Available online freely at www.isisn.org

Bioscience Research

Print ISSN: 1811-9506 Online ISSN: 2218-3973

Journal by Innovative Scientific Information & Services Network

RESEARCH ARTICLE BIOSCIENCE RESEARCH, 2022 19(1): 418-425. **OPEN ACCESS**

Communication skills teaching for Physical therapy students in Jeddah City: A cross-sectional study

Salwa R. Elgendy

Department of Physical Therapy, Faculty of Medical Rehabilitation Sciences, King Abdulaziz University, Jeddah, **Saudi Arabia**

***Correspondence:** selgendy@kau.edu.sa **Received 27-12-2021, Revised: 03-03-2022, Accepted:06-03-2022 e-Published: 08-03-2022**

Communication skills are considered as vital basics and chief outcomes of high-quality medical training. The present study aims to study importance of teaching communication skills for physical therapy students, and review relevant investigation evidences. Cross sectional study using a survey by a previously prepared validated questionnaire. Descriptive statistical analysis of data was done. Results were matched with evidences of systematic review studies to develop recommendations. Four hundred eighty two physical therapy students from different universities participated in the study. According to the data received, a reply rate of 86% was reached. Most of respondents assured providing communication skills, as few theoretical lectures, beside practical sessions. Evaluation was via written exams. They mentioned being challenging and involving plans for student commitment, delivery of accurate skills, accessibility of instruction time, capability, and definite instruction texts. Suggestions of education research highlights the significance of practical instruction, constructive feedback, observation, and evidence based course material. Unluckily in physical therapy, evidence is still inadequate. A gap was there in direct evidence concerning advantages of separate modules and assistance of prerequisite communication skills teaching. Evidence proposes that active training necessitates ample instruction phase, know-how and experimental research on precise communication performs. Program designers and instructors must maximize the extent of working on this zone, deliver hands-on with patients. Assessment must be via direct observation. Because of extensive gap in the evidences, significant questions concerning ideal practice are still without answers.

Keywords: Physical therapy; Communication skills teaching, evaluation, training

INTRODUCTION

Humans respect and appreciate communicating civilly, considering dealing with a patient requires special concern for this issue. This study aims to show features of current practice in education of communication skills in physical therapy programs, as well as educators' sights on this aspect; to summarize present research-based evidence of actual practices; and to study how it is practiced, and compare to current evidence. (Ammentorp, et al. 2021). Accordingly, study proposals justifying that communication skills teaching could be more advanced to maximize generation of qualified therapists with active interpersonal clinical communication skills. This study analyzed evidence of clinical communication skills and training; reported the method and results of a survey for communication skills training; and analyzed it relative to each other (Perloff, 2020).

Communication skill: evidences

Physical therapy sessions depend on verbal beside non-verbal communication among the therapist and people around; including patients, colleagues, and health and social care professionals. Proper communication reinforces real practice (World Confederation of Physical Therapy, 2003and2013) and (Reynolds, 2005), is a vital professional ability (Health Professions Council, 2009), (McLaughlin, et al. 2016) and (Department of Health, 2009) and is greatly valued by patients (Partridge, 1994).

Educational attention to physical therapy communication has been respected (Dickson, Maxwell, 1985), (Brown and Edmunds, 2018), (Hayward and Blackmer, 2010).

Recently, experimental studies considered many communication performs and expertise, determining in what way it affect, and reasons of being used or not. All these studies comes from three broad forms, as follows.

Qualitative observational study which study carefully communication performs via video-recorded discussions from a serious perspective (Thornquist, 1994). A link between the studies is grasping variations among patients'

and therapists' influences in clinical sessions as integrally difficult and adverse, and this perspective inspires their study.

Qualitative observational study relying on other viewpoints and approaches, mainly the social scientific discussion study (Parry, 2009). Similar to the critical observational study, it use inductive methods, arising overall clarification and identification of communication practice via qualitative analysis of single meetings. Conversation systematic technique varies from logical approach in viewpoint on communication asymmetry. In dialogue systematic technique, asymmetry is essential to professional health care, attained beside contribution of patients and therapists (Pilnick and Dingwall, 2011). Studying this approach also commands assessment of communication series, classifying and labeling therapist and patient influences.

Quantitative observational study- deductive, not inductive method was used to develop knowledge and understanding of communication (Green, et al. 2008). Inductive observation study facts deprived of supposing a previous experience, while logical explanation starts with decision making of a structured set with this outline, then application to observation or recordings. More or less studies in physical therapy have considered a tailored communication coding tool (Sluijs, et al. 1993), while others approved and used a formerly considered tool (Roberts, and Bucksey, 2007).

Most studies have documents of features of physical therapy communication in stroke therapy from approaches to outcomes, and out-patient musculoskeletal sessions. Per se, extensive ranges of training persistence is unknown. Communication features involve: dominance of touch, in what way- physiotherapists deliver directions and modifications; patients show education; patients and physiotherapists act together for deciding goals and while history taking (Parry, 2004). As these skills are obviously related to various zones of physical therapy, overall and detailed ones still unreported. Besides, as non-verbal communication is totally essential in settings, struggles for their reporting and recognizing are at a quite initial phase. There are additional limits in the present research: some of it emphases on solitary aspects of communication and neglects in what way it suit with others, as well as narrow caution to patients' influences on whatever physiotherapists say and do (Green, et al. 2008).

Moreover, studying the forms and inspiration of physical therapy communication. Specially, studies showing that therapists' communication influences how patients know-how their state (Jeffels and Foster, 2003). Yet, while a strong claim about importance of communication for lasting effects of physical therapy management (Gyllensten, et al. 1999), yet no observed indication of communication skills influence on physical therapy patients' lasting results.

Hence, as studies did a major jump on recording both the mechanisms and influence of communication skills in physical therapy, we must create an inclusive and full outline defining and clarifying this compound zone, in agreement with Goldstein and Ford, (2002).

Communication teaching: strategy, practice and evidence

Expert and supervisory organizations perceive the advance in valued communication skills as a significant feature of prerequisite physical therapy instructions (Chartered Society of Physiotherapy, 2002). Yet, it is claimed that this issue seems ignored in educational programs due to time burdens 'leading to a slight emphasis on physical rehabilitation' (Reynolds, 2005, World Confederation for Physical Therapy, 2011).

New studies gathered indication of communication skills teaching for all health care professionals (AHPs) (Parry, 2008). A systematic review regarding impact of interferences intended to affect communication practice between before and after qualification AHPs, as well as physical therapists. Of which, some studies contented extensive selecting measures, all set up optimistic influence (Ten Have, 1991).The greatest strong proof arose from two studies using within-subjects controlled schemes, beside single case trials. The two studies grasped optimistic influence on participants' practices behaviors; also, a study tested patients' results reported optimistic influence (Ducharme and Spencer, 2001).

Strong proof in communication training and its influence in AHPs is yet narrow, another research was studying indirect indication in medical and nursing fields. Scooping out proof in AHPs, found 'an objective solid proof for optimistic influence of interventions targeting precise skills and intended as perfect experiential study (Ducharme and Spencer, 2001). Indirect evidences showed that effective training must include experiential practice of communication and feedback; also 'learners must be prepared and interested', training is influential if carried with clinical skills. In medical education, the gold standard for evaluating communication skills education includes noticing and assessing real show in actual-life conditions (Hulsman, et al. 1999), even if imitation scenarios and patients viewed as a satisfactory substitute, mainly for undergraduates (Adamo, 2003). Unluckily, written student assessments for this skill have no correlation with real act (Irwin et al. 2002). Of course, influential coaching and communication skill evaluation need much time and costly (Gysels, et al. 2005). It is noted that while studies usually assures communication-specific teaching for qualified specialists, few strong evidence was found about its effects if provided to pre-qualification specialists.

Even with this gap, communication skills teaching is definitely proven in scholar medical education (Brown, 2008). Communication in medical syllabus become a need instead of full skill record and performs including doctor–patient communication, mainly in primary care (Heritage and Maynard (Eds.). (2006); beside significant indication

that definite communication skills influence healthcare excellence and results (Heritage, et al. 2007). Teaching modules emphasizing on health communication skills is a standard in medical institutes (Rees, et al. 2004). Entrenched outlines describing communication and reinforcing education are accessible, and is usually including dealings with simulations (Kurtz et al. 2003).

The survey

This article alerts the outcomes of a survey of current physical therapy education of clinical communication in qualifying programs. Aiming to collect data around the way communication was taught, the respondents' added skills and sights on its education, guided by instructions of Bartlett, (2005), Martin, (2004) and Batt-Rawden, et al. (2013).

MATERIALS AND METHODS

A guided questionnaire was developed (Bartlett, 2005). Collection of question content was formed after discussion with physical therapy mentors and students, revising former surveys and preparing sketch on current awareness of communication skills preparation and assessment in physical therapy (Hulsman, et al. 1999).

The questionnaire early form was showed to physical therapy volunteers from higher education and research areas enrolled by mail. They were requested to answer the questions and give notes. Both content and design of the survey was reviewed and letting respondents to define related units focusing on communication, and with an important communication component then it was not the only emphasis.

Emailed questionnaire and request letter were spread to every student participant. Wherever probable, the author recognized those concerned in communication education, and directed the forms straight to them. Reminding were sent to non-responders 1 month later, and yet again after a month. First mail was in November 2020, and the last answer to a following notice was accepted in December 2020. Queries were enquired around new and intended curricular changes. Replies showed no considerable variations through the term.

Table 1: Questionnaire

Numerical and categorical responses:
• Full program length
• Modules/units in the program for teaching clinical communication skills.
• Modules with major or minor emphasis on communication:
- Period
- Education methods
- Evaluation methods
Allowed-text responses:
• Title, objectives and learning outcomes of communication-particular units
• Suggested reference and resources
• Means of adding clinical communication skills to the syllabus (responses of all subjects who did and did not afford precise communication skills basics)
• Participants' opinions, practices and 'ideal world' objectives in teaching communication
• Current and intended modifications in syllabus touching this zone

The questionnaire is accessible on demand. Summary of areas covered (Table 1). Responses were encoded in a pre-planned excel sheet where frequencies were calculated. Free-text replies were organized in word file as well as tables, and were statistically analyzed following that of Braun, and Clarke (2006).

RESULTS

Two hundreds of the 250 participants (80%) replied to the survey. Non- and incomplete responses were excluded from analysis.

One hundred twenty six of the respondents (63%) stated that their educational syllabus involved major or minor emphasis on communication. Study of objectives and learning outcomes (LOs) proposed that most programs focused on theoretic background of communication performs and skills, besides teaching the skill to define and imitate on this. The ILOs of more than half (121/200) of programs clearly denoted delivery of chances to training, improve and establish communication skills. Citing a sample, delivered chance to discover, appreciate, and exercise identified and novel communication skills'. Only two programs comprised ILOs specified to the capability to communicate successfully and properly, seemingly due to the struggle in assessment with validity (Boon, and Stewart, 1998). Results and evaluation of students' skill in defining their practices, more than on their expertise.

Table 2 shows timing, teaching strategy and evaluating procedures for communication-definite courses. Commonly were provided later within the training programs, lectures outweighed over practical education, and a few involved any applied evaluation. Participants recorded various texts and peer-reviewed articles. The best commonly cited texts besides policies found in Table 3. Only one text was focusing on physical therapy skills and practices (Parry, 2005, Dennis, et al. 2021).

All participants whose programs hah no communication-detailed units answered an enquiry regarding extra methods for clinical medical communication skills integration into the course. Whereas the enquiry was not planned to provoke extensive detail, they all reported that communication skills were explicitly evaluated inside practical-based exams. Two informed that their curriculum was planned on a case- or problem-based learning basis, considering a communication-based framework, this agrees with Esparza, et al. (2021).

Instructors' comments on challenges and approaches

The survey form was effective in prompting replies on these areas from most participants who responded to inquiries regarding their opinions on the trials and on in what way they treated it, or want to do. Stated challenges involved students' disappointment to show value of communication instruction, later on absence of struggles and commitment. Some respondents considered it as due to learners' failure in identify daily communication skills vary than skills in clinical life. One reply denoted its' students' 'overstated self-efficiency to communicate' while others said: 'Students cannot see it as importance, so frequently fail to engage deeply in tutorial classes, focus groups, others.' Persons who mentioned their trials in dealing with this included research indication of relations of communication and outcomes in their courses; an obligation that students read about patients' health care; research conclusions about patients' needs via communication and healthcare. Additional approach need students recording and writing about their skills and practices; this look 'to help to find weak areas and to test any hypothesis for patient communication' (Mach, et al. 2021).

Additional often stated trials studying problems to deliver adequate true skills in education, and mixing assignment and school- based learning to the syllabus. Few respondents conveyed counting patients' and simulated patients' influences, as well as reflective feedback and assignment periodicals. Others said apprehension and problems were shortage of time, resources, student and know-how of teaching and evaluation.

Table 2: Scheduling, instruction strategy and evaluation of communication units

Year of Teaching Communication Skills	%
2nd Year	11%
3rd Year	40%
4th Year	57%
Teaching Strategy and References	
Lectures	100%
Focus group discussions	56%
Role play	41%
Real patient simulation	10%
Simulated scenario videos	52%
Real patient treatment	20%
Evaluation Method	
Written questions only	91%
Written questions and Oral Presentations	53%
Written questions and Practical Exams (OSPE)	38%

Many participants mentioned that even though they could not comprise constructive individualized response and evaluation of real communication skill, they wished doing it in a model realm. (Table 2)

DISCUSSION

As reported, little direct signs in allied health professions and more indirect ones in medicine proposing that communication training can lead to optimistic influence on the therapists' practice and the patients' results (Kell, et al. 2008, Shapiro, et al. 2009, World Confederation for Physical Therapy, 2011). Thus arguing the significance of inclusion of teaching and evaluation based on strong practical indication of the content and impact of carry out. It point to the significance of motivated learners for modification and improving their communication, also training must be experience-based, including constructive responses. Evidences showed that evaluating real behavior is extremely superior to written ones. Lastly, real teaching beside effective valuation need much time, and extensive instruction capability, all at once are costly (Ryan, et al. 2010).

A school-based communication skills training survey among UK physical therapy qualifying programs found that the most programs delivered precise communication-specific contents, while the minority include communication skills lectures via extra methods in the course (Lim, et al. 2011). Described communication units were mostly provided in advance of clinical training, was mainly taught by lecturing, and results were evaluated by paper or verbal reporting more than by real rehearsal (Fazel and Aghamolaei, 2011).

Matching rehearsals described with evidence shows that there is area for perfection by: providing more or less communication training late and not early during practical program; planning training as mainly practice better than theoretical based; and evaluating real application (Koponen, et al. 2012). It is more expensive than present designs and needs more progress of educators' skill (Essers, et al. 2012). Appreciating and considering inadequate practice and substitutes is needed for development. This requires strategic planning, organizational and economic controls.

Major gaps in available suggestions is an important reason of struggle to have strong approvals. Three gaps are recorded here, beside proposed thoughts for teaching student for improving both whole strategic plan and taught courses. Gap number one is lack of indication of efficiency of practice in medical care communication skills delivered to students, agreeing with Clever, et al. (2011). So, choices of actual trials to instruct it must be started; endorsing improving communication skills for qualifying programs. Lastly, it is logic to argue evidence that training after qualification have optimistic results. As well, pre-prerequisite preparation has a worthy chance of becoming operational if found in accordance with best-accessible ones (Choudhary, and Gupta, 2015, WCPT Glossary, 2013).

Second gap alarms the significance of communication-specific components as opposite to methods relying merely on incorporation in another units

and instruction. Evidences found by the writers were all beginning at definite communication courses/modules, without comparing different systems. Hence, inadequate evidence for recommending or in contrast to communication specific modules were found. Instead, it might be debated that a value of specific modules is providing a strong tool and delivering valid course design and content, teaching strategies and evaluation reinforced by best accessible indication (Shield, et al. 2011).

Third gap concern with subjects and influence of communication practice and skill in physical therapy. It is essential in foundation of actual training. Whereas available data on physical therapy skills, till now there is a long approach. We need production of evidence from physical therapy and associated areas, recording basic and advanced physical therapy communication performs. It is advised that inductive observational studies is superior to deductive coding, because the relative early stage of advance in accurate reporting what communication skills are used, beside its implication and special effects (Brown, 2010). Deductive study must be done first as it depend mainly on some ‘rules’, round content and importance of communication. Further studies suggested conversation analysis that do not rely on critical standpoint to professional persons practice, this is mostly suitable (Finlay and Ballinger, (Eds.), 2006). Developing practical proof on physical therapy communication would not only enrich course content, but will solve difficulties related to deficient reliability of communication training. In addition, it will rise foundation of physical therapy special training resources (Cole and Wessel, 2008, Europe Region World Physiotherapy Professional Issues, 2018).

The present study had some limits, mostly about the range and approaches of the survey. One-quarter of educational programs did not reply, and no data was found to determine if the difference is due to participants’ features. Even though the letter sent with the questionnaire was inspiring for precise recording. As seen, some responses concern to one academic term, while others to next term. Questions near important modifications in programs was not revealing significant differences, beside no change in strategy or other improvement. Following the initial pilot study, it was certain not to contain questions around communication education through clinical training. This part is certainly vital, had been issue to former analysis (Parry, 2010), (Parry and Brown, 2009) and was stated by many participants. Though, additional research would be required afore a directed and significant survey can be planned. Likewise, the survey met minute aspects of exactly how communication skills could be combined with other teaching; thorough research is necessary to plan suitable survey questions.

CONCLUSION

Skill teaching is challenging, requiring teaching skills, resources and learner engagement in practice.In addition to the multifaceted origin of clinical skill area, its incorporation with every further zones of physical therapy, beside the tasks of its evaluation. Strong indicators exist to teaching student and curriculum developers in current studies on teaching and practicing. The present article recommended the following; teaching must be: provided strongly once assignments are ongoing; practical and constructive feedback by skilful faculty student; established as much as expected on current observed data of communication in physical therapy; applying strategies focusing on student engaged trials; and contain practical observational evaluation of students’ education. Application of these recommendations involve obligation of time and skill in physical therapy qualifying programs. Important gaps in evidences are too eminent, adding challenges for student, learners and academic researchers in this arena.

Recommendations

Inclusion of practical sessions beside theoretical background to the undergraduate course contents. Presenting periodical up-to-date awareness workshops and lectures for interns and therapists.

CONFLICT OF INTEREST

The authors declared that present study was performed in absence of any conflict of interest.

ACKNOWLEDGEMENT

Author deeply express deep appreciation to all the interns and undergraduate physiotherapy department students for their cooperation during this study.

AUTHOR CONTRIBUTIONS

SRE got the research idea, designed and performleed the questionnaire, wrote the manuscript, performed data analysis, reviewed the manuscript, finally read and approved the final version.

Copyrights: © 2022@ author (s).
This is an open access article distributed under the terms of the **Creative Commons Attribution License (CC BY 4.0)**, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author(s) and source are credited and that the original publication in this journal is cited, in accordance with accepted academic practice. No use, distribution or reproduction is permitted which does not comply with these terms.

REFERENCES

Adamo, G. (2003). Simulated and standardized patients in OSCEs: achievements and challenges 1992-2003. Medical teacher, 25(3), 262-270. Med Teach 2004; 25:262–70.

Ammentorp, J., Bigi, S., Silverman, J., Sator, M., Gillen, P., Ryan, W., and Martin, P., (2021). Upscaling

communication skills training–lessons learned from international initiatives. Patient Education and Counseling, 104(2), 352-359

Bartlett, K. R. (2005). Survey research in organizations. Research in organizations: Foundations and methods of inquiry, 97-113.

Batt-Rawden, S. A., Chisolm, M. S., Anton, B., and Flickinger, T. E. (2013). Teaching empathy to medical students: an updated, systematic review. Academic Medicine, 88(8), 1171-1177.

Boon, H., and Stewart, M. (1998). Patient-physician communication assessment instruments: 1986 to 1996 in review. Patient education and counseling, 35(3), 161-176.

Braun, V., and Clarke, V. (2006). Using thematic analysis in psychology. Qualitative research in psychology, 3(2), 77-101.

Brown, G., and Edmunds, S. (2018). On explaining. In The Handbook of Communication Skills (pp. 183-216). Routledge.

Brown, J. (2008). How clinical communication has become a core part of medical education in the UK. Medical education, 42(3), 271-278.

Brown, J. (2010). Transferring clinical communication skills from the classroom to the clinical environment: perceptions of a group of medical students in the United Kingdom. Academic Medicine, 85(6), 1052-1059.

Chartered Society of Physiotherapy (Great Britain). (2002). Curriculum Framework for Qualifying Programmes in Physiotherapy: 2002. Chartered Society of Physiotherapy. Available at: http://www.csp.org.uk/ uploads/documents/CFforQPP.pdf (last accessed 09/05/2009).

Choudhary, A., and Gupta, V. (2015). Teaching communications skills to medical students: Introducing the fine art of medical practice. International Journal of Applied and Basic Medical Research, 5(Suppl 1), S41. doi: 10.4103/2229-516X.162273

Clever, S. L., Dudas, R. A., Solomon, B. S., Yeh, H. C., Levine, D., Bertram, A., ... and Cofrancesco Jr, J. (2011). Medical student and faculty perceptions of volunteer outpatients versus simulated patients in communication skills training. Academic Medicine, 86(11), 1437-1442.

Cole, B., and Wessel, J. (2008). How clinical instructors can enhance the learning experience of physical therapy students in an introductory clinical placement. Advances in health sciences education, 13(2), 163-179.

Dennis, D., Furness, A., Booth, H., Burton, A., Jayaprakash, R., McKinlay, M., and Thompson, S. (2021). Can physiotherapy students develop and portray simulated patients authentically to their peers during an activity aimed at improving communication skills? A mixed methods study. Collegian.

Department of Health. (2009). NHS Knowledge and Skills Framework (NHS KSF) and the Development Review Process-Final Draft. DoH. Available at: http://www.dh.gov.uk/en/Publicationsandstatistics/Publications/PublicationsPolicyAndGuidance/DH 4090843 (last accessed 09/05/2009).

Dickson D, Maxwell M. (1985). The interpersonal dimension of physical therapy: implications for training. Physical therapy. 71:306–10.

Ducharme, J. M., and Spencer, T. F. (2001). Training brain injury rehabilitation therapists to use generalized teaching and interaction skills. Brain injury, 15(4), 333-347.

Esparza, W., Santillán, G., Gordón, Y., Freire, M. A., and Borja, A. (2021, February). Exploring the Impact of Simulated Patient on Academic Performance in Physical Therapy Training: Preliminary Results. In International Conference on Information Technology and Systems (pp. 131-137). Springer, Cham

Essers, G., Van Weel-Baumgarten, E., and Bolhuis, S. (2012). Mixed messages in learning communication skills? Students comparing role model behaviour in clerkships with formal training. Medical teacher, 34(10), e659-e665., DOI: 10.3109/0142159X.2012.687483.

Europe Region World Physiotherapy Professional Issues WG (PI WG) - approved at the 2018 General Meeting. Quality Assurance Standards of Physiotherapy Practice and Delivery.

Fazel, I., and Aghamolaei, T. (2011). Attitudes toward learning communication skills among medical students of a university in Iran. Acta Medica Iranica, 625-629.

Finlay, L., and Ballinger, C. (Eds.). (2006). Qualitative research for allied health professionals: Challenging choices. John Wiley and Sons Ltd.

Goldstein, I. L., and Ford, J. K. (2002). Training in organisations. Belmont, CA: Wadsworth.

Green, A. J., Jackson, D. A., and Moffett, J. K. (2008). An observational study of physiotherapists' use of cognitive-behavioural principles in the management of patients with back pain and neck pain. Physiotherapy, 94(4), 306-313.

Gyllensten, A. L., Gard, G., Salford, E., and Ekdahl, C. (1999). Interaction between patient and physiotherapist: a qualitative study reflecting the physiotherapist's perspective. Physiotherapy Research International, 4(2), 89-109.

Gysels, M., Richardson, A., and Higginson, I. J. (2005). Communication training for health professionals who care for patients with cancer: a systematic review of training methods. Supportive care in cancer, 13(6), 356-366.

Hayward, L. M., and Blackmer, B. (2010). A model for teaching and assessing core values development in

doctor of physical therapy students. Journal of Physical Therapy Education, 24(3), 16-26.

Health Professions Council. Standards of proficiency– physiotherapists. London: HPC; (2007). Available at: http://www.hpc-uk.org/assets/ documents/10000DBCStandards of Proficiency Physiotherapists.pdf (last accessed 09/05/2009).

Heritage, J., and Maynard, D. W. (Eds.). (2006). Communication in medical care: Interaction between primary care physicians and patients (Vol. 20). Cambridge University Press.

Heritage, J., Robinson, J. D., Elliott, M. N., Beckett, M., and Wilkes, M. (2007). Reducing patients' unmet concerns in primary care: the difference one word can make. Journal of general internal medicine, 22(10), 1429-1433.

Hulsman, R. L., Ros, W. J. G., Winnubst, J. A. M., and Bensing, J. M. (1999). Teaching clinically experienced physicians communication skills. A review of evaluation studies. Medical education, 33(9), 655-668.

Irwin L. Goldstein, and Ford, J. K. (2002). Training in Organizations: Needs Assessment, Development, and Evaluation. 4th ed. Belmont CA: Wadsworth Thomson Learning.

Jeffels, K., and Foster, N. (2003). Can aspects of physiotherapist communication influence patients' pain experiences? A systematic review. Physical therapy reviews, 8(4), 197-210.

Kell, C., and Owen, G. (2008). Physiotherapy as a profession: Where are we now?. International journal of therapy and rehabilitation, 15(4), 158-167.

Koponen, J., Pyörälä, E., and Isotalus, P. (2012). Comparing three experiential learning methods and their effect on medical students' attitudes to learning communication skills. Medical Teacher, 34(3), e198-e207, DOI: 10.3109/0142159X.2012.642828.

Kurtz, S., Silverman, J., Benson, J., and Draper, J. (2003). Marrying content and process in clinical method teaching: enhancing the Calgary–Cambridge guides. Academic Medicine, 78(8), 802-809.

Lim, B. T., Moriarty, H., and Huthwaite, M. (2011). "Being-in-role": A teaching innovation to enhance empathic communication skills in medical students. Medical teacher, 33(12), e663-e669. DOI:10.3109/0142159X.2011.611193.

Mach, H., Baylor, C., Burns, M., and Yorkston, K. (2021). Training students from rehabilitation professions on communicating with patients with communication disorders. PMandR.

Martin, C. (2004). From other to self. Learning as interactional change (Doctoral dissertation, Acta Universitatis Upsaliensis).

McLaughlin, K., Leigh, J., and Worsley, A. (2016). The state of regulation in England: From the general social care council to the health and care professions council. The British Journal of Social Work, 46(4), 825-838.

Parry, R. (2008). Are interventions to enhance communication performance in allied health professionals effective, and how should they be delivered? Direct and indirect evidence. Patient education and counseling, 73(2), 186-195.

Parry, R. (2009). Practitioners' accounts for treatment actions and recommendations in physiotherapy: when do they occur, how are they structured, what do they do?. Sociology of health and illness, 31(6), 835-853. https://doi.org/10.1111/j.1467-9566.2009.01187.x

Parry, R. (2010). Video-based conversation analysis. Sage handbook of qualitative methods in health research. London: Sage, 373-96.

Parry, R. H. (2004). Communication during goal-setting in physiotherapy treatment sessions. Clinical rehabilitation, 18(6), 668-682.

Parry, R. H. (2005). Official recommendations and actual practice in physiotherapy: Managing troubles of physical performance. Communication and medicine, 2(2), 151-161.

Parry, R. H., and Brown, K. (2009). Teaching and learning communication skills in physiotherapy: What is done and how should it be done?. Physiotherapy, 95(4), 294-301. doi:10.1016/j.physio.2009.05.003.

Partridge, C. J. (1994). Evaluation of Physiotherapy for People with Stroke: Report of a Workshop on Appropriate Outcomes of Physiotherapy for People with Stroke. The King's Fund Centre, London, 3 November 1993. King's Fund Centre.

Perloff, R. M. (2020). The dynamics of persuasion: Communication and attitudes in the twenty-first century. Routledge.

Pilnick, A., and Dingwall, R. (2011). On the remarkable persistence of asymmetry in doctor/patient interaction: A critical review. Social science and medicine, 72(8), 1374-1382. Available at: http://www.allacademic.com/meta/p182780 index.html (last accessed 09/05/2009).

Rees, C., Sheard, C., and McPherson, A. (2004). Medical students' views and experiences of methods of teaching and learning communication skills. Patient education and counseling, 54(1), 119-121.

Reynolds, F. (2005). Communication and Clinical Effectiveness in Rehabilitation E-Book. Elsevier Health Sciences.

Roberts, L., and Bucksey, S. J. (2007). Communicating with patients: what happens in practice?. Physical Therapy, 87(5), 586-594.

Ryan, C. A., Walshe, N., Gaffney, R., Shanks, A., Burgoyne, L., and Wiskin, C. M. (2010). Using standardized patients to assess communication skills in medical and nursing students. BMC medical education, 10(1), 24. http://www.biomedcentral.com/1472-6920/10/24

Shapiro, S. M., Lancee, W. J., and Richards-Bentley, C. M. (2009). Evaluation of a communication skills program for first-year medical students at the University of Toronto. BMC medical education, 9(1), 11. http://www.biomedcentral.com/1472-6920/9/11

Shield, R. R., Tong, I., Tomas, M., and Besdine, R. W. (2011). Teaching communication and compassionate care skills: an innovative curriculum for pre-clerkship medical students. Medical teacher, 33(8), e408-e416. DOI: 10.3109/0142159X.2011.586748.

Sluijs, E. M., van der Zee, J., and Kok, G. J. (1993). Differences between physical therapists in attention paid to patient education. Physiotherapy Theory and Practice, 9(2), 103-118.

Ten Have, P. (1991). Talk and institution: A reconsideration of the ‘asymmetry’ of doctor-patient interaction. Talk and social structure: Studies in ethnomethodology and conversation analysis, 138-163.

Thornquist, E. (1994). Profession and life: separate worlds. Social Science and Medicine, 39(5), 701-713.

WCPT Glossary (2013). Terms used in WCPT’s policies and resources Annex 1: Terms specific to the European Region of WCPT May 2013.

World Confederation for Physical Therapy (2011). Policy statement: Ethical responsibilities of physical therapists and WCPT members. London, UK: WCPT. www.wcpt.org/policy/ps-ethical-responsibilities (Access date 22nd September 2011)

World Confederation for Physical Therapy (2011). Policy statement: Regulation of the physical therapy profession. London, UK: WCPT. www.wcpt.org/policy/ps-regulation (Access date 22nd September 2011)