

THE IMPACT OF MEDIA ON HEALTH BEHAVIORS

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Abstract:

At present, media have become a source of information and promotion of healthy lifestyle, what in consequence contributed to improvement of health condition in society. It also has huge influence on the personality of customers and their perception of the surrounding world.

The aim of this article is to identify and evaluate behavior as a result of media in promoting healthy behaviors in the society. The subject of the study was to analyze the influence of different types of media taking the above issues into practical actions of the respondents regarding their commitment to proper healthy condition. For attaining its objective method of diagnostic survey was used, with use a questionnaire technique of random inhabitants from the district of Tarnow, and for the evaluation of test compounds statistics Kruskal-Wallis test was used.

The weakest in terms of behavior differentiated subjects have sex, and the differences were only here because of the two kinds of attitudes. Significant differences, as a basis for the distribution of respondents adopted other determinants appeared. The rationalization of the diet appeared strongest in men and residents of big cities, but more self-control health and preventive research intensity was the case for the elderly and with vocational education, which characteristics are correlated.

INTRODUCTION

Mass media, as good and very fast means of communication among people, significantly affect the attitudes, actions and the wider knowledge of health prevention. In the role of behavior's wizard conducive to health, media perform mainly two functions: an educational and motivational one. The first provides the necessary information in the field of medicine, presenting and processing professional knowledge so as to make it understandable to wide audience. The motivational aspect mainly comes down to cause changes in attitudes. The importance of media as modern tool aimed at preserving and improving human health is reflected in the National Program of Health and Law on Radio and Television [Turbiasz, Kadłubowska, Kolonko, Bąk, 2010].

On development of healthy behaviors many factors outside world and patterns of personal family environment, peer, school, as well as information provided by the mass media have influence. General health and lifestyle depends on many factors, including: age, educational level, socio-economic status and life experience gained in specific cultural conditions. A critical moment in the development of healthy behaviors is puberty, adolescence, in which perpetuate the previously acquired health behaviors, although at this time there is also a lot of risky behavior. Some of them disappear after the experimental phase, but in large part of the people it has been perpetuating for years. This, in turn

determines whether a young man brings in his later life resources, or risk factors for own health. According to this article, important task of health education is to encourage to healthy behavior and eliminate activities that adversely affect health and should be carried out from an early age.

Health is a multi-faceted and complex value. This concept can be interpreted in different ways. Health is characterized by volatility, which is the result of differences: individual, social, situational, cultural, historical or scientific one [Syrkiewicz- Świtała, Holecki, Wojtynek, 2014].

The aim of this study is to identify and evaluate behaviors as a result of media influence in promoting of healthy behaviors. The subject of the study is to analyze the influence of different types of media taking the above issues into practical actions of the respondents in terms of their commitment to proper health condition.

Lifestyle is the most important factor which determines 50-60% of human health. There is no only definition and developed conception of health. The World Health Organization defines lifestyle as behavior based on mutual respect between the patterns of behavior determined by socio-cultural factors and individual characteristics. According to various authors lifestyle presents group behaviors, procedure, activity specific to the individual or groups, characteristic way of being distinctive towards this unit or different community. These are daily, repetitive behaviors, arranged in certain patterns characteristic of the persons and groups, not accidental and not exceptional. This is "strategy" of life, manifesting itself in the daily activities of people. Health promotion and the proper lifestyle are important factors for further decisions aimed at health and its protection, and health education is conducive to making positive health behaviors. The effectiveness of health education, health promotion and preventive programs depend largely on the degree of knowledge and understanding of health behavior and its determinants. Health education also leads to better results in health care, and therefore was included in the essential elements to improve the quality of medical services and to increase patient satisfaction with medical care.

During the implementation of health education programs one can achieve two different objectives: development of individual health behavior unit and raising the awareness of those, who are responsible for health policy, which may result in the introduction of appropriate changes in social policy, and thus to improve the health of the population. Therefore, this education can be directed to individual person or group of people. Nevertheless, the essence of these actions in both cases is to develop skills of decision making, which are designed to solve problems related to the impact on health.

A particular role in the education and health promotion is performed by mass media, which at the present time have tremendous power of communication and its impact on human behavior. It should promote programs of health, and the issue of health. It is important that in these activities health sector is also significant. It should place greater emphasis on health promotion, not only on treatment process [Szymczuk, Zajchowska, Dominik, Makara-Studzińska, Zwolak, Daniluk, 2011].

Achieving those objectives in health promotion is conditional, inter alia, the methods and techniques in its implementation are aimed primarily at increasing the potential for human health, by promoting healthy behaviors, including lifestyles and shaping physical and social environment. It is extremely important in health promotion to make people aware that they make decisions and choices about their own and the other people health.

RESEARCH METHODS AND EMPIRICAL MATERIAL

For the realization of the objective there was used method of diagnostic survey with use of questionnaire technique. The research tool was the original questionnaire containing 25 closed questions regarding obtaining health information concerning the media, its effect and

extent of use by the respondents. Due to the nature of the variables, data analysis were used in statistics' elaboration - Kruskala-Wallis test. General characteristics of respondents due to describing characteristics are summarized in Table 1. The basis for the analysis was the results of 114 random survey, taking into account above issues, conducted in 2015 in the district of Tarnow, in the Malopolska Province.

Table 1. Respondents due to the selected variables

The criterion for the distribution of respondents		Amount	%
Age	18 – 40	64	56,14
	>40	50	43,86
Sex	Female	68	59,64
	Male	46	40,36
Place of residence	Countryside	32	28,08
	City for 50.000 residents	44	38,59
	City with more than 50,000 residents	38	33,33
Education	Professional	37	32,46
	Secondary	42	36,84
	High	35	30,70

Source: Authors' elaboration

Subjected questionnaires individuals were divided into two age groups (approx. 56% under 40 years), gender (approx. 60% of women), and three groups of inhabited villages (28% from rural areas, 38.6% of cities with a population below 50 000, and the rest of the major cities), and level of education (32% have completed professional study, 37% of secondary school, and other - high school). The answers presented in the study were measured on an ordinal scale and expressed them on a scale of 1 to 5 points, and the lowest value is always the lowest level of acceptance of the question subject. Included in the study there are consisted of characteristics most often taken into consideration such situations characteristics that are analyzed in this study phenomena. Evaluation of the development size of the dependent variables describing the health behaviors of respondents, was conducted against the background of the above subgroups, which are divided according to: age, sex, size of the inhabited locality and level of education. These variables are therefore taken as determinants of the behavior under scrutiny. The appearance of the statistical significance of differences between the measurements of dependent variables formed the basis of statements of the relationship between these variables and determinants accepted criteria for group of respondents. The evaluation of the significance of differences between the level variables were based on statistics Kruskal-Wallis test, and the significance of differences between the ranks of the characteristics of the individual groups was verified by comparing the size of the critical value the smallest significant difference determined on the basis of statistics χ^2 .

The use of statistics Kruskal-Wallis preceded the establishment of the null hypothesis of similarity in distribution of the population under consideration consisting in the same position. This test requires description of the variables studied, at least on an original scale, which is a criterion for the data included in the analysis.

Statistics by Kruskal-Wallis, after ordering value and being assigned a rank, were calculated according to the formula:

$$H = \frac{12}{n(n-1)} \left(\sum_{j=1}^k \frac{R_j^2}{n_j} \right) - 3(n+1),$$

where n is the number of observations, n_j - the number of observations in the sample j , and R_j are in the ranks of observation j - group, the number of which is equal to k .

Statistics of this test allows to find the disparities between populations, but in order to determine what are statistically significant, authors compare modules D difference between the mean rank test i, j of the critical size of the C_{KW} :

$$D = |\bar{R}_i - \bar{R}_j|,$$

$$C_{KW} = \sqrt{\chi_{\alpha, k-1}^2 \left[\frac{n(n+1)}{12} \left(\frac{1}{n_i} + \frac{1}{n_j} \right) \right]}$$

Where $\chi_{\alpha, k-1}^2$, the critical size distribution χ^2 , was used. [Aczel, 2000].

ANALYSIS OF THE RESULTS

The starting point was to assess reaction of respondents at different age groups in promotion of healthy lifestyle based on their opinions considering importance of educational function of media in the provision of appropriate health behaviors. Research has shown that younger people found far above the importance of this function, and the difference in this respect between them and the elderly proved to be statistically high significant. Definitely, the question arises whether these opinions are reflected in the behavior of some of the respondents. Presented in Table 2 results allow to conclude that the younger people respect elders statistically significantly more have submitted information obtained from the media over medical consultation, pointing also to the stronger influence of the media on lifestyle. In addition, younger respondents attribute more importance to the media in terms of their impact on increasing physical activity and skills in first aid in emergency.

Table 2. Age of respondents and their health behaviors caused by the influence of the media to promote a healthy lifestyle.

Opinions and pro-health actions of respondents	Average rank of opinion among respondents		Rating rank distinctions between groups of respondents
	Younger	Older	
The importance of the educational function of the media in shaping health behavior	68,3	43,7	0,00**
Submission of medical advice from the media over the medical consultation	67,9	44,2	0,00**
The impact of media on lifestyle changes	63,7	49,5	0,00**
Increase in physical activity	71,5	39,6	0,00**
Rationalisation of diet	53,9	62,1	0,17
Increasing attention to the descriptions of food products	54,3	61,6	0,23
Improving the skills of first aid in emergencies	72,2	38,7	0,00**
Increasing self-control and intensity of health of prophylactic examinations	40,2	79,6	0,00**

* - Significance with probability $p = 0.05$

** - Significance with probability $p = 0.01$

Source: Authors' elaboration

In turn, the elderly - statistically highly significant - and it differs from younger people, they see in the media more powerful stimulator course of their self-control health and of preventive actions. This is obviously related to the increase at age carefully targeted appearing more and more often deficiencies in health. The impact of the media on the activation of

getting acquainted with the descriptions of food products and the rationalization of the diet did not differentiate attitudes of respondents in both groups.

Another criterion for the distribution of respondents involved in the questionnaires was their gender. The study indicates (Tab. 3) that this variable does not differentiate respondents in terms of their health behavior as clearly as at age.

Table 3. Gender of the respondents and their health behaviors caused by the influence of the media to promote a healthy lifestyle.

Respondents' opinions with particular attention to media	Average rank of opinion among respondents		Rating rank distinctions between groups of respondents
	Female	Male	
The importance of the educational function of the media in shaping health behavior	61,7	51,2	0,07
Submission of medical advice from the media over the medical consultation	63,0	49,0	0,02*
The impact of media on lifestyle changes	60,7	52,7	0,15
Increasing of physical activity	57,0	58,2	0,85
Rationalisation of diet	50,9	67,2	0,00**
Increasing attention to the descriptions of food products	58,4	56,1	0,71
Improving the skills of first aid in emergencies	58,9	55,4	0,56
Increasing self-control and intensity of health of prophylactic examinations	58,6	55,8	0,63

* - Significance with probability $p = 0.05$

** - Significance with probability $p = 0.01$

Source: Authors' elaboration

The first statistically significant difference, which appeared here indicates that women in higher level of prioritized medical advice presented in the media over traditional medical consultation. Pursuing the reasons for such attitudes of women could become the subject of separate studies. The second behavior differs both sexes was greater rationalization of the diet among men, so perhaps it is a little surprising phenomenon, whereas circulating opinions.

Statistically significant differences between the sexes could not be established in the other cases of healthy behavior, ie. Especially in the media's influence on the increase: physical activity, self-health, due to the descriptions of food products and improve the skills of first aid in emergencies.

More important media in education aimed at developing good health habits attributed the inhabitants of villages and smaller towns, which they differed statistically significantly from those living in larger cities (Tab. 4).

Table 4. Place of residence of the respondents and their health behaviors caused by the influence of the media to promote a healthy lifestyle

Respondents' opinions with respect to media	Average rank of opinion among respondents			Rating rank distinctions between groups of respondents by residence		
	county residence	city by number of inhabitants		village and city <50 tys.	village and city > 50 tys.	cities <50 tys. > 50 tys.
		<50 tys.	>50 tys.			
The importance of the educational function of the media in shaping health behavior	64,7	63,8	44,2	1,0	0,03*	0,02*
Submission of medical advice from the media, the medical consultation	72,0	58,7	43,9	0,25	0,00**	0,13
The impact of media on lifestyle changes	59,4	63,8	48,7	1,0	0,52	0,11
Increasing of physical activity	54,8	68,3	47,2	0,24	1,0	0,01*
Rationalisation of diet	49,5	53,3	69,1	1,0	0,04*	0,09
Increasing attention to the descriptions of food products	75,7	53,9	46,4	0,01*	0,00**	0,91
Improving the skills of first aid in emergencies	51,4	68,6	49,8	0,07	1,0	0,03*
Increasing self-control and intensity of health of prophylactic examinations	60,8	44,9	69,3	0,11	0,87	0,00**

* - Significance with probability p = 0.05

** - Significance with probability p = 0.01

Source: Authors' elaboration

Table 5. Education of the respondents and their health behaviors caused by the influence of the media to promote a healthy lifestyle

Respondents' opinions with respect to media	Average rank of opinion among respondents			Assessment of rank distinctions between groups of respondents according to education		
	vocational.	secondary	higher	vocational	vocational	secondary
				secondary	higher	higher
The importance of the educational function of the media in shaping health behavior	34,3	62,0	76,6	0,00**	0,00**	0,16
Submission of medical advice from the media, the medical consultation	26,7	73,2	71,2	0,00**	0,00**	1,0
Influence the media to the change of lifestyle	32,1	58,4	83,3	0,00**	0,00**	0,00**
Increasing of physical activity	44,2	59,9	68,6	0,11	0,00**	0,74
Rationalization of diet	66,1	53,6	53,1	0,29	0,29	1,0
Increasing attention to the descriptions of food products	49,9	79,4	39,2	0,00**	0,51	0,00**
Improving the skills of first aid in emergencies	44,7	52,3	77,3	0,94	0,00**	0,00**
Increasing self-control and intensity of health checkups	79,6	51,9	40,9	0,00**	0,00**	0,44

* - Significance with probability p = 0.05 / significance at p = 0.05 probability

** - Significance with probability p = 0.01 / significance at p = 0.01 probability

Source: Authors' elaboration

It turned out that the villagers to higher degree submit to medical advice given in the media over traditional medical consultation. They differed in terms of their statistical

residents of large cities. Villagers also showed greater interest in food product descriptions. People living in smaller towns (up to 50 thousand of inhabitants) stronger emphasized the influence of the media to increase their physical activity and improve the skills of first aid in emergencies, what differed them statistically significantly only from people living in larger cities (over 50 thousand. Inhabitants). In turn, residents of major cities in the greatest influence of the media have seen in the rationalization of their diet, which differed statistically significantly from the villagers and self-health and intensity of preventive examinations, which distinguished them only from residents of smaller cities, the lack of significance of differences in other cases.

The most important educational role in creating healthy behaviors attributed to the media, respondents with higher education, which statistically significantly differed, and their high school graduates from people with vocational education (Tab. 5).

It also pointed to the highest degree the strength of the media in shaping lifestyles and with less severity can be observed among persons with medium, and then work at all these differences were found to be statistically significant. Among respondents, university graduates have seen in the media as the most powerful causative factor increase their physical activity, which they differed statistically significantly only from people with vocational education, with no significant differences in other cases. In addition, people with higher education the most important media tied to increasing skills of first aid in an emergency, which differed from the other groups of people, among whom there were no such differences.

Graduates of secondary schools, in turn, the greatest importance gave submission of their medical advice presented in the media over traditional medical consultation, albeit in a manner no different from people with higher education, both these groups of people strongly differ in this respect from the graduates of vocational schools, and this could be due to, among others, less frequent use of the media and weaker understanding of the issues and habits of a healthy lifestyle among the latter group of respondents. Those with secondary education have also shown the greatest interest in descriptions of food products, differing because of this behavior that graduates of vocational schools and universities.

People with vocational greatest importance attributed to the media in terms of self-control of their health status and intensity of preventive examinations, which distinguished them in a statistically significant way from other groups of people separated because of the education, among whom there were no differences in these behaviors. This relationship stems naturally from old age people with lower education.

DISCUSSION

The study was to analyze the behavior as a result of the impact of the mass media in the promotion of a healthy lifestyle. Due to the qualitative nature of the variables, to assess the results applied statistics Kruskal-Wallis test, taking into account as determinants of attitudes of the respondents their age, sex, place of residence and education.

The weakest in terms of behavior differentiated subjects have sex, and the differences were only here because of two kinds of attitudes. Significant differences, as a basis for the distribution of respondents adopted other determinants appeared among almost all respondents. Due to the high rank of the problem there should be noted that medical advice presented in the media over traditional medical consultations at the highest level submit to younger respondents, with secondary and higher education, and rural residents and women. To increase physical activity media tended mainly younger people with higher education and residents of smaller towns. The rationalization of the diet appeared strongest in men and residents of big cities. Increasing attention to the descriptions of food products could be observed in the rural population and people with secondary education. In turn, greater self-

control of their health status and intensity of preventive examinations occurred in the elderly and with vocational education, which characteristics are correlated.

As carried out in 2014 - studies of the importance of mass media in health promotion, the authors found that people aged 18-45 years, the most common use of the Internet as a means of mass communication, and the elderly above 45 years of age usually enjoy television [Gugała, Boratyn-Dubiel, Chmiel, 2010]. The respondents of this study concluded that the media in the emissions programs in health promotion are basically uniform, but there is little information on preventive examinations. It was also found that only television very much conducive to increasing knowledge of health-related.

A large part of the study group (42.1%) declared the use of the Internet and placed there with advice on health, prevention, healthy eating, physical activity. They were usually the youngest respondents who felt website as an important source of information. But the opposite opinion was more than 20% of the respondents who stated that this is not a reliable source, it is difficult sometimes to find valuable information, and a wealth of resources and an infinite number of documents with extremely diverse scientific value, makes these messages unreliable. These opinions also confirm the results of Gugała and colleagues [Gugała, 2010].

In turn, the research of Szymczuk and colleagues, conducted in 2011 demonstrated that the media nowadays are one of the most important sources of respondents' health information and improve their condition [Szymczuk, 2011].

The frequency of the use of information in health through the media correlates with age and education, but does not depend on place of residence. 88.5% of respondents aged 20-25 years, while more than half of the respondents (67%) felt that the use of information gained by media allows you to improve your health.

On the basis of those test results it can be concluded that the role of the media in shaping health behaviors in society is significant, providing for increasing their impact on quality of life. However, this aspect is not really the end of the examined because of the changing generations and their needs go hand in hand change in media that shape our consciousness and perception of reality. Impact on the psyche of the people, which is also on the health behavior expressed, among others, by: taking preventive examinations, self-health, change in physical activity, and increase awareness on the rational diet and changes in eating habits.

At present - media constitute, in the opinion of a large part of the respondents - as one of the main sources of guidance on taking measures to promote health. The information reported by the means of social communication, especially through educational programs information in the field of health are, in many cases reliable enough that they are often practical application without verification of these actions through consultation with health professionals. The mass media influence, undoubtedly, for a resource acquired knowledge in the field of education and health promotion, and thereby contribute to the development of a healthy lifestyle. In the literature there is no information confirming the effectiveness of the impact of mass media in shaping health behaviors of society, and such studies have been conducted recently. Determination of the impact on the public, expressed as a positive and negative its consequences, it is a difficult process and requires a lot of research and statistical analysis.

CONCLUSIONS

Education and health promotion are presently important link in shaping health behaviors of society, and their effectiveness to protect and enhance the health, thanks to the growing influence of the media. They have become an effective way to transfer knowledge about health, increasing the chance of reaching a wide audience.

Mass media have undoubtedly major impact on modern life. Groups of society use it more and more often. However, thanks to mass media availability of a variety of information in the field of health increased. Media with an attractive form of communication make the process of acquiring knowledge about health, learning and accepting such behavior, deepening of interests related to the maintenance of health. It has become more enjoyable and effective. This becomes also often unconsciously and involuntarily.

The mass media, and more specifically its impact and influence on the life of society, is the subject of interests and not completely discussed. Therefore, in various scientific publications and in the literature, one can find growing number of articles, where the authors attempt to assess the impact of the media in their life in both positive and negative aspects.

REFERENCES

1. Aczel A.D. (2000), *Statystyka w zarządzaniu. Pełny wykład*, PWN, Warszawa, pp. 731-735.
2. Andruszkiewicz A., Banaszkiewicz M. (2008), *Promocja zdrowia*. Tom I, Czelej, Lublin.
3. Cianciara D. (2010), *Zarys współczesnej promocji zdrowia*, Wydawnictwo Lekarskie PZWL, Warszawa.
4. Czupryna A., Poździoch S., Ryś A., Włodarczyk C. (2000), *Zdrowie publiczne*, Tom II, Uniwersyteckie Wydawnictwo Medyczne Vesalius, Kraków.
5. Gugąła B., Boratyn-Dubiel L., Chmiel Z. (2010), *Internet jako narzędzie wiedzy o zdrowiu*, „Medycyna Ogólna”, 16 (2), pp. 266- 273.
6. Kulik T, Latański M. (2002), *Zdrowie publiczne*, Wydawnictwo Czelej, Lublin.
7. Mrozowicz A, Guty E. (2013), *Styl życia a zachowania zdrowotne; poglądy kobiet*, Zdrowie i dobrostan, Tom I.
8. Rudawska I. (2005), *Rola mass mediów w promocji zachowań sprzyjających zdrowiu*. Pielęgniarstwo Polskie, 2 (20).
9. Szymczuk E., Zajchowska J., Dominik A., Makara- Studzińska M., Zwolak A., Daniluk J. (2011), *Media jako źródło wiedzy o zdrowiu*, „Medycyna Ogólna i Nauk o Zdrowiu”, 17 (4), pp. 165-168.
10. Syrkiewicz- Świtała M., Holecki T., Wojtynek E. (2014), *Znaczenie mass mediów w promocji zdrowia*, Medycyna Ogólna i Nauk o Zdrowiu, 20 (2), pp. 171-176.
11. Turbiasz A., Kadłubowska M., Kolonko J., Bąk E. (2010), *Rola mediów w promocji zdrowia*, Problemy Pielęgniarstwa, 18 (2), p. 241.

SUPPLEMENTARY REFERENCES

1. Ustawa o Radiofonii i Telewizji. Dz. U. 1993, nr 7 poz. 34, z dnia 29.12.1992; art. 21 pkt 1, 2.
2. Wojtczak A. (2009), *Zdrowie publiczne, wyzwanie dla systemów zdrowia XXI wieku*, Wyd. Lekarskie PZWL, Warszawa.
3. Woynarowska B. Bogucka J. (2000), *Zdrowie i szkoła*. Wyd. Lekarskie PZWL, Warszawa.
4. Woynarowska B. (2008), *Edukacja zdrowotna*, Wydawnictwo Naukowe PWN, Warszawa.
5. Wysokiński M., Domżał- Drzewiecka R. (2003), *Edukacja zdrowotna w środkach masowego przekazu*, Zdrowie Publiczne, 113 (1/2).