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**PROFESSIONAL PERCEPTION OF DISABILITY AMONG
STUDENTS IN OCCUPATIONAL THERAPY AND PHYSICAL
THERAPY**

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Abstract

Disability is a frequently encountered condition in Occupational Therapy (OT) and Physical Therapy (PT) practice. The aim of this study was to investigate the perception of students in OT and PT towards disability and to explore their perspective on working with people with disabilities. The attitudes of two groups of students in OT and PT (n=50) were assessed through a brainstorming session on the topic of disability. At the end of the session, we applied a semistructured self-administered questionnaire on participants in order to evaluate the performance of each group and to put into evidence the most relevant resulted ideas. Descriptive statistics and inferential statistics were used to describe the variables. At the end of the session, a few mutually agreeable opinions resulted to have met the collective agreement of the participants. A framework for the development of future questions and for exploring further solutions was drafted. Our results showed that, at declarative level, students are open to work with people with disabilities in rehabilitation services. For certain types of disabilities, such as intellectual disabilities, students are slightly reluctant to actively engage as professionals in specialized institutions. Students reported an enhanced understanding of and respect for people with disabilities, as their future patients/clients. They also agreed with assuming of specific professional roles within the rehabilitation team and they identified the communication competencies as essential for working with people with disabilities.

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1. Introduction

People with disabilities represent a highly heterogeneous group, characterized by a poor health and an increased vulnerability to environmental factors. Within this group, higher values of morbidity indicators are reported, with particular reference to chronic diseases and conditions, with early onset (Krahn, Walker, & Correa-De-Araujo, 2015). Also, disparities, especially cultural-induced, are manifested in most countries, regarding the accessibility of these persons to quality health care services, and it could be even about discrimination and exclusion in relation to the attitude of communities to solve the problems of these individuals (Taylor, 1984).

Over the last decades, people's perceptions of disability have varied significantly. Therefore, differences have been reported in various communities and interpreted especially through cross-cultural factors (Munyi, 2012). The perception of disability gets special valences from a professional perspective, taking into account that there are now a growing interest and a broad sector of services for these individuals. Among the services addressed to people with disabilities, in present, a special attention is given to the health care, which is distinguished by the multidisciplinary nature of the proposed interventions on extremely heterogeneous groups, with a different clinical presentation.

2. Problem Statement

Training for health care providers for people with disabilities is of great interest (Santoro, Yedla, Lazzareschi, & Whitgob, 2017), as the therapeutic intervention in these cases must meet the widely varying needs of a vulnerable group, with insufficient resources for adaptation. People with disabilities are facing with various life difficulties and environmental barriers, more or less similar, hence the need for client-centred intervention in different clinical settings. In the specific areas of Occupational Therapy (OT) and Physical Therapy (PT) professional activities often involve interactions with people with disabilities, the occupational standards for these qualifications making direct reference to the professional skills required for working with such individuals. But, while the disability is a frequently encountered condition in OT and PT practice, as in other health domains, not always the academic training for the future specialists is targeting the acquisition of appropriate professional attitudes towards persons with disabilities (Lam et al., 2010).

3. Research Questions

The attitude of students in the health domain towards people with disabilities is the starting point in the construction for the future careers of graduates, which will decisively influence their behaviour as future professionals. Therefore, the results of a study on the attitude of students in OT and PT towards people with disabilities can provide support and argumentation to redefine the student's skills that are necessary to meet the challenges arising from engaging in rehabilitation services.

4. Purpose of the Study

The objective of this study was to investigate the perception of students in OT and PT towards persons with disability and to explore their perspective on working with such people.

5. Research Methods

5.1. Study design and participants.

In practice, there are many validated survey instruments used to detect attitudes towards people with disabilities, originally designed for the general population and then adapted for different healthcare students and various types of disabilities (Lam et al., 2010). The attitudes of two groups of students (in OT and PT) were assessed through a brainstorming session on the topic of disability, organized in the University of Pitesti with the occasion of the International Day of People with Disability (on the 3rd of December 2017). The brainstorming session was entitled “The approach of disability from the perspective of Occupational therapy and Physical therapy”.

A guided brainstorming session implies a collective group debate about a specific theme under the constraints of time and perspective (Sekhar & Lidiya, 2012). Through the qualitative method of brainstorming meaningful concepts and ideas can be extracted. These concepts and ideas are the results obtained following discussions circumscribed to a certain previously established topic list (Sivan et al., 2014). A brainstorming session can generate a big number of ideas and most authors insist that these ideas must be ranked according to some criteria as intrinsic logic, novelty, originality, practical applicability, financial implication etc. (Al-khatib, 2012). We worked with a number of 50 students of the University of Pitesti, 25 students in OT (5 men, 20 women) and 25 in PT (7 men, 18 women). Students were voluntary involved and signed an informed consent form for the data processing.

5.2. Procedure, measurements and statistical analysis.

The facilitator for the brainstorming was a teacher of the university, with specialization in both OT and PT fields. The aim of the session was to generate the most possible ideas about the students' perception towards disability, within an imposed period of time. At the beginning of the brainstorming session, each group of students presented a PowerPoint Presentation, with the same general plan: definition of disability and related terminology; classification of disability; legislation relating to persons with disabilities; types of services to people with disabilities; occupational therapy/physical therapy for persons with disabilities: frames of references, assessment and intervention particularities, benefits, risks, limitations, indications and contraindications, clinical evidence etc.; conclusions – similarities and differences in approach to disability in the two fields: overlapping of professionals' roles, possible role conflicts and perspectives of interdisciplinary collaboration and of professional development for the benefit of persons with disabilities.

Every group of students had a period of time of 3 days before the brainstorming to prepare the presentation, completely voluntary. One student from each group was designated by his colleagues to present the work during the session, in front of the reunited groups. Each presentation lasted 30 minutes and it was followed by a session of 10 minutes of questions from the audience. At the end of the event, a single guided brainstorming session of 30 minutes was organized for the reunited groups of students. In this way, students had the opportunity to share impressions and ideas and to interact with each other as virtual members of an inter-professional intervention team for people with disabilities.

At the end of the brainstorming session, we applied an anonymous semistructured self-administered questionnaire on participants in both groups. The questionnaire was designed as a

qualitative instrument to evaluate the performance of each group (OT and PT) during presentation and brainstorming session and to put into evidence the most relevant resulted ideas. Each participant was invited to complete the sections, based on the discussions at the brainstorming meeting, from a double perspective: regarding the performance of his own group and then of the other group.

The students answered to a checklist of 9 items, with each question having 5 choices (a Likert scale with 5 options: 1 – unsatisfactory, 2 – satisfactory, 3 – good, 4 – very good and 5 – excellent). The items referred to the extent to which the own group and the other one had a good performance during the presentations and the brainstorming debate. The performance was assessed in terms of following criteria:

- The team demonstrated the use of an extensive documentation and of a recent scientific bibliography, as support for the argumentation.
- The team was within the time schedule of debate session.
- The used arguments were easy to understand, sufficient and relevant to the objectives of presentations and discussions.
- The presenters used a correct grammatical expression; their vocabulary was rich and professional.
- The team has shown the ability to actively listen during the conversation and to accept differences of opinion.
- The presenters demonstrated professional conduct by appropriating the debate and communication rules.
- Closing arguments and statements were eloquent and persuasive.
- Team's overall activity was efficient.
- The presentation was creative and interesting.

At the end of the questionnaire, each participant was invited to mention the 3 most preferred idea of the session and any other additional comments related to the topic. After gathering data, descriptive statistics (univariate analysis) and inferential statistics (t test for unpaired groups, with 95% confidence interval for the mean – CI) were used to analyse the variables extracted from the questionnaires. By using the group scores, we wanted to analyse the similarities and differences between students' perception of the groups' performance and their feelings about the brainstorming session.

The mean overall score and the mean scores of each item subcategory were calculated for both groups and compared among two types of responses: for the membership group and the other group (OT or PT). Results are presented as mean±standard deviation of scores.

6. Findings

After recording the most important ideas of the two groups by using conventional approaches, a few mutually agreeable opinions resulted to have met the collective agreement of the participants. A framework for the development of future questions and for exploring further solutions was drafted. From the list of the brainstormed ideas and according to the most accepted solutions, we can mention:

- Both groups of students assent to the idea of working with people with disabilities, being very assumed that this target group is often the subject of rehabilitation.

- In working with persons with disabilities the most important competence of the therapist is the proper communication to establish a therapeutic relationship of therapeutic alliance type.
- Both the OT and PT practice addressed to people with disabilities should be based on the professional clinical judgment, the clinical evidence principle and the client/patient centred therapy.
- When working with people with disabilities, both in OT and PT practice, problems might arise due to direct interaction with complex patients, who have been diagnosed with mental disorders and dangerous behaviours.
- There are sometimes difficult situations regarding the evaluation of the therapeutic results of the intervention on people with disabilities.
- The question arises whether there are circumstances in which the disrespect can be expressed against the physical therapist or occupational therapist and to his opinions during practice (from patients, from other professionals in the rehabilitation team etc.). In this context, it is very important how the physical therapist or occupational therapist will act to solve this issue.
- Providing professional health care services for people with disabilities can be risky for the occupational therapist/physical therapist (risk of illness/injury, fatigue due to physical/mental overloading, under the conditions of an increased professional stress).
- A number of differences can be summarized in the approach of the OT and PT when it comes to assisting people with disabilities: OT practice is oriented especially towards solving the client's occupational performance problems, according to his own options; in fact, the client is a partner in the rehabilitation activity and, therefore, he will take part in the negotiation process of the objectives of the intervention, which must comply with the SMART principle (Specific, Measurable, Assignable, Realistic, Time-related); PT practice takes more into account the use of techniques and physical methods aimed at restoring functional abilities of the patient/client and/or stimulating his functional status; professional reflection in OT is directed mainly for creating connections between theory and practice in order to take informed decisions, while in PT it acquires more guidance valences on an intervention strategy based on clinical judgment.
- Dilemmas regarding the professional activity of OT/PT can sometimes occur, such as: in which situations the occupational therapist/physical therapist consider as inappropriate or contraindicated the intervention on the patient/client?; what is the level of autonomy of the occupational therapist/physical therapist in clinical practice?; which is the professional overlapping of the OT/PT skills with other members of the rehabilitation team and when role conflicts may occur?

Most participants (86% of the reunited groups) considered as opportune their participation at the brainstorming session for gathering knowledge about professional working with people with disabilities. Regarding the interpretation of statistical indicators of the obtained scores from the questionnaires of evaluation of own group and opposite group performance (Table 1, 2, 3, 4), we ascertained that most responses were placed in the categories 3 – good, 4 – very good and 5 – excellent.

Table 01. OT Group - statistical indicators (mean scores and standard deviations - SD) for the evaluation of own group (OT) performance

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Sum
Mean	4.53	4.87	4.53	4.60	4.80	4.73	4.80	4.60	4.73	42.20
SD	0.52	0.35	0.64	0.63	0.56	0.46	0.56	0.51	0.46	3.10

Table 02. OT Group - statistical indicators (mean scores and standard deviations - SD) for the evaluation of the other group (PT) performance

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Sum
Mean	4.40	4.33	4.07	4.40	4.13	4.00	4.13	4.20	4.00	37.67
SD	0.63	0.90	0.80	0.83	1.06	1.00	0.64	0.68	0.76	5.11

Table 03. PT group - statistical indicators (mean scores and standard deviations - SD) for the evaluation of own group (PT) performance

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Sum
Mean	4.67	4.87	4.67	4.60	4.80	4.53	4.80	4.80	4.87	42.60
SD	0.49	0.49	0.35	0.62	0.63	0.41	0.64	0.41	0.41	2.35

Table 04. PT group - statistical indicators (mean scores and standard deviations - SD) for the evaluation of the other group (OT) performance

	Item 1	Item 2	Item 3	Item 4	Item 5	Item 6	Item 7	Item 8	Item 9	Sum
Mean	4.00	4.73	4.27	4.20	4.07	4.20	3.93	4.13	4.07	37.60
SD	0.65	0.46	0.70	0.68	0.96	0.77	0.70	0.83	0.96	4.72

Through this study, we wanted to reveal the students' attitudes toward people with disabilities and their perceptions of subjective norms, experiences, willingness and preparedness for working in specialized settings. Our study indicates that, at least at declarative level, students in OT and PT are open to work with people with disabilities in rehabilitation services. For certain types of disabilities, such as intellectual disabilities, students are slightly reluctant to actively engage in the labour market in the specialized institutions. Moreover, it is known that, in general, students are willing to prepare for delivering rehabilitation to adults with intellectual disabilities, but many of them do not feel enough prepared to interact in a clinical setting with such cases (Vermeltoort et al., 2014).

In the acceptance of the brainstorming participants, communication competence is essential to establish a favourable climate for addressing the treatment of people with disabilities. In the same way, all participants had agreed that the empathetic attitude of the therapist in front of individual with disabilities emerges as necessary conditions for establishing a therapeutic alliance, as a premise of the therapeutic success. Many researches have been demonstrated the existence of a direct relation between a positive therapeutic alliance, based on a good communication with the patient, and the success in the rehabilitation process (Nicholas, 1995). The dynamics of the therapeutic alliance is important, in terms of its precocity

and continuity throughout the intervention (Pinto et al., 2012; Ciucurel, Ciucurel, Iconaru, & Tudor, 2014).

This study is in the line with some modern research topics about the reform in the rehabilitation professions, which showed that some of the conditions, associated with students' attitudes toward people with disabilities, could be modified through educational interventions (Satchidanand et al., 2012; Vermeltoort et al., 2014). For these reasons, the curricula for both programs (OT and PT) must be reoriented towards providing for students the opportunities for learning and gaining experience with patients with disabilities, as it has already been proposed in the literature (Long-Bellil et al., 2011).

Another important objective refers to the identification of common and distinctive attitude of students in the two programs of study towards issues of persons with disabilities, knowing that, in some health sectors there are overlapping professional roles for the two qualifications. The dilemma of occurring possible conflicts of role was observed in the students involved in our study, especially when it comes to working with people with disabilities, in terms of providing integrated services for the same target group. Resolving this situation derives only from the awareness that the client and his preferences are first concerns, as fundamentals for a therapeutic intervention focused strictly on client's needs.

Following this idea, many authors consider that this situation could be solved through a model of interdisciplinary education that seeks to instil collaboration and understanding among professions, in the circumstances of sharing of clinical experiences (Cleary & Howell, 2003). A variant of resolving conflicts of role could be given by transforming them into a form of professional competition for the client's benefit, while maintaining the boundaries of ethics and deontology (Randall, 2007). Thus, through competition, it can be stimulated the process of obtaining added value in terms of client's satisfaction regarding the quality of services provided, as per already established models (Rivers & Glover, 2008).

From the statistical perspective, the analysis of the obtained results indicated an evident tendency that each subject appreciates more the performance of his own group than that of the other group, but without falling towards a too accentuated subjectivism. Therefore, the whole OT group considered its own performance within the brainstorming session as very good (mean score 42.20 ± 3.10 , CI 95% 40.98 - 43.42) while the PT group performance was considered to be good (mean score 37.67 ± 5.11 , CI 95% 35.67 - 39.67). For this comparison, according to the t-test on unpaired samples, the differences of means between the two groups indicated statistically significant results ($p < 0.001$).

The same type of analysis showed that the PT group also appreciated his own performance in the brainstorming session as very good (mean score 42.60 ± 2.35 , CI 95% 41.68 - 43.52), while the OT's group was good (mean score 37.60 ± 4.72 , CI 95% 35.75 - 39.45, $p < 0.001$). There was a relatively even distribution of the scores on the investigated items, higher mean scores being noted about the documentation, and about the creative and interesting character of the presentations. The lowest mean scores were given to different items for each alternative of evaluation, without a specific trend, being difficult to interpret it in a consistent manner. Overall, mean scores per item were higher in the case of the evaluation of own group performance than for the other one.

In analysing the scores we must take into account the fact that practically there were two sessions of presentations on the same theme, the first being that of students in PT. Thus, some authors affirm that the performance levels and productivity of original ideas in brainstorming groups are influenced in a significant manner by the previous information regarding the discussed topics, in terms of exposure to

information about the performance of others (Paulus & Dzindolet, 1993). In our case, the minor differences that we found do not fall in this direction, which is explained by the fact that the brainstorming session has been meticulously prepared by the majority of participants, according to the model of problem-based learning (PBL).

Overall, we consider that this research has highlighted a number of vocational characteristics of students in OT and PT. Taking a step forward, we can even appreciate its formative valences in the process framework of clarifying own values, in relation to a very complex and, at the same time, complicated issue. At least, at the declarative level, the participants in our study are willing to satisfy current social needs of employment in an important sector of the labour market. Basically, it comes to providing support services for vulnerable persons due to disability, the professional context being characterized by a risk of confrontation with different forms of professional stress.

Moreover, other authors confirmed the intentions of students in allied health programs to work with people with disabilities, given that these behavioural intentions can be predicted by their attitudes and perceptions of subjective norms and knowledge, with some specificity depending on each field of study (Werner & Grayzman, 2011). It should be noted that, in particular, the presence of intellectual disability among patients/clients raises the degree of difficulty of providing high-quality health care services, which explains the existence of disparities in the field (Ryan & Scior, 2014).

The academic field is responsible for putting an effort in increasing the sustainability of the health care services sector for people with disability, regardless of the type of disability, by creating educational premises for gaining knowledge, promoting positive contact, and reducing the fear attached to working with complex patients (Werner, 2012). It is important to continue this study in order to establish how different learning resources can help students in acquiring commune competencies through the specific curriculum, in terms of knowledge and skills for a better professional interaction with disabled people.

This study pointed out the attitudes and perceptions of students in OT and PT towards the problems of people with disabilities. In this context, students became more aware of the need for training in the direction of future professional interaction with such target group. In relation to the imposed requirements of the specific future profession, each participant was able to valorise his personal interests for career development, in an area where the disability occurs more strongly. A qualitative study of the results obtained from the discussions in a brainstorming session raises interpretative problems to the extent that we cannot draw conclusions of the inferential type, with great power of generalization.

7. Conclusion

Our study provided information about how students in OT and PT functioned during a brainstorming session on a topic related to disability and dealing with disabled people in their professional area. This research has enabled a confrontation of ideas on a topic of great actuality between two groups of students, different in terms of training, but linked by the junction on the labour market. As a result, for both professions (OT and PT), there are challenges in rehabilitation work for people with disabilities. For this reason, efforts for the emancipation of the profession can be taken in the context of their folding to the benefit of patients/clients.

As a result of participating in the brainstorming session, students reported an enhanced understanding of and respect for people with disabilities, as their future patients/clients. They also agreed with assuming of specific professional roles within the rehabilitation team and they identified the communication competencies as essential for a better delivery of integrated rehabilitation services for people with disabilities, in different organizational contexts.

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