### Safe school

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#### Abstract

**Objective:** To review the strategies to make school a safe environment. The paper first addresses the social context of accidents and violence in the school environment, and makes recommendations, based on the literature data, for the implementation of safe schools.

**Source of data:** Articles published between 1993 and 2005 in the MEDLINE database. Brazilian epidemiological and literature data have also been searched.

**Summary of the findings**: There is growing evidence that intervention has multiple components, focusing on health education practices, with the participation of the whole community. The aim of those interventions is to help students and community members to adopt healthy and safe behaviors. Schools are taking on an increasing role in health promotion, disease prevention, and injury prevention. In the context of prevention of external causes of morbidity and mortality, it is important to recognize a risky environment, places, and risk behaviors as favorable to injury and violence, as well as the concept of accident as something one can avoid.

**Conclusion**: Implementation of safe schools represents a promising new direction for school-based preventive work. It is important to note that a safe school should intervene not only in its physical structure, but it should also make it as safe as possible by gathering the school community through health education, and mainly encouraging healthy behavior.

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### Introduction

The United Nations (WHO) state that the concept of human security should be centered on the development of human beings, taking in the security of all citizens in their day-to-day lives: on the public streets, at school, when at leisure and at home. $^{1}$ 

The State continues to have primary responsibility for security. However, from the moment at which security

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problems increase in complexity, new actors begin to play a role in this domain. Thus, other sectors of society emerge as determinants of the status of security. It is health and education that stand out from among these determinants. In 1994, the Pan American Health Organization (PAHO), in 1994, in the form of the "Declaration of the Inter American Conference on Society, Violence and Health", defined violence as a health problem.<sup>2</sup> The concept of security is being widened and has come to include diverse values at the same time as the determinants of violence are being dissected throughout society and are exposed in the form of inequality and social injustice.<sup>2</sup> Violence and accidents come to be seen as the subject for an intersectorial approach, and healthcare, tends towards the incorporation of these domains within its wide field of activity.<sup>3</sup> Policies for promoting health, now seen as the ability to resist stress - whether physical mental or social - so that it does not reduce lifespan, function or well being, must, urgently, prioritize the safety, education and quality of life of the whole of society, in particular children and adolescents.<sup>4</sup>

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The rights of children and adolescents are guaranteed by law. The Statute of the Child and Adolescent, passed in 1990, guarantees to children and adolescents all opportunities and facilities to enable their physical, mental, moral, spiritual and social development in conditions of liberty and dignity. Many private and public institutions are raising the issue of accidents and violence as a serious public health problem and taking initiatives to guarantee the rights of children and adolescents.<sup>5</sup>

Towards the end of the twentieth century, new types of diseases were appearing: diseases of behavioral etiology. Described by McIntyre as a behavioral epidemic, it was perceived that these were responsible for more deaths in developed countries than diseases of organic origins.<sup>6</sup>

## Intentional and unintentional injuries among children and adolescents

Currently adolescents account for 20% of the world population, with more than 85% of these residents in developing countries. It is estimated that in Latin America in 2000 there were 155 million adolescents aged 10 to 24 years and this figure is projected to reach 163 million in 2025.7

Also based on the 2000 Census, IBGE states that 42.3 million children and adolescents attend day care or schools (82% of the total number of school aged children and adolescents).<sup>8</sup> Children, adolescents and young adults are the group most vulnerable to the insults caused by diseases of behavioral etiology, with accidents and violence standing out.

Nowadays accidents and violence are in first place in the ranking of causes of morbidity and mortality of children and adolescents from 5 to 19 years of age. According to the International Classification of Diseases – 10th Revision (ICD-10) external causes of morbidity and mortality, accidents and violence, consist of homicides, suicides and traffic or other accidents (poisoning, workplace accidents, burns, falls, drownings, and others).

The most recent data from SIM/MS (Brazil) are from 2002, and show that, from 1 to 19 years, half of all deaths are from external causes. During this period, aggression is in first place, followed by traffic accidents and drownings. From 1 to 19 years the majority of victims are male. Traffic accidents and aggression are responsible for this significant increase in mortality between 15 and 19 years.<sup>9</sup>

With this, we come up against a severe public health problem, not just because of the statistics, but also because of the costs; in 2000, more than 12% of healthcare costs went on hospitalization and rehabilitation of patients who had been the victims of accidents and violence, even without taking account of the working years lost through early deaths.  $^{\rm 10}$ 

It is necessary that family members, pediatricians and school directors are made aware of this subject. Studies show that, even when they are aware, pediatricians spend less than 1 minute of their consultations on accident prevention. 11 Other studies have shown that demonstrate

that parents who describe themselves as careful and knowledgeable about prevention do not use that knowledge in practice and cite doctors as the first choice for guidance on prevention of accidents.  $^{12}$ 

An epidemiological study was undertaken in 2002 in France based on questionnaires applied to 2,396 adolescents who attended their schools' clinics, the victims of accidents. Of these, 52.8% were hurt during sports, compared with 12.7% who suffered accidents during recreation. It was confirmed that the risk of accidents during these activities reduced significantly with age. Causes described by the victims were: personal carelessness (26%), lack of ability/skill (17.5%), didn't realize there was a risk (13.8%), tiredness (9.5%), stress (8.6%) and disobedience of the teacher's instructions (6%). Injuries were: contusions (50.7%), wounds (18.7%), tendonitis (11.7%), distension (9.2%), others (7.3%). Of these, 11.4% missed some days at school, 16.3% were released from sports and 2.7% required hospitalization.<sup>13</sup>

Schools have been assuming a growing importance in health promotion, prevention of diseases and the prevention of accidents among children and adolescents.

Children and adolescents tend to spend approximately one third of their day at school or on the way to or from school. Safety at school, in terms of the physical, emotional and psychological environment, is the subject of constant concern of parents/guardians, teachers and school directors. It is not only accidents at schools and in their environs merit constant debate, but also the multiplicity of violent acts to which students and teachers fall victim.

The violence experienced at school has the direct influence of the social and family milieu in which children and adolescents live, but with much more severe consequences. The school creates an environment of insecurity and fear, which in turn compromises, not just the intellectual development of the students, but also the basic assumptions of education, to learn to understand, to learn to do, to learn to live together and learn to be (Delors report, 1998). <sup>14</sup> One quarter of North-American students do not feel safe going to school, and 23 to 43% report fear of physical attacks within and around school. <sup>15</sup>

This discussion transcends the school walls, taking in the environs and the means of transport used to get there.

Research carried out in 2000 by UNESCO (United Nations Educational, Scientific and Cultural Organization) in 14 Brazilian state capitals, using questionnaires applied to students, parents and teachers, studied the varying modalities of violence that take place in the school environment and its surroundings. Abramovay & Rua indicate the school environs as the place where the majority of violent acts against students take place. Students report that bus stops and the walk from home to school are the locations at which most problems take place. <sup>16</sup> They observed that two important phenomena associated with violence occur in the areas around schools – gangs and drug dealing. Approximately 25% of the students interviewed said that gangs and the drug trade were the two primary problems at school. These two

factors cause great concern among students parents and teachers, in addition to having direct influence on the school routine, by facilitating and amplifying drug usage. The study also points out that the principal manifestation of violence is physical. Fights are routine, suggesting the banalization of violence and its legitimacy as a mechanism for conflict resolution. <sup>16</sup>

According to data from 2000, in Rio de Janeiro 18.6 and 25% of students reported having witnessed someone using drugs in and close to school, respectively; 6% of students stated they were aware of rape or sexual violence taking place in or close to school, 10% of those interviewed had witnessed students, teachers or parents carrying firearms in school. There was a positive association between witnessing firearms being carried and reports of violent occurrences. UNESCO reports that students in general are the most frequent victims, followed by teachers and employees/directors. The results of this research indicated the following as being the principal impacts of violence: the atmosphere at school becomes "heavy", lessons are missed, the quality of teaching falls and motivation to attend is reduced. 16

One type of violence in particular that takes place in schools is bullying. The term covers all types of intentional and repeated aggressive attitudes, with no obvious motivation, provoked by one or more students against others, causing pain and anxiety in an unequal power relationship. Thus, actions like name calling, insulting, imitating, humiliating, discriminating, excluding, ignoring, intimidating, chasing, beating, stealing, breaking possessions and others, in a repetitive manner and also imbalances of power characterize bullying at school.<sup>17</sup>

In common with society, the role of schools has been changing drastically over recent years, over passing their academic function and coming to aggregate socialization, character forming, behavior and citizenship. For this to take place, it is important that all actors are prepared to deal with the multiplicity of issues that involve children and adolescents in a society that makes them vulnerable.

We should, therefore, concern ourselves with creating prevention strategies. Thus, in the same way that vaccines exist to avoid epidemics of infectious diseases, we must create "vaccines" to minimize the risks of accidents/violence. The basic formula for this "vaccine" is in the discussion and construction of knowledge, by means of "Safe Schools". Schools are the location of choice for the promotion of health and also safety concepts, both interrelated. The period during which culture, behavior and attitudes are being formed involves the school unit, where themes related to health and safety should be constantly brought up for discussion. Safety at school is indivisible from education and health promotion.

#### **Health Promoting Schools**

In the face of this new epidemic of behavioral diseases, the strategy of health promotion arises as an ideological movement that values healthy lifestyle and society. <sup>18</sup>

Schools are one of the pillars of education, of the construction of citizenship and of the formation of a people and nation. IT is through school that children start their education, their social integration and inclusion and their relationships and potentials, i.e. complex relationships that last their whole lives. Therefore, a school environment where safety is not promoted can only destructure the role of the school, check mating its basic principles. The preservation of human security is based on sustainable development, strongly related to health and education.

In order to strengthen the role of schools in the preservation of health and education and to extend their educational potential with respect to quality of life, at the end of the eighties, the "Health Promoting Schools" strategy, based on the health promotion movement started in Ottawa, in  $1986.^{18}$ 

In the Ottawa Charter for Health Promotion, the result of the First International Health Promotion Conference, health promotion is defined as a "the process of enabling people to increase control over, and to improve, their health (...), reducing factors that can result in risk and favoring those that are protective and healthy (...) Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love. Health is created by caring for oneself and others, by being able to take decisions and have control over one's life circumstances, and by ensuring that the society one lives in creates conditions that allow the attainment of health by all its members". 18

Health promotion goes beyond a healthy lifestyle; it works towards global, individual and collective well being at all levels. Tackling the issue of safety is in the spirit of health promotion. The debate on this theme, in particular about children and adolescents, is part of the process.

Schools are in a privileged position to promote and maintain the health of children, adolescents, teachers, school employees and the surrounding community. These tasks can be performed through the curriculum, preservation of the school environment and relationships with parents and the community. Health Promoting Schools are based on a social healthcare model that emphasizes the entire school organization and focuses on the individual. The backbone of Health Promoting Schools are the students, seen holistically in a dynamic environment.

Health Promoting Schools have the following objectives: (1) cultivate health and learning at all times; (2) integrate health professionals, education parents, students and members of the community, in the effort to transform schools into healthy environments; (3) implement practices that respect the well being and dignity of individuals, recognizing their personal efforts, intentions and achievements; (4) promote physical activity and guarantee health services, i.e. policies that guarantee individual and collective well being, offering opportunities for growth and development in a healthy environment and with the participation of health and education, the family and the community. These schools should provide health education in an all-encompassing form, in order to prevent unintentional injuries, violence and suicides. <sup>19</sup>

In the context of the prevention of morbidity and mortality from external causes, it is of fundamental importance to understand the risk environment, such as inappropriate and/or accident-provoking physical infrastructure, high-risk behavior such as attitudes that encourage injuries/violence, and the new concept of accidents as preventable, in order to condition family members and school directors to intervene in the home/school environment and the self esteem of students and employees.<sup>20</sup>

The concept therefore emerges of the "Safe School" as described in the "Health Promoting Schools" guidelines.

# Health Promotion- experience of the Health at School Program

The Health at School Program (HSP) in Rio de Janeiro, developed by the State Secretariat of Civil Defense, in partnership with the Secretariat of Health and Education, has the objective of promoting the health of schoolchildren, their parents and the school community by means of health education actions, the prevention of injuries and care activities at the Public Integrated Education Centers (PIEC), thereby participating in the process of constructing Health Promoting Schools.<sup>21</sup>

In order to promote health and transform the PIECs into Health Promoting Schools, the HSP has more than 1,000 health professionals including social workers, dentists, nurses, doctors, speech therapists, nutritionists, psychologists and nursing and dental auxiliaries.

Implanted in 317 PIECs in Rio de Janeiro state since 2000, the HSP carries out many research projects with the objective of better characterizing the afflictions that affect the population of students, teachers and employees, as well as the community. The data obtained are transformed into information that serves as the basis for the development and implementation of intervention actions.<sup>21</sup>

Themes involving sexually transmitted diseases, Acquired Immunodeficiency Syndrome, teenage pregnancy, care of the body, oral health, self-esteem, prevention of accidents and others, are worked on in a cross-sectional manner, using a participative teaching model in which questions and teamwork are fundamental to problem solving. They also carry out activities such as "Young Firefighter Health Agent", through which students are trained and capacitated with information on health promotion and become information multipliers in their families and communities. The objective is to stimulate the acquisition of healthy lifestyles, cultivate a critical viewpoint and respect for the environment, develop a spirit of solidarity, encourage the exercise of citizenship and others.

With relation to accidents in the school environment, a descriptive, sectional study was performed, based on questionnaires applied to doctors in the HSP to identify environments with a high risk of accidents in 130 PIECs. Data was recorded and analyzed using Epi-Info. Environments with risk of accidents were defined as those likely to favor falls, bites and stings, drowning, poisoning and traffic accidents.

Examples of environments favorable to falls that were observed include easily scaled walls/fences at almost all PIECs, the presence of large animals, e.g. cows and horses, at ¾, uncovered storm drains and open ditches at half of the PIECs, unbarred windows at 40%, ramps without rails at almost 1/4 and large trees at more than half. Situations with risks of bites or stings included the presence of small animals such as dogs, cats and rats at almost all PIECs studied. With respect of traffic accidents, we observed that a little more than half of the PIECs were located on highways or close to highways where vehicles travel at high speed, and at eight of these there was no system for protecting pedestrians, such as, for example, traffic lights. These data serve as a baseline for future interventions to modify the physical environment in order to make the PIECs safer from accidents.<sup>22</sup>

## Safe schools – proposals for the prevention of accidents and violence in schools

In order to reduce accidents and violence in the school environment and its surroundings, it is necessary to intervene not just in the physical infrastructure of the school/day care center, in order to make them safer, but also, by means of health education that promotes and encourages healthy behavior, in schools and their communities.<sup>23</sup>

Preventative measures can be split up into: primary, to avoid the occurrence of accidents or violence (or reduce the transference of energy to the victim), for example, fitting grilles to windows or headrests in vehicles; secondary, involving care for the victim; and, lastly, tertiary, facilitating the victims' return to their maximum potential prior to the traumatic event (rehabilitation).

The first step in developing preventative strategies against accidents and violence is the identification of the developmental characteristics of victims, the environments where they live and the activities they were performing when they suffered the insult. For this reason, complete records of incidents, including time, characteristics of the victim such as age and sex and descriptions of the conditions under which they took place are of fundamental importance.

A variety of strategies can be applied to identify the risk of accidents/violence: assessment of medical records, questionnaires, the organization of internal commissions for the prevention of accidents and violence in schools (ICPAVS), ongoing investigations, and others. The identification of possible risk factors for accidents and violence within the school environment is performed with the objective of guiding planning and intervention activities aimed at reducing accidents and violence.

Intervention strategies are based on education, modification of the environment and creation of and compliance with rules and regulations. We understand the complexity of the problem when it requires intervention from a variety of spheres of activity. All must be engaged: educators, doctors, volunteers, governments, nongovernmental organizations, etc.

Education guarantees access to the information necessary to ensure that healthy habits are valued and incorporated (active prevention), in addition to promoting a culture of peace, valuing not just the individual and their abilities, but also the collective, giving people the capacity to resolve personal and community problems. Information can be passed during play, by means of music, videos, games, cultural activities and health services.

Modifying the environment to make it safer is a passive preventative measure with a great impact in the reduction of accidents, since it allows for greater liberty for children, without imperious intervention by parents and/or quardians.

Creation of and compliance with rules and regulations that minimize the risk of accidents, such as the compulsory use of safety belts, a prohibition on the sale of liquid alcohol, strengthen prevention campaigns, reducing injury statistics. A study into the frequency of accidents on playground equipment at public schools and parks in Brisbane (Australia) revealed that installations such as climbing frames, horizontal ladders and slides, that adhere to safety standards (with appropriate heights for the age of the users), contribute to the reduction of accident rates.<sup>24</sup>

In Argentina, since 2000 the Ministry of Health and Social Development, together with the Schools General Directorate, have been running the "Safe and Healthy Schools" project, with the objective of reducing the number of juvenile accidents in schools, at home and on the public highways, by means of measures for the integration of community, students, teachers and other school employees, generating self-preserving behavior and respect.<sup>25</sup>

When an accident occurs at a school it can result in major disorder for the institution. In addition to the legal implications, teachers have to abandon the remaining students when attending to an accident victim, which, in turn, results in lost teaching time. The Argentinean "Safe and Healthy Schools" project developed a spreadsheet to record accidents that occurred at schools, the risk factors involved and their magnitude. The objective is to identify different types of accident and adapt strategies to the true situation in each location. The accident records include the following information: date (to understand seasons of increase accident frequency), age and sex (to identify the sexes/ages most often involved in specific types of accidents), name (to permit the identification of specific children who become involved in more than one accident; thus allowing the investigation of motor function problems or high-risk behavior), class/grade (permits the confirmation of how strict or permissive the teachers are), type of accident (to identify the most common causes and possible risk factors for them), time (to identify whether more accidents occur during theoretical lessons, physical education classes, during recreation periods or when leaving), location (classroom, yard, bathroom, en route to school), cause (whether injury was the result of accident or violence), evolution (to identify the magnitude of the injury, by the need or absence of need for medical intervention), inclusion criteria (victims of moderate to high severity accidents, excluding mild accidents involving short falls or minor impacts.

According to these records, 50% of accidents took place during recreation, 15-20% during physical education classes, 10-20% during lessons, 5-10% while leaving and 2-5% in bathrooms.

Several measures were implemented in some of the state schools in Mendoza (Argentina), such as altering the timing of recreation periods, separating the older children from the younger ones; differentiating leaving times by grade to avoid congestion of vehicles and pedestrians, reducing supervision needs; supervised and directed games during recreation such as chess, cards and checkers, musical recreation with music that encourages singing and dancing, permanent supervision during physical education classes; clean and attractive environments with all signs of vandalism rapidly effaced.

School directors have a fundamental role in establishing relationships with students, visiting classrooms, school yards and giving them due value.

The authors describing the project emphasize that it is very important for every school to perform its own statistical analysis, since the characteristics of both the physical environment and the students vary from establishment to establishment. Many exercises have been created and applied to better deal with the issue of accidents in a more iterative manner such as, for example, timelines. Students remember an accident that occurred and had a great impact, they create a brief report on it, analyze the circumstances that led to it, share their experiences with their colleagues, and, in groups, list the factors that the accidents have in common and how they could be avoided. In another activity aimed at learning through play called "The detectives: risk maps", students get a magnifying glass and are taught to find places where accidents are likely to occur all over the school or home. The objective is to involve the student more in the process of identifying and preventing risk factors for accidents, demonstrating how correct environment and behavior can interfere in this issue.<sup>25</sup>

Programs for children, such as "Think First", launched in 1986 in the USA by a group of neurosurgeons concerned with the high indices of sequelae from cranioencephalic and spinal traumas, are implemented in the schools in several states in North-America and also Canada, Australia and Mexico. The program is applied in six modules which call attention to the general structure and function of the brain and spinal cord, safety in motorized vehicles and for pedestrians, safety with bicycles, safety with firearms, safety with water and in recreation and sporting areas. An assessment showed that knowledge about the subject increased greatly among the children, demonstrating that information is the first step towards developing safe behavior with relation to accidents. <sup>26</sup>

Any project with the objective of reducing accidents and violence should be based on strategies that involve the community (strengthening collective action and skills) and the State (public policies), such as employment creation schemes, financial support for families that commit to keeping their children at school, increased investment in health and education.

In Brazil, examples of strategies implemented by civil society and the many different spheres of the government with responsibility for reducing accidents and violence. The Health Ministry emphasizes the importance of the time spent at school for approaching health from the perspective of its promotion, through activities for the prevention of diseases and the reinforcement of protective factors. Schools have a social and political function directed at the transformation of society and the exercise of citizenship, which justifies the development of health promotion activities aimed at the school community.<sup>27</sup>

Schools are the ideal environment for the creation of a "culture of peace" and need to be seen as a public space that better use must be made of. Opening schools at the weekends, presenting them as options for leisure, sport, dance, music and art, among other activities, will serve to attract the community, which comes to respect them and preserve them. UNESCO has established possible options for reducing cases of violence at schools. One of these in the Opening Spaces Program, which has the objective of constructing a culture of peace, of education for all and throughout life and fighting against poverty and constructing new schools for the twenty-first century".<sup>28</sup>

UNESCO recognizes that the development of proposals that prioritize "youth, joining the concepts of citizenship and participation, made concrete through education, culture, sport and leisure contribute to the construction of a culture of peace". The Schools of Peace program is being implemented in Rio de Janeiro. Started in August 2000 it is part of an agreement between UNESCO and the government of Rio state and is being executed by the Secretariat of Education, offering options for leisure culture sports and workshops to youth and the community around the school.<sup>28</sup>

In Brazil, members of the Brazilian Society of Pediatrics (Sociedade Brasileira de Pediatria - SBP), concerned with the high indices of mortality from external causes among children and adolescents, started, in October 1998, the National Campaign for the Prevention of Accidents and Against Violence to Children and Adolescents. Based on the slogan that all accidents and violence are avoidable, the campaign proposes strategies that involve the whole of society, public authorities, parents, guardians and educators, in addition to the pediatricians themselves.<sup>29</sup>

According to information provided by the SBP, some factors that make implementation of actions against accidents and violence are: the lack of precise diagnosis of the real current situation on Brazil in terms of accidents and violence, the huge territory to be covered by the campaign, the socioeconomic inequality in education and health of the population, the unemployment and low income causing accidents and increasing violence, in addition to a lack of continuity in the implementation of actions and delays in meeting the targets proposed.<sup>29</sup>

A major achievement was won in this area in Recife (PE), with the 2001 approval of a law for the installation of internal commissions for the prevention of accidents and violence in schools (ICPAVS). Municipal Law no. 16665/2001, already in force, created the Permanent Program for the Prevention

of Accidents in Schools, to be implemented by the ICPAVS. This is the practical realization of a project that has been defended by the SBP since 1998 and followed by other cities such as Betim (MG), Salto (SP), Maceió (AL), Natal (RN), Maringá (PR), Três Lagoas (MS), Olinda (PE) and others. Made up of representatives of the students, parents, teachers, directors and school employees, with equal numbers of each, the commissions have the objective of observing conditions and situations of high-risk for accidents/violence in the school environment and surroundings, in addition to promoting awareness of safety principles aimed at prevention at school, at home, in traffic and at work, constructing a culture of peace and requesting measures to reduce and even eliminate these risks. <sup>30</sup>

During the nineteen nineties in São Paulo, two strategies were implemented for the prevention of violence in schools: (1) the "Community Present" project, which emphasizes a culture of peace by means of strengthening citizenship, participation of the entire school community and students' parents and (2) the "Partners of the Future" program, aimed at developing activities that promote solidarity, respect for plurality and social interaction that is fairer and more ethical among young people, with the participation of children and adolescents, parents, residents and community leaders in activities carried out at weekends and aimed at this public.<sup>31</sup>

Measures have also been taken in Belo Horizonte where the schools are opened to the community with the intention of bringing the community together to reduce the indices of violence.  $^{31}$ 

With the objective of instructing students and society, the Pernambuco Military Firefighters Corp also take part in educational activities. Since 2003, activities such as puppet theatres, exhibitions and lectures on first aid, prevention of accidents, oral hygiene and others have been carried out. By means of partnerships with the State Health Secretariat, Secretariat of Social Defense and non-governmental organizations, the Firefighters are active in many schools in Recife, contributing to discussion on the prevention of insults to health and, as a consequence, top the construction of safe schools. <sup>32</sup>

In Brazil, civil society has also mobilized for the prevention of accidents. The "Safe Child" organization, begun in 2001, is exclusively dedicated to the prevention of accidents to children and adolescents of up to 14 years of age. It is currently active in São Paulo, Recife, Londrina and Curitiba, by means of the development of research into the subject and information in the population. This organization has implemented the "Safe Child at School", program, whose objective is to expose children to the theme of accident prevention, by means of activities carried out in the classroom and a cross-sectional approach is taken to the subject. 33

In 2001, the Centers for Disease Control and Prevention (CDC) established standards for the prevention of accidental injuries, violence and suicide at schools, publishing them in the Morbidity and Mortality Weekly Report with the objective of creating an environment that promotes safety and prevents injuries at schools. According to the CDC, the prevention approach should be integrated, acting in eight different

spheres: social environment, physical environment, health education, physical education and extracurricular physical activity, health services, crisis management, integrated efforts by school, family and community to prevent injuries and train employees.<sup>34</sup>

**Social Environment** – recommendations are: (1) encourage students in their academic achievements; (2) develop social norms that disapprove of bullying and all forms of violence; (3) involve teachers, employees, students, parents and community in all operational aspects of the school; (4) designate a person to be responsible for safety activities; (5) encourage a sense of "connectedness" in students with relation to their school; (6) establish a climate of relationships that demonstrates respect, support and care and which does not tolerate bullying; and (7) develop and implement policies aimed at the prevention of suicide, violence and unintentional injuries, approaching these themes in a cross-sectional manner during school activities, at periodic intervals.

**Physical Environment** – should be as safe as possible in terms of accident risks. Recommendations are: (1) designate someone to be responsible for the identification of accident risks, expediting immediate physical changes; (2) supervise environments that facilitate intimidation and attempt to change them, restricting access, improving illumination, etc.; (3) supervise students during their activities to promote safety, prevent violence and avoid unintentional injuries; and (4) periodically inspect means of transport, such as school buses.

**Health Education** – healthcare should be approached in a cross-sectional manner. Students should be stimulated to adopt safe and healthy lifestyles by means of interactive teaching strategies and methods that involve the school in learning about the prevention of violence and unintentional injuries. It is also recommended that educators be trained and means be of education be tested.

Physical education and extracurricular physical activity — physical activity, in addition to promoting greater integration between the students, makes possible positive reinforcement of health education, emphasizing safety rules during activities, pointing out the importance of personal protection equipment, changing the rules of games to avoid injuries, strengthening first aid measures and reinforcing the prohibition against alcohol, drugs and violence at sporting events. Installation and maintenance of spaces for the development of physical activities that avoid accidents. Educators, teachers and coaches must be trained in the prevention of accidents and performance of first aid.

**Health Services** – schools should offer and/or facilitate health service access for students, family members and employees. Furthermore, schools should train employees to identify students who are being persecuted or who show signs of developing high-risk behavior, immediately referring them to preventative programs and services. Health services should assess the magnitude of accidents and violence in

the school environment. It is recommended that emergency plans be developed and implemented for the assessment, conduct and referral of students or employees in emergency situations.

**Management of crises, disasters and accidents that affect the school community** –establish a written
plan with student evacuation in case of disaster risk, in
addition to long and short term post-crisis responses.

Integration of school, family and community in injury prevention – the school should involve the family and community in activities for the prevention of accidents and violence, in addition to being available for extracurricular community activities and events even outside of school hours.

**Training employees** – all professionals at schools should be prepared to promote health, serving as positive models of safe and healthy lifestyles. Employees must be conscious of the prevention of unintentional injuries, violence and suicide and must be capable of developing preventative activities.

#### Conclusions

Deaths and traumas resulting from violence and accidents have increased in absolute figures all over the world, demanding a rapid and organized response from the system. These causes have greatest incidence among a particularly vulnerable group: children and young people. The school environment represents an important facet of this problem, which is multifactorial, since children and adolescents spend a large proportion of their time at school, where these subjects linked with health should be raised and discussed.

The construction of a "Safe School" is a complex task. Without doubt, schools in which concern with preventing accidents and violence is constant, schools that stimulate healthy lifestyle habits, that guarantee a good education, stimulate all students with no discrimination and that perceive the difficulties and prepare them for life is an ideal towards which we must strive. All the hope and fascination that children have when enrolling at school must not be destroyed in the face of the problems observed at schools. The Health Promoting School proposal serves as a theoretical basis for what we need to do to make the school environment as safe as possible, proportioning good physical, social, intellectual and cultural development to all. For this to happen it is necessary that health professionals and educators participate in conjunction to better understand the subject and to act in a more specific and effective manner in the construction of "Safe Schools". Discussions and knowledge building must be participative, involving the student body, parents and members of the community, who represent the focus of activities, in all proposals for the reduction of accidents and violence at schools. Furthermore, opening schools to the community, cultivating its participation, is a measure that many schools have adopted with the aim of reducing violence.

The implementation of a "Safe School" should follow a calendar that starts with the identification of environments where there is risk of accidents and violence and which can be performed by means of instruments such as that used in Mendoza, in Argentina, and the Firefighters in Rio de Janeiro, already mentioned. After the identification phase intervention activities should be planned, observing the school and its environs and involving the whole school community, parents of students and the community close to the school. One large initiative that involves all of these actors is the creation of internal commissions for the prevention of accidents and violence in schools (ICPAVS), whose objective is to observe conditions and situations where there is risk of accidents/violence in the schools environment and environs, in addition to promoting awareness of prevention-oriented safety principles at school, at home, in traffic and at work. Finally, the eight Health at Schools recommendations made by the Centers for Disease Control and Prevention and mentioned earlier should be used as a checklist.

Professor Maria Cecília de Souza Minayo points out that "violent and traumatic events are not accidental, there are not fate or bad luck, they can be faced, prevented and avoided".  $^{35}$ 

Gawryszewski et al. emphasize that, for external causes, the key to reducing mortality is primary prevention.<sup>36</sup>

It is of fundamental importance that all health and education professionals have one ear tuned to social problems, are aware of their responsibilities and up to the task of preventative measures. Initiatives in the healthcare sector must be joined up with others connected to education, culture and leisure, security and justice. Health promotion in the school environment is fundamental to integral citizenship development, which permeates safety, education, justice and equality.

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