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Poczucie odpowiedzialności za swoje zdrowie a elementy samooceny w grupie młodzieży studenckiej

Students' sense of responsibility for their own health and self-esteem elements

Streszczenie

Wprowadzenie. Od połowy ubiegłego wieku szeroko jest dyskutowana rola indywidualnych przekonań w modelach profilaktyki chorób. Pomiar tych przekonań umożliwia Wielowymiarowa Skala Umiejscowienia Kontroli Zdrowia (MHLC) autorstwa K.A. Wallstona, B.S. Wallston i R.F. DeVellisa. Narzędzie to bada trzy wymiary tzw. kontroli zdrowia: kontroli wewnętrznej (IHLC), wpływu innych (PHLC) oraz przypadku (CHLC). Skala ta pozwala określić, czy i w jakim stopniu badana osoba jest przekonana, że ponosi odpowiedzialność za stan swojego zdrowia.

Cel. Celem badania było określenie psychologicznej struktury kontroli zdrowia w odniesieniu do samooceny i poczucia własnej skuteczności w grupie młodzieży studiującej w przedziale wiekowym od 18 do 25 lat.

Materiał i metoda. W badaniu uczestniczyło 518 losowo wybranych studentów lubelskich uczelni wyższych w przedziale wiekowym od 18 do 25 lat. W badanej grupie było 69,5% kobiet (N=360) oraz 30,5% mężczyzn (N=158). Średnia wieku respondentów wynosiła 21,62 (SD 3,462). W badaniu zastosowano w polskich adaptacjach: wersję B Wielowymiarowej Skali Umiejscowienia Kontroli Zdrowia (MHLC), Skalę Samooceny M. Rosenberga (SES) oraz polską wersję Skali Uogólnionej Własnej Skuteczności (GSES).

Wnioski. Wysunięto następujące wnioski: młodzież studencka wykazuje w zakresie odpowiedzialności za własne zdrowie przewagę przekonań o istotności mechanizmów autokontroli nad przekonaniem o odpowiedzialności za ich zdrowie innych osób; przekonanie o własnej odpowiedzialności za stan swojego zdrowia koreluje z wynikami testów samooceny; w badanej grupie studentów występuje silna zależność pomiędzy samooceną a przekonaniem o skuteczności podejmowanych przez siebie działań; istnieje zależność pomiędzy uwarunkowaniami materialnymi a samooceną, przekonaniem o skuteczności podejmowanych przez siebie działań oraz przekonaniem o wpływie innych osób na stan własnego zdrowia; Wielowymiarowa Skala Umiejscowienia Kontroli Zdrowia (MHLC) jest użytecznym narzędziem pozwalającym oszacować stopień odpowiedzialności za własne zdrowie zarówno w wymiarze populacyjnym, jak i indywidualnym.

Summary

Introduction. The role of individual beliefs in prophylaxis of diseases has been widely discussed since the mid of the last century. Such beliefs can be measured with the Multidimensional Health Locus of Control Scale (MHLC) created by K.A. Wallston, B.S. Wallston and R.F. DeVellis. Such a tool examines three dimensions of so called health control: Internal Health Locus of Control (IHLC), Powerful Others Health Locus of Control (PHLC) as well as Chance Health Locus of Control (CHLC). Such a scale allows defining whether and to what extent the examined person is convinced that he/she is responsible for his/her health condition.

The aim. The aim of the examination was to define the psychological structure of health control, in relation to self-esteem and the sense of self-efficacy in a group of students aged between 18 and 25 years.

Material and methods. The research comprised 518 randomly chosen students at the age between 18 and 25 years, studying at Lublin's universities. The examined group consisted of 69.5% of women (N=360) and 30.5% of men (N=158). The average age of respondents came to 21.62 (SD 3,462). In the Polish adaptation of the research the following aspects have been deployed: version B of the Multidimensional Health Locus of Control Scale (MHLC), M. Rosenberg's Self-Esteem Scale (SES) as well as the Polish version of the Generalized Self-Efficacy Scale (GSES).

Conclusions. The following conclusions have been drawn: in the field of responsibility for one's own health, students proved that the importance of the self-control mechanisms prevails the belief that other people are responsible for the students' health; belief about self-responsibility for one's own health correlates with results of self-esteem tests; there is a strong correlation between the self-esteem and the self-efficacy in the examined group; there is a relationship between material conditions, self-esteem, self-efficacy and the belief of other people's influence on one's own health condition; The Multidimensional Health Locus of Control Scale (MHLC) is the useful tool allowing one to estimate the degree of responsibility for one's own health both in the social and in the individual dimension.

Słowa kluczowe: zdrowie, umiejscowienie kontroli, lokalizacja kontroli wewnętrzna i zewnętrzna, odpowiedzialność, samoocena, własna skuteczność, studenci.

Key words: health, Locus of Control, Internal-External Locus of Control, responsibility, self-esteem, self-efficacy, students.

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INTRODUCTION

Today's health hazards, especially those that can be successfully prevented, create a crucial challenge to modern prophylaxis of diseases and health education. The risk of contagious sexually transmitted diseases or susceptibility to addictions are the most crucial subjects of reflections and prophylactic activities of health education run among school and student youth. Factors contributing to obtaining beneficial results of health education programs are individual beliefs, expectations, and even self-esteem. Therefore, the possibility of managing the functional tool that would estimate, for health education purposes, specific beliefs relating to the responsibility for one's own health as well as the possibility of educated people's engagement in health-promoting activities, is crucial.

The role of the individual beliefs in disease prophylaxis models has been broadly discussed since the mid of the last century. Conceptualization and measurement of such beliefs can be done with the Multidimensional Health Locus of Control Scale – MHLC, created in 1978 by K. A. Wallston, B. S. Wallston and R. F. DeVellis. MHLC, both in A and B versions, examines three dimensions of so called health control: the Internal Health Locus of Control (IHLC), the Powerful Others Health Locus of Control (PHLC) and the Chance Health Locus of Control (CHLC) [1]. The MHLC Scale allows one to determine whether, and to what extent the examined person is convinced that he/she bears responsibility for his/her own health condition. Subject literature discusses an assumption being the basis for MHLC's construction, stating that internal health control contributes to the development of health-protective awareness, namely: cutting down tobacco smoking [2], alcohol drinking, controlling one's weight or preventing HIV infections [3].

Theories relating to health behaviour attempt to find an answer to the question concerning reasons for risky behaviour [4]. In this context, when it comes to explaining the basis for risky health behavior, there are numerous categories in world-wide literature that describe human beliefs as well as reasons for specific health behavior and ways of controlling it in relation to such beliefs.

According to J. Rotter's [5] theory concerning social teaching, two of the following loci of control should be distinguished: internal and external [6]. Kenneth Wallston's research team contributed to the successful application of the concepts of Rotter's main theories to the beliefs and healthy behaviour examination field, both in the social and in the individual dimension [1]. However, the one-dimensional theory created by K. Wallston's team from School of Nursing Vanderbilt University (Nashville, Tennesee, USA) initially explained health behavior in an unsatisfactory way [7]. According to Z. Juczyński, the new three-dimensional scale relates to Levenson's interpretation, [8] who proposed diversification in the external health control locus which is influenced by chance and powerful others. The "health locus" category relates to "localization" in which the psychological control mechanism, in the field of health behavior, is settled.

Such a location may constitute of either the Internal Health Locus of Control – IHLC or the External Health Locus of Control – EHLC. This location may also include either a definite ("others' influence," e.g. medical person-

nel's or family members' influence: Powerful Others Health Locus of Control – PHLC) or an indefinite source of control ("a chance:" Chance Health Locus of Control – CHLC) [9]. Z. Juczyński [3] emphasizes that the MHLC scale is applied in prophylaxis, health promotion and health education programs and it can be also applied in epidemiological research. However, relationships between the health control placement and readiness to undertake health-protective activities are complicated. Consequently, such a fact requires taking the following variables into consideration: Generalized Self-Efficacy Scale – GSES, M. Rosenberg's Self-Esteem Scale and health evaluation [3].

During the last decade grand scale comparative research studies were conducted on health beliefs and behaviours of students living in major European countries, as well as in the USA and Canada. Currently, great importance is attached to creating modern health education programs meant for students. Such programs most notably include promoting physical activity [10], a healthy diet, and addiction-preventing programs. Steptoe and Wardle made an attempt at assessment of interrelations between placing the health control and health behaviour among young people in 18 European countries [11]. Due to this fact, locating health control, the self-esteem, and the sense of self-efficacy in a group of students seems to be an immensely crucial subject of current interest. It should also be added that the sense of self-efficacy provides an opportunity to predict intentions and actions in different fields of human activity and the activity within the field of health-promoting behaviour as well. [3]

THE AIM

The aim of the research was to define the psychological structure of health control, in relation to self-esteem and the sense of self-efficacy in a group of students at the age between 18 and 25 years.

MATERIAL AND METHODS

There were 518 randomly selected students of Lublin's universities participating in the research. The students' age ranged from 18 to 25 years. The examined group consisted of 69.5% of women (N=360) and 30.5% of men (N=158). The average age of the respondents came to 21.62 (SD =3.462).

From among all of the examined persons 28% (N=145) came from rural areas, 25.5% (N=132) came from small towns in which the number of citizens does not exceed 50,000 inhabitants and 19.9% (N=103) of all respondents came from cities in which the number of inhabitants runs from 50,000 to 100,000. Every fourth examined person, i.e. 26.6% (N=138) came from a metropolitan area.

The three following scales were applied simultaneously in the research that was conducted from January to March 2008:

a) Z. Juczyński's Polish adaptation of the Multidimensional Health Locus of Control Scale (MHLC) created by Keneth and Barbara Wallston as well as by Robert DeVellis,

b) Created by I. Dzwonkowska, K. Lachowicz-Tabaczek and M. Łaguna, the Polish adaptation of the M. Rosenberg Self-Esteem Scale (SES) [12],

c) The Polish adaptation of the Generalized Self-Efficacy Scale – GSES created by R. Schwarzer, M. Jerusalem and Z. Juczyński [3].

(The research included the "B" version of the MHLC scale due to the fixed rates that are better in Polish adaptation than that in the "A" version. However, both versions are recognized as equivalent to each other.)

There was a sociometrical data-sheet attached to the aforementioned scales, in which the respondents, apart from sex, age and place of origin, were asked to define their family background and material situation and to assess their own health conditions. The respondents defined the material status by choosing one of the five possibilities: very good, good, acceptable, bad, and very bad. Furthermore, they performed the assessment of their health conditions by ticking one of the seven possible numbers, ranging from "1," meaning "very bad," to "7," meaning "very good."

The research results were compiled by means of statistical software – SPSS (SPSS Poland).

THE RESULTS

There are six statements assigned to each of three dimensions (IHLC, PHLC, and CHLC) of the MHLC scale. The respondents issue an opinion on these statements by means of a six-degree Likert scale, i.e. "1" meaning strong disagreement and "6" meaning resolute agreement. Hence, whereas the minimum possible value for each of the three dimensions amounts to 6, the maximum value is 36. In the examined group of 518 students the following average values were gained: the internal control (IHLC: M=26.07, SD 4.43), the powerful others (PHLC: M=21.14 SD 5.1) and the chance control (CHLC: M=19.62, SD 4.84).

In case of both the internal and the chance control, the average values for women (Table 2) and men (Table 3) groups were immensely similar. The maximum values were gained in the case of the internal control, whereas the maximum values were gained in examining the influence of chance on the health control. A marginally higher value, compared to that of the women, was gained for "the influence of powerful others," only in the men's group.

In both scales, namely the Rosenberg Self-Esteem Scale (SES) and the Generalized Self-Efficacy Scale (GSES), men gained marginally higher values (31 points) than women did (30 points). Both scales include 10 statements each, on which the respondents issue their opinions by means of the Likert four-grade scale. The maximum possible value is 40. The higher the result, the higher either the general self-esteem or the sense of self-efficacy.

A Spearman method of rank correlation was deployed in analyzing data in relation to the respondents' age, self-esteem of their health conditions as well as to their family background and material condition (Table 4). It was stated that there are statistically crucial, although insignificant positive correlations between the age, the influence of powerful others (PHLC/age: r=0.114, p<0.01), the Rosenberg Self-Seteem Scale (SES/age: 0.124, p=0.01) and the Generalized Self-Efficacy Scale (GSES/age: r=0.96. p=0.05).

The results of the Rosenberg Self-Esteem Scale (SES/material condit.: r=0.243, p=0.01), the results of the Generalized Self-Esteem Scale (GSES/material condit.: r=0.179, p=0.01) and, marginally, the influence of powerful others

TABLE 1. The MHLC, SES, and GSES scales results of research conducted on students.

Students in total	N	M	SD
IHLC	517	26.0754	4.43123
PHLC	518	21.1429	5.10422
CHLC	518	19.6293	4.84356
SES	518	30.8610	4.71878
GSES	518	30.3012	4.02147

N – number of the respondents; M – median; SD – standard deviation, IHLC – Internal Health Locus of Control; PHLC – Powerful Others Health Locus of Control; CHLC – Chance Health Locus of Control; SES – M. Rosenberg's Self-Esteem Scale; GSES – Generalized Self-Efficacy Scale.

TABLE 2. The MHLC, SES, and GSES scales results of research conducted on the sub-group of women.

Women	N	M	SD
IHLC	359	26.0028	4.55598
PHLC	360	20.9472	4.96618
CHLC	360	19.7167	4.86105
SES	360	30.8000	4.69920
GSES	360	29.9806	4.01698

N – number of the respondents; M – median; SD – standard deviation, IHLC – Internal Health Locus of Control; PHLC – Powerful Others Health Locus of Control; CHLC – Chance Health Locus of Control; SES – M. Rosenberg's Self-Esteem Scale; GSES – Generalized Self-Efficacy Scale.

TABLE 3. The MHLC, SES, and GSES scales results of research conducted on the sub-group of men.

Men	N	M	SD
IHLC	158	26.2405	4.14303
PHLC	158	21.5886	5.39536
CHLC	158	19.4304	4.81289
SES	158	31.0000	4.77520
GSES	158	31.0316	3.94778

N – number of the respondents; M – median; SD – standard deviation, IHLC – Internal Health Locus of Control; PHLC – Powerful Others Health Locus of Control; CHLC – Chance Health Locus of Control; SES – M. Rosenberg's Self-Esteem Scale; GSES – Generalized Self-Efficacy Scale.

correlated positively with the material conditions. A clear correlation was observed between the self-esteem of health conditions and the Rosenberg Self-Esteem Scale (SES/health condition: r=0.317, p=0.01). However, there was a poor correlation between the self-esteem of the health condition and the following factors: Generalized Self-Esteem Scale (GSES/health condition: 0.187, p=0.01), the Internal Health Locus of Control (IHLC/health condition: r=0.103, p=0.05) as well as, negatively, the Chance Health Locus of Control (CHLC/health condition: r=-0.116, p=0.01).

Similarly, the Spearman's rank correlation method was again deployed in searching for statistically significant relationships between the gained results in the MHLC, the SES and the GSES scales. It was stated that there is a positive correlation between the general result in the SES and the GSES scales (r=0.512, p=0.01). The relatively weak, however positive correlation was recognized between the result of the GSES scale and the internal control (IHLC) scale (r=0.151 p=0.01). A negative correlation between the SES scale and the chance (CHLC) scale (r=-0.131 p=0.01) was

TABLE 4. The correlations between variables of the MHLC (IHLC, PHLC, CHLC), the SES as well as the GSES scales and the age, material status as well as subjective assessment of one's own health condition.

Spearman's rho *(p=0,05);**(p=0,01)		Age	Material conditions	Health conditions
IHLC	Correlation coefficient	.067	.017	.103(*)
	Significance level	.126	.694	.019
	N	517	517	517
PHLC	Correlation coefficient	.114(**)	.094(*)	.080
	Significance level	.010	.033	.069
	N	518	518	518
CHLC	Correlation coefficient	.009	.050	-.116(**)
	Significance level	.832	.256	.008
	N	518	518	518
SES	Correlation coefficient	.124(**)	.243(**)	.317(**)
	Significance level	.005	.000	.000
	N	518	518	518
GSES	Correlation coefficient	.096(*)	.179(**)	.187(**)
	Significance level	.028	.000	.000
	N	518	518	518

N – number of the respondents; IHLC – Internal Health Locus of Control; PHLC – Powerful Others Health Locus of Control; CHLC – Chance Health Locus of Control; SES – M. Rosenberg's Self-Esteem Scale; GSES – Generalized Self-Efficacy Scale.

TABLE 5. The correlations between variables of the MHLC (IHLC, PHLC, CHLC), the SES and the GSES scales.

Spearman's rho *(p=0,05);**(p=0,01)		IHLC	PHLC	CHLC	SES	GSES
IHLC	Correlation coefficient	1.000	.141(**)	-.043	.111(*)	.151(**)
	Significance level	.	.001	.335	.011	.001
	N	517	517	517	517	517
PHLC	Correlation coefficient	.141(**)	1.000	.160(**)	.078	.090(*)
	Significance level	.001	.	.000	.076	.040
	N	517	518	518	518	518
CHLC	Correlation coefficient	-.043	.160(**)	1.000	-.131(**)	-.028
	Significance level	.335	.000	.	.003	.532
	N	517	518	518	518	518
SES	Correlation coefficient	.111(*)	.078	-.131(**)	1.000	.512(**)
	Significance level	.011	.076	.003	.	.000
	N	517	518	518	518	518
GSES	Correlation coefficient	.151(**)	.090(*)	-.028	.512(**)	1.000
	Significance level	.001	.040	.532	.000	.
	N	517	518	518	518	518

N – number of the respondents, IHLC – Internal Health Locus of Control; PHLC – Powerful Others Health Locus of Control; CHLC – Chance Health Locus of Control; SES – M. Rosenberg's Self-Esteem Scale; GSES – Generalized Self-Efficacy Scale.

also found. The factor of the "influence of powerful others" (PHLC) correlated with the other dimensions of the MHLC, the IHLC (r=0.141, p=0.01) as well as the CHLC (r=0.160, p=0.01) to a marginal extent.

DISCUSSION

Importance of internal health locus control (IHLC) is emphasized in discussions about psychological determinants of health-promoting attitudes. The IHLC is recognized as more beneficial than the two other types of control (the PHLC and the CHLC). The dominance of the IHLC is frequently related with greater autonomy in making decisions and the sense of greater responsibility for one's own health condition. It is assumed that people who show stronger internal control are, to a larger extent, responsible for their health-protective behavior [3, 13]. Wallston emphasized the correlation between the result gained within the scope of the internal control in the MHLC scale and taking preventive treatment actions [14].

The research conducted by Z. Juczyński (N=97) among Polish students at the end of the 1990s indicated strong internal control (IHLC: M=28.61, SD=3.73), significantly weaker beliefs in the powerful influence of others on one's own health (PHLC: M=18.76, SD=4.19) or the influence of the chance (CHLC: M=15.65, SD=5.12) existing in this group [3]. The same author gained very similar results in a group of both learning and working people at the age of 18 to 25 years (IHLC: M=28.55, SD=4.01; PHLC: M=18.76, SD 4.62; CHLC: 15.76, SD=4.82) [3]. However, the values gained in Poland at the same time, i.e. more than ten years ago, from groups consisting of either older or sick people, when compared to that of students, indicated characteristic differences in internal control. In the field of internal control, diabetics gained significantly lower results (IHLC: M=25.77, SD=6.28) than the students did. However, they gained significantly better results compared to that of healthy people in the chance health locus control (CHLC: M=20.14, SD=6.46) and especially high results in the field of the influence of powerful others (PHLC: M=25.59, SD=6.83). It is worth emphasizing that in the latter case the values of the results were even equal with the results gained in the IHLC category [3].

The results obtained in major research studies conducted in the 1990s among students in 18 European countries (including Polish students) were similar to the results gained only in the group of the Polish students in the IHLC and the CHLC fields. Such multi-center research comprised 7115 students (4358 women and 2757 men; the average age was 21.6, SD=2.7) originating from 18 European countries. While the average value of M=17.1 (SD=4.7) was gained in the field of the PHLC, the average value of M=15.8 (SD=4.2) was gained in the field of the CHLC. However, the average value of the IHLC was significantly lower that the IHLC value gained at the same time only in Polish research and it amounted to M=24.1 (SD=4.3) [11].

When comparing the recently gained results with those gained nearly one decade ago in a group of Polish students, one can state that after ten years, the results obtained in the internal control dimension of the MHLC scale are marginally lower (M=26.07, SD=4.43) and they approach those of the European students gained nearly ten years ago. Simultaneously, the responsibility for one's own health is currently more often than a decade ago shifted by students onto the "powerful others' influence" (M=21.14, SD=5.10) and even onto chance (M=19.62, SD=4.84). Cultural changeability in emphasizing responsibility for one's own health is also

worth mentioning. In research conducted in the group of Iranian students in 2007 the obtained results were significantly lower than the European average values in the fields of internal control (IHLC: M=23.53, SD=4.59) and chance (CHLC: M=14.36, SD=7.81). However, higher results were gained in relation to the powerful others' influence (PHLC: M=20.12, SD=7.60) [15]. Hence, it could be suggested that there is a relationship between the scope as well as the structure of responsibility for one's own health and the social as well as the cultural conditions, including upbringing and educational models. Such a suggestion should be regarded as a hypothesis that can contribute to conducting further research.

The research proved that there is a clear correlation (r=0.512, p=0.01) between the self-esteem (SES) and the belief about one's efficacy (GSES). It is worth emphasizing that in American research conducted by the GSES Scale authors, the correlation value obtained was significantly similar to the aforementioned SES relationship that in this case amounted to r=0.52 [16]. The results gained in our research in each scale also clearly correlated with the self-assessment of the health condition. The complex character of the relationships between the self-esteem, the sense of self-efficacy and specific determinants of the structure of the responsibility for one's own health in the MHLC scale (IHLC, PHLC, and CHLC) were unclear. Such a fact validates the statement that the relationships between health control location and a readiness to undertaking wellness activities are complex. However, in the examined group of students it is possible to indicate correlations between internal control (IHLC) and self-esteem (r=0.111, p=0.05), IHLC, and the belief about one's efficacy (r=0.151, p=0.01) as well as between IHLC and the self-assessment of one's own health conditions (r=0.103, p=0.05).

CONCLUSIONS

1. In the field of responsibility for one's own health, students proved that the importance of the self-control mechanisms prevails the belief that other people are responsible for the students' health.
2. Belief about self-responsibility for one's own health correlates with results of self-esteem tests.
3. There is a strong correlation between the self-esteem and the self-efficacy in the examined group.
4. There is a relationship between material conditions, self-esteem, self-efficacy and the belief of other people's influence on one's own health condition.
5. The Multidimensional Health Locus of Control Scale (MHLC) is the useful tool allowing one to estimate the degree of responsibility for one's own health both in the social and in the individual dimension.

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