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SUBJECTIVE HEALTH PROFILES AMONG UKRAINIAN STUDENTS OF MEDICAL VOCATIONAL SCHOOL

SUBIEKTYWNE PROFILE ZDROWIA WŚRÓD UKRAIŃSKIEJ MŁODZIEŻY SZKOLNEJ STUDIUM MEDYCZNEGO

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Wkład autorów:
A. Study design/planning
zaplanowanie badań
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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Summary
Background. Understanding various dimensions of health is a key factor to properly identify health risks. The purpose of the research is to acquire knowledge concerning positive health and survival skills by the Ukrainian students of Medical Vocational School in Lutsk.
Material and methods. The study group comprised 467 female students aged 15-25 years old who were the attendants of Postsecondary Vocational School in Lutsk on: Pharmacy, Medicine, Obstetrics, Nursing and Laboratory Diagnostics specialties.
A subjective questionnaire was used, which focused on: somatic, mental and social health profiles together with survival skills.
Results. The results indicated the intensification of individual profiles, with the highest value of social health. Somatic health identified HR as its highest index, for mental health it was tolerance and for social health- respecting basic values. When it comes to the survival skill health profile tolerating body imbalance obtained the highest index.
Conclusions. Most of the specialties showed a domination of different health profiles, which allowed to demonstrate forms of self-reported health models from the specialties of Nursing and Medicine.

Keywords: subjective health profiles, Ukrainian students, medical majors

Streszczenie
Wprowadzenie. Wiedza o różnych wymiarach zdrowia jest koniecznym warunkiem jego właściwego rozpoznania. Celem badań jest poznanie wiedzy o poczuciu zdrowia pozytywnego i zdolności przetrwania przez ukraińską młodzież ze Studium Medycznego w Łucku .
Materiał i metody. Badaniami objęto 467 uczennic w wieku 15-25 lat będących słuchaczkami Studium Policealnego w Łucku na kierunkach: farmacja, medycyna, położnictwo, pielęgniarstwo i diagnostyka laboratoryjna.
Zastosowano kwestionariusz subiektywnej oceny profili zdrowia: somatycznego, psychicznego, społecznego i zdolności przetrwania.
Wyniki. W wyniku badań wykazano wyraźne nasilenie określonych profili przy najwyższej wartości zdrowia społecznego. W zdrowiu somatycznym najwyższy wskaźnik cechuje HR, w zdrowiu psychicznym najwyższy wskaźnik uzyskała tolerancja, w zdrowiu społecznym najwyższa wartość przypada respektowaniu naczelnych wartości. W profilu zdrowia zdolności przetrwania najwyższy wskaźnik uzyskało tolerowanie zakłóceń równowagi.
Wnioski. Większość kierunków kształcenia wykazało dominację różnych profili zdrowia, co pozwoliło na przedstawienie swego rodzaju wzorów samooceny zdrowia z kierunków kształcenia młodzieży z pielęgniarstwa i medycyny.

Słowa kluczowe: subiektywne profile zdrowia, młodzież ukraińska, kierunki medyczne

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Introduction

According to Eriksson and Lindstrom [1] human health is understood as a group of surfaces specified as: physical (also called somatic), mental, social, spiritual, environmental and sexual health. Physical health is best identified in the literature. It provides a foundation for other dimensions of health. A new element in these studies is the methodology of different dimensions of health initiated by Kalina [2]. According to Szymborski and Jakóbik [3], Polish students' health is a highly neglected area of medicine and health policy. Because of that, a particular importance,

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as defined in the definition of health by Eriksson and Lindstrom [1], is given to a health promoter, who enables to control individual surfaces of health. Kubińska [4] draws attention to the role of a coordinator of health education in the opinion of Physical Education teacher.

It is worth remembering that the most important measure in health education is movement and recently decreasing physical activity of societies is the cause of a large number of diseases.

The importance of physical activity on different stages of human development has been highlighted by many international authors over the last 20 years [5,6,7,8,9,10]. The research proves that being physically active at a younger age, increases the probability of intensive activity in the future [11,12,13].

Research Methodology

Objective

The purpose of this paper is to characterize the specificity of somatic, mental and social health profiles and the survival skill of the students on the following five specialties: Pharmacy, Medicine, Obstetrics, Nursing and Laboratory Diagnostics.

Material and research method

The study group comprised 467 women aged 15-25 years old, who were the attendants in Medical Vocational School in Lutsk, Ukraine. The method of diagnostic survey was applied on the basis of the original method of Kalina [2], which included four health indexes: somatic, mental, social and survival skill. All of the above indicate total health.

Results

Characteristics of respondents

The respondents comprise of female students of four learning cycles on five specialties: Medicine – 124 (26.6%), Nursing- 136 (29.1%), Pharmacy- 83 (17.8%), Obstetrics- 76 (16.3%) and Laboratory Diagnostics- 48 (10.3%). The majority of respondents had good educational achievements (58.7%), sufficient comprised of 22.9% and very good- 18.4% (Tab. 1).

Table 1. Characteristics of female student respondents

Variable	Amount (n)	(%)
Specialty		
Pharmacy	83	17.8
Medicine	124	26.6
Obstetrics	76	16.3
Nursing	136	29.1
Laboratory Diagnostics	48	10.3
Study Year		
First	98	21.0
Second	147	31.5
Third	140	29.0
Fourth	82	17.5
Educational achievements		
Sufficient	107	22.9
Good	274	58.7
Very goog	86	18.4

Positive health profiles

Social health obtained the highest total value among other health profiles (3.86 ± 0.64), with the highest index on Nursing (3.96 ± 0.67). This value, however, does not significantly differentiate other specialties (Tab.2).

Table 2. Health profiles levels for students of different specialties

Specialties		Health profiles				
		Somatic health	Mental health	Social health	Survival health	Total health
Total (n=467)	$\bar{x}$	2.88	2.87	3.86	2.57	2.90
	SD	0.38	0.60	0.64	0.73	0.36
Pharmacy (n=83)	$\bar{x}$	2.86	2.92	3.78	**2.46**^{Nu}	2.85
	SD	0.38	0.69	0.71	0.65	0.36
Medicine (n=124)		2.90	2.86	3.88	**2.52**^{Nu}	2.89
	SD	0.39	0.58	0.63	0.70	0.34
Obstetrics (n=76)	$\bar{x}$	2.85	**3.01**^{Ob}	3.84	**2.46**^{Nu}	2.87
	SD	0.35	0.47	0.49	0.74	0.35
Nursing (n=136)	$\bar{x}$	2.87	**2.78**^{Nu}	3.96	**2.79**^{P,M,Ob}	2.97
	SD	0.40	0.60	0.67	**0**.74	0.39
Laboratory Diagnostics (n=48)	$\bar{x}$	2.98	2.86	3.76	2.48	2.89
	SD	0.37	0.62	0.68	0.80	0.34
Kruskal-Wallis Test	H	6.20	**12.49**	5.11	**15.11**	8.11
	p	0.1850	**0.0140***	0.2758	**0.0045***	0.0877

*-significant variation when p<0.05

As regards somatic health, the highest index is assigned to HR (3.04 ± 0.67), and the highest value is obtained by Laboratory Diagnostics (3.27 ± 0.49). It is significantly higher than on the specialty of Pharmacy (2.86 ± 0.59) (Tab. 3).

Table 3. Somatic health levels for students of different specialties

Specialties		Somatic health							
		1	2	3	4	5	6	7	8
Total (n=467)	$\bar{x}$	3.00	3.04	2.86	2.80	2.76	2.81	2.93	2.87
	SD	0.62	0.61	0.69	0.73	1.06	1.09	0.81	1.06
Pharmacy (n=83)	$\bar{x}$	3.07	**2.86**^{P}	2.90	2.86	2.73	2.89	2.82	2.75
	SD	0.56	0.59	0.51	0.61	1.00	0.97	0.87	0.97
Medicine (n=124)		3.07	3.06	2.94	2.86	2.81	2.83	2.82	2.79
	SD	0.56	0.64	0.61	0.62	0.99	1.11	0.77	1.01
Obstetrics (n=76)	$\bar{x}$	2.99	2.99	2.70	2.61	2.66	2.80	2.96	3.07
	SD	0.62	0.45	0.86	0.95	1.17	1.10	0.76	1.12

Nursing (n=136)	$\bar{x}$	2.88	3.07	2.83	2.78	2.73	2.80	3.01	2.88
	SD	0.72	0.67	0.73	0.74	1.14	1.13	0.79	1.08
Laboratory Diagnostics (n=48)	$\bar{x}$	3.10	**3.27**^{P}	2.92	2.90	2.90	2.63	3.15	2.96
	SD	0.52	0.49	0.77	0.75	0.88	1.12	0.87	1.20
Kruskal-Wallis Test	H	8.27	**17.91**	6.03	6.84	2.06	1.27	**9.72**	4.65
	p	0.0823	**0.0013***	0.1970	0.1443	0.7243	0.8661	**0.0455***	0.3257

1-BMI, 2-HR, 3-Systolic blood pressure, 4-Diastolic blood pressure, 5-Aerobic performance, 6-Anaerobic performance, 7-Muscle strength, 8-Flexibility

Class profile: P-Pharmacy, M-Medicine, Ob-Obstetrics, Nu-Nursing, N-Laboratory Diagnostics

*-significant variation when p<0.05

At the level of mental health, the highest index was reached by tolerance (-3.62 ± 0.88). The ability to overcome stress is significantly higher among nurses (3.26 ± 1.07) and the lowest on medical specialty (2.73 ± 1.03). In comparison to Nursing (2.25 ± 1.13), the anxiety index for the students of Pharmacy (2.87 ± 1.08) is much higher. Belligerence, however, reaches the highest value for Obstetrics students (2.72 ± 1.03), who obtained significantly higher indexes than the specialty of Nursing (2.01 ± 1.02) and Pharmacy (2.63 ± 1.21). In terms of tolerance, no significant relevancy was detected between the specialties (Tab. 4).

Table 4. Mental health levels for students of different specialties

Specialties		Mental health			
		Belligerence	Anxiety	Ability to overcome stress	Tolerance
Total (n=467)	$\bar{x}$	2.38	2.50	3.00	3.62
	SD	1.13	1.17	1.10	0.88
Pharmacy (n=83)	$\bar{x}$	**2.63**^{Nu}	**2.81**^{Nu}	2.87	3.40
	SD	1.21	1.08	1.13	0.92
Medicine (n=124)	$\bar{x}$	2.37	2.55	**2.73**^{Nu}	3.78
	SD	1.13	1.23	1.03	0.78
Obstetrics (n=76)	$\bar{x}$	**2.72**^{Nu}	2.51	3.13	3.68
	SD	**1.03**	1.05	1.18	0.70
Nursing (n=136)	$\bar{x}$	**2.01**^{P,Ob}	**2.25**^{P}	**3.26**^{M}	3.62
	SD	1.02	1.13	1.07	0.94
Laboratory Diagnostics (n=48)	$\bar{x}$	2.46	2.50	3.00	3.50
	SD	1.15	1.34	1.03	1.03
Kruskal-Wallis Test	$\bar{x}$	**27.93**	**13.95**	**19.18**	9.46
	SD	**0.0001***	**0.0075***	**0.0007***	0.0505

*-significant variation when p<0.05

Level of social health is characterized by huge diversification. The highest specific value falls on targets respecting basic values (4.21 ± 0.79), especially on Obstetrics (4.53 ± 0.64), which is characterized by significant differences in comparison to other specialties (Tab. 5).In terms of fair play value, the specialization of Pharmacy dominates (3.96 ± 0.93). It is characterized by considerably higher indexes than those reached on Obstetrics and Laboratory Diagnostics. Responsibility parameter, which has the average index of all the respondents (3.75 ± 0.90), has the highest value on Nursing (3.82 ± 0.94), which is significantly higher than one reached on Pharmacy (3.42 ± 0.94) (Tab. 5).

Table 5. Social health levels for students of different specialties

Specialties		Social health		
		Being fair play in everyday life	Respecting basic values	Responsibility
Total (n=467)	$\bar{x}$	3.64	4.21	3.75
	SD	1.03	0.79	0.90
Pharmacy (n=83)	$\bar{x}$	**3.96^{Ob,L}**	**3.95^{Ob}**	**3.42^{Nu}**
	SD	0.93	0.91	0.94
Medicine (n=124)	$\bar{x}$	3.56	4.27	3.81
	SD	1.07	0.71	0.82
Obstetrics (n=76)	$\bar{x}$	**3.18^{P,Nu}**	**4.53^{P,Nu}**	3.80
	SD	1.03	0.64	0.80
Nursing (n=136)	$\bar{x}$	**3.88^{Ob,L}**	**4.17^{Ob}**	**3.82^{P}**
	SD	0.89	0.78	0.94
Laboratory Diagnostics (n=48)	$\bar{x}$	**3.31^{P,Nu}**	4.13	3.85
	SD	1.15	0.87	0.95
Kruskal-Wallis Test	H	**36.93**	**22.59**	**14.04**
	p	**0.0001***	**0.0002***	**0.0072***

*-istotne zróznicowanie przy p<0.05

The level of survival skills significantly differs the eight analyzed components. It obtained the highest specific indexes in tolerating body imbalance (3.23 ± 1.07) and survival (3.21 ± 1.06), while the lowest in the ability of water rescue (1.47 ± 1.34) (Tab. 6).

Table 6. Survival skills levels for students of different specialties

Specialties		Survival skills							
		1	2	3	4	5	6	7	8
Total (n=467)		3.23	2.73	2.21	2.61	2.33	1.47	2.81	3.21
	SD	1.07	1.11	1.24	1.18	1.70	1.34	1.05	1.06
Pharmacy (n=83)		3.31	**2.36^{Nu}**	1.96	2.67	2.41	1.27	**2.67^{Nu}**	**3.02^{Nu}**
	SD	0.88	1.20	1.18	1.15	1.73	1.09	1.08	1.14
Medicine (n=124)		**3.36^{Ob}**	2.69	2.07	2.42	2.50	1.48	**2.48^{Nu}**	**3.15^{Nu}**
	SD	0.95	1.11	1.22	1.22	1.56	1.27	0.99	0.99
Obstetrics (n=76)		**2.75^{M,Nu}**	2.70	2.13	2.47	2.22	1.70	**2.75^{Nu}**	**2.93^{Nu}**
	SD	1.21	0.92	1.10	1.14	1.69	1.42	1.03	1.01
Nursing (n=136)		**3.43^{Ob}**	**2.96^{P}**	2.42	2.82	2.28	1.47	**3.30^{P,M,Ob,L}**	**3.64^{P,M,Ob,L}**
	SD	1.05	1.13	1.30	1.15	1.85	1.49	0.95	0.97
Laboratory Diagnostics (n=48)		2.92	2.85	2.54	2.58	2.02	1.48	**2.63^{Nu}**	**2.85^{Nu}**
	SD	1.18	1.07	1.30	1.25	1.64	1.35	1.00	1.03
Kruskal-Wallis Test	H	**22.86**	**13.94**	**11.83**	8.53	3.02	3.20	**43.79**	**37.51**
	p	**0.0001***	**0.0075***	**0.0186***	0.0740	0.5540	0.5252	**0.0001***	**0.0001***

1-Tolerating body imbalance, 2-Precise performance, 3-The ability of falling securely, 4-The ability of self-defense, 5-The ability of swimming, 6-The ability of water rescue, 7-The ability of preclinical aid, 8-Survival

In the group of the highest values skills, which is survival (3.21 ± 1.06), the highest index was obtained on Nursing (3.64 ± 0.97), and the lowest on Laboratory Diagnostic (2.85 ± 1.03) with the significance in differences on every specialty. When it comes to tolerating body imbalance (3.23 ± 1.07), the highest values appeared on the specialties of Nursing (3.43 ± 1.05) and Medicine (3.36 ± 0.95), while the lowest on Obstetrics (2.75 ± 1.21) with the significance in differences on most of the specialties. The ability of water rescue, which obtained the lowest average value, did not show the significance of differences among specialties. The significance of differences was not also shown in self-defense and swimming abilities.

Discussion

The result of the statistical analysis of five independent groups of specialties taking four changing health profiles into consideration: somatic, mental, social and survival skill, indicate a clear growth of specified indexes, similarly to the studies of Kalina [2], Jagiełło et al. [14] and Bergier [15].

Female students rate social health as the most important, at high similar values on every specialty (no significance of differences). Survival skill is the lowest evaluated, as confirmed by recent studies conducted among students from Medical majors [15], Physical Education [14] and Physiotherapy [2]. It should be noted that in studies conducted among students of Medical majors, survival skill was assessed much higher than other values.

It may be noted that the general health index is almost identical on every specialty, which can be the example of clearly defined choices of future professions and which corresponds to other conducted studies [15,14]. Statistically significant differentiation between specialties occurred in self-assessment of mental health, the highest index characterizes respondents from Obstetrics specialty, which shows its importance in this particular profession. Surprisingly, lower value was reached by Nursing students. As regards survival skills, in comparison to Pharmacy, Medicine and Obstetrics, higher values were reached by Nursing students. Possibly, this is the curriculum, which prepares for a better understanding of features connected with survival skills.

Among four health profiles, the lowest variety of indexes was observed in somatic health, as confirmed by studies carried out among Medical students [15].

The most significant differences (statistically relevant) were observed in the fields of mental and social health, which may be indicative of requiring these particular skills on before mentioned specialties.

As regards mental health, detailed index of the ability of stress overcoming was the highest on Nursing specialty. Anxiety was the highest on Pharmacy, while belligerence on Obstetrics specialty. It can be assumed with high probability that the values of the detailed indexes characterize a mental peculiarity of future professions.

As regards social health, detailed indexes are significantly higher on different specialties. Responsibility is rated the highest by Nursing students, while Obstetrics students consider respecting basic values as important, and Pharmacy students- being fair play in everyday life.

Survival skills differentiate studied groups in five out of eight analyzed detailed indexes, while the biggest differentiation between the specialties was shown in the abilities of pre-clinical aid and survival.

The highest self-esteem of pre-clinical aid characterizes Nursing students, as confirmed by the right choice of specialty. They have also obtained the highest rate of self-esteem for survival, which may be indicative of a comprehensive curriculum, which contains varied information essential for survival.

Conclusions

Taking into account a relatively large number of respondents on two specialties, which are: Nursing and Medicine (over 100 respondents on each specialty) we would like to depict forms of subjective models of health assessment for these specialties as well as in the perspective of future professions.

Medicine- domination of social and mental health profiles. Respecting basic values dominates among detailed indexes of social health profile. As regards mental health profile, the ability of stress overcoming dominates. When it comes to somatic health, a prevalence of BMI and HR indexes was observed.

Nursing- domination of social health profile, among detailed indexes respecting basic values. As regards somatic health, the highest value was reached by HR index. According to the authors, generalizations indicated in the conclusions may be used in further discussion concerning creating the curriculums on the before mentioned specialties.

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