

Comparative studies on promotion of health and life style of hospital staff in Sweden and Poland

Jerzy T. Marcinkowski¹, Anna Edbom-Kolarz², Anna Bajek³, Andrzej Wojtyła^{1,4}, Jerzy Leppert⁵, Paweł Zagożdżon⁶, Emilia Kolarzyk⁷, Wiesław Bryl⁸, Karolina Hoffmann⁸

¹ Chair of Social Medicine, Department of Hygiene, University of Medical Sciences, Poznan, Poland

² Vrinnevi Hospital, Department of Ophthalmology Syncentralen, Norrköping, Sweden

³ District Hospital, Kalisz, Poland

⁴ Department of Mother and Child Health, University of Medical Sciences, Poznan, Poland

⁵ Centre for Clinical Research – Uppsala University, Central Hospital Västerås, Västerås, Sweden

⁶ Department of Hygiene and Epidemiology, Medical University, Gdansk, Poland

⁷ Department of Hygiene and Dietetics, Jagiellonian University, Krakow, Poland

⁸ Department of Internal Medicine, Metabolic Disorders and Arterial Hypertension, University of Medical Sciences, Poznan, Poland

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Abstract

Introduction. Recently, an increase has been observed in the number of patients suffering from diseases which are the consequence of an anti-health life style; therefore it is necessary to undertake proper actions in this area, including those addressed to hospital staff.

Objectives. 1) Comparison of self-reported state of health and life style between hospital staff in Sweden and Poland, and the motivation of these employees to change the to-date life style for one that is more health promoting. 2) Presentation, based on Swedish experiences in the field of health promotion in hospitals, of the possibilities to implement these changes in Polish conditions.

Material and method. The study covered the staff from the following hospitals: 1) hospitals in Östergötland County, Sweden, and 2) the Ludwik Perzyna Regional Polyclinical Hospital in Kalisz, Poland. The studies were conducted in parallel in Sweden and in Poland during the fourth quarter 2010. The research instrument was a questionnaire form.

Results. The following measures should be undertaken by the staff of Polish hospitals: an increase in the consumption of fruit and vegetables, physical activity, organization of workshops aimed at the shaping of skills of coping with stress and relieving stress, assistance in reducing body weight and increasing physical activity. Obligatory breaks at work should be introduced for the consumption of meals and intake of beverages, including water, promotion of fluid replacement would reduce fatigue. An obligatory lunchtime would allow each employee to consume a decent meal, and consequently have respite away from one's own work activities. In order to have a well-functioning staff an employer should, in his/her own interest, decrease potential sick absenteeism, provide incentives for motor activity, e.g. by the organization of groups, reduction of weekly working time on behalf of documented physical activity, or financial support for the purchase of tickets for various forms of physical exercises. Promotion of collective exercise, e.g. common *nordic walking* for 30 min. during lunch, competition in the largest number of steps made. Promotion of healthy nutrition by the preparation of recipes for meals, several exemplary healthy meals in the form of a healthy alternative breakfast. During this event, a basket of fruit is provided, instead of cakes and sweets.

Conclusions. 1) The life style of the staff of health care facilities is more health promoting in Sweden than in Poland. 2) It is possible to change the life style of employees of health care facilities into one that is more health promoting. Changes in this area have been made in Sweden with a great success; therefore, it is worthwhile implementing in Poland these Swedish experiences which may function also in Polish conditions. 3) The foundations of health promotion in enterprises have been known for a long time; however, considering the fact that the comparative studies show that these foundations are more advanced in Sweden, it is necessary that Polish employers devote more attention to this problem, and become interested in Swedish experiences in this area.

Key words

health promotion, life style, hospitals, hospital staff, physical activity, healthy diet

INTRODUCTION

Considering the fact that an increase has been observed in the number of patients who suffer from diseases which result from an anti-health life style, proper actions in this area

should be urgently undertaken [1], including those addressed to hospital staff. This concerns, among other things, the development of actions in the field of health promotion in enterprises. Therefore, the following questions arise:

- 1) To what extent does the life style of health care staff differ between Sweden and Poland, especially the life style of employees of hospitals?
- 2) What actions are undertaken, and at what level, on behalf of an improvement of life style of hospital staff to be more health promoting?

Address for correspondence: Jerzy T. Marcinkowski, Chair of Social Medicine, Department of Hygiene, University of Medical Sciences, 5C Rokietnicka, 60-806 Poznań, Poland.
E-mail: jtmarcin@gmail.com

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Many studies show that medical staff frequently ignore a health promoting life style, including diet and body mass, and physical activity – perhaps due to a false conviction that they are sufficiently protected by their own medical knowledge. Physicians may not even perceive (diagnose) that they are overweight or even obese [2].

The results of some studies are surprising, according to which health promoting behaviours of the general population were better than those of physicians [3, 4].

OBJECTIVES

1. Comparison of the state of health and life style between the staff of Swedish and Polish hospitals, and subsequently, the motivation of these employees to change their to-date life style for one more health promoting.
2. Presentation, based on Swedish experiences in the field of health promotion in hospitals, of the possibilities of implementation of these experiences in Polish conditions.

MATERIALS AND METHOD

The study covered the staff from the following hospitals: 1) hospitals in Östergötland County in Sweden, and 2) the Ludwik Perzyna Regional Polyclinical Hospital in Kalisz, Poland. The studies were conducted in parallel in Sweden and in Poland during the fourth quarter of 2010.

The research instrument was a questionnaire form designed in the LEO electronic works in Sweden for the council of the Östergötland County in such a way that each employee performed self-evaluation of own state of health and life style, and then reported if he had, and if 'Yes' what motivations to change the to-date life style into one that would be more health promoting. The questionnaire form consisted of 23 items concerning the respondents' life style, self-reported state of health, and 7 socio-demographic questions, concerning gender, age, occupation performed and period of employment.

The questionnaire was sent by electronic mail to all staff members of hospitals in the Östergötland County. This questionnaire was translated into Polish and used in studies in the hospital in Kalisz. Firstly, consent for the study was obtained from the manager of the hospital in Kalisz, and subsequently the surveyors personally contacted the respondents and explained the justification for carrying out the study.

RESULTS

The differences between hospital staffs in Sweden and Poland was that in Poland there were more middle-aged employees (30-44), whereas in Sweden the largest group were the oldest employees (45-65) (Fig. 1). Both in Poland and Sweden the majority of respondents were women (Fig. 2). Polish women are occupationally-active until the age of 60, whereas in Sweden they retire at the age of 65, therefore this group was larger in Sweden. In Sweden, there is a lack of specialists in health care, and it is clearly observable that the group of employees at pre-retirement age are specialists (specialized surgical and other nurses, physicians,

psychologists, custodians) – this group of employees is the oldest. For the above-mentioned reason, there will be a lack of these specialists in the near future. The national health services in Sweden are threatened by the shortage of specialists; however, it is also evident that this group is occupationally-active and would like to continue working. This also evidences their satisfactory health and physical condition.

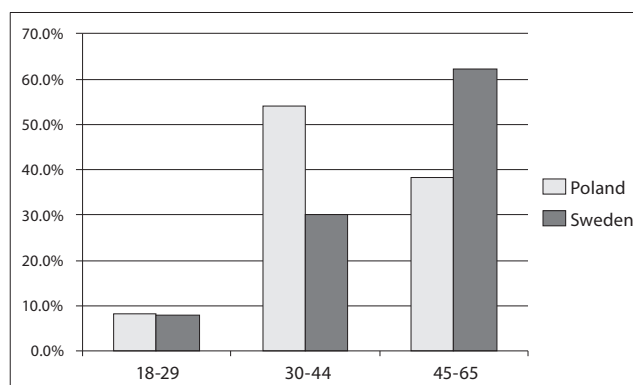


Figure 1. Characteristics of respondents in Poland and Sweden according to age

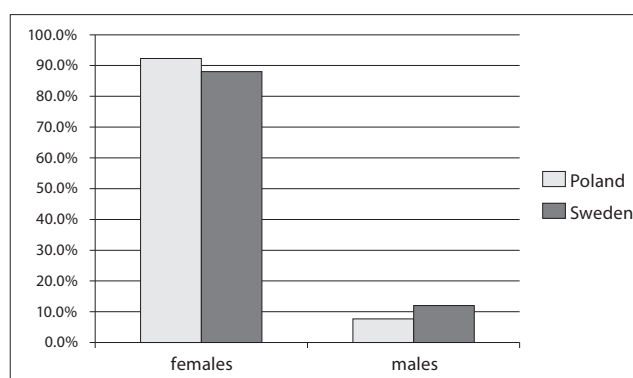


Figure 2. Characteristics of respondents in Poland and Sweden according to gender

Unfortunately, a clear domination of women employed in health care – clearly noted in both countries (Fig. 2) – carries many conflicts at work (*mobbing*, etc.), as the group consisting merely of women does not function well. It is also unfavourable when a large group of women occupy managerial positions. The best situation is a balance in the number of employees of both genders.

A comparative analysis of respondents in both countries reveals fundamental differences. Hospital staff in Sweden almost three times as frequently as in Poland described their state of health and very good or excellent, twice as often evaluated their nutritional habits as good, twice as often consumed meals 5-7 times a week according to the recommended principle of the division of food portions. As many as 91% of hospital staff in Sweden considered their time for the consumption of a meal at work as sufficient, compared to only 36% of respondents in Poland. This is due to the obligatory break for lunch in Sweden, not counted into the working time, which is from 30 min. – 1 hour. Due to this meal commonly consumed at the workplace the staff is better off at work and regain strength after having a rest. This meal consists of 3 dishes and a large amount of water. The regular consumption of water throughout the workday also results in better general wellbeing.

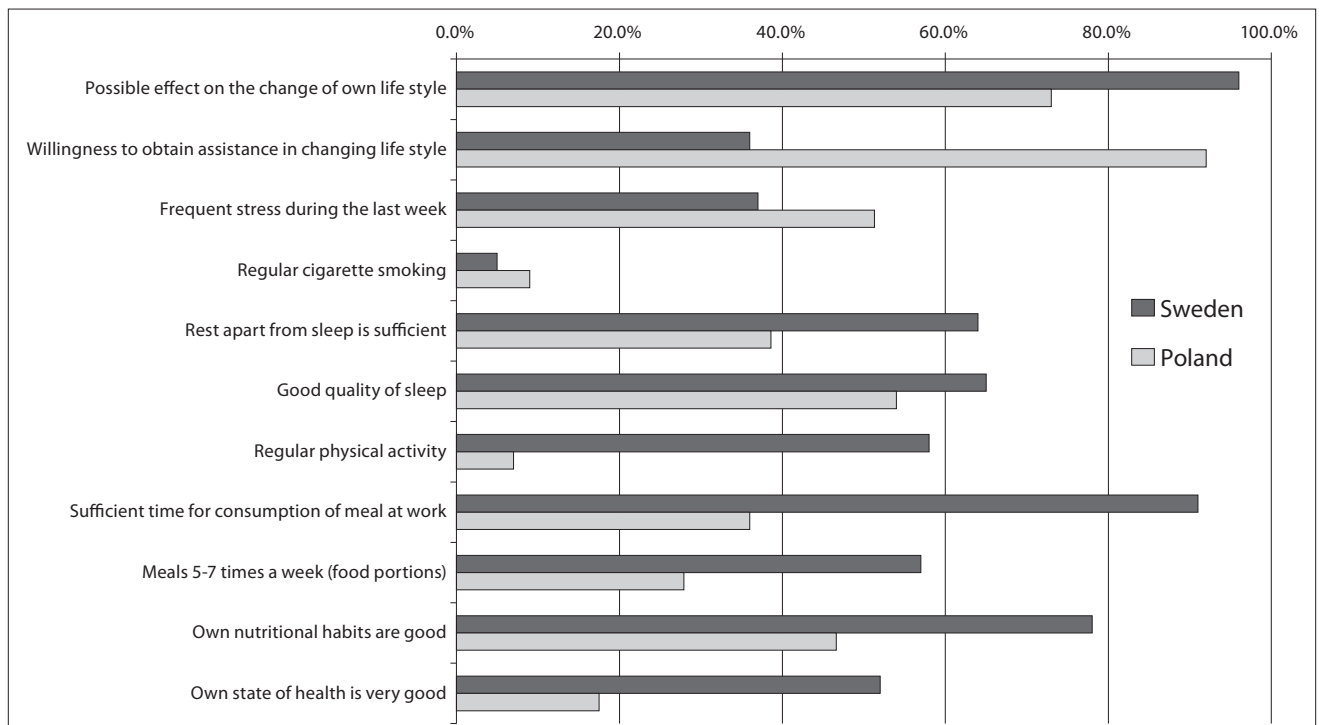


Figure 3. Comparison of self-reported state of health, life style, and readiness to change this life style for one that is more health-promoting between respondents in Poland and Sweden.

(Possible effect on the change of own life style; willingness to obtain assistance in changing life style; frequent stress during the last week; regular cigarette smoking; rest, apart from sleep is sufficient; good quality of sleep; regular physical activity; sufficient time for consumption of a meal at work; consumption of meals 5-7 times a week acc. to division into food portions; own nutritional habits are good; own state of health is very good)

The difference between regular physical activity is most striking, this activity being more than a dozen times higher among Swedish than Polish hospital staff – 58% and only 7%, respectively (Fig. 3). Such a good result obtained in Sweden is due to a many-year programme of activities on behalf of an increase in the physical activity of employees. Also, Swedish staff more often than Polish employees evaluated the quality of their sleep and leisure while awake in positive terms, although the differences were not as high as those mentioned above. Here, it should be mentioned that the quality of sleep is greatly affected by: quality of beds, regular physical activity and adequate nutrition, e.g. no consumption of meals after 18:00. Regular cigarette smoking was not frequently observed; however, the percentage of smokers was higher in Poland, similar to the percentage of employees who often felt stressed. Polish employees significantly more often declared willingness to obtain assistance in changing their life style, which mainly results from the fact that in Poland offers in this area were considerably more modest. In Poland, actions in the field of health promotion at workplaces are also more modest compared to Sweden. Probably for this reason, in Sweden, the number of hospital staff who reported that they had an effect on changing their life style for one that is more health promoting was larger, which confirms a higher social knowledge of this problem.

DISCUSSION

The results of own studies may serve as guidelines for the creation of prophylactic and information programmes. It is clearly noted that daily health promotion in enterprises carried out by the creation of possibilities of free use of

various programmes supporting a change of life style for a more health promoting one brings about clear results [5]. The employees should be provided the possibility to use various forms of support, free or with partial cost reimbursement, in order to evoke their motivation to change the to-date, not always adequate, life style, i.e. greater physical activity, struggle with own habits, improvement of habits with respect to diet, hygiene, as well as rest and sleep. The route towards an improvement and maintenance of both physical and psychological condition, especially nowadays, when the prolongation of the period of employment is proposed, is extremely important. A healthy worker is more effective and more rarely uses sick leave [6]. Here, it should be mentioned that in Sweden health promoting programmes were created due to an increase in sick absenteeism. In addition, a healthy employee willingly participates in various forms of improvement courses and occupational self-education, which is positively manifested in interpersonal relationships in a family and the society [7].

The objective of actions in the area of health promotion at workplaces is the elimination of unfavourable social behaviours and habits, and changing them into more health promoting ones – through individual and group programmes [8]. Care of the health status of health care staff will certainly bring about favourable results in a longer time perspective [9]. These were the goals in the organization of health promoting activities for the staff of the hospital in Norrköping – in order to decrease an occupational burnout syndrome [10], sick absenteeism, and over a longer period of time, also a change in life style. In this hospital, among other things, were organized slimming groups, groups exercising various forms of recreation associated with physical activity, regular walking in the forests, skiing with a leader of a group, or tour

skating through canals and lakes under the care of a guide. For example, common racing in spring over a distance of 5 km, those capable of running do so, while the remainder may walk this 5 km distance. Families are also invited to participate, including family members aged from 7-70 and over; they take rucksacks with food. With respect to skating, group activity is important, because skating individually is very risky, as one may fall into the water and be threatened by the lack of rescue.

The above-mentioned groups for exercising physical activity are on various levels of advancement, bearing in mind that each employee could adjust a suitable group to individual expectations and capabilities. For this type of activity, the hospital in Norrköping allocates the sum of 1,500 crowns/1 employee/year; which may be used for exercising any physical activity, according to preferences, e.g. ticket for swimming pool or horse riding.

In almost all Swedish hospitals the pedagogue for physical activity (Swed. *hälsopedagog*) has a gymnastics hall at his/her disposal, where motor activity is organized of various degrees of advancement, for example, gymnastics and motor activity groups are undertaken. Such halls are equipped with fitness devices for training particular groups of muscles (athletics). In general, each Swedish hospital has a swimming pool for rehabilitation purposes, which is also available for its staff. *Nordic walking*, bicycle riding, and running routes are popular. Training of this type is held every day, at various hours, primarily from 16.00 – 19.00, therefore they are available for all staff members who make an appointment for a specified hour and the programme which suits them best. The training groups are at various ages and levels of advancement. Sauna, showers, massage and weighing scales are also available. However, weighing is not frequently performed in order not to cause discouragement and loss of motivation for a longer, programme change of life style. Commuting to work by bicycle is encouraged, e.g. competitions are organized for those who commute by bicycle, ending with the sponsoring of tours abroad.

In Poland, *nordic walking*, *jogging* and walking have only now begun to develop as forms of activity and have as yet few fans. For this reason, sometimes unjustified comments may be heard of the type: 'They have nothing better to do, they should rather have a rest'. But the fact is that any form of active leisure is beneficial [11]. Each individually adjusted form of physical activity strengthens the nervous system, relaxes and helps the achievement of metabolic balance, thus exerting a therapeutic effect [12].

In some Polish hospitals there function rehabilitation wards and rehabilitation outpatient rooms. Unfortunately, the waiting time for a visit to a rehabilitation consultation room is currently about 6 months. Many rehabilitation rooms did not obtain an extension of an agreement with the National Health Insurance Fund for the current year. In these facilities there is a full payment for the procedures, which is relatively high. Meanwhile, the studies conducted among hospital staff in Kalisz showed that many employees have health problems and would eagerly use such a form of assistance at their workplace if they were offered such an opportunity.

In the hospital in eastern Sweden (*Vrinnevisjukhus, Norrköping, Östergötland*) a 'free time pedagogue' is employed (Swed. *fritispedagog*), who deals with the whole of health promotion for the hospital staff, for example, with

adequate nutrition, including slimming for those with obesity or overweight – by group training consisting in weekly meetings for self-control of the group. Each group member registers his/her initial body weight, diet, and amount of daily physical activity, and subsequently report this in a group. The programme covers daily adequate consumption of meals – 5-6 times. Such a frequent nutrition is beneficial. Weighing is planned not more often than once in 4-6 weeks in order not to stress the group members, because this programme of slimming is based on a long-term change of life style, and not on rapid weight loss. Frequent weighing often caused frustration due to low weight loss. Three slimming groups were organized of various levels of advancement. After several months, each of these groups covering 10-12 people, jointly lost approximately 100 kg through changing nutritional habits. Pharmacotherapy oriented towards slimming is not recommended, but instead adequate nutrition and regular control of body weight. These slimming groups have become so very popular that the 'free time pedagogue' (*hälsopedagog*) literally cannot keep up with servicing all those who are willing to participate.

Changes in nutrition are supported by 'healthy nutrition weeks'. During these weeks adequate nutrition is popularized through common meals prepared by specialists. Also, proper recipes are recommended for the preparation of meals, or even the possibility of buying the necessary ingredients (products).

In Poland, a high percentage of overweight and obese population is observed [13]. Some of them have already become accustomed to their own unfavourable appearance; nevertheless, others undertake various types of activities in order to reduce their body weight. They visit a dietician; however, it is difficult to observe the recommendations, and a frequent lack of being systematic is clearly noted, while others obtain information concerning diet from magazines and the Internet. It should be mentioned that this is not a good method, because each diet should be properly adjusted, primarily with respect to age, gender, and type of occupation performed [14]. In Poland, there is a lack of group actions in this area.

In Sweden, prophylactic actions in the field of nutrition cover also children, e.g. sweets can be given to children only on Saturdays, it is better to provide pure water and not water with flavour additives, e.g. orangeade. Polish women constantly feed their children with chips and sweets, and are generally unable to prepare health promoting meals, etc. [15]. This is due, among other thing, to the aggressive advertising of food products not recommended in health promoting nutrition.

Daily motor activity of a minimum 30 min. is recommended in various forms, e.g. fast walking, riding a bicycle or swimming – it is important to train the habit of everyday physical activity.

Swedish society is group-based. A group, psychology of its existence and functioning, has accompanied the Swedes from their youngest years. As early as in the nursery school, group classes are considered to be superior to the individual. Briefly speaking, an average Swedish person strives to come into being as a member of a group, rather than remaining an individual. For this reason, even slimming, prophylactic actions and any social actions are group-based. Thus, much attention is devoted to the analysis of the functioning of a group and its psychology. In the case of Swedish society, this

has not only many benefits, but also unfavourable effects. For example, basing education from elementary school to university not on individual questioning but on group work leads to a decrease in the level of education, which today exerts a negative effect on the entire society. A decline has been noted in architecture, level of education, and young physicians becoming frustrated when realizing that their contemporaries from other countries possess much higher theoretical knowledge.

Swedish society is characterized by a high rate of participation in prophylactic health check-up examinations. This is due to the fact that, to a high degree, the mass media shape positive social opinion with respect to a health promoting life style and, as a result, the education of society in this area is good, probably better than in Poland.

In Poland, changes are necessary on behalf of the behaviours in society which would be more health promoting, including the participation in prophylactic examinations. To-date, participation in free prophylactic health check-ups of the cardiovascular system [16, 17], or mammography [18], has been unsatisfactory. Actions should be undertaken primarily on behalf of: 1) increasing participation rates in these prophylactic health check-ups, and 2) observance by patients of medical orders. If such social changes in the field of health are to be achieved in Poland, it is necessary to start from the foundations. It is desirable to pattern the Swedish experiences – e.g. with respect to group actions on behalf of own health. Group pressure is important in order to change the attitudes for health promoting, and change in bad habits, e.g. with respect to nutrition.

Health promotion in enterprises should be an important element of actions addressed to the employees. The scope and character of these actions may be varied and very broad, starting from passing on the principles of health promoting life style to the staff. It is explained to the employees that health is their capital, which would allow them to achieve life goals, give satisfaction and fulfilment in life. While performing this task, the employees are equipped with knowledge and skills to improve their health status, and become mobilized to observe the principles of health promoting life style [19]. Here, life without habits is most important, especially free from cigarette smoking [20, 21, 22], proper comprehension and understanding of health [23], maintenance of many-faceted physical activity for proper physical and psychological fitness, adequate nutrition [24], toughening-up of oneself, developing the skills of coping with stress [25], kindness towards others (a socially healthy individual is the one who does good, is kind with respect to others, knows the value of the concepts: tolerance and compromise, and applies these concepts in practice, being at the same time, assertive), maintenance of an encouraging attitude (Eng. *coping* – to contend with difficulties in life; being a life optimist, perceived by others as a successful person – due to this, being an individual attractive to others, possessing many friends, with which it is simply easier to live). It is very important to promote a healthy life style at workplaces in an attractive way, active and full of humour. The objective of these actions for the enterprises is clear and obvious – healthier employees will work longer and more effectively. Such attitudes and behaviours are shaped at home and at school [26, 27, 28, 29].

The results of the presented comparative studies indicate what and in which way the life style of the staff of health care

facilities in Sweden and in Poland should be changed. This knowledge is very important for the employers, who, based on these results, are provided with the premises to develop proper health promotion in their enterprises.

It is known that many factors are distinguished which condition the state of health of the population; therefore, the comparative results of Swedish-Polish studies should be viewed from this aspect.

SUMMING-UP

Based on the results of studies carried out among the staff of the hospital in Kalisz, the following are recommended:

1. the staff members of the hospital in Kalisz should increase their consumption of fruits and vegetables, as well as physical activity;
2. it is necessary to organize workshops aimed at the shaping of the skill of coping with stress and relieving stress;
3. the employees of the hospital would like to obtain assistance in the area of the reduction of body weight and increase in physical activity;
4. obligatory breaks at work should be introduced for the consumption of meals and beverages, including water, promotion of fluids replacement would decrease stress during the workday. An obligatory discounting of the time for lunch would allow everyone the consumption of a decent meal and simultaneously rest, while having a respite from one's duties;
5. an employer, in his best interest, should provide incentives for physical activity to possess a well-functioning staff by, e.g. the organization of groups, reduction of weekly working time on behalf of well-documented physical activity, or financial support for the purchase of tickets for various forms of physical exercises. Promotion of group physical activity, e.g. common *nordic walking* for 30 min. during lunch, competition in the greatest number of steps.
6. promotion of a healthy diet by the preparation of recipes for meals and several exemplary healthy meals in the form of a healthy alternative breakfast. During celebrations, a basket of fruit is provided instead of sweets.

CONCLUSIONS

1. The life style of the staff of health care facilities is more health promoting in Sweden than in Poland.
2. A change of life style of the staff of health care facilities for one that is more health promoting is possible. In Sweden, changes in this area have taken place with great success. Therefore, it is worthwhile implementing in Poland the Swedish experiences which might also function in Polish conditions.
3. The fundamental of health promotion in enterprises have been known for a long time; however, considering the fact that the comparative studies show that these foundations are more advanced in Sweden, it is necessary that Polish employers devote more attention to this problem, and become interested in the Swedish experiences in this area.



REFERENCES

- Pappachan MJ. Increasing prevalence of lifestyle diseases: high time for action. *Med Res.* 2011 Aug; 134(2): 143-5.
- Ziemska B. Stan zdrowia pracowników Uniwersytetu Medycznego im. Karola Marcinkowskiego w Poznaniu. Rozprawa doktorska (promotor: J.T. Marcinkowski). Uniwersytet Medyczny im. Karola Marcinkowskiego w Poznaniu, Poznań 2012. (State of health of the staff of Karol Marcinkowski Hospital in Poznań. Doctor's dissertation-Tutor J.T. Marcinkowski, Medical University in Poznań, Poznań 2012) (in Polish).
- Dubnov-Raz G, Berry EM, Shemer O, Constantini NW. Who will take care of the caretaker? Lifestyle recommendations for physicians. *Harefuah.* 2011 Jul; 150(7): 583-7, 617.
- Gacek M. Zachowania żywieniowe i aktywność fizyczna w grupie lekarzy (Nutritional behaviours and physical activity in a group of physicians). *Probl Hig Epidemiol.* 2011; 92(2): 254-259.
- Tinati T, Lawrence W, Ntani G, Black C, Craddock S, Jarman M, et al. Implementation of new Healthy Conversation Skills to support lifestyle changes – what helps and what hinders? Experiences of Sure Start Children's Centre staff. *Health Soc Care Community.* 2012 Mar 27; 20: 430-437. doi: 10.1111/j.1365-2524.2012.01063.x.
- Speroni KG, Earley C, Seibert D, Kassem M, Shorter G, Ware CC, Kosak E, Atherton M. Effect of Nurses Living Fit™ Exercise and Nutrition Intervention on Body Mass Index in Nurses. *J Nurs Adm.* 2012 Apr; 42(4): 231-238.
- Byczkowska Z, Dawydzik L. Medycyna pracy w praktyce lekarskiej. (Occupational medicine in medical practice). Oficyna Wydawnicza Instytutu Medycyny Pracy, Łódź 1998.
- Kulik TB, Latański M. Zdrowie publiczne. Podręcznik dla studentów i absolwentów wydziałów pielęgniarstwa i nauk o zdrowiu akademii medycznych. (Handbook for students and graduates of departments of nursing and health sciences at medical universities). Wydawnictwo Czelej, Lublin 2002.
- Andruszkiewicz A, Banaszekiewicz M. (Ed.). Zakład pracy promujący zdrowie. Zdrowe miejsce pracy. (Enterprise promoting health. healthy workplace) [In]: Promocja zdrowia dla studentów studiów licencjackich kierunku pielęgniarstwo i położnictwo, vol. 1, Wydawnictwo Czelej, Lublin 2008.
- Fearon C, Nicol M. Strategies to assist prevention of burnout in nursing staff. *Nurs Stand.* 2011 Dec 7-13 ;26(14): 35-9.
- Tuszyńska-Bogucka V, Bogucki J. (Ed.). Styl życia a zdrowie – wybrane zagadnienia. (Life style and health – selected problems) Wydawnictwo Czelej, Lublin 2005: 42-52.
- Karski J.B (Ed.). Promocja zdrowia, Wydawnictwo Ignis, Warszawa 1999.
- Pilecka W. (Ed.). Psychologia zdrowia dzieci i młodzieży. Perspektywa kliniczna. (Psychology of health of children and adolescents. Clinical perspective) Wydawnictwo Uniwersytetu Jagiellońskiego, Kraków 2011.
- Pilch W, Janiszewska R, Makuch R, Mucha D, Pałka T. Racjonalne odżywianie i jego wpływ na zdrowie. (Rational nutrition and its effect on health). *Hygeia Public Health* 2011; 46(2): 244-248.
- Majcher A, Czerwonogrodzka-Senczyzna A, Bielecka-Jasiocha J, Rumińska M, Witkowska-Sędek E. Rozwój otyłości we wczesnym dzieciństwie – obserwacje własne. (Development of obesity in early childhood – own observations) *Probl Hig Epidemiol.* 2011; 92(2): 241-246.
- Majewicz A, Marcinkowski JT. Epidemiologia chorób układu krążenia. Dlaczego w Polsce jest tak małe zainteresowanie istniejącymi programami profilaktycznymi? (Epidemiology of cardiovascular diseases. Why in Poland there is such a little interest in the existing prophylactic programmes?). *Probl Hig Epidemiol.* 2008; 89(3): 322-325.
- Sawicka K, Szczyrek M, Jastrzębska I, Prasał M, Zwolak A, Daniluk J. Hypertension – The Silent Killer. *J Pre-Clin Clin Res.* 2011; 5(2): 43-46.
- Dyzmann-Sroka A, Marcinkowski JT, Kubiak A, Trojanowski M. Kto powinien zajmować się promocją skriningowego Populacyjnego Programu Wczesnego Wykrywania Raka Piersi? (Who should deal with promotion of the screening Population Programme for Early Breast cancer Detection). *Probl Hig Epidemiol.* 2009; 90(4): 621-626.
- Gniazdowski A. Promocja zdrowia w miejscu pracy. Promocja zdrowia. (Health promotion at a workplace. Health promotion). *Nauki Społ Med.* 1994; 1-2: 70-80.
- Cekiera C, Zatoński W. Palenie tytoniu – wolność czy zniewolenie? (Tobacco smoking – freedom or enslavement?). Wydawnictwo Naukowe Katolickiego Uniwersytetu Lubelskiego, Lublin 2001.
- Preisler E. Tytoń a zdrowie i sprawność fizyczna. (Tobacco and health and physical efficacy). Polskie Towarzystwo Przeciwytoniowe, Poznań 1991; XVI.
- Zatoński W, Przewoźniak K. Palenie tytoniu w Polsce, podstawy, następstwa zdrowotne, profilaktyka. (Tobacco smoking in Poland, fundamentals, health consequences, prophylaxis) Państwowe Zakłady Wydawnictw Lekarskich, Warszawa 2006.
- Nowicki G, Ślusarska B. Determinanty społeczno-demograficzne wartościowania zdrowia wśród pracujących osób dorosłych. (Socio-demographic determinants of valuation of health among occupationally active adults). *Hygeia Public Health* 2011; 46(2): 280-285.
- Gawęcki J, Mossor-Pietraszewska T (ed.): Kompendium wiedzy o żywności, żywieniu i zdrowiu. (Compendium of knowledge about food, nutrition and health) Wydawnictwo Naukowe PWN, Warszawa 2004.
- Marczyńska A. Jak promować zdrowie w miejscu pracy? Program radzenia sobie ze stresem. (How to promote health at workplace. Programme of coping with stress). Instytut Medycyny Pracy, Łódź 1998.
- Jacennik B. Strategie dla zdrowia. Kształtowanie zachowań zdrowotnych przez środowisko. (Health strategies. Shaping health behaviours by the environment) Wizja Press, & IT, Warszawa 2008.
- Karski JB. Postępy w promocji zdrowia, Przegląd międzynarodowy. (Proceedings in health promotion. International review) Wydawnictwo CeDeWu, Warszawa 2007.
- Sheridan Ch, Radmacher SA. Psychologia Zdrowia. (Psychology of health) Instytut Psychologii Zdrowia, Polskie Towarzystwo Psychiatryczne, Warszawa 1998.
- Woynarowska B. Zdrowie i szkoła. (Health and school) Wydawnictwo Lekarskie PZWL, Warszawa 2000.