as an example to other countries.

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