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“Clean water: the bringer of life”

## **The importance of environmental education in preventative healthcare**

**Keywords:** environmental education, preventative healthcare, prophylaxis, the natural environment, the progress of civilization.

### **Summary**

Environmental education, frequently referred to as ecological education, is commonly associated with the description and shaping of human relationships with the natural environment. It points to the examples of anthropocentric transformation of nature and the consequences thereof. Deeper analysis leads to the conclusion that the existing emphasis of environmental education was on natural aspects, while neglecting no less important social issues, including human health. This article is devoted to demonstrating the interrelationships and dependencies of environmental education and preventive healthcare, from definition through to various activities and finally effects. The article clearly promotes being active, highlighting the importance of being involved in the development of gardens, which are important both in terms of the protection of the natural environment, through the development and diversification of the landscape, and in the maintenance of good physical and mental condition. In summary, the article puts forward the notion that in going through life, it is worthwhile to really

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care about one's health and the natural environment, especially since one is dependent on the other.

### **1. Common objectives enshrined in definition**

Environmental education and prophylaxis (preventative health-care)? On the face value of activities identified by these concepts, they don't have anything in common. The colloquial meaning of the former is associated with the description and shaping of mankind's relationship to the natural environment, and the latter falls within the scope of health education.

The hypothetical relationship of environmental education with preventive healthcare, as illustrated in this text, has been confirmed by analyzing the definition of both terms. In the dictionary of foreign words and phrases (Kopaliński 2002: 407) the word prophylaxis (gr. *prophylaktikós*) is described in terms of precaution and prevention. In the Polish language dictionary, prevention is defined as an activity that uses a variety of measures to avoid disease, and generally refers to the use of various precautionary measures in order to get round accidents, damage, and disasters etc. (Sobol 2002: 753). Important words that arise in the definition of the former include prediction, prevention, combating, and refusal to allow the onset of an illness, an accident or a disaster. One definition of environmental education is: *All educational activities (formal and informal) of a mainly educational nature, leading to the fact that on the basis of knowledge drawn from different disciplines (regardless of scope) people of different age, social or professional status become better to one another, be able to cooperate and used nature's gifts in moderation and lived modestly, with dignity and a care for themselves and those to whom they will pass the baton in the relay of life. This is a typically interdisciplinary view of the world around us and our sustainable approach to functioning within the natural environment and society, with the end result being the leading of an active life, sensitivity, awareness and an ecological culture; in other words a wisdom of life that is filled with people and makes use of the natural environment, to ensure the safety of our multi-generational model*(Kowalski 2012: 5).

When comparing the definitions cited, in order to determine the relationship between environmental education and preventative healthcare, attention needs to be paid to the direct or indirect needs therein, for schools and extracurricular efforts to encourage increased public awareness and change attitudes in favour of the environment and health. This is true of measures adopted in the formal school system, as well as in informal education outside schools. This is consistent with the idea of developing a knowledge-based society based on continuous, life-long education. In comparable definitions, emphasis is also placed on the importance of a positive atmosphere drawn upon mutual relationships and the ability to cooperate with one another, which ensures smooth functioning, as well as eliminating nervousness and stress, which negatively affects our health. The definition of environmental education also highlights the need to exercise, show restraint in the use of natural resources and be modest in one's every day pursuits, without necessarily resigning from a decent life. The definition of environmental education also refers to the wisdom of empathy towards people and the sensible use of the natural environment, which is frankly underrated in its contribution to an individual's mental and physical health, as well as having a considerable and positive impact on pro-environmental and sociological initiatives. When preparing a set of terms (keywords) valid for both environmental education and preventative healthcare, one should certainly include in the natural environment, interdisciplinary knowledge, formal and informal methods and forms that influence humans, consciousness, being active, moderation, modesty, foresight, regularity.

According to current thinking, environmental (ecological) education is identified as the formation of the appropriate relationship of an individual to the natural environment. Most publications also treat this in the same context. And this is another important argument for the importance of environmental education in the preventative healthcare, because the means by which we utilize the natural environment, the way we shape it, or even degrade it, has a direct impact on our health. Article 68 of the Constitution obliges public authorities

to prevent the negative consequences on our health of environmental degradation and, therefore it is clear that the legislature clearly recognizes convergence of pro-environmental activity and health.

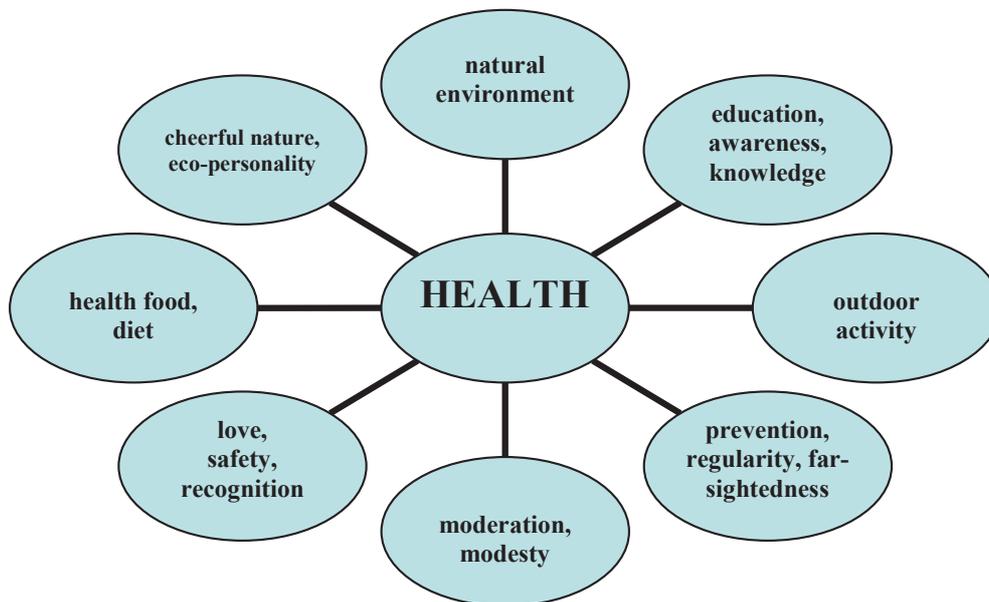
Daniel Goleman, one of the leading contemporary psychologists, wrote that *every body is a complex system, a kind of ecosystem. Just as the Earth's systems have their boundaries, which persevere and renew themselves before they begin to degrade and eventually collapse, so the systems of our body can accumulate various compounds to a certain limit, beyond which they no longer function normally and begin to succumb to disease.* (Goleman 2009: 59). In light of this, prophylaxis is an example of environmental education relating to the protection of nature, upon which the human body's homeostasis depends. Environmental education, like a coin, has two sides; the natural and the social side. It cannot be otherwise, since the human ecological niche is also (to put it simply) two-dimensional from a horizontal perspective expresses (in mundane terms) the existential relationship of the human being with Mother Nature, while the vertical arrangement is socialization, which is reflected in meeting the needs of safety, health, recognition, education, cultural creation and participation. Therefore, the concern for the environment simultaneously expresses a concern for public health.

## **2. Does love have an impact on health?**

At this point, further consideration should be given to the definition contained in the constitution of the World Health Organization (WHO) defining health as *a state of complete physical, mental and social well being and not merely the absence of disease or infirmity* (web-01). Therefore it can be understood that the etiology of many diseases has its origins in the crisis of love. The effectiveness of multiple medical visits and procedures will be increased if the healing process safeguards an atmosphere of mutual respect, kindness and understanding – emotional states characteristic of love. Conversation, friendly advice, a kind word of support cannot cure disease, but, by strengthening the impact on the patient's psyche, can assist

therapeutic treatment. Without words of kindness, the pill may well not work! Fig. 1 illustrates the subjective choice of favorable factors that affect health, and therefore fight disease, made from an environmental educational perspective. From this, it can be concluded that there are many determinants of health and most of them have considerable influence.

Fig. 1. Basic conditions for good health



### 3. Horticultural activity heals and beautifies

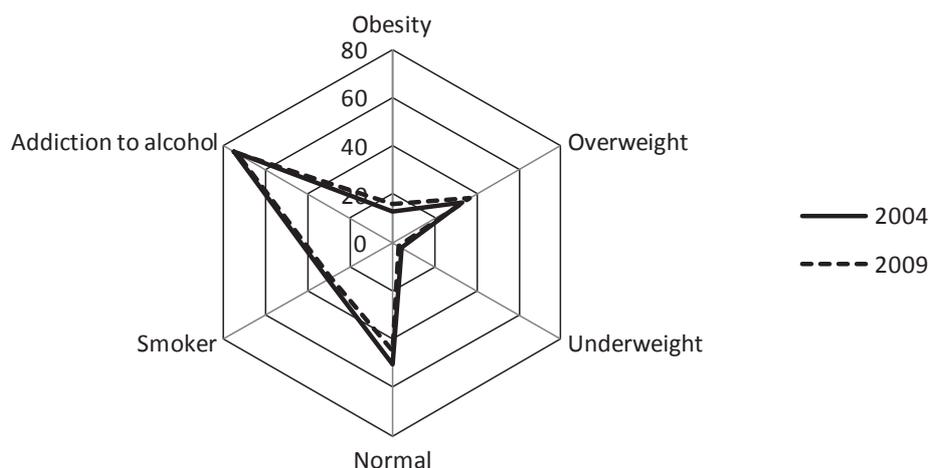
Pro-environmental and pro-social activities contribute directly to improving the qualities of nature and a better functioning society. It also has a significant impact on health, the physical (exercise, activity, agility, coordination) and mental (ambient aesthetics, satisfaction with social activity, motivation, a sense of security and self-esteem).

By conducting seemingly private activities related to the one's own garden, one engages in environmental and pro-social work conducive to health, because the garden adorns, allows contact with one's favorite plants and animals, provides flowers and herbs creating a microclimate conducive to recuperation, is an oasis of peace and inspires

optimism. Those who beautify the surroundings of their homes first and foremost meet their own needs, but they are not indifferent to others – they also improve the appearance of the entire environment and contribute to public education. Consequently, by gardening on their own premises, they improve not only their own health, but also indirectly benefit the health their neighbors, through the preventive and even therapeutic effects of the resulting aesthetic (namely a clean and tidy area and structure of the local landscape) and fragrance (the scent of flowering plants). But there is a caveat: jealousy; which, at least in theory, arises from this and certainly does not have a positive impact on health. From a medical point of view, working in the garden is a great way of maintaining good physical and mental health, and physical activity “is just what the doctor ordered,” and is the least expensive drug for dealing with bad cholesterol levels (Kowalski 2013: 22). Harmony of the external environment restores the homeostasis of the human body and so, to a greater or lesser extent affects health.

#### 4. We are overweight and become obese!

Fig. 2. The health status of the population in the years 2004/2009 (%). *According to the Statistical Yearbook of Poland, 2013*



What are the health trends in Polish society? Given some parameters describing the condition of the people, and using the figures contained in the yearbook, it is fair to say that Poles are becoming systematically overweight (an increase of 3.4% over the years 2004-2009) and obese (an increase of 3.3% over the same time period). Perhaps this is due to inadequate eating habits and a failure to comply with a healthy diet, understood as the right amount and quality of food consumed and the distribution of food at a given time. The foods eaten by humans contain far too much sugar, salt and fat, and a variety of artificial chemicals (preservatives, enhancers, specific “food attractants” appetite enhancers), which effects on the body are not exactly known as yet, but are certainly not without impact and number in their thousands. In a sense, mankind is an imperfect being, devoid of the instinct for self-preservation. There are no internal mechanisms signaling the danger that lurks in the foods consumed, or the gradual accumulation of fine particles in the body. In general, in choosing our foods, we are driven by their availability, packaging and price, and not by a consideration of whether their composition is favorable and well balanced, according to the needs of the body. This is one of the reasons for so much disease. Add to this a passive lifestyle, combined with a lack of moderation in eating habits, and we arrive at the reason why the number of people categorized as “normal” decreased by about 5.5% between 2004 and 2009.

More comforting, though still unsatisfactory, is to reduction in the number of people addicted to tobacco and alcohol abuse. In this respect, the positive change the awareness of Poles can be credited to some extent to education, and perhaps even more so to the constantly rising prices of these drugs. One has to be mindful of the fact that the statistics generally do not take into account the economic data from the shadow economy, and hence these improvements in public health may be illusory.

## 5. “Clean water: the bringer of life”

Years ago, this slogan was embroidered on decorative hangings found on the walls of every rural home, under which a bucket of fresh water was located on a wooden stool. We drank this water without boiling it, believing it would provide the strength needed to work. In those days, faith in the health-giving properties of fresh water resulted to a lesser extent from knowledge, and more from intuition and intergenerational transfer. Clean water, fresh air and uncontaminated soil are the basis of human health according to the environmental education and pro-health messages. Therefore, we again find that common ground is shared by environmental education, preventive healthcare, and the efforts of those who build sewage treatment plants and aim to improve water quality. All these are clearly consistent with preventive healthcare recommendations.

Fig. 3. The incidence of certain diseases in Poland in 2011 compared to 2005 (100%). According to the *Statistical Yearbook of Poland, 2013*.

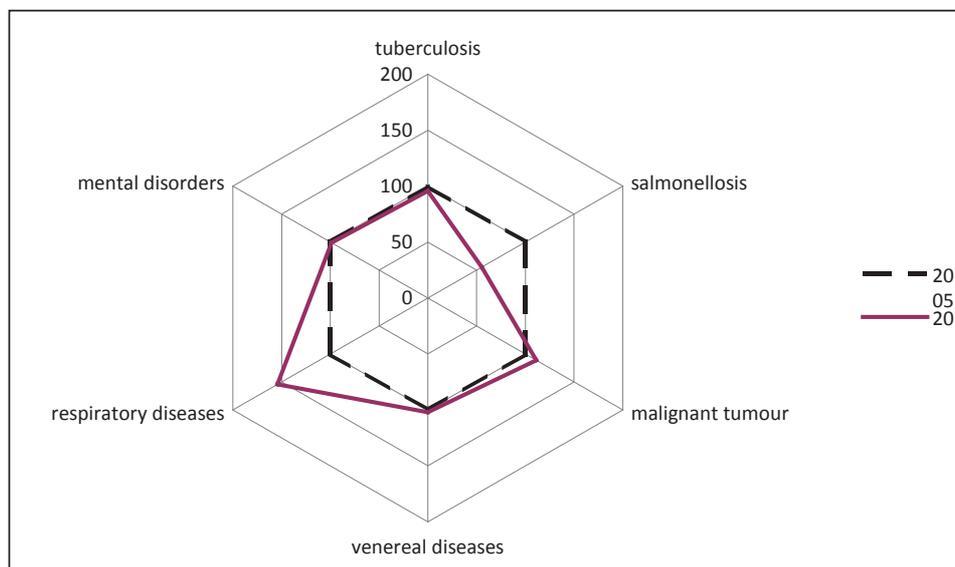


Figure 3 illustrates the comparative statistics of the incidence of certain diseases amongst Poles, subject to registration by health professionals between 2005 and 2011. The number of cases recorded in 2005 was taken as the base (100%). It should be noted that the

incidence of respiratory diseases increased (over 54%), as did cancer (over 11%). Their etiology is directly related to the quality of the natural environment, which contains harmful gases and dusts in the atmosphere, chemical substances dissolved in water and pollutants in the soil used for agriculture. Based on the available statistics, it is difficult to explain why the number of patients suffering from respiratory problems is rapidly increasing, while significant improvement in the air quality are officially reported by the Central Statistical Office in the yearbook, "Environmental Protection in Poland." Perhaps the approach to global statistics is at fault, due to the great diversity of people's living conditions in different regions of the country. This matter should be carefully analyzed by overlapping distribution maps of health-threatening air pollution and the incidence of respiratory disease in different regions.

## **6. Are diseases the price we pay for the progress of civilization?**

The development of our civilization is associated with changes in the economy and society. The scientific, technical and technological revolution that has taken place in recent decades has changed people's behavior, habits and attitudes. In addition to the positive aspects of improving the quality of life, progress also has its price, and presents risk and unwanted consequences. These included diseases we attribute to "civilization". Among them are those that occur on a massive scale, and have therefore attained the title of social diseases. These include, for example, cardiovascular disease, diabetes, neuroses, allergies, alcoholism, smoking, drug addiction and others. In each case, the etiology is different, but each of them is more or less related to environmental factors and social processes. It could be argued that specialists in environmental education, who speak, for example, about the ecological situation of the world in the context of health problems, and those specialists in the field of health education who address preventive healthcare, argue as one that the diseases of civilization and society prevent proper nutrition (the number and quality of food and the frequency of meals), the body's resilience through

frequent contact with the natural environment, the prevention of obesity and addictions (alcohol, tobacco, drugs), outdoor activity, the right balance between work and rest, and the minimization of stress. Going back to basics, through a “return to nature” is the cheapest form of preventive healthcare and the primary recommendation of environmental education. As he wrote years ago, Jan Gwalbert Pawlikowski “Culture came from nature, and then turned against her” (Olaczek 1987: 4). We have natural roots, which a lot of people have forgotten through their civilization, consumer and technocratic blindness. As mentioned earlier, Daniel Goleman wrote: “*We need to maximize our resolution and expand the range of lenses through which we look at nature, to see how synthetic chemicals damage the cells of the endocrine system and how the sea levels are slowly rising. We must forge a new sensitivity to a wide range of unknown risks beyond those that are detected by the radar of our nervous system and learn what to do with them. For this we need ecological intelligence*” (Goleman 2009: 47). This is not personal but collective intelligence, which we can develop as a species. It should be widely distributed in human networks. The effectiveness of these networks depends on good cooperation especially in various fields of mankind, adhering to three basic principles: 1. Know your impact (on the environment, other people); 2. Be conducive to improvement; 3. Share what you find out (Goleman 2009: 50).

It should seek to improve the system of ecological intelligence, because diseases are the price paid for the widespread use of objects made of unnatural (plastic) materials and the use of many chemical substances for preserving or “processing” foods. Our health is not indifferent to chemical detergents for household use, as well as cosmetics produced through chemical synthesis. Certainly, it is not healthy to live in a constant rush, surrounded by noise, to irregularly eat, and to consume meals, the composition of which falls far short of the standards recommended by nutritionists. We are forsaking our health for long-term stress and the means by which we rest, if we can attribute this term to the way we utilize our free time, which we spend in front of the television, computer or at a shopping centre.

Contemporary individuals, encouraged by the advertising that has infiltrated their lives, are passively subjected to a wave of consumerism, with the result that they want “to have” as much as possible and, unable to satisfy their material desires, fall into negative emotional states that often lead to various kinds of depression and addiction. This is where environmental education, together with preventative healthcare, can play a role, by teaching contemporary individuals assertiveness; at once qualities and skills, which provide an effective shield from the social engineering and marketing that drive people into increasing materialism, social degradation and marginalization. Assertiveness (a loud NO!) is the first step towards sustainable consumption based on information and knowledge about products, their potential harm and the production costs in terms of the “carbon footprint”. For the sake of one’s own health, as well as that of society in general, it is necessary to immediately abandon purchases made on the principle of the lowest price in favour of what is healthy for human beings, renewable and eco-friendly. This is important because global consumption has significantly exceeded Earth’s regenerative capacity and we cannot afford to continue to waste energy and raw materials. By using disposable items on a massive scale, we give evidence of our extravagance; our lack of care for the future; and label ourselves “people of the throw-away society.” Social education comprising assertiveness training should begin with the recognition of the unethical behavior of many people whose services we use and come across at every step of our irresponsible and dishonest lives.

## **7. The wisdom of Franciscan philosophy**

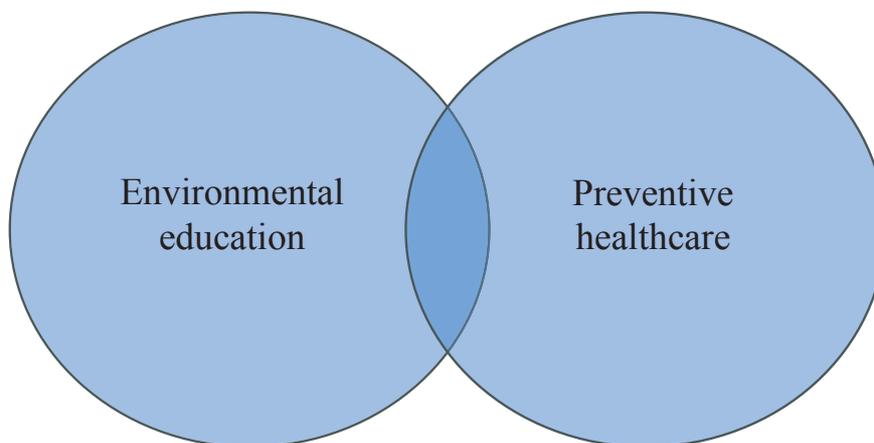
One of the constant themes of environmental education is philosophical and theological axiology and deontology. Reading philosophical doctrines leads to the conclusion that the value and duty of every religion is to respect the act of creation, which serves people in helping them meet all their living needs. Whoever, intentionally or unintentionally, destroys the environment raises his hand at God, and such a struggle will always end in disaster for mankind. Nature is good

in that it determines the existence of all living beings on Earth. Her biological degradation and destabilization of balance carries different implications, the adverse health effects must often be prevented by use of chemicals. Artificially produced chemicals are widely used in order to eliminate physical work, because contemporary individuals do not like to strain the muscles, thereby exposing them to premature sagging. When pursuing religious topics in environmental education, the role of mankind in nature is addressed in consideration of the exclusive or inclusive position of homo sapiens in the organic world. Regardless of the philosophical approach adopted, each person has the opportunity to make a positive contribution to the environment, either as a representative of one of the many species living on Earth (inclusionism), or as one placed above all others, acting as a good host – a colleague of the Lord (exclusionism). Dissemination of the Franciscan attitudes towards nature “Man in the midst of creatures and brother among brothers” seems to be very important in achieving the pro-environmental and health objectives. Achieving these objectives should be encouraged by other principles enshrined in the Franciscan Ten Commandments, such as: “Do not rob the future – Respect the children by giving them the opportunity of a long life”, “Foster in your children a love of nature,” “Find time in your weekly rest to live with the world, and not just use it.” It is worth repeating David Goleman’s *we must reject the notion proclaiming that humanity is situated beyond nature. It is necessary to develop ecological empathy* (Goleman 2009: 46) and *At each and every step we can begin to actively contribute to the corrective action, which we desperately need. Intelligence that can save us from ourselves requires all our awareness and coordinated efforts, as customers, business people and citizens* (Goleman 2009: 41).

Let the summary of this thread, and the entire article be that *in going through life it is worth taking care of one’s health and nature, all the more because one cannot preclude the other. Sooner or later, all material goods can be bought* (Kowalski 2012: 323). It is this idea promoted through public education, both at school and outside the education system. It is worth repeating what has been put forward

by environmental education specialists and those involved in preventative healthcare – areas only seemingly disjointed, and in fact mutually intertwined and complementary, because nature comprises many ecosystems, in which mankind has place and even mankind itself is a complex ecosystem. The Earth is a planetary organism (Gaia) as is mankind. If we manage to stabilize the shaky balance of nature today, as enlightened environmental education specialists urgently seek to do, this and the homeostasis in organisms of over seven billion people on the planet will be easier to maintain, which is the primary goal of health education. Maybe through widespread involvement in nature conservation, which environment educators are urging, it will be possible to shorten queues to see the doctor, which is currently a major social and political problem. Caring for the environment and initiatives to clean up the environment translate directly into good health. Why is it that so many people seem unable to grasp this simple rule?

Fig. 4. The relationship between environmental education and preventive healthcare does exist!



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