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Individual Professional Features of Physiotherapists

Andrzej Lewandowski* and Zuzanna Piekorz

Chair Department of Physiotherapy, Faculty of Health Sciences, Ludwik Rydygier Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

*Corresponding author: Andrzej Lewandowski, Chair Department of Physiotherapy, Faculty of Health Sciences, Ludwik Rydygier Collegium Medicum in Bydgoszcz, Nicolaus Copernicus University, Poland

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ABSTRACT

The aim of the study is to prioritize the individual characteristics of the physiotherapist. It was assumed that gender and education influence their hierarchy. Material and Methods: 2,130 people were examined using the J. Herberger set of traits. Results: Patience (57-61%), willingness to help (51-66%) and respect for the patient (55-67%) turned out to be the most important. The overall hierarchy is similar to that presented more than two decades ago by the "Expert Group". Differences in the preferences of women and men were found in 36.1% of the analyzed characteristics, with the dominance in the hybrid group and the highest percentage of respondents (39.2%). Education differentiated the individual preferences of a physiotherapist more than gender (50.0%). The preferences of people with vocational education differed significantly from those characterizing groups with different levels of education. However, the vast majority of respondents claim that the most desirable feature in this profession is the sense of recall ("calling"). This opinion was shared to a lesser extent by men and people with higher education. Conclusions: The most important individual features of a physical therapist are characterized by a high stability of social acceptance, while the level of education is important in both the current and future hierarchy / hierarchy, the latter being most likely hybrid features.

Keywords: Sex; Level of Education; Instrumental; Hybrid and Directional Characteristics Preferences; Differences

Ethics

A permission to conduct this study was obtained from the Bioethics Committee of the Ludwik Rydygier Collegium Medicum of Nicolaus Copernicus University in Toruń (no. KB 525/2008). All men and women were informed about the purpose of the study, and the possibility to withdraw from the study without giving any reason. Each potential participant granted a voluntary consent for participation in the study.

Introduction

The work of a physiotherapist is strongly related to the need of constant cooperation with the other people, which seems a crucial aspect during career selection process and the employment stage itself, but most of all, however, creates the need for knowledge about the usefulness of particular individual features which might contribute to the success of the profession [1,2]. They are just as important as physical traits and skills, the social perception and variability of

which are determined by many factors [3-5]. Constant development of the therapy methods and the area of physiotherapists' work aside with patients' awareness of the so many various forms of therapy may influence the changes in the hierarchy of social expectations towards the therapists [6-9]. This issue is a rather rare subject of scientific research, yet seems of vital importance in developing countries, such as Poland, due to the medical and technological progress as well as the unlimited access to information.

Literature data indicate that many factors, particularly age, disease, and the health status of the patients, determine patient's satisfaction with the therapy. The latter is also strongly related to the earlier expectations, the evaluation of its efficacy and finally personal and professional features of the therapist [10-14]. The results of previous own research prove relative stability in the most significant individual properties of the physiotherapist, whereas the differences expressed by different gender and education level groups concern the features hardly indicated by the respondents [15-18].

Therefore, the aim of the study was the attempt to update hierarchy of the individual features of a physiotherapist, significant for a larger social group, as well as the evaluation of their long-term changes. It was assumed that such variables as sex and educational background of the patients' having had previous experience with therapies as well as the long-term development of the profession will impact the hierarchy. Additionally, it was assumed that directional characteristics which are strongly related to the feeling of vocation ('calling') for the profession will be expected of the therapist to a greater extent compared to the other features.

Materials and Methods

The data was collected by the administration of surveys conducted among people who had previous experience with physical therapy. 2130 respondents participated in the study, with 716 men (33.6%) and 1414 women (66.4%) from various family background from central and western Poland. Only 2120 questionnaires were analyzed since the remaining 28 were incomplete. The study group included patients from physiotherapy centers (34.9%); physiotherapists, university, and college students of physiotherapy (30.8%); medical personnel and university teachers (20.8%), and physical education students and regular fitness clubs' clients (13.5%). The respondents were aged from 18 to 89 with the average age of 36.64 ± 14.63. Half of them was under 32 and the age range of men and women was similar. The highest percentage of the respondents admitted to having secondary education (53.4%), and the number of respondents with higher education (33.9%) significantly exceeded those with vocational education (12.7%). Men, more frequently than women, had higher and vocational education. The list of 36 individual properties of a physiotherapist proposed by J. Herberger [18] was adopted. The respondent was to choose only the 10 most significant in their opinion. Additionally, the author's division into directional, instrumental and hybrid properties (possessing traces of both features) was applied. The data were analyzed by taking the gender and the level of education of the respondents into account. The success of the profession

with the relation to the need of vocation ('calling') was also looked into. Statistical analysis of the gender preferences of the respondents was carried out using the Z statistical tool, while the correlation between the level of education and the percentage share of the response frequency, was determined using the Fisher-Snedecor test. When the percentage share of the responses in the three groups was below 0.2 or above 0.8 the statistical result was calculated using the F2 test, otherwise the F1 test was applied. The calculation of the percentage of all the differences was done at the level of 0.05.

Results

The results are presented in Tables 1-4. Tables 1 & 2 summarize numeral characteristics of the individual features of the physiotherapist by gender and level of education of the respondents. Tables 3 & 4 present the assessment of the expressed need of vocation ('calling') to the profession. On the basis of the above, it appears that patience (more frequently indicated by women), the need to help, respect for the patient and accuracy were among the most important properties. Women more often indicated emotional resistance, responsibility, professional self-improvement, feedback from patients, emotional balance, and kindness, while male respondents chose activation of the patient, professional authority, selflessness, honesty, experience. and professional independence. The percentages differences of these features were statistically significant. The percentage of directional features, prioritized by men and women alike (29.2%) was lower than instrumental properties (31.6%) and hybrid properties (39.2%) with slight differences between the sexes. They were found in 36.1% of all features used in the research (Table 1). The level of education of the respondents (50%) more than gender, influenced and differentiated the choice of the features. It was found that with the increase of the level of education of the respondents, certain parameters were chosen more often: theoretical knowledge, communicating skills, consistency, inspiring confidence, emotional resistance, emotional balance, professional self-improvement, individualization of treatment, patient's activation, and the awareness of patient's expectations.

Table 1: Numerical characteristic of the preferences of a physiotherapist's categorized qualities with regards to the respondents' gender.

Physiotherapist's categorized qualities	Man		Woman		Z	p		
	n	0/0	n	0/0				
Directional qualities (close to "calling")								
Kindness	169	26	386	29	1,680	0,046*		
Caring attitude	97	15	205	16	0,473	0,318		
Gentleness	57	9	96	7	-1,081	0,140		
Scrupulousness	158	24	288	22	-1,083	0,139		
Dedication	28	4	46	3	-0,844	0,199		
The will to help	377	57	761	58	0.188	0,425		
Honesty	134	20	195	15	-3,133	0,001*		
Determination	76	12	180	14	1,315	0,094		

The will to work 178 27 321 24 -1,301 Work engagement 230 35 474 36 0,442 Interest in the patient's needs 185 28 408 31 1,299 Selflessness 174 26 298 23 -1,884 Instrumental qualities (to a great extent dependent on education) Professional self-improvement 215 33 496 38 2,165 Professional independence 108 16 171 13 -2,069 Professional efficiency 158 24 332 25 0,571 Individualisation of treatment 185 28 400 30 1,025 Professional experience 320 49 589 45 -1,659 Psycho-pedagogical knowledge 115 18 228 17 -0,099 Theoretical knowledge 162 25 325 25 0,019 Organisational skills 53 8 <td< th=""><th>0,097 0,329 0,097 0,030* 0,015* 0,019* 0,284 0,153 0,049* 0,461 0,493</th></td<>	0,097 0,329 0,097 0,030* 0,015* 0,019* 0,284 0,153 0,049* 0,461 0,493										
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	0,132										
Ease of rapport/relations 220 33 443 34 0,078	0,106										
	0,469										
Patience 372 57 805 61 1,941	0,026*										
Restraints 126 19 228 17 -1,011	0,156										
Communication skills 312 47 606 46 -0,604	0,273										
Consistence 104 16 186 14 -1,003	0,158										
Inspiring trust 156 24 298 23 -0,547	0,292										
Professional authority 166 25 235 18 -3,854	0,000*										
Emotional resistance 99 15 252 19 2,234	0,013*										
Considering patient's feedback 108 16 259 20 1,744											
Emotional balance 77 12 223 17 3,046	0,041*										

Note: Z - the result of the test of equality of two percentage structures based on the statistics "Z"

The parameters which decreased were respect for the patient, knowledge of psychotherapy, professional experience, kindness, gentleness, scrupulousness, professional authority, and dedication. Differences of the particular parameters were statistically significant and turned out to appear more frequently in the hybrid and instrumental groups. The hybrid group appeared to have the largest percentage of the respondents (38.7-46.7%) and instrumental features group was the least numerous (24.2-33.9%) with the vast majority of the respondents with vocational education. Their preferences dif-

fered significantly compared to those with other levels of education (Table 2). Despite the observed differences, irrespective of the group, the vast majority of the respondents found "calling" a key aspect in the profession of a physiotherapist. Yet, men and people with higher education shared that opinion in a smaller share (the difference was statistically significant), while the number of respondents who did not have strong views on the topic was similar in both groups (Tables 3 & 4).

p - value used to determine statistical significance

^{*}Statistically significant difference: p < 0.05.

Table 2: Numerical characteristic of the preferences of a physiotherapist's features with regard to the respondent's level of education.

Dhysioth aranist/o agt	Basic		Middle		Higher		F1		F2	
Physiotherapist's categorized qualities	n	0/0	N	0/0	N	0/0	F	p	F	p
		Direc	tional quali	ties (close to	"calling")					
Kindness	96	36	203	28	319	28	3,221	0,040*	4,45	0,012
Caring attitude	47	18	117	16	163	14	1,106	0,331	1,476	0,229
Gentleness	45	17	44	6	86	8	13,060	0,000*	17,744	0,000*
Scrupulousness	83	31	130	18	279	25	10,154	0,000*	11,711	0,000*
Dedication	19	7	25	3	48	4	2,748	0,064	3,637	0,026*
The will to help	176	66	365	51	687	61	12,710	0,000*	12,906	0,000*
Honesty	52	19	114	16	191	17	0,843	0,430	1,056	0,348
Determination	27	10	98	14	163	14	1,823	0,162	2,572	0,076
Will to work	70	26	179	25	282	25	0,092	0,913	0,128	0,880
Work engagement	90	34	237	33	419	37	1,702	0,182	1,898	0,150
Interest in the patient	82	31	210	29	340	30	0,101	0,904	0,110	0,896
Selflessness	66	25	163	23	283	25	0,633	0,531	0,639	0,528
Instru	mental qu	alities (t	o a great ex	tent depend	ent on the	level of	education)		1	
Professional self-improvement	56	21	271	38	412	36	14,473	0,000*	19,571	0,000*
Professional independence	31	12	101	14	157	14	0,586	0,556	0,799	0,450
Professional efficiency	69	26	190	27	266	24	1,128	0,324	1,261	0,283
Individualization of therapy	50	19	229	32	324	29	8,991	0,000*	11,327	0,000*
Professional experience	146	55	329	46	496	44	5,040	0,006*	7,092	0,001*
Psycho-pedagogical knowledge	42	16	134	19	186	16	1,017	0,362	1,012	0,364
Theoretical knowledge	54	20	163	23	301	27	3,440	0,032*	4,304	0,014*
Organisational skills	21	8	61	9	106	9	0,416	0,660	0,531	0,588
Knowledge of psychotherapy	66	25	128	18	198	18	3,648	0,026*	5,096	0,006*
Patient's activisation	30	11	306	43	318	28	58,386	0,000*	61,141	0,000*
Responsibility	113	42	289	40	482	43	0,478	0,620	0,480	0,619
Knowing patient's expectations	14	5	64	9	102	9	2,319	0,098	3,296	0,037*
Hybrid qualities (could be qualified as both directional and instrumental)										
Precision	154	58	352	49	612	54	3,565	0,028*	3,779	0,023*
Respect for patient	178	67	399	56	637	56	5,416	0,004*	7,380	0,001*
Ease of making a connection	90	34	215	30	399	35	2,764	0,063	2,816	0,060
Patience	163	61	436	61	666	59	0,443	0,642	0,516	0,597
Restraint	57	21	114	21	214	19	2,280	0,102	2,544	0,079
Communication skills	99	37	321	45	536	47	4,830	0,008*	6,759	0,001*
Consequence	22	8	113	16	159	14	5,088	0,006*	6,603	0,001*
Inspiring trust	43	16	138	19	295	26	10,262	0,000*	12,063	0,000*
Professional authority	62	23	205	23	205	18	3,694	0,025*	4,542	0,011*
Emotional resistance	21	8	132	18	212	19	10,864	0,000*	15,594	0,000*
Considering patient's feedback	62	23	127	18	208	18	1,943	0,143	2,596	0,075
Emotional balance	23	9	109	15	188	17	6,039	0,002*	8,545	0,000*

Note: F - multiple-ratio equality test result based on Fisher-Snedecor test statistics

 $[\]boldsymbol{p}$ - value used to determine statistical significance

^{*}Statistically significant difference: p < 0.05.

Table 3: Numerical characteristics of the vocation need in the physiotherapist's profession with regards to the respondents' gender.

Need of vocation		⁄Ian	Wo	man	~	
		0/0	N	0/0	Z	p
No	66	11	77	6	-3,309	0,000*
No opinion	40	6	77	6	-0,137	0,446
Yes	503	83	1049	87	2,641	0,004*

Note: Z - the result of the test of equality of two percentage structures based on the statistics "Z"

Table 4: Numerical characteristics of the vocation need in the physiotherapist's profession with regards to the respondents' level of education.

Need of vocation	Basic		Middle		Higher		F1		F2	
Need of vocation	n	%	n	0/0	n	0/0	F	p	F	p
No	11	5	48	5	80	12	13,213	0,000*	11,956	0,000*
No opinion	6	3	44	5	66	10	11,426	0,000*	10,430	0,000*
Yes	190	92	822	90	533	78	26,553	0,000*	23,605	0,000*

Note: Z - the result of the test of equality of two percentage structures based on the statistics "Z"

Discussion

The results enabled the authors to update the perception of a physiotherapist in accordance with the social expectations with regard to personality traits as well as professional training. These findings appear to be partly correlating with the studies carried out by J. Herberger [19], particularly in the aspect of the hierarchy of the most important features of a therapist, expressed by the so-called "expert group" (comprising of the most competent people with extensive knowledge about physiotherapy) but also the results of own studies on university teachers and physiotherapists [18-20]. This observation, however, does not change the overall research result, demonstrating progressing changes in social expectation towards the profession, especially over a long period of time. The consistency with the previous research, conducted over two decades ago, may result from the fact that the percentage of people with higher education made up the majority of the respondents. The results indicate a great stability of social hierarchy of the most important individual features of therapists, among which patience (57-61%), the will to help (51-66%) and respect for patient (55-67%) seem of key importance and need to be taken into consideration when educating new generations of physiotherapists. In this regard, we obtained similar results to the results obtained by Trylińska-Tekielska, et al. [21] in long-term studies of physiotherapy students. Interestingly the features strongly related to the therapist's mental resistance were chosen less frequently than expected, i.e., determination (10-14%), emotional resistance (8-19%) and emotional balance (9-17%).

These results are contradictory to the opinions expressed by the physiotherapists and others related to the profession [17-22]. The

research conducted has shown that hybrid properties are of great importance and were preferred by the respondents with higher education. Thereby, the hypothesis claiming that the directional properties are the most important in the profession of a physiotherapist has been verified negatively, contrary to the thesis on strong correlation between the level of education and the particular preferences of the said features. Thus, it can be concluded that nowadays the therapists are expected to possess professional knowledge and skills, rather than "calling". Directional properties which are closer to "calling", were mainly advocated by people with low level of education, and their perception of the profession differed greatly to that expressed by more educated groups [15]. The results also contradict the widespread belief found in previous research claiming that "calling" is one of the essential features of the therapist [15-20]. The "calling" or vocation understood as kindness, warm-heartedness, or the concept of selfless, noble act - "caritas" or compassion, is commonly expected from the representatives of many professions such as: doctors, nurses, teachers, or priests. This opinion is confirmed in numerous literature data [23], yet it seems that it remains more in a declarative area and the factual social expectations focus on hybrid and instrumental features. This claim seems to be further confirmed by a small percentage of the respondents choosing dedication (3-7%) and gentleness (7-17%) as important features of the therapist.

Possibly, "calling" being one of the features well-grounded in social hierarchy, affiliating many virtues, was indicated in the questionnaire by almost 90% of both men and women and did not require, in their opinion, additional confirmation of its validity. It is worth noticing; however, it was hardly chosen by the respondents with

p - value used to determine statistical significance

^{*}Statistically significant difference: p < 0.05.

p - value used to determine statistical significance

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higher education (statistically significant difference). Thus, it can be assumed, that perhaps in the future, due to the civilization progress and increase of the level of education of the society, "calling" or vocation to the profession of a physiotherapist as well as many other directional properties will lose their significance in favor of the hybrid and instrumental properties. In both hybrid and instrumental group, low percentage of organizational skills indication (8-10%) being very useful during working with patients, as well as the awareness of patient's expectations (5-9%) and psycho-pedagogical knowledge (16-19%) came as a surprise and turned out to be contrary to the literature data [24-26]. Also in the current research, this view was confirmed by almost 50% of the respondents, however, at a significantly lower rate among the people with basic education. Therapist-patient communication of both educational and socio-affective nature takes place non-stop, supporting their mutual understanding, cooperation and creating emotional bonds [24]. Its main elements comprise of instructions, explanations, manual demonstrations, or support [25] and come as a key element of the therapy for all patients, also post-stroke patients who, despite the obvious difficulties, are its participants and recipients [26]. With regard to the above, it can be concluded, that soft competences in the said profession, previously underestimated in other professions, are more important and more acknowledged by people with higher education.

The results, being an attempt to update social expectations as for individual properties of a physiotherapist, indicate a high stability of those most important, among which patience, the will to help and respect for the patient prevail and also allow forecasting of expectation in the attitudes and competence of therapists. Therefore, with high probability, it can be presumed, that in the near future, competence attitude of a physiotherapist, manifested in paramedical nature of work, seems to be more expected than humanistic attitude, in which representatives of the profession prefer para-pedagogical nature of work and therefore, pay more attention to the contact with the patient and the effect on his or her personality [19]. This view also allows us to assume that in a wider social scope, the so-called hard competences of a physiotherapist are still more important than soft competences, which were not given proper attention when it comes to the success of many professions.

Conclusions

The perception of the most important individual properties of a physiotherapist has remained stable for many years. Directional features have received slightly lower acknowledgment and the level of education of the society is a significant factor in both the present and future hierarchy of the analyzed features. It can be assumed that hybrid and instrumental features will most likely prevail as the properties being subjected to a process of development in the course of job progress and strongly related to the character of a future therapist. In this light the process of selection of university candidates and their proper education seems of key importance.

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Conflicts of Interests

The authors declare that there are no conflicts of interest.

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