

# Kinesiology and Sustainable Development

Ivan Prskalo

University of Zagreb, Faculty of Teacher Education

## Abstract

*The United Nations Millennium Declaration (2000), defining achievable goals directed towards sustainable development until 2015, includes the following: 1) To eradicate extreme poverty and hunger, 2) To achieve universal primary education, that is to ensure access to education for all, 3) To promote gender equality and the empowerment of women, 4) To decrease the mortality rate of newborns and children, 5) To improve mothers' health, 6) To fight against HIV / AIDS, tuberculosis, malaria and other diseases, 7) To ensure environmental sustainability, and 8) To develop global partnership, i.e. co-operation for the purpose of development as a strategic commitment planned until 2015. The current global goals are: 1) World without poverty, 2) World without hunger, 3) Health and well-being, 4) Quality education, 5) Gender equality, 6) Clean water and sanitation, 7) Affordable and clean energy, 8) Decent work and economic growth, 9) Industry, innovation and infrastructure, 10) Reduced inequalities, 11) Sustainable cities and communities, 12) Responsible consumption and production, 13) Climate protection, 14) Preservation of life below water, 15) Preservation of life on land, 16) Peace, justice and strong institutions, and 17) Strengthening the global partnership for sustainable development. These goals are the guiding principles of today's globalized world. The issues associated with sustainable development are not exclusively related to a single scientific area or one group of scientific disciplines. The universal issues presented through the millennium and global goals are also the issues dealt with by kinesiology and all its applied sciences. Particular focus is on the issues pertaining to the formation of environmental awareness connected with a positive attitude toward health benefits of physical exercise. Kinesiology contents, aside from health benefits, the impact on the quality of education, and confirmed economic values are not in collision with other proclaimed goals of sustainable development, which is the only option that guarantees survival.*

**Key words:** globalization; kinesiology; millennium goals; sustainable development.

## **Introduction**

The scientific world often remains in the opposition or the shadow of politics where rests the great concentration of power and decision-making as well as a greater possibility and the right to make mistakes, which, however, is not acceptable in science and profession (Findak as cited in Čutura, 2013). Therefore, a reference needs to be made to the United Nations Millennium Declaration with achievable goals until 2015, a political document at the centre of discussions related to sustainable development, which is simultaneously a reference point for sciences. The Declaration includes the following goals: 1) To eradicate extreme poverty and hunger, 2) To achieve universal primary education, that is to ensure access to education for all, 3) To promote gender equality and the empowerment of women, 4) To decrease the mortality rate of newborns and children, 5) To improve mothers' health, 6) To fight against HIV / AIDS, tuberculosis, malaria and other diseases, 7) To ensure environmental sustainability, and 8) To develop global partnership, i.e. co-operation for the purpose of development (Državni zavod za statistiku et al., 2006; Pavić-Rogošić, 2016). In the contemporary world, appropriate objectives are not merely those aimed at solving key issues in developing countries, but also these universal goals, seeking integrated solutions and a global commitment to ensure a better future both for people and the planet (Pavić-Rogošić, 2016). According to the same source (Pavić-Rogošić, 2016), the global goals are 1) World without poverty, 2) World without hunger, 3) Health and well-being, 4) Quality education, 5) Gender equality, 6) Clean water and sanitation, 7) Affordable and clean energy, 8) Decent work and economic growth, 9) Industry, innovation and infrastructure, 10) Reduced inequalities, 11) Sustainable cities and communities, 12) Responsible consumption and production, 13) Climate protection, 14) Preservation of life below water, 15) Preservation of life on land, 16) Peace, justice and strong institutions, and 17) Strengthening the global partnership for sustainable development.

It is clear that the issue of sustainable development necessarily goes beyond the sphere of politics and only one scientific area because these issues are both interdisciplinary and multidisciplinary. Therefore, kinesiology, as an interdisciplinary and multidisciplinary science that studies the effectiveness of movement, general and specific laws of the process of exercise as well as movement and the consequences of these processes on every person in the widest sense of the word (Findak, 1995; Mraković, 1992, 1997; Prskalo & Sporiš, 2016), should not be excluded from this globally important issue that is the essence of human survival. Emphasizing the fact that there are no, or there are only rare, activities which "can influence such a large number of features, attributes and abilities as it is possible through expertly conducted physical and health education, training or sports and recreational exercise" (Findak, 2016, p. 19; Findak, Mraković, & Metikoš, 1995), in other words, through kinesiology activities, the focus is on the impact these activities have on the benefits of harmonizing scientific and professional efforts for the purpose of directing the universal world development towards the sustainable one.

## **Modern Living Conditions and Sustainable Development**

Humanity, in the broadest sense of the word, is the witness of the only constant, and that is a change in living conditions (Findak, 2016). This change is so dramatic that it has become a precondition for its own survival, and when at some point this change stops, the cataclysmic recession is announced, progress is brought to a standstill, etc. Such stagnation in consumption is unwanted by all countries, because when it does occur everything seems to stop. On the other hand, this (un)desired progress has been achieved mainly by replacing the source of the driving force that ensured work on a particular path, and which has changed from men, animals, steam powered engines, electric motors and motors running on nuclear power. The Industrial Revolution has been replaced by the Information Technology revolution, etc. This overall progress has a number of positive as well as negative effects on the quality of life. The impoverishment of villages and the migration of its population to cities is the first of many negative consequences of the Industrial Revolution. These consequences are still present today and it feels as if the worst-case scenario of this process has not yet taken place. According to the 2011 census and the data provided by the City Office for Strategic Planning and Development of the City of Zagreb, 18.44% of the total population of the Republic of Croatia, i.e. 4,284,889 inhabitants (Buršić, 2013) live in the city of Zagreb, which means that there are 1232 inhabitants per km<sup>2</sup> (Grad Zagreb, 2014). “The population concentration in cities is not a suitable condition for an even development from a demographic standpoint as it imposes poor conditions on the greatest number of the inhabitants of the Republic of Croatia, both from the environmental as well as from a kinesiology point of view” (Prskalo & Babin, 2008, p. 32). It is evident that environmental and kinesiology problems have the same source, and there is no doubt that they need to be solved jointly. Specifically, the reduced rate of movement in everyday life reflects the quality of life in the urban surroundings. Even though not every movement or physical activity is necessarily a kinesiology activity, this reduction is nevertheless manifested, primarily as a reduction in functional and motor abilities. Moreover, “[p]hysical activity in the broader sense and kinesiology activity in the narrower sense are considered the most important health determinants associated with the way of life” (Heimer & Sporiš, 2016, p. 171). In addition, the industrial development is necessarily accompanied by pollution and worsening of living conditions, as well as low quality food that may meet the hygiene minimum but also overwhelms its consumers with excessive energy intake. Furthermore, the above is accompanied by an acceleration phenomenon or a secular growth rate in height, necessarily accompanied by an increased body mass, which needs to be monitored on larger samples of the population in order to confirm statistical significance (Cetinić, Vidaković-Samaržija, & Cetinić, 2008). Increasingly frequent disorders of the movement system, primarily flat feet, are the immediate

consequence of muscular weakness co-occurring with simultaneous increase in the ballast mass as a result of the acceleration supplemented by an increase in height and body mass, but also as a result of bone growth and even more of the increase in ballast mass (Mraković, 1997). Contemporary living conditions can also be linked to various psychological disorders, especially stress and depression, which have not spared even children. According to Zdenković (2014), 3-5% of children and adolescents were subject to depression. “Basic biotic needs, such as the need for clean air, quality water, natural food and, obviously, adequate muscle activity, have nowadays been compromised to the extent that in recent years we may talk of serious endangerment of human race” (Findak & Prskalo, 2003, p. 144).

## **Kinesiology and Sustainable Development**

Contemporary living conditions are something that an average citizen cannot influence, however, such a citizen can offer appropriate solutions to this issue, both individually, as well as through social leverages, primarily public educational institutions. Solutions to these problems greatly lie in kinesiology science, a relatively young discipline, which, possibly for these very reasons, may have readily available responses to the issues of contemporary life. However, firstly, it should be noted that professional and scientifically-based kinesiology activities endanger neither man nor his environment, and the standards for the construction of facilities intended for kinesiology activities also prescribe minimum environment-related conditions but have the power to influence the formation and development of environmental awareness as few other activities can (Findak & Prskalo, 2004). According to the same source, the preventative role of physical exercise in the prevention of a number of diseases of the modern age is emphasized, especially cardiovascular diseases, which are the world's leading cause of death (Buršić, 2013).

When analysing the function of kinesiology culture in the environmental education of children, pupils and the youth, from the kinesiology point of view, the following needs to be emphasised: if human health, harmonious development, preservation of human traits and abilities, the acquisition of knowledge necessary for an efficient life and work, and a personal satisfaction are considered the basic values and kinesiology ideal of man, then the only valid process can be the exercise process, the teaching process and the educational process aimed at improving human health, the optimum development of individually determined attributes and abilities, the acquisition of theoretical and motor skills that are important in everyday life and relevant situations in such a way that this process is filled with pleasure as an essential assumption of man's psychophysical balance. (Findak & Prskalo, 2003, pp. 145-146)

It is clear that kinesiology and its applied disciplines have a significant role in sustainable development, especially influencing the 3rd global goal - health and well-being, since the impact of all its applied disciplines is related to health and overall

well-being, and not only the absence of disease. Quality education as the 4th goal is unimaginable without a significant quantitative and qualitative contribution of kinesiology education. Decent work conditions and economic growth is the 8th global goal that is in line with economic values, along with the biological, health, cultural and pedagogical values of kinesiology culture (Findak, 1999). Finally, none of the other values affirmed by the global goals are in collision with the goals of exercise and values affirmed by kinesiology and kinesiology culture.

## Conclusion

The issues associated with sustainable development are not exclusively related to a single scientific area or one group of scientific disciplines. The universal issues presented through the millennium and global goals are also the issues dealt with by kinesiology and all its applied fields. Particular focus is on the issues pertaining to the formation of environmental awareness connected with a positive attitude toward health benefits of physical exercise. Kinesiology contents, aside from health benefits, the impact on the quality of education, and confirmed economic values are not in collision with other proclaimed goals of sustainable development, which is the only option that guarantees survival.

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**Ivan Prskalo**

University of Zagreb, Faculty of Teacher Education

Savska cesta 77, 10000 Zagreb, Croatia

[Ivan.prskalo@ufzg.hr](mailto:Ivan.prskalo@ufzg.hr)

# Kineziologija i održivi razvoj

## Sažetak

*U Milenijskoj deklaraciji Ujedinjenih naroda (2000.) s ostvarivim ciljevima usmjerenim prema održivu razvoju do 2015. godine ističe se: 1) Iskorijeniti ekstremno siromaštvo i glad, 2) Postići univerzalno osnovno obrazovanje, odnosno jamstvo obrazovanja za sve, 3) Promovirati ravnopravnost spolova i osnažiti žene, 4) Smanjiti stopu smrtnosti novorođenčadi i djece, 5) Poboljšati zdravlje majki, 6) Boriti se protiv HIV/AIDS-a, tuberkuloze, malarije i drugih bolesti, 7) Osigurati održivost okoliša i 8) Razviti globalno partnerstvo, odnosno suradnju za razvoj, što je strateško opredjeljenje do 2015. godine. Danas su aktualni globalni ciljevi: 1) Svijet bez siromaštva, 2) Svijet bez gladi, 3) Zdravlje i blagostanje, 4) Kvalitetno obrazovanje, 5) Rodna ravnopravnost, 6) Čista voda i sanitarni uvjeti, 7) Pristupačna energija iz čistih izvora, 8) Dostojanstven rad i ekonomski rast, 9) Industrija, inovacije i infrastruktura, 10) Smanjenje nejednakosti, 11) Održivi gradovi i zajednice, 12) Odgovorna potrošnja i proizvodnja, 13) Zaštita klime, 14) Očuvanje vodenog svijeta, 15) Očuvanje života na Zemlji, 16) Mir, pravda i snažne institucije i 17) Učvršćenje globalnog partnerstva za održivi razvoj. Ti ciljevi vodilja su današnjeg globaliziranog svijeta. Problemi održiva razvoja nisu ekskluzivno povezani samo s jednim znanstvenim područjem i jednom grupacijom znanstvenih disciplina. Univezalna problematika sadržana u milenijским i globalnim ciljevima problematika je i kineziologije i svih njezinih primijenjenih područja. Posebno se ističe problematika formiranja ekološke svijesti povezane s pozitivnim stavom prema zdravstvenim vrijednostima tjelesnog vježbanja. Kineziološki sadržaji osim zdravstvenih vrijednosti, utjecaja na kvalitetu obrazovanja, potvrđene ekonomske vrijednosti nisu u koliziji s ostalim proklamiranim ciljevima održiva razvoja, jedinog jamca opstanka.*

**Ključne riječi:** globalizacija; milenijски ciljevi; kineziologija; održivi razvoj.