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Nopembri, Soni

Graduate School of Human-Environment Studies, Kyushu University | Faculty of Sport Sciences, Yogyakarta State University

Sugiyama, Yoshio

Faculty of Human-Environment Studies, Kyushu University

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—Review—

Physical education and sport as a psychosocial intervention effort for children in disaster-prone areas

Soni NOPEMBRI¹⁾²⁾ and Yoshio SUGIYAMA^{3)*}

Abstract

Indonesia has the potential to experience massively damaging natural disasters. The Special Region of Yogyakarta is a province in Indonesia and home to the disaster-prone area of Merapi Volcano. Merapi Volcano erupts at any time with low, moderate, or high intensity. The destructive potential of this natural disaster is vehemently impressed upon local children, and as a result, many children become victims of psychological and social disorders. Children are more susceptible to it because their perception of disaster is far different from that of adults. Physical education and sport are a special form of activity that places emphasis on movement as a whole. Various studies on the inclusion of physical education and sport in psychosocial intervention efforts have been carried out. Physical education and sport are the only disciplines in the curriculum that addresses the physical and psychological health problems in students from pre-school through college. Physical activity plays an important role in the psychological and social well-being of an individual. In addition, physical activity is also instrumental in developing students' perception of health, and can serve as a protection against placing excessive emphasis on extrinsic values. A number of studies have also found a positive impact of physical education and sports classes on moral development. Indonesia's great potential for disaster is often realized, with deadly, and devastating results for the people in the disaster area. The impact of disasters often causes persistent traumatic stress for the surrounding community, especially for children. Emotional demands before the disaster, during evacuation, and after the disaster require children to be prepared psychologically and socially. However, despite the increase in community disaster preparedness, it still revolves around incidental activities without explicitly defined programs working with existing educational services. This results in programs that do not specify how to prepare children for disaster emergencies. Children's psychosocial preparedness in facing emergencies should be clearly defined in a program integrated into local education. Physical education and sport are likely to provide many opportunities for children to actively engage and develop psychosocial skills, in addition to providing numerous other benefits.

Key words: physical education, sport, psychosocial, disaster

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1) Graduate School of Human-Environment Studies, Kyushu University, Kasuga, Japan.

2) Faculty of Sport Sciences, Yogyakarta State University, Yogyakarta, Indonesia.

3) Faculty of Human-Environment Studies, Kyushu University, Kasuga, Japan.

*Correspondence to: Faculty of Human-Environment Studies, Kyushu University, 6-1 Kasuga-koen, Kasuga City, 816-8580, Japan.
Tel & Fax: +81-92-583-7856. E-mail: sugiyama@ihs.kyushu-u.ac.jp

Introduction

Some psychosocial problems exist throughout the entirety of Indonesia and solutions to these should be found as soon as possible. One approach to this issue is the development of psychosocial skills. Exercise can help develop effective psychosocial skills as sports are generally integrated into the social lives of individuals and society. As expressed by Morris et al. (2003)¹⁵⁾, exercise can facilitate personal and social development through positive behavior. Sports, in general, can become a universal identity and promote social relationships¹⁴⁾. Exercise is associated with team formation and thus is widely used to bind workers and support the creation of new teams, especially if the members have not previously met¹⁷⁾. Furthermore, sports can help develop social capital by aligning values to form a strong community¹⁴⁾. Therefore, the psychosocial benefits of exercise in the form of understanding and application of the values of social psychological and can be used as capital in civic life.

Lawrence (2008)¹²⁾ asserted, “sports are clearly more important than ever to both the individual and society in economic, cultural and financial terms.” Similarly, Coakley (2001)³⁾ states “sports are an important part of cultures and societies around the world.” Coakley (2001)³⁾ further explains, “sports are cultural practices that differ from place to place and time to time.” Some of the statements underlined the importance of sport in multiple areas of human life, and the precise effect it has on life will change with place and time. Sports are a sociocultural phenomenon that requires complete understanding, given their strong cultural connections to individuals and society.

Sport reflects culture and society, strengthens social differences, and serves as a vehicle for social

conflict⁶⁾. Sport is a social and cultural product that has significant meaning for the individual, community, and society in general¹⁴⁾. Maguire et al. (2002)¹⁴⁾ also claimed “...through sport we can begin to understand societies, nations, and communities.” Sport is a social and cultural product that can be understood and examined in detail by studying the actions of the individual and society within the scope of exercise.

Research on the development of psychosocial skills through physical education and sport has been done explicitly. Some researchers have explored variables that can influence the development of psychosocial skills. However, a comprehensive exploration of all the potential variables associated with psychosocial skills has not been performed. Further elaboration on this subject is very important because psychosocial skills are extremely complex. Physical education and sport have not been used optimally to develop psychosocial skills, so a comprehensive analysis is required to ascertain this. The variables associated with the development of psychosocial skills can be explored by observing behaviors and social interactions that naturally occur when physical education is implemented in the elementary school gym. Physical education and sport are expected to be a means for the successful development of psychosocial skills in individuals. Based on the statement above, we interested in investigating the development of psychosocial skills by asking the questions, “What is the role of physical education and sport in emergency situations?” and “How can physical education and sport develop children's psychosocial skills in disaster-prone areas?”

The value of sports and games and their use in an emergency

Sports and games, ranging from physical activity to competitive sport, have an important role in all societies. Access to and participation in sports and games is essential for individuals of all ages to lead healthy and fulfilling lives. The right to play and participate in sport has been addressed in many United Nations (UN) conventions²⁾. In 2002, the potential value of sport encouraged the UN to create a report that assessed its potential contribution, titled the UN *Millennium Development Goals*. Sport in development programs can serve as a tool to (1) spread educational messages such as safety, health promotion, and disease prevention (hygiene, HIV/AIDS); (2) teach positive values and life skills, as well as improve health and wellness, individual development, social integration and the development of social capital (increasing coherence or cohesion), peace building, conflict prevention, and economic development; and (3) promote social inclusion, thereby strengthening and encouraging the involvement of marginalized groups, especially women/children, refugees, and people with disabilities²⁴⁾.

There are four main benefits of sports and games in emergency situations these are depicted in Figure 1 and discussed in detail below.

Health

For children, sports and games are very important for the health and development of very basic skills, as well as for optimal growth and physical, cognitive, emotional, and social development. Games take the role of work in childhood and are the foundation of healthy psychosocial development⁵⁾. For children whose lives are disrupted by disaster or conflict, such activities become necessary for healing from trauma. Games are a powerful tool for reducing stress and seem to be a restorative force for children in difficult situations¹⁾¹⁸⁾. Structured and regularly scheduled games, sports, drama, music, and art activities are important in emergencies and post-conflict periods because these activities allow children to process the events around them and resume a more natural development in childhood²³⁾.

Psychosocial Rehabilitation

Research shows that participation in sports activities and games can help restore the mental functionality of members of the public who experience severe stress and psychological trauma to a normal level comparable to that before the crisis. Although it is not yet understood exactly how

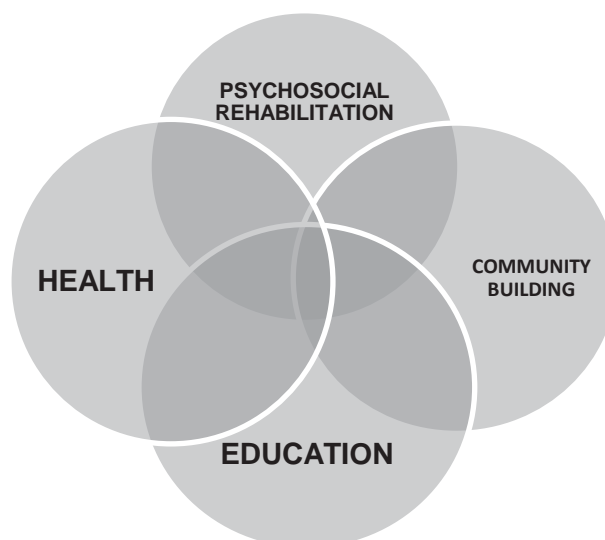


Figure 1. Value of Sports and Games²⁴⁾

exercise programs can completely alleviate stress and trauma experienced by children, there is clear evidence that involvement in sports provide tremendous healing power to those suffering from psychological and physical trauma and anxiety associated with stress²⁰⁾. Research shows that social support provided by family, friends, companions, teachers, peers, or other adults can facilitate the post-emergency healing process¹⁰⁾. Sports and games are also diverse in terms of their cultural relevance and significance. However, children who take part in sports and games are cross-culturally recognized for their improved social interaction, personal resilience, and marked healing. When programs and activities are adapted to local cultural practices and traditional games, a sports and game-

based approach would be an effective and widely accepted form of psychosocial intervention.

Education

In the absence of formal school structures, sports activities and games can be a valuable way to provide education during and after an emergency. Activities targeted to help children recover from disasters are often a key element of a post-emergency education program. Application of emergency programming must include a strategy for long-term education. Activities, materials, sports equipment, and trainer instructions can continue to be part of the normal curriculum once the initial healing after an emergency has taken place. A three-phase framework for education programs in emergencies, developed by Save the Children,

Table 1. The Contributions of Sports and Games in Three Phases after an Emergency²⁰⁾

EMERGENCY PHASES	SPORT IN EMERGENCIES
Response	
<ul style="list-style-type: none"> • Water supply & sanitation • Food security, nutrition & food aid • Shelter & site management • Health services 	<ul style="list-style-type: none"> • Create the safe space & activities to occupy children & youth • Sanitation & hygiene education/outreach
Recovery	
<ul style="list-style-type: none"> • Psychosocial rehabilitation • Education • Recreation 	<ul style="list-style-type: none"> • Assess children's psychosocial disorders • Refer children to treatment • Structure programs to alleviate trauma and promote a return to normalcy • Pair children with supportive adult figures • Facilitate children's re-entry into school • Spread joy and happiness
Reconstruction	
<ul style="list-style-type: none"> • Community development • Social services • Economic reconstruction 	<ul style="list-style-type: none"> • Develop leadership • Promote cooperation & conflict management skills • Raise awareness about HIV/AIDS and other diseases • Improvement of daily coping and other life skills

UNICEF, and UNHCR²³⁾, includes sports activities and games in the early phase of the emergency response and support to make “safe space” for children to participate in recreational and educational activities. Although often regarded as a key activity in merely re-education, sporting and games activities maintain their value throughout the entire education system and should be an integral part of all phases of recovery.

The role of physical education and sport in emergency

Sport programs are now used to promote peacemaking and conflict resolution, education and youth empowerment, health education and disease prevention, gender equality and the empowerment of women and girls, and social inclusion of disadvantaged groups, such as religious or ethnic minorities as well as persons with disabilities. Sport is a universally spoken language and can be a highly effective means of providing a sense of structure in emergency situations, which otherwise feel chaotic. More recently, sports interventions are also used in the field as a non-medical approach to trauma relief among populations affected by natural disasters or war. This may also improve responsiveness to other psychosocial treatments⁶⁾. Henley (2005)⁸⁾ emphasize that sports and play activities can assist youth non-verbally to access, express and resolve the myriad issues they face, by giving them a less confrontational means to address issues that they often do not have the intellectual or emotional capacity to deal with otherwise. Furthermore, Henley et al. (2007)⁹⁾ also explain that through play, children become sensitive to other children's needs and values, learn to handle exclusion and dominance, manage their emotions, learn self-control, plus to share power, space, and ideas with

others.

Psychosocial sports programs are rapidly gaining popularity as post-disaster interventions due to their ease of application in diverse cultural settings and their ability to reach large groups of victims in a relatively cost-effective way⁷⁾. Psychosocial sport and play programs look to be an important development in potentially helping children manage and thrive in the aftermath of traumatic or severely stressful experiences, and it appears that the “active ingredient” of these programs is in the enhancement of children's resilience processes⁸⁾. Henley et al. (2007)⁹⁾ also stated that sports and play activities with children as psychosocial interventions in a variety of situations, including (but not limited to): (1) In and after wars or conflicts to provide opportunities for “peace building” between conflicted parties, (2) In response to pandemics to provide healthcare education, support and services, (3) In response to social problems, such as providing opportunities to help reintegrate homeless children and child soldiers into society, or to address issues of poverty, and (4) After disasters to help re-establish social and psychological stability. What do we know about the effectiveness of these programs? Can children and youth who have experienced severe stress and/or psychological trauma due to disasters realistically return to normal functioning through sports activities? Could they even be prevented from experiencing more long-term mental health problems by using this approach? Finally, can we identify programs that should be considered “the best practice” in the field? There is no straightforward answer to these questions because we simply lack the empirical evidence to date.

When faced with a disaster, the experience of terror and helplessness is identical all around the

world, whatever the cultural background¹¹⁾. It is thus a common consequence that such experiences result in psychological trauma for many of the affected individuals after a disaster event. In the face of such a serious threat to life, the adult individual's response is often one of intense horror, fear, or helplessness; in children, the response often involves disorganized or agitated behaviors²⁶⁾. The sport and play programs offer children the opportunity to learn new problem-solving skills in managing their own emotions and behaviors, as well as to have healthy peer relationships⁹⁾.

Under such circumstances, using sport and play as instruments to support psychosocial rehabilitation in post-disaster trauma, especially that of children and youth, could serve as an interesting approach. Sport and play are physical activities that are very popular all around the world, meaning that they can be used in various forms and in different cultural contexts. Moreover, sport can offer a form of collective, group-based, support, through which many individuals are helped in a cost-effective way¹¹⁾. Sport has positive impacts on both the individuals and at the group/community level of society. The framework of physical activities can provide substantial information for the effective implementation of sport initiatives that aim to promote moral development and conflict resolution¹³⁾. This makes it an ideal instrument for the psychosocial approach to overcoming post-disaster-trauma. The psychosocial approach utilizes a non-medical model of rehabilitation, which addresses the resolution of stress or trauma, both on the individual and on the community level, via activities that attend to social and psychological issues in gentle and non-intrusive ways. These activities include a focus on community empowerment based on the respect of local culture

and traditions, as well as help the individual via the community by supporting the collective resiliency.

The psychosocial skill development through physical education and sports

Psychosocial skills development can feasibly be achieved through physical education and sports programs at school. As expressed by Curelaru et al. (2011)⁴⁾, physical education is the only discipline in the curriculum that addresses the physical and psychological health problems of preschool, school, and college students. According to Piko and Keresztes (2006)¹⁹⁾, in public health programs, physical education is related to health and should be emphasized to improve the psychosocial benefits of physical activity. This should, in turn, increase the level of student participation in schools and encourage them to “apply the skills of mental, emotional, social and physical to pursue a healthy lifestyle¹⁶⁾.”

Some research related to psychosocial skills and physical education programs in schools has been published as well. Wang and Sugiyama (2014)²⁵⁾ found that student's social skills increased after the new PE program and it was effective in improving social skills. Furthermore, Sugiyama, Shibukura, et al. (2009)²²⁾ stated that psychosocial skills acquired through physical education can be transferred to life using simple interventions. Similarly, Sugiyama, Nagao, et al. (2009)²¹⁾ found that individual traits such as social orientation can be determinants in the process of improving the communication skills fostered by organized physical education. In general, it can be concluded that the benefits of sport and play in psychosocial improvement programs are aided by the natural tendency of children to utilize the intended skills while playing, which assists in recovery from trauma and the support of existing

strengths¹¹⁾.

Referring to many previous studies, Lyras (2011)¹³⁾ stated that a number of researchers have tried examining the impact of sport and physical education classes on moral development. Among the psychosocial benefits, sports activities can help develop a sense of competence, self-determination, autonomy, and an internal locus of control¹⁹⁾. Curelaru et al. (2011)⁴⁾ states that exercise can be an important resource for young people to learn the skills necessary to effectively functioning in the family, school, and society; this is accomplished by teaching them responsible behavior, internalization of rules, courage, effectiveness, persistence, and tolerance of frustration. In contrast, facilitating and inhibiting motivational climate in physical education in secondary schools has no effect on social and psychological factors¹⁶⁾.

Physical activity plays an important role in the

psychological well-being of students as well as in their perceptions of health, and it can also serve as a protection against excessive emphasis on extrinsic values¹⁹⁾. Students who practice sport and play are generally excited to exercise show that they have more negative attitudes toward bullying compared to others. Exercise reduces psychological stress in general; it teaches discipline, fair play, and life organization, and it fosters respect for others⁴⁾. Furthermore, Curelaru et al. (2011)⁴⁾ emphasize that practicing sport is associated with a concrete vision of life. Similarly, Piko and Keresztes (2006)¹⁹⁾ state that regular physical activity becomes a source of personal development and orients values to create a healthy life. Based on some of the opinions and studies above, we formulate an idea of psychosocial skills development through physical education and sports in elementary schools in the disaster-prone areas such as in Figure 2.

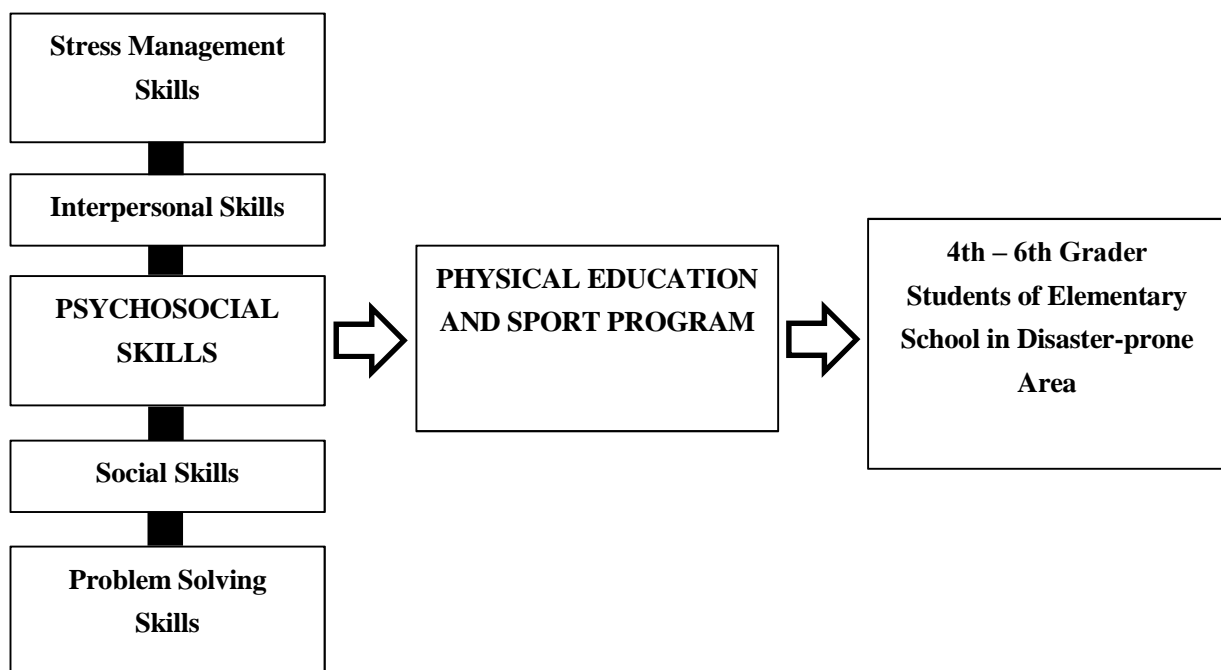


Figure 2. The Idea of Psychosocial Skills Development through Physical Education and Sport

Conclusion

Based on the results of the abovementioned research, we can conclude that physical education and sport is a viable tool for children's psychosocial development in disaster-prone areas. Sports and games have important for emergencies, including promotion of health, psychosocial rehabilitation, community development, and education. Sports and games contribute to the emergency phases of response, recovery, and reconstruction. Various studies have shown that physical education and sport have an important role in an emergency. For children, physical education and sport are more widely used for trauma recovery by developing a comfortable and pleasant environment. Psychosocial rehabilitation is very important for children, and sports provide an opportunity for them to engage in activities within a competitive and diverse group. Physical education and sport are very likely to become a vehicle for psychosocial development, as evidenced by various studies. Due to the integration of physical education and sports in education, in general, it would be very easy to implement psychosocial interventions in order to allow children to develop strong psychosocial skills.

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