Feminization of the physiotherapy profession? Results from a single-center cross-sectional study

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Abstract

Introduction: The concept of feminization of a profession can be described as an over-representation of women in any given occupation. This phenomenon can be analyzed both statistically and in a broader social context. Nearly three-quarters of professionally active physiotherapists are women. However, the literature on the feminization of the physiotherapy profession is limited; therefore, this work was exploratory.

Aim: The overall aim was to determine whether statistical feminization affects the image of the profession in the minds of those who practice it and to clarify what factors influence its shape.

Material and methods: A group of 189 people (132 women, 57 men): physiotherapy professionals, and students participated in the study. The research tool was an original questionnaire made available online.

Results: Some physiotherapists declared that they receive comments on gender characteristics, and most often, they are related to external features – at the same time, most often presenting the content on stereotypes related to masculinity with positive valorization. The stereotypical image of a good physiotherapist functioning among the respondents is more masculine, and socio-political attitudes are a differentiating factor: for liberals, this image is more masculine, and for conservatives, it is more feminine.

Conclusions: Gender is a variable that affects the experiences of Polish physiotherapists. Despite the preponderance of women, the functioning stereotype is rather masculine.

Key words

gender, feminization, physiotherapy profession, gender stereotype.

Introduction

The concepts of feminization and masculinization of a profession can be described as the over-representation of individuals of a particular sex, female and male, respectively, in a certain occupation [1]. These phenomena are analyzed in both statistical terms, referring to quantitative representation, and in a broader social context – as a kind of sociological phenomenon, which can be both a cause and a result of changes in many aspects related to a particular profession [1,2]. One of the features of feminization/masculinization is the qualitative difference in access to socially valuable resources [1]. The three most important of them are: prestige, wealth, and power [3].

When writing about the feminization of the profession, one should also mention the phenomenon of occupational segregation, which occurs in two forms: vertical and horizontal. Horizontal segregation occurs when an occupation, or an industry, is dominated by either men or women. Vertical segregation, on the other hand, refers to a situation in which women have little participation in decision-making processes, which, for example, is expressed in the disproportion of women and men in leadership, and decision-making positions [1].

According to data from the National Chamber of Physiotherapists (pol. KIF – *Krajowa Izba Fizjoterapeutów*), as of May 29, 2018, there were 48,062 physiotherapists of both genders, of whom 35,566 (74%) were women, and 12,496 (26%) were men [4]. Therefore, it is evident that physiotherapy in Poland is statistically feminized. However, there is no literature addressing the social aspect of this phenomenon.

Aims

Considering the fact that active physiotherapists in Poland are almost three-quarters women, the goal was set to determine whether gender differentiates the experiences of those in the profession. One of the intentions of this work was also to sketch the functioning social aspect of the feminization of the physiotherapy profession – that is, to try to determine with which stereotype (male or female) physiotherapists themselves associate their profession.

Materials and methods

The study group consisted of 189 physiotherapy professionals and physiotherapy students, including 132 women (69.8%) and 57 men (30.2%) between 21 and 56 years of age (mean: 27.9±6.8). The percentage distribution of respondents' gender corresponds to the percentage distribution of gender in the physiotherapy profession. The inclusion criterion was the experience of working with patients during internships and/or at work. An online proprietary 4-part questionnaire was used; it began with a preamble informing about the purpose of the study. The first part, "Beliefs and Knowledge," consisted mainly of close-ended questions and included questions about knowledge of gender structure, beliefs about the impact of gender on the physiotherapy profession, and acceptance of the professional role. Another section, "Experiences," looked at respondents' personal encounters with behaviors directly characterized by gender stereotypes. In the "Image of a physiotherapist" section, there was a semantic differential in which respondents selected characteristics that fit their image of a good physiotherapist. Adjectives (taken from the literature addressing the divisions of femininity and masculinity [1]) were considered to represent a category based on dualistic divisions of these constructs. Lastly, participants' sociodemographic characteristics were collected. The data was collected between October 30, 2020, and December 6, 2020.

The obtained data were exported to IBM SPSS Statistics 20, then descriptive statistics and frequencies were calculated. Contingency table

analyses used percentage profiles, Pearson's Chi-square test of independence, and Phi Yul's measure of relationship strength. The accepted level of significance was α=0.05. Data regarding the image of the physiotherapy profession, collected using semantic differential, were analyzed using principal component factor analysis with analytical rotation to a simple-Varimax structure. For the analysis, 20 pairs of adjectives were selected from among 30 pairs in which the average indication reached a value above 2.93. The information received was subjected to substantive interpretation. Factor loadings of more than 0.6 were included in the analyses. The number of components highlighted and analyzed was limited to three, ranking them hierarchically. The substantive analyses considered the number of terms that make up a given component and what classic stereotype (male or female) they mostly describe.

Results

Due to the length limitation of this article, only selected results were presented. The responses of women (n=132) to the question: "*Please complete the sentence in such a way that expresses what your profession is: I am ...*" showed that 48% of female respondents used a term expressing the male gender (e.g., *male physiotherapist*, *male physiotherapy student*), 47% the female gender (e.g., *female physiotherapist*, *female physiotherapy student*), and 5% phrased the sentence in a way that did not express the gender.

The percentage of men in the physiotherapy profession is shown in **Table 1**. Respondents were divided into three categories according to the numerical value given in the response: underestimators (response: ≤25%), "knowers" (26-30%), and overestimators (31%≤).

Table 1. Gender and evaluation of gender structure.

Gender	Gender structure – number of men			Overall
	Underestimate (%)	Know (%)	Overestimate (%)	
Women	9.8	11.4	78.8	132 (69.8%)
Men	7.0	19.3	73.7	57 (30.2%)
Overall	9.0	13.8	77.2	189 (100%)
Notes: Chi^2 = 2.311; ϕ = 0.111; p = 0.315				

Nearly half of the respondents (45.7%) said they had experienced gender-related comments, and 45 individuals included at least one example - these statements were broken down into syntagms and analyzed on two planes. The first division was based on aspects of the label type cited by Lipinska-Grobelny and Gozdzik [5], and its results are presented in **Table 2**.

The second division (**Table 3**) was based on the distinction of stereotypes on the femininity and masculinity scales, depending on positive or negative characteristics, describing a certain direction of a load of statements.

Table 2. The number of syntagms regarding received comments assigned to each category of label type with examples.

Category	Number of syntagms	Examples of syntagms
External features	74 (48.7%)	„ You're too small for this job.", "Well, after all, you wouldn't let a female physiotherapist do all of the manipulations because she can't handle a heavy patient; it's not worth the back problems.", "If a man presses, at least you can feel something.", "You, sir, have more strength.", "Lady, it seems like you do not have the strength for such a job cause your arm muscles are missing.", "I am surprised that a woman can do a massage like this, not just a little pat. So you do have the strength of a guy.", "Well, how can you not train with such a handsome gentleman?!", "Male patients often say to young future physiotherapists that the very fact that they are the ones doing something (being women) will certainly speed up the treatment. For example, during a massage – a women's hand is a women's hand, meaning that they are softer, etc... comments about being in shape, athletic, pretty, or attractive are an everyday occurrence; it does not sound good from the mouths of older, unfamiliar men, especially in the workplace and in front of other people."
Personality traits	5 (3.3%)	"There is a difference when it is a woman – more empathetic"
Performed social roles	25 (16.4%)	"A woman will quickly go on a maternity leave," "Women are the ones thinking about family and will not devote themselves to work like men will.", "Not allowed to get pregnant for at least 2 years at a military hospital in *******(orthopedics); otherwise, there will be no permanent contract."
Features of the profession	14 (9.2%)	"A subtle division that men should do the tough jobs and women are better in pediatrics.", "But what are you even doing in this degree program? It is women, after all, who tend to be physiotherapists.", "Together with patients, we concluded that women were better suited for pediatric physiotherapy and men for manual therapy."
Others	34 (22.4%)	"A girl is supposed to work with me, and she is also a student? No way.", "I do not want a man to give me a massage.", "From massaged men at a hotel – it sometimes happened that they were hoping for something more than just a classic massage. It was humiliating.", "I would prefer to be massaged by a man.", "With you, sir it was pure pleasure, and with your female colleague, it is torture.", "Patients, regardless of their gender, prefer women.", "The patient remarked when seeing me that young breast compresses were being prepared."
Overall	152 (100.0%)	

Table 3. The number of syntagms regarding the received comments assigned to each type of gender stereotype with examples. "K+" denotes syntagms related to positively valorized women, "K-" related to negatively valorized women, "M+" and "M-" related to men valorization, respectively.

Type of characteristics	Number of syntagms	Examples of syntagms
K+	19 (11.2%)	*"Oh ladies are much softer and more pleasant.", "'I would rather the lady come to massage me'-said to my male colleague.", "Oh, it is good you are a woman (because I get uncomfortable around men)."*
K-	47 (27.6%)	*"A woman works too gently.", "What can such a petite person do?!", "(We prefer a man) because a woman will immediately start having babies and taking maternity leaves.", "Physiotherapist for neurology? Child, with your height?! (This is where a man is needed!)"*
M+	71 (41.8%)	*"Men massage better and harder.", "If there is a possibility, I prefer to see a man.", "We prefer a man (because a woman will immediately start having babies and taking maternity leaves).", "(Physiotherapist for neurology? Child, with your height?!) This is where a man is needed!", "A man is strong and suitable for the job."*
M-	1 (0.6%)	*"A man is not fit to work with children."*
I	32 (18.8%)	There were syntagms regarding erotic requests, indications of matching gender to a particular department of physiotherapy, and also those that conveyed non-obvious valorization or those from which gender could not be determined - already cited in this article.
Overall	170 (100.0%)	

A semantic differential was used to explore opinions on the image of a standard physiotherapist, in which respondents were asked to choose which characteristic from a pair of semantically opposite adjectives more closely matched their vision of a good physiotherapist. **Table 4** and **Table 5** showed the rotated component matrices for the two analyzed variables: gender and socio-political characteristics. In these tables, bold and grey font indicated those values of factor loadings that reached above 0.6 as those included in the analyses. In all factor analyses performed, the values of the determinant of the correlation matrix and the Kaiser–Meyer–Olkin test (KMO) measure of sampling adequacy reached values to classify the data for analysis. The reliability of the tool, which was a semantic differential, was also verified using the alpha-Cronbach's coefficient α that reached 0.901, which allowed for the tool to be considered reliable.

Table 4. A matrix of rotated components for the gender variable.

Characteristics	Overall – components			Women – components			Men – components		
	1	2	3	1	2	3	1	2	3
Active	0.571	-0.071	-0.430	0.191	0.133	0.774	0.735	0.119	-0.158
Independent	0.601	-0.225	-0.397	0.439	0.115	0.609	0.726	-0.024	-0.167
Kind	0.791	-0.016	-0.051	0.423	0.424	0.628	0.253	0.072	0.248
Ambitious	0.824	-0.115	-0.317	0.663	0.165	0.627	0.677	0.043	0.317
Decisive	0.849	-0.071	-0.240	0.625	0.258	0.608	0.629	0.037	0.095
Open	0.785	-0.052	-0.095	0.286	0.466	0.658	0.700	0.093	0.167
Friendly	0.235	0.826	0.031	0.124	0.112	-0.078	-0.083	0.855	0.065
Straightforward	0.578	-0.132	0.249	0.214	0.618	0.316	0.149	-0.122	0.090
Warm	0.666	0.054	0.438	0.332	0.718	0.148	0.057	0.098	0.763
Competent	0.860	-0.048	-0.085	0.777	0.393	0.314	0.634	0.288	0.014
Demanding	0.706	-0.162	-0.005	0.598	0.444	0.219	0.679	-0.233	0.257
Firm	0.684	-0.182	-0.062	0.761	0.234	0.166	0.660	-0.097	0.566
Factual	0.846	-0.069	-0.167	0.796	0.323	0.319	0.785	-0.099	0.055
Empathetic	0.767	0.045	0.311	0.524	0.603	0.298	0.054	0.086	0.900
Objective	0.266	0.794	-0.194	0.167	-0.006	0.050	0.199	0.820	-0.017
Supportive	0.617	0.089	0.388	0.457	0.634	0.033	0.054	0.081	0.121
Understanding	0.686	0.059	0.425	0.304	0.778	0.136	0.164	0.197	0.161
Listening	0.169	0.836	-0.177	-0.028	-0.001	0.116	-0.008	0.869	-0.085
Gentle	0.518	-0.148	0.345	-0.071	0.639	0.549	0.073	0.040	0.500
Caring	0.196	0.832	0.068	-0.089	0.117	0.046	-0.060	0.756	0.448

Table 5. A matrix of rotated components for the socio-political attitudes grouping variable.

Characteristics	Overall – components			Conservative – components			Liberal – components		
	1	2	3	1	2	3	1	2	3
Active	0.571	-0.071	-0.430	0.064	0.003	0.622	0.598	0.286	0.144
Independent	0.601	-0.225	-0.397	-0.055	-0.093	0.346	0.762	0.116	-0.024
Kind	0.791	-0.016	-0.051	0.064	0.153	0.780	0.646	0.464	0.154
Ambitious	0.824	-0.115	-0.317	0.160	0.131	0.550	0.900	0.161	0.075
Decisive	0.849	-0.071	-0.240	0.167	0.062	0.577	0.814	0.239	0.081
Open	0.785	-0.052	-0.095	0.124	0.758	0.437	0.676	0.427	0.102
Friendly	0.235	0.826	0.031	0.911	0.009	0.233	0.023	0.050	0.821

Straightforward	0.578	-0.132	0.249	-0.011	0.833	-0.016	0.262	0.746	-0.005
Warm	0.666	0.054	0.438	0.263	0.750	0.139	0.392	0.632	0.101
Competent	0.860	-0.048	-0.085	0.317	0.240	0.773	0.829	0.295	0.112
Demanding	0.706	-0.162	-0.005	-0.180	0.108	-0.096	0.652	0.443	0.063
Firm	0.684	-0.182	-0.062	-0.105	0.356	0.188	0.791	0.126	-0.095
Factual	0.846	-0.069	-0.167	-0.156	0.585	0.487	0.895	0.217	0.082
Empathetic	0.767	0.045	0.311	0.389	0.062	0.163	0.553	0.561	0.110
Objective	0.266	0.794	-0.194	0.925	0.126	0.161	0.214	-0.075	0.799
Supportive	0.617	0.089	0.388	0.445	0.462	0.142	0.287	0.167	0.042
Understanding	0.686	0.059	0.425	0.391	0.563	-0.176	0.346	0.399	0.027
Listening	0.169	0.836	-0.177	0.947	0.078	0.123	0.053	-0.021	0.841
Gentle	0.518	-0.148	0.345	-0.114	0.326	0.166	0.195	0.772	-0.045
Caring	0.196	0.832	0.068	0.925	0.034	-0.094	-0.051	0.161	0.857

Discussion

The debate over the use of feminatives has been ongoing for decades and is now commonly unfolding on social media [6]. The purpose of addressing this topic was to respond to a public discussion and to show the current functioning of the female personal pronoun among female physiotherapists. Unfortunately, there is a lack of data to compare the obtained results. It would be interesting to investigate the dynamics of changes in the use of feminatives by female physiotherapists over the years.

Most of the comments cited by respondents related to physical characteristics. This situation corresponds to the relationships regarding the components of gender stereotypes found by Deaux and Lewis, cited by Królikowska [7]. Indeed, it is the component of physical characteristics, as the one most readily available in interpersonal relations and therefore most easily identifiable, that is strongly correlated and influences the other components of the gender label: "through the prism of physical characteristics individuals perceive the other components of gender stereotypes."

Some of the respondents of the current study mentioned the patients' reported preference for the gender of the physiotherapist who works with them. The research conducted by Dadura and Wojcik [8] found that most physiotherapists did not have a preference for the gender of the patient; however, 14% (both men and women) preferred to work with females. The explanations for this preference, or rather the component relating to the characteristics of physical features (and, e.g., communication, hygiene) called by the authors "the technical aspect" (put in opposition to the "professionalism aspect" which rather refers to the lack of preference, under which the gender of the patient was somehow separated from their person), deserve attention in the context of this work. The explanations found in the technical aspect correspond with the theme of the component of external features: the smaller the body weight of female patients - the fewer technical difficulties result from this. Differences in the weight of the patient and therapist is a topic that should perhaps be addressed in the context of finding technical solutions to support a thera-

pist's ergonomic performance and thus prolong their health, which, after all, is needed to fulfill the professional role with due diligence – however, the difference between the assessment of the impact of external characteristics on the therapy performed between physiotherapists (Dadura and Wojcik's research [8] - a certain proportion of the responses with 14% declaring the importance of gender) and patients (the current work, the largest number of syntagms) seems to be significant. However, this comparison is not entirely appropriate. It would need to be verified in a properly designed study. However, its indication may be important in terms of patient education - building their adequate expectations, which are a component of creating a therapeutic relationship based on trust [9].

According to the second division of syntagms, most comments carried a male stereotype with positive valorization. If we assume, according to Miluska [10], that positive stereotypes promote the groups to which they relate, promote access to social goods and facilitate the acquisition of material and non-material goods, and "negative stereotypes become justification for discriminatory actions and take the form of social prejudice" [10], then based on the results of the current study, it can be concluded that in physiotherapy, being male is promoted and being female is surrounded with social prejudice. However, after analyzing the first breakdown of syntagms, it was apparent that the main basis for these opinions was the physical strength category.

When discussing this topic, it is necessary to keep in mind the presence of a certain bias in the selection of syntagms – Miluska [10] mentions this in the context of building scales on stereotypes, i.e., the inclusion of more features favorable to men (*male-valued items*) and little features favorable to women (*female-valued items*) - a similar situation may have occurred in this research as a subconscious factor of the researcher.

Comparing the results of men and women obtained in the semantic differential analysis (**Table 4**), it can be observed that in both groups, the first component included terms associated with stereotypically masculine traits (e.g., decisiveness, making demands) and the second with stereotypically feminine ones. Thus, according to the respondents, it can be concluded that the standard physiotherapist, primarily, should manifest stereotypically masculine traits. This correlates with the statement cited by Dahl-Michelsen [11] that the public image of the physiotherapy profession is masculine.

Considering the variable of socio-political attitudes (**Table 5**), one can see differences between the first component. In the conservative group, there were only four terms, mostly referring to female characteristics, while in the liberal group, there were nine terms, mostly masculine. The second component was similar for both groups and related to stereotypical femininity. Characteristics in the third component, conservative respondents tend to describe male characteristics, and liberal respondents tend to describe rather feminine. Thus, when assuming this functioning image as a determinant of the level to which physiotherapists want to aspire, it can be concluded that conservatives will place more importance on developing "soft" competencies – associated with stereotypically feminine traits and less on "hard" skills. The situation would be the opposite for liberals.

Conclusions

Gender is a variable affecting the experience of Polish physiotherapists. Despite the preponderance of women in the profession, the stereotypical image of the profession operating among physiotherapists themselves is rather masculine. However, this subject requires further research.

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