

Professional communication competences of physiotherapists – practice and educational perspectives

Anna Włoszczak-Szubzda^{1,2}, Mirosław J. Jarosz^{1,2}

¹ Department of Health Informatics and Statistics, Institute of Rural Health, Lublin, Poland

² Faculty of Pedagogy and Psychology, University of Economics and Innovation, Lublin, Poland

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Abstract

Background: Dissonance between the high 'technical' competences of medical professionals, including physiotherapists, and the relatively low level of patient satisfaction with care received is a phenomenon observed in many countries. Many studies show that it occurs in the case of an inadequate interpersonal communication between medical professionals and patients.

Objectives: The primary goal of the presented research was evaluation of the level (study of the state) of communication competences of physiotherapists, and determination of the factors on which this level depends. An additional goal was analysis of the needs and educational possibilities within the existing models of education in the area of interpersonal communication provided by higher medical education institutions.

Design, setting and participants: The self-designed questionnaire and adjective check list were subject to standardization from the aspect of reliability and validity. Information available on the websites of 20 educational facilities in Poland were compared. The study group covered a total number of 115 respondents in the following subgroups: 1) occupationally-active physiotherapists who, as a rule, were not trained in interpersonal communication (35 respondents); students of physiotherapy covered by a standard educational programme (60 respondents); 3) students of physiotherapy who, in addition to a standard educational programme, attended extra courses in professional interpersonal communications (20 respondents).

Results: The results of studies indicate poor efficacy of shaping communication competences of physiotherapists based on education in the area of general psychology and general interpersonal communication. Communication competences acquired during undergraduate physiotherapy education are subject to regression during occupational activity.

Conclusions: Methods of evaluating communication competences are useful in constructing group and individual programmes focused on specific communication competences, rather than on general communication skills.

Key words

physiotherapy, interpersonal relations, communication, education, patient satisfaction

BACKGROUND

The ethos of a physiotherapist defines what good occupational practices should characterize a physiotherapist. General principles cover an evaluation of an adequate attitude, i.e. respectable coexistence and behaviour with respect to others, as well as normal social relationships and a positive attitude towards oneself and the surrounding world [1]. If physiotherapists lack a deeper ethical awareness, they may reason and/or act ethically to a varying extent: only ethically-conscious physiotherapists will know when they reflect and act ethically [2]. They are required to make autonomous clinical and ethical decisions based on communication and relationships with their patients, other health care team members, and health care institutions [3].

The subjective opinion of a patient is the ultimate measure of physiotherapists' professional attitude. Even the most able team of therapists will not be able to create a collaborative framework unless their patients are willing to grasp the

opportunity offered to them [4]. In this occupation, there is also a need for sensitivity to others, tolerance, acceptance, understanding of the psychological essence of suffering and illness, and above all, motivation to provide assistance for patients. According to the self-determination theory, support from health care practitioners can promote patients' autonomous motivation and greater long-term behavioural persistence [5].

A physiotherapist should possess skills of empathic understanding of patient, also how to respect patient's feelings and sensations. Kindness, engagement in the recognition of a patient's individual life situation, as well as his/her personality traits, allow the physiotherapist the 'maximisation' of the techniques of providing assistance to a patient [6]. An ethical duty of a physiotherapist is also care about maintaining psychical hygiene in the circle of own activity, and not creating stress. A proper atmosphere at the workplace enables a physiotherapist to enjoy the occupation performed, and postpone the effects of occupational burnout which, at the same time, protects patients.

Educational standards are necessary to satisfy the requirements posed by the World Confederation for Physical Therapy (WCPT) which expects physiotherapists to:

1. respect the rights and dignity of all individuals;

Address for correspondence: Anna Włoszczak-Szubzda, Department of Health Informatics and Statistics, Institute of Rural Health, Jaczewskiego 2, 20-090 Lublin, Poland.

E-mail: a-wlos@tlen.pl

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2. comply with the laws and regulations governing the practice of physical therapy in the country in which they practice;
3. accept responsibility for the exercise of sound judgement;
4. provide honest, competent and accountable professional services;
5. provide quality services;
6. receive a just and fair level of remuneration for their services;
7. provide accurate information to patients/clients, to other agencies and the community about physical therapy and the services physiotherapists provide;
8. contribute to the planning and development of services which address the health needs of the community [1].

There arises a question whether educational programmes for physiotherapists satisfy these requirements and to a sufficient degree prepare to undertake work [7]. General psychological knowledge, although indispensable for a basic recognition of the scope of communication problems, is poorly occupationally useful if not accompanied by specially trained skills. Even a one-semester course could significantly change the communication skills in the desired direction [8]. In addition, cultural and ethnical differences in the sphere of intra- and interpersonal communication require special attention. Clouten et al. suggest that the minority students would benefit from further preparation in communication and interpersonal skills, but they are stronger than the majority students in stress management [9]. It seems that despite of international and cultural differences, listening and communication skills are fundamental to the delivery of rehabilitation services, but few measures comprehensively assess these skills [10, 11]. It is necessary to recognize the complexity of interpersonal contacts; however, only its adequate application in practice makes a person communicatively competent [12, 13].

In physiotherapy, similarly to other domains, three scopes of competences contribute to the professionalism in the area of communication: 1) motivation, 2) knowledge and 3) skills.

Motivations bias the behaviour of an individual towards the achievement of specified states of affairs which are important for this individual. The motivation process consists of a set of individual motives. A motive may be termed an experience stimulating an individual to action, or refraining from or hindering its performance. Communication motivation is an inspiration, engagement and encouragement to contact with others (patients or co-workers). By its definition, communication encompasses respect, tolerance for dissimilarity, respect for rights, and non-violation of another person's limits [14, 15].

Knowledge of interpersonal communication covers contents concerning what should be said or done in specified situations, as well as procedures based on which these contents will be introduced into practice. It is necessary to recognize the complexity of interpersonal contacts; however, only its adequate application in practice makes a person communicatively competent [12, 13]. Communication knowledge, although indispensable for a basic recognition of the scope of communication problems, is poorly occupationally useful for physiotherapists if not accompanied by skills.

To communication **skills** contribute, among other things, emotional intelligence, i.e. personal competences of an individual, understood as skills of recognizing own emotional states and the emotional states of others, as well as skills of using own emotions and coping with emotional states of others which, in spite of the common opinion, may be trained and developed [16, 17].

Other concepts associated with medical professional interpersonal competences which are worth mentioning are: moral imagination, accord and trust, and "therapeutic emplotment".

Skilled communication in medical practice requires students to move beyond simply learning superficial communication techniques and behaviours. A conceptualization of **moral imagination** is usually drawn from the works of Hume, Aristotle and Gadamer. Students must exercise moral imagination on two levels: towards the direct communication exchange before them; and to the representative nature of simulation encounters. The limits of moral imagination in simulation-based education must be carefully considered [16].

Trust has been identified in the literature to be a crucial element in establishing an effective nurse- patient relationship. Before a medical professional can achieve a trusting relationship with a patient, they first have to develop a rapport with them. Rapport is a term used to describe, in common terms, the relationship of two or more people who are "in sync" or "on the same wave length" because they feel similar and/or relate well to each other [17].

"**Therapeutic emplotment**" develops from two philosophical strains: one emphasizing the connection of speech to actions, the other the linguistically mediated nature of human experience. "Therapeutic emplotment" is the creation of story-like structures through therapist-patient interactions which encourage the patient to see therapy as integral to healing. "Therapeutic emplotment" may provide the medical professional with a way of improving communication and relationship skills [18].

OBJECTIVES

The primary goal was evaluation of the level of communication competences of physiotherapists, and determination of the factors on which this level depends. An additional goal was analysis of the needs and possibilities within the existing models of education in the area of interpersonal communication. The following research problems were formulated:

1. What is the level of communication competences of physiotherapists (knowledge, motivation and skills).
2. Are there any differences in the level of professional communication competences according to the model of education, i.e.:
 - a. education within the scope of general psychological knowledge;
 - b. education within the scope of professional interpersonal communication skills.

Based on earlier own studies, the following research hypotheses were posed:

1. The level of individual communication competences of physiotherapists based on general psychological knowledge is relatively low.
2. There are significant differences in the level of communication competences according to the education model applied in the education of physiotherapists.

DESIGN

Investigation of three basic scopes of communication: 1) motivation, 2) knowledge, and 3) skills is important from the aspect of understanding the research problems posed and a potential design of their repair programme.

In the research process, three methods were used:

1. analysis of documentation (standards, education schedules, curricula and syllabuses);
2. diagnostic survey concerning professional communication competences of physiotherapist – self-designed questionnaire;
3. testing of professional self-evaluation from the physiotherapist aspect – the 20 items adjective check list [19].

The 54 items in the questionnaire and test examine the following:

1) within the scope of motivation:

- a) affective dimension vs. cognitive (shows to what extent communication is motivated by emotions, and to what extent by intentions, if the message is the result of the 'stream' of emotions or the effect of consideration and planning),
- b) positive vs. negative dimension (if the message is useful or harmful, advantageous or disadvantageous for a patient),
- c) directed towards 'Own self' vs. biased towards 'Others' (if the message was generated exclusively for own needs, or considers others).

2) within the scope of knowledge:

- a) declared dimension, (what to communicate?),
- b) procedural dimension (how to communicate?).

3) within the scope of skills:

- a) dimension of carefulness (skills of showing during an interaction – interest, concern and attention to a patient or patients),
- b) dimension of expressiveness (skills of managing verbal and non-verbal communication),
- c) dimension of coordination (skills of managing the course of interaction),
- d) dimension of self-possession (in interpersonal communication this is a basic requirement of being competent).

The self-designed questionnaire and adjective test were subjected to standardization from the aspect of reliability and validity by means of:

1. pilot studies,
2. competent judges test,
3. Kendall's coefficient of concordance (Kendall's W) examining the degree of conformity assessments of competent judges,
4. test-retest method examining the reliability (stability) of the instrument,

5. t-Student test for paired samples, investigating the significance of the differences between each pair of questions in test and retest.

As a result of pilot studies investigating **face validity**, the contents of a few of the questions was changed. Competent judges assessed **content validity** (intrinsic) of the instrument, from the aspect of adequacy of its content with respect to the objective of the study and position in theory, level of difficulty of the contents, correlation between problems, clarity of instructions, as well as the level of acceptance while completing. The group of judges covered specialists representing the following areas of knowledge: 1) medicine, 2) philosophy/ethics, 3) pedagogy, 4) law, 5) psychology. Table 1 presents the results of examinations of the level of concordance between the judges' opinions. **Reliability** was investigated by means of the 'test-retest' method, by examining the same group twice, every 2 weeks. The results were calculated in a logic test (1 – concordance, 2 – lack of concordance). The mean concordance was 85%. The last method applied for the standardization of the instrument was **test-retest**, investigating differences between every pair of the questionnaire items. Out of 54 pairs of questions, statistical differences were observed only in two pairs.

Table 1. Kendall's test of the level of concordance of competent judges.

Characteristics of the instrument	w	p	\bar{r}_i	$(\bar{r}_i)^2$
Adequacy to the problem	0.86	<0.01	0.83	69%
Easiness of completing	0.87	<0.01	0.84	71%
Clarity of instructions	0.86	<0.01	0.83	69%
Level of contents acceptance	0.88	<0.01	0.86	73%
Level of contents difficulty	0.88	<0.01	0.86	73%
Correlation of problems	0.91	<0.01	0.90	81%

W – Kendall's W;
p – significance;
 \bar{r}_i – mean correlation of evaluations;
 $(\bar{r}_i)^2$ – percentage of variance of general concordance of evaluations.

During the studies, the following conditions of objectivity were preserved:

1. independence of the respondents (without unconscious pressure, e.g. resulting from subordination, when the surveyor is a lecturer or supervisor, and the respondents are his/her students or subordinates);
2. all respondents expressed informed consent to participate in the studies;
3. conditions of conducting the studies were standardized for all groups examined;
4. the questionnaire form included a precise and clear instruction.

The data obtained were subjected to statistical analysis. The presence of the differences between qualitative variables were investigated by means of Pearson's chi-square test, whereas the significance of quantitative variables was examined with the use of single-factor analysis of variance. The p values < 0.05 were considered statistically significant.

SETTING

The presented research was carried out as part of a many-year programme of monitoring and evaluation of the education of medical professionals, conducted from 2007 at the institutions educating medical professionals in Lublin (Poland).

PARTICIPANTS

In a pilot study, a total number of 30 students and occupationally-active medical professionals. The respondents participating in the pilot study were not enrolled into the main study.

Information (curricula and syllabuses) available on the websites of 20 educational facilities in Poland were compared.

The study group covered a total number of 115 respondents in the following sub-groups:

1. occupationally-active physiotherapists covered by standard educational programme, and not trained in interpersonal communication skills (35 respondents);
2. students of physiotherapy covered by a standard educational programme, and not trained in interpersonal communication skills (60 respondents);
3. students of physiotherapy who, in addition to a standard educational programme, attended extra courses in professional interpersonal communications (20 respondents).

MAIN OUTCOME MEASURES

Analysis of documentation

Analysis of the documentation showed that the official standards of education for the first-degree studies (Bachelor's Degree) in physiotherapy, assume that students should "possess psychophysical predispositions to work with the ill and disabled", as be the result of education within the scope of general psychology (45 didactic hours), and should be prepared, among other things, for the "understanding of basic human reactions to illness" [20].

Graduates of second-degree studies (Master's Degree) within the classes in clinical psychology and psychotherapy (30 didactic hours) acquire the knowledge, which should be the basis for acquiring skills of "perception of psychological

problems of patients with various dysfunctions and at various ages, and the effect of these problems on the course and efficacy of rehabilitation".

The all 20 curricula and syllabuses of schools educating physiotherapists in Poland contained the above-described standard educational contents, but did not contain courses for training skills in professional interpersonal communication.

Diagnostic survey

Table 2 presents the comparison of selected results of the diagnostic survey. The mean value of motivation, knowledge and skills indices which, theoretically, remain within the range from 0 to 1. That value was lower in the group of occupationally-active physiotherapists than in the remaining groups – students who had undergone extra training in professional communication, and those who participated in the standard course only. The differences with respect to motivation, knowledge and skills were highly statistically significant ($p < 0.0001$).

Professional self-evaluation

Table 3 presents a comparison of the selected communication competences between the group of occupationally-active physiotherapist and both groups of student. The comparison demonstrated that occupationally-active physiotherapists show the greatest shortages with respect to the following:

- a) lack of perception of limitation in work with a patients (71.4%; 25);
- b) knowledge of the role of active listening (62.9%; 22);
- c) knowledge of resistance mechanisms (100%; 100);
- d) lack of perception of needs within the scope of communication knowledge (57.1%; 20)
- e) lack of perception of needs within the scope of communication skills (37.1%; 13).

Students who participated in the extra training in interpersonal communication showed the least shortcomings. These relationships were statistically significant or highly significant. Only in the case of "tolerance towards patients and their significant others", the difference among compared groups was not statistically significant ($p \leq 0,066$). However, also in this case, the shortcomings observed among students who had undergone a standard course (60%), and among occupationally-active physiotherapists, was very high (51.4%).

Table 2. Comparison of indices of communication skills in the observed groups

Scope	Group	N	Mean	Standard deviation	Standard error	Minimum	Maximum	F	p
Motivation	Occupationally-active physiotherapists	35	0.4183	0.10051	0.01699	0.20	0.64	28.236	0.000
	Students of physiotherapy covered by standard programme	60	0.4433	0.09411	0.01215	0.20	0.68		
	Student of physiotherapy who participated in an extra communication course	20	0.6080	0.08954	0.02002	0.48	0.80		
	Total	115	0.4643	0.11592	0.01081	0.20	0.80		
Knowledge	Occupationally-active physiotherapists	35	0.5136	0.11486	0.01941	0.23	0.73	14.586	0.000
	Students of physiotherapy covered by standard programme	60	0.5739	0.10374	0.01339	0.27	0.80		
	Student of physiotherapy who participated in an extra communication course	20	0.6705	0.07925	0.01772	0.55	0.84		
	Total	115	0.5723	0.11532	0.01075	0.23	0.84		
Skills	Occupationally-active physiotherapists	35	0.4936	0.10750	0.01817	0.22	0.70	16.218	0.000
	Students of physiotherapy covered by standard programme	60	0.5492	0.10261	0.01325	0.32	0.75		
	Student of physiotherapy who participated in an extra communication course	20	0.6550	0.08335	0.01864	0.50	0.83		
	Total	115	0.5507	0.11387	0.01062	0.22	0.83		

Table 3. Presence or absence of selected skills in the groups examined

Evaluated skill	Results	Group			Chi ²	p
		Occupationally- active physiotherapists	Students of physiotherapy covered by standard programme	Student of physiotherapy who participated in an extra communication course		
Perception of limitations in work with patients	absent	71.4% (25)	40.0% (24)	25.0% (5)	13.452	0.001
	present	28.6% (10)	60.0% (36)	75.0% (15)		
Knowledge of the role of active listening	absent	62.9% (22)	43.3% (26)	0.0% (0)	20.810	0.000
	present	37.1% (13)	56.7% (34)	100.0% (20)		
Knowledge of defence mechanisms	absent	100.0%(35)	98.3% (59)	40.0% (8)	57.319	0.000
	present	0.0% (0)	1.7% (1)	60.0% (12)		
Tolerance towards patients and their significant others	absent	51.4% (18)	60.0% (36)	30.0%(6)	5.421	0.066
	present	48.6% (17)	40.0% (24)	70.0%(14)		
Perception of needs within the scope of communication knowledge	absent	57.1% (20)	56.7% (34)	10.0% (2)	14.513	0.001
	present	42.9% (15)	43.3% (26)	90.0% (18)		
Perception of needs within the scope of communication skills	absent	37.1% (13)	23.3% (14)	0.0% (0)	9.775	0.008
	present	62.9% (22)	76.7% (46)	100.0% (20)		

RESULTS

Occupational development covers five primary functions:

1. expanding knowledge useful in problem situations, especially in conceptual work;
2. learning based on experiences – acquisition of practical knowledge through observation of oneself and other employees, and implementation of new solutions in the work performed;
3. development of new attitudes and beliefs – change of to-date attitudes, reformulation of the system of values, principles and standards of behaviour;
4. possibility to rebuild occupational qualification – this concerns an individual dimension and refers to the personal competences of an employee, diagnosing these competences and their improvement to a higher level;
5. cooperation and contribution in staff development – imparting knowledge and skills, use of knowledge resources of other workers, mutual learning and acting (coaching, mentoring, peer tutoring) [21].

All three scopes of interpersonal communication competences (motivation, knowledge and skills), contribute to the occupational professionalism of physiotherapists. Unfortunately, the presented studies showed that mean indicators in the group of occupationally-active physiotherapists, were lower than the mean values of these indicators in the group of students. This may evidence a regression of communication competences in the course of occupational activity and the lack of continuing education in this area.

The most important competences which, at the same time, are the most difficult to train, are those in the area of motivation, and for an individual, motivation is the driving force for action which, simultaneously, delineates the direction of this action. The results obtained indicate that both occupationally- active physiotherapists and students who had completed a standard course in psychology, have serious shortcomings of knowledge. Without knowledge of what to say or do in specified situations, and knowledge of procedures, based on which this content will be put into practice, one cannot speak about a professional attitude towards patients and adequate contact with others [13].

Lack of ‘tolerance towards patients and their significant others’ may arise from the erroneous conviction that to

tolerate means the same as to accept (see Lat. *acceptatio* – adopt, favour) someone’s behaviour or attitudes. Tolerance is just the respect for someone’s behaviours and attitudes, which we might not like. Tolerance allows the assumption of an open attitude towards a patient, irrespective of his/her habits, appearance, attitudes, behaviours, etc. A physiotherapist must eliminate the feeling of reluctance, which is easy to identify in relation with a patient, must be able to restrain from attempts to influence patients who have different attitudes.

The fundamental cause of the ‘lack of perception of limitation in the work with a patient’ is the lack of assertive skills, which cover the following:

- skills of expressing oneself (clearly, directly), within the limits of tolerance for another person;
- self-respect (reckoning on what one feels and thinks), which allow identification of personal resources;
- awareness of own capabilities and limitations, i.e. giving oneself the right to make mistakes, and to be the best in various areas.

The preconditions of assertiveness are frankness (openness, truth), acceptance of oneself (acknowledgement of what one feels and thinks), responsibility for own life and life choices, and consequently, not blaming others or the ‘circumstances’, as well as trust with respect to oneself and the world. An equally important problem is the way of perceiving reality, in which one must excellently cope; thus, the perception and disguising of own limitations reduces the evaluation of own work in the eyes of others. Such ways of thinking about oneself distort reality, and therefore favour occupational burnout [22, 23].

Patients, due to illness (a difficult situation) apply many psychological defence mechanisms (e.g. repression, denial, reaction formation, rationalization, projection) and they change their natural behaviour. Similar defence mechanisms are also applied by physiotherapists in response to occupational stress. Knowledge of these mechanisms, and the skills of coping with them, is indispensable in effective physiotherapist-patient communication.

Shortcomings in the area of communication competences of physiotherapists also concern their ‘knowledge of the role of active listening’. As commonly understood, very often ‘listening’ is confused with ‘hearing’, which is only a physiological reception of sounds, while ‘listening’ is

a psychological process, in which a message is received, meaning is ascribed to this message and, subsequently, the feedback information is sent. Listening is a very important component of communication competences and may be 'trained' [13].

The shortcomings observed in the competences of physiotherapists also concerned 'needs within the scope of communication knowledge and skills.' Communication is an important area in the curricula of health professional education; however, it has been dealt with as discrete skills that can be learned and taught separate from the underlying thinking [24]. Occupational activity requires a constant supplementation of knowledge and improvement of manual and communication skills. The lack of perception of professional educational needs, i.e. lack of motivation, destroys the possibility of occupational development.

CONCLUSIONS

Results of own studies indicate that the efficiency of shaping communication competences among students of physiotherapy, based on education within the scope of general psychology only, is relatively low. That kind of knowledge is not spontaneously translated into the anticipated communication competences while practicing physiotherapy. Moreover, certain communication competences acquired during undergraduate education are subject to regression during occupational activity, and due to occupational stress, are replaced by undesirable defence mechanisms, such as resistance or withdrawal.

The presented results concern the current situation in Poland. One should be aware of the systemic and cultural differences which may limit the scope of experience exchange. However, it seems that despite international and cultural differences, if there is a lack of practical classes in intra-psychological and intra-communication training, the general psychological knowledge imparted alone, may be used mainly for 'manipulating' patients and co-workers.

In conclusion, a reasonable approach would be to focus on specific communication skills, rather than on a general or 'full suite' of communication competences. It is necessary to develop methods of evaluation of communication competences, which diagnose educational needs of occupationally-active physiotherapists, and may be useful in constructing group and individual continuation of educational programmes. An optimum approach would be diagnosis of the scope and level of lack of communication competence, and on this basis, the development of adequate training courses which focus on specific communication skills [25].

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