

PART II. PHYSICAL ACTIVITY OF SOCIAL AND PROFESSIONAL GROUPS
DZIAŁ II. AKTYWNOŚĆ FIZYCZNA GRUP SPOŁECZNYCH I ZAWODOWYCH

PHYSIOPROPHYLAXIS IN PHYSIOTHERAPY AND HEALTH PROMOTION

FIZJOPROFILAKTYKA W FIZJOTERAPII I PROMOCJI ZDROWIA

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Authors' contribution

Wkład autorów:

- A. Study design/planning
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- B. Data collection/entry
zebranie danych
- C. Data analysis/statistics
dane – analiza i statystyki
- D. Data interpretation
interpretacja danych
- E. Preparation of manuscript
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- F. Literature analysis/search
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Summary

According to the authors, physioprophylaxis is a preventive measure against developmental and lifestyle diseases, the aging process and disabilities through: ergonomic performance of daily and professional activities; systematic physical exercise; behaviors that strengthen pro-health factors; and which is oriented towards risk prevention. In the health care system, it is a new and effective prophylactic alternative for the prevention of ever-increasing health risks. As a health need and medical service, physioprophylaxis has officially become present in the law, standards of education and in the professional practice of most physiotherapists. On the other hand, the promotion of the health and well-being of people and the general public that emphasizes the importance of physical activity and exercise is one of a physiotherapist's professional objectives. The aim of this work is to present an exemplary description of physioprophylaxis integrated with health promotion. The authors resolved to show the types, means and methods of its impact on health education, risk prevention and health policy.

Keywords: health promotion, physioprophylaxis, physiotherapy

Streszczenie

Fizjoprofilaktyka według autorów jest to działanie zapobiegające chorobom rozwojowym i cywilizacyjnym, procesowi starzenia się i niepełnosprawności przez: ergonomiczne wykonywanie czynności życiowych i zawodowych, systematyczną aktywność fizyczną i zachowania wzmacniające czynniki prozdrowotne, ukierunkowane na zapobieganie zagrożeniom. W systemie ochrony zdrowia jest ona nową, skuteczną alternatywą profilaktyczną służącą zapobieganiu nieustannie narastającym zagrożeniom. Jako potrzeba zdrowotna i świadczenie medyczne, fizjoprofilaktyka oficjalnie stała się obecna w aktach prawa, standardach edukacji i praktyce zawodowej większości fizjoterapeutów. Natomiast promowanie zdrowia i dobrostanu osób oraz ogółu społeczeństwa, podkreślające znaczenie aktywności fizycznej i ćwiczeń jest jednym z celów zawodowych fizjoterapeutów. Celem pracy jest zaprezentowanie przykładowego opisu fizjoprofilaktyki zintegrowanej z promocją zdrowia. Postanowiono ukazać rodzaje, środki i metody jej oddziaływania w edukacji zdrowotnej, profilaktyce zagrożeń i polityce zdrowotnej.

Słowa kluczowe: promocja zdrowia, fizjoprofilaktyka, fizjoterapia

Introduction

Physiotherapy, as an independent medical discipline, has a wide range of biophysical factors incorporated in its methods, which serve to influence the human body from the moment of conception until death, both in sickness and in health. According to the current description of the WCPT (2019), physiotherapy is a service provided by physiotherapists to persons and populations in order to develop, maintain and restore maximum movement and functional ability at any stage of life. The services are provided in situations where movement and function are threatened by ageing, injury, pain, diseases, disorders, conditions or environmental factors and under the assumption that functional movement is crucial for what it means to be healthy. On the other hand, with regard to the professional activities of physiotherapists, it has been shown that their duties include identification and maximization of quality of life and movement potential with respect to promotion, prevention,

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treatment/intervention, habilitation and rehabilitation [1]. The lexical-dictionary source (2014) defines three types of prophylaxis (primary, secondary and tertiary) [2].

According to the authors' description [3], physioprophylaxis is a preventive measure against developmental and lifestyle diseases, the aging process and disabilities through: ergonomic performance of daily and professional activities; systematic physical exercise; behaviors that strengthen pro-health factors; and which is oriented towards risk prevention. In the health care system, it is a new and effective prophylactic alternative for the prevention of ever-increasing health risks. As a health need and medical service, physioprophylaxis has officially become present in the law, standards of education and in the professional practice of most physiotherapists [3]. The intention of the authors' is to present an exemplary description of physioprophylaxis integrated with health promotion according to the ideas of Tannahill [4]. The authors have decided to show the types, means and methods of its impact in promotional strategies, i.e.: health education, risk prevention and health policy. The authors assumed that the study will contribute to expanding and organizing the existing, fragmentary theoretical and practical knowledge showing the role and place of physioprophylaxis in health promotion. We believe that this original approach to the issue will encourage other authors to continue the discussion aimed at developing (mostly) a unified nomenclature related to physioprophylaxis that is consistent with the terminology of physiotherapy and health promotion.

Physioprophylaxis in physiotherapy

Physiotherapy, in order to become an independent medical field, has "overcome" a lengthy period of transition, among other things, in terms of terminology and the functions performed. The author of the term physiotherapy is considered to be Per Henrik Ling, the originator and creator of Swedish medical gymnastics and founder of the Royal Central Gymnastics Institute in 1813. The functioning of physiotherapy in the areas of education, science, law and medicine since the beginning of the third millennium has been based on the records in the documents of the World Confederation of Physical Therapy (WCPT 1999) and, since 2003, the European Physiotherapy Benchmark Statement, which state that physiotherapy consists in providing individual persons and populations with services that result in developing, maintaining or restoring, to the fullest possible extent, movement and functional ability throughout a patient's life [5].

Physioprophylaxis in Poland was officially added to the physiotherapeutic profession in 2015 by virtue of the provisions of the Act on Physiotherapist Profession. It stated that the function of physiotherapy is to popularize health promoting behaviors and to shape and maintain the fitness and ability of people of different ages to prevent disability [6]. In specialist textbooks, e.g. in the systematics of physiotherapy according to Zembaty, it had been considered much earlier and defined as preventive action against disease (without pathological symptoms) [7].

In the text of the Act (2018), which presents a detailed list of a physiotherapist's professional activities, physioprophylaxis is listed and defined as "conducting physioprophylactic activities consisting in popularizing pro-health behaviors" [8]. Meanwhile, in the text of the National Chamber of Physiotherapists' (KRF) resolution (2019), physioprophylaxis is defined as "physiotherapeutic management consisting of prevention, mitigation, inhibition or reversing of the adverse effects of abnormal lifestyles, involuntional changes and disease processes through, among others, popularization of physical activity, health education, reduction of risk factors and functional diagnostics to avoid or inhibit the development of functional problems or diseases". Furthermore, the types of physioprophylaxis are classified and described as such:

- *early physioprophylaxis*, aimed at the entire population, to promote physical exercise as a factor for reducing social, economic and cultural patterns of life which contribute to increasing the likelihood of disease and/or health problems;
- *primary physioprophylaxis*, aimed at high-risk groups, to prevent the disease before it develops and/or to reduce the likelihood of health problems through early diagnosis, control and prevention of internal and external risk factors;
- *secondary physioprophylaxis* (selective) which involves complementary treatment by implementing physical activity adapted to the dysfunction in order to halt the development of adverse effects of the disease and/or health problems;
- *tertiary physioprophylaxis* (selective) to prevent the effects of past/permanent disease/health problems and to prevent their recurrence, as well as to minimize secondary damage, complications and/or compensation [9].

It should be emphasized that the definition of physioprophylaxis and its types published in the Act by the National Chamber of Physiotherapists (2019) is a fundamental achievement, contributing to the development of physiotherapy, which was especially lacking in the area of education.

Health promotion in physiotherapy

According to Ostrzyżek and Marcinkowski, despite a clear shift in medical science towards a holistic approach to health, in many European countries the biomedical model is still the dominant approach in medicine, especially for the purposes of diagnostics and treatment [10]. This situation also applies to the functioning of Polish medicine and health care system. Physiotherapy, as a medical field, is also influenced by these two paradigms. In order to understand to what extent the holistic paradigm is present, a detailed analysis would be necessary exploring the interdisciplinary nature of physiotherapy within physiotherapists' education, law and professional practice. Physioprophylaxis and health promotion in the current, directional educational standards are written in general physiotherapy. The entire content of the standards is based on the documents prepared by the World Confederation of Physical Therapy and the effects of teaching and learning in terms of knowledge and skills come from four areas of science: medical, health, physical and psychosocial culture [11]. The interdisciplinarity of the content contained in the current educational standards predetermines multidisciplinary integration ensuring, according to the holistic paradigm, training the physiotherapy graduate in a theoretical sense (Figure 1).

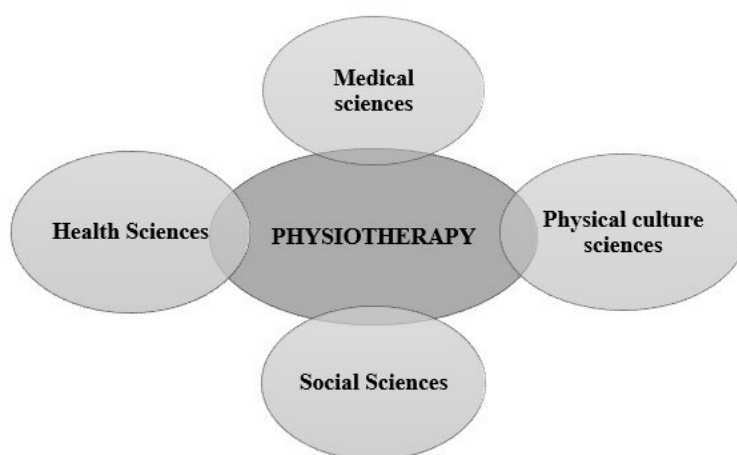


Figure 1. Physiotherapy and other sciences in educational standards
Source: own work

The analysis of the regulations concerning the physiotherapist's profession and detailed professional activities, as mentioned earlier, indicates physioprophylaxis in health and disease physiotherapy. It should be stressed, however, that systematic procedures (policymakers) do not guarantee that these regulations are implemented in the professional (systemic) practice of physiotherapists.

Health promotion as an area of practical action strategies for the health of individuals and communities has been evolving since the 1980s. According to the Ottawa Charter from 1986, it is a process that enables people to control and improve their own health, and according to the WHO glossary from 1995, it is a process that enables people to increase control over health determinants in order to improve their health as well as to develop healthy lifestyles and other social, environmental and individual factors leading to health [12].

The development of the idea of health promotion has been implemented in 5 main strands, including: establishing health policy, creating health environments, strengthening community activities, developing individual skills and reorientation of health care (health ministry policy, functioning of medicine) [13, 14]. Apart from diagnostics and treatment, it consists of helping people and communities in identifying and meeting their health needs, stimulating the need for health care through health education, prevention, developing individual and social skills, competences (health literacy, health behaviors, health protecting factors). The education of medical personnel, taking into account the integration of various fields of medicine, including physiotherapy and health promotion, is the currently recommended direction of development by global and national organizations such as: WHO, WCPT, European Physiotherapy Benchmark Statement and The National Chamber of Physiotherapists.

According to national data, the situation in Poland significantly differs from the level of implementation of the defined directions of activities in other countries due to the shortage of funding for public health (health promotion) as well as the lack of understanding and integration of the scientific community [15]. Theoretically speaking, the idea of health promotion implemented by representatives of modern medicine requires a transition from the recognition of a specific "pathocentrism" (diagnosing and treating a patient who has become ill) to taking an interest in health, i.e. the condition of the person before the loss of health. It is based on the advance

recognition of health threats (risk factors) with the emphasis on evidence-based activities [16]. Moving from a biomedical paradigm to a holistic and socioenvironmental one means adopting important strategies for pro-health activities by focusing on health, chronic disease and prophylaxis, and which are addressed to the whole of society, and include observation and care and the main subject (modification of risk factors) which is a healthy person [17, 18]. Researchers call this situation a “new revolution in health”. From the point of view of the health promoter, this is a favorable situation because the responsibility for the health of the individual is transferred from professionals to the individual. In the face of these changes, new qualitative problems have emerged, which have been described as a crisis in the health care system, such as: the health costs of poverty and unemployment, the rising costs of medical technology, and a phenomenon called the Cochrane anomaly, i.e. the lack of a link between increasing spending on remedial medicine and the improvement in the health of the population [17]. For further considerations on the integration of physioprophylaxis with health promotion, Tannahill’s model of health promotion, adopted and undertaken in scientific, educational and training activities in other European Union countries, was used (Figure 2) [4].



Figure 2. A. Tannahill’s health promotion model [4]

According to the Tannahill model, three basic types of actions (strategies) are used in health promotion to improve and maintain health. These include: health education, prevention (physioprophylaxis) and health policy (health care system), which closely cooperate with each other and have been used in science, education and training for many years [4]. The practical implementation of promotion activities as obligatory, to the greatest extent, has been confirmed in the practice of nursing [19].

Physioprophylaxis and health literacy

Health education in the propaedeutic sense is the responsibility of parents, kindergartens and schools. Its continuation, leading to the formation of competences and skills from each level of health literacy, and which enables independent health care, is an individual matter [20]. The World Health Organization defines health literacy as “the cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health and adds: “By improving people’s access to health information, and their capacity to use it effectively, health literacy is critical” [21]. Health literacy through the proper acquisition of relevant information helps to minimize the occurrence and impact of health risk factors on the individual and the environment, for the purpose of improving and maintaining good health. It is positively correlated with the level of education and health potential [22, 23]. According to a study by Cylkowska-Nowak and Wiatrowska, Poles present an insufficient level of health literacy, regardless of gender and age. The knowledge deficiency includes the basics of human body anatomy and its functioning, first aid and knowledge of vital parameters of human life [24]. According to an international literary survey carried out by the OECD (Organization for Economic Cooperation and Development), the term is defined as “the ability to understand and use information in daily activities at home, at work and in the community—to achieve one’s life goals as well as to develop skills and potential”. Attainment of literacy is related to four key factors: level

of education, parents' education, age and employment status. As far as literacy level is concerned, out of 20 countries participating in the study described by Ivancic et al. Slovenia was almost at the very bottom – only Poland, Portugal and Chile achieved worse results [25].

Expanding knowledge about health and illness builds a pro-health consciousness that motivates people to take care of their health and creates individual and public health potential. Up-to-date information on health risk factors, which are recognized threats, is available from clinical trials and the rapid advances in diagnostic technologies. Patients can receive professional support in undertaking these actions by a physiotherapist who performs physioprophylaxis. This results in acquired cognitive competence that determines behavioral health behaviors, including systematic, moderate physical activity. It is an important element of human activity both in health and in illness. Future directions of development of the professions of physiotherapist and other medical disciplines introduce the need for clinicians to broaden their knowledge about health literacy and the concept of its communication. The purpose is to help patients to find, understand and use the information pertaining to knowledge of their own health needs [26, 27].

An example of the importance of the role of education and physical exercise in the treatment of chronic diseases is the behavior of personnel (including physiotherapists) and patients themselves (according to the guidelines of the European Society of Cardiology from 2019, aimed at the reinforcement of behavioral changes associated with regular physical exercise [28]). Knowledge of the health benefits resulting from physical exercise is a manifestation of cognitive-behavioral competence associated with health literacy. The results demonstrating the percentage of Poles taking up recreational and sports activities show a systematic increase; in 2008, 37.5% of the population participated overall, in 2012, 45.9% and in 2016 46.4% [29-31]. According to another report, 39% of Poles are physically active in their free time to the extent recommended by the WHO. Physical activity is strongly related to age and education. Young people are more active than older ones and higher education fosters greater physical activity [32].

According to Wahl et al., people who regularly use physiotherapy are more aware of their health and better managed the activities related to maintaining good health [33].

Physioprophylaxis of health risk factors

According to Ostaszewski, high hopes are placed in the development of health education, health promotion and prevention of diseases as well as health-related behavior for good health. It is these actions that give a greater chance of improving the health of future generations than the achievements of corrective medicine. This is predetermined by their availability to every one of us, as opposed to costly and unavailable diagnostic and therapeutic technologies [34]. If we look at the described situation from the perspective of physioprophylaxis as a physiotherapist's professional activity, a model of physioprophylaxis integrated with health promotion will "appear". The authors believe that it is reasonable to realize the entirety of physioprophylaxis of health risks educationally (in the future it may be called—physioeducation), prophylactically, i.e., physioprophylactic and systemically (in the future it may be called—physiopolitics) (Table 1). It should be remembered that creating the terminological reality in the field of physiotherapy belongs to international and national experts.

Table 1. Place, types and functions of physioprophylaxis in health promotion

Promotional activities	Function	Implementation methods
Physioprophylaxis in health education	Acquisition, continuous improvement and updating of health knowledge for the development of health competence, physical and psychosocial health potential, and health literacy at 3 levels with a focus on physical exercise.	Lecture, talk, discussion, working with a book or journal, participation in training and conferences. Lifelong health education.
Prophylaxis Physioprophylaxis	Systematic implementation of established guidelines and current recommendations, health needs, i.e. physical activity, rational diet, no addictions or stress, prevention of recognized health risks, and prevention of developmental, lifestyle and occupational diseases, and slowing the aging process.	Participation in preventative programmes, changing of anti-health behaviors, systematic strengthening of health care factors, determinants, formal and informal activities, both individual and in organized groups, physical activity: aerobic, performance and endurance, resistance, coordination, flexibility, breathing, relaxation, healing, stretching.

Physioprophylaxis in health policy	The presence of obligatory, organized and accessible pro-health activities (especially through physical exercise) preventing risk factors, conditions and illness within the functioning of the social health care system.	Systemic medical and behavioral prophylactic programmes with no age, capacity or other access barriers. Infrastructure fostering health care through physical activity.
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Source: own work.

Conclusions

Since the literature on physioprophylaxis has so far devoted little attention to the importance of physioprophylaxis in health promotion, it seems justified to undertake theoretical deliberations aimed at organizing the knowledge on this subject. This has been done by attempting to discuss the place, role and functions of physioprophylaxis in health promotion and disease. According to the authors, the promotional aspect of physioprophylaxis targeted towards healthy and sick people should be implemented as an educational, prophylactic and systemic strategy. The effect of these promotional activities would be a higher level of individual and social health literacy, which would probably significantly reduce the ever-growing health care demands. One should hope that the original idea of integrating physioprophylaxis with health promotion will be found among physiotherapists willing to use it in professional practice. The recommended continuation of this topic would be a detailed approach to the functions of physioprophylaxis in disease.

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