

## **OCCUPATIONAL THERAPY IN FOSTERING KINETIC-THERAPIST'S EMPATHY**

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**Abstract:** *The therapist-patient empathy is the basis for an efficient intervention and contributes to establishing the individualized intervention plan of recovery. This study started from the premise that by following a programme of occupational therapy, kinetic-therapists would develop their ability to empathize with the patient. The experimental group included a total of 42 students from the Faculty of Physical Education and Mountain Sports, from the kinetic therapy and special motility specialization (KMS). They have completed a programme that included 10 workshops (with activities specific to occupational therapy), each workshop lasting 100 minutes. The results obtained during the experiment and from the Mind in the Eyes test (S. Baron-Cohen) led to the confirmation of the hypothesis. The present study focuses on the experimental phase of the research.*

**Keywords:** *kinetic-therapist, empathy, occupational therapy*

### **1. Introduction**

During the motor recovery, in order to optimize the process of rehabilitation, in addition to the physiotherapy programme, occupational therapies (artistic activities, household activities, etc.) addressing specific activities aimed directly at motor coordination are recommended for the recovery of personal autonomy and social or professional re-integration. The specialty literature records numerous interdisciplinary studies addressing a motor deficit in order to ensure optimal recovery and to guarantee performance and successful results by combining the physical therapy programme with occupational therapy activities [2, 9, 15]. The physical therapy has, in addition to its general purpose of motor recovery, a secondary purpose, too—depending on the physical deficiency (deficiency acquired in accidents, congenital physical handicap, sensory impairment, physical and intellectual impairment, etc.). The secondary purpose is grafted into areas related to motility - particularly regarding psychological, social, emotional, motivational, professional issues.

The ability of establishing an empathic therapist-patient relationship is the basis for an efficient response in motorrecovery and may contribute to drawing up the individualized intervention plan, based on knowing and understanding the patient.

**An empathic therapist-patient relationship** - why is it important to develop the therapist's capacity of empathising with the patient? Wouldn't emotional involvement "sabotage" the recovery demarche? Or would the empathy between therapist and patient favour the process of motor recovery? These are the questions that triggered this research.

Specialty studies are aimed at addressing empathy in connection with neural activity [12], personality traits associated with empathic processing [6], age [10], empathy as part of positivism [13] or as result of the effect of sport education [5]. The examples are manifold. The investigations that cover the fostering of the emphatic capacity are less apparent in the specialty literature.

Defined as a form of intuition of emotional reality and of identification with the other's feelings, empathy is a form of knowledge of the other [10]. Although the fundamental goal of physical therapy is to recover patient's motility, as a whole, regardless of the type and depth of disability, however, the mood of the patient must be understood by the kinetic therapist before any intervention. It is not about the psychological construct or the psychoanalytic approach, but rather about communication and emotional rules [16] intended to help optimize the physical therapy intervention plan.

**Occupational therapy in the recovery of motor deficiencies.** The place held by the occupational therapy in motor recovery is not one defined by rules, but by the effects of practical applications [3, 4, 11]. During performing various types of activities, specific to occupational therapy, although the formative aspects are intertwined with the informative ones, the former are more numerous during this kind of therapy. For example, during the activities that develop manual skills, the patient receives a large amount of information about the materials he works with, their type and quality, about their maintenance (the informative aspect) and only after that the formative activities are performed, developing motor qualities, such as strength, speed, precision, and coordination. The complexity of the activities in the area of occupational therapy requires the use of different muscle groups, combining "business" with pleasure.

## **2. Purpose of study**

The hypothesis of the present study assumed that by following a programme of occupational therapy, physiotherapists would develop their capacity of empathising with the patient. Among our research objectives we can mention the adaptation and application tests of empathy; the development of the experimental plan; the development of the curriculum for the

occupational therapy workshops; the establishing of the correlation between the activities of occupational therapy and targeted muscle groups; the implementation of the experiment; intermediate measurements during the experiment; the analysis of the products obtained in the experiment; processing the data obtained.

### **3. Methods**

#### **3.1. Sample and procedure**

The participants were 42 third year students at *Transilvania* University of Brasov, from the Faculty of Physical Education and Mountain Sports, from the kinetic therapy and special motility specialization. Out of these, 45.23% (19) were female and 54.77% (23) male. The stages of the experiment were: the pre-test in February 2015; the experiment –from March to May 2015; the post-test phase - late May 2015. The structure of the workshops was finalised in February-March 2015.

#### **3.2. Instruments**

The instruments used in the investigation were: in the pre-test stage, we used *the empathy test 1*, adapted after Zolland Enz [18]; in the experimental phase, we used a *Scoring grid for the degree of accomplishment of the activities held during the occupational therapy workshops* to monitor their engagement in the task and their feedback; in the post-test stage, we applied *the empathy test 2*, an adaptation after Simon Baron-Cohen [11] and *Decoding the expression of the eyes* test [19]. Since the data presented in this article refer only to the experimental phase, we shall refer only to the instrument used during in the experiment, for monitoring the activities. *The Scoring grid for the degree of accomplishment of the activities held during the occupational therapy workshops* contains five items (table 1) and it was used for each activity. The scoring was defined as: *0 - low* (performance indicators: not using or misusing the instruments; not using the right materials for the technique addressed; incorrect accomplishment of the task received; not identifying the motor actions or their identification rate below 25%; under 30% of product realization); *1 - average* (performance indicators: partial correct use of tools, partial use of the right materials for the technique addressed; partial accomplishment of the task received; identifying the motor actions below 50%; achieving 30% -60% of the final product), *2 - high* (the correct use of tools, using the right materials for the technique addressed; accomplishment of the task received, identifying all the motor actions, achieving over 60% of the final product).

Table 1. Scoring grid for the degree of accomplishment of the activities held during the occupational therapy workshops

| Item   | Score |   |   |
|--|-------|---|---|
|  | 0     | 1 | 2 |
| Use of specific instruments                  |       |   |   |
| Correct use of materials                     |       |   |   |
| Correct accomplishment of the product        |       |   |   |
| Identification of the specific motor actions |       |   |   |
| Finishing the product                        |       |   |   |

### 3.3. Description of the experiment

In the experimental phase, the 42 participants have completed a programme of 12 workshops of occupational therapy, each workshop lasting 100 minutes. Out of the 12 workshops, eight workshops had 4 individual tasks and 4 group tasks (2-3 people). The themes of the workshops were designed in the area of visual arts, which was the experiential field of the experimenter. The names of the workshops, the techniques used in making the products, the tools and materials for each task are presented in Table 2:

Table 2. Occupational therapy workshops

| No. | Workshop     | Technique                                    | Instruments                              | Materials  |
|-----|--------------|--|--|--|
| 1   | Butterfly    | Watermark, graphics                          | Pen or black gel pen, template           | Ink, white cardboard                             |
| 2   | Cob          | crinkling, gluing                            | scissors, template                       | glue, cardboard, crepe paper                     |
| 3   | Clock        | contour drawing, cutting, assembling, gluing | template, HB pencil, scissors            | coloured paper, coloured cardboard, glue         |
| 4   | Fishing-net  | knots technique                              | scissors                                 | hemp twine                                       |
| 5   | Crane        | origami                                      | origami chart for a crane                | origami paper                                    |
| 6   | Flowers      | blowing                                      | brushes, water container, straw          | white cardboard, watercolours                    |
| 7   | Fish         | finger-painting                              | water container, HB pencil               | white cardboard, watercolours                    |
| 8   | Construction | assembling models                            | cutter, scissors, HB pencil, brush       | newspapers, scotch, glue, crepe paper, cardboard |
| 9   | Tree         | stamping                                     | Watercolours, HB pencil                  | paper, drawing paper                             |
| 10  | 3D Letter    | 3D tactile image                             | cutter, scissors, HB pencil              | material at participants' choice                 |
| 11  | Windows      | fretwork                                     | cutter, scissors, HB pencil              | cardboard, coloured paper                        |
| 12  | Aquarium     | contour drawing, cutting, assembling, gluing | patterned scissors, hole punch, scissors | coloured cardboard, coloured paper, glue         |

References to particular muscles involved in the basic movements necessary to do the products and the motor activities generally covered by each activity are summarized in Table 3:

Table 3. Occupational therapy workshops

| No. | Workshop     | Muscles involved   | Motor activity  |
|-----|--------------|--|---|
| 1   | Butterfly    | extensor/flexor muscles of wrist, thumb long muscle, thenar and hypothenar muscles       | colouring fine movements                              |
| 2   | Cob          | interdigital muscles, thumb flexor   | rotating movements of the fingers, pressing, gluing   |
| 3   | Clock        | Fine palm muscles, brachial muscle   | contour tracing, cutting, assembling                  |
| 4   | Fishing-net  | triceps, biceps, deltoid muscles, rotator flexor/extensor of the hand and of the fingers | left-right coordination, gripping, knotting           |
| 5   | Crane        | index flexor, thumb extensor muscles   | Bending, unbending, pressing                          |
| 6   | Flowers      | jaw muscles, the diaphragm, intercostal muscle   | Breathing in and out                                  |
| 7   | Fish         | abductor, adductors of the arm and flexor fingers muscles                                | pressing with the fingers (fingerprinting)            |
| 8   | Construction | fine muscles of the hand, arm muscles  | rolling, bonding, assembling                          |
| 9   | Tree         | thenar and hypothenar muscles; palmar fine muscles                                       | right-left coordination, pressing                     |
| 10  | 3D Letter    | whole hand and arm muscles   | assembly of complex motor actions                     |
| 11  | Windows      | fingers and thumb flexor and extensor muscles  | drawing, cutter cutting, gluing                       |
| 12  | Aquarium     | palmar muscles, brachial biceps, fingers flexor / extensor, forearm flexor               | contour cutting, rolling, bonding, assembly, drilling |

Each workshop started with the announcement of the theme topic, followed by the simulation of the targeted deficiency (moment of dramatization). After the dramatization, the task was described; the technique and details about the instruments and the materials to be used were presented. In occupational therapy activities, we work with various instruments, tools or devices. The patient will receive, in the beginning, some general information about their features and how they operate. At the end of the activity, each participant completed a document that specifies the main motor actions that were needed for the task. Also, they identified specific deficiencies in whose recovery programme they would be able to use the application deployed. At

the end of each session, the experimenter completed the *scoring grid* for each participant.

#### 4. Results in the experiment

The data recorded in *Scoring grid for the degree of accomplishment of the activities held during the occupational therapy workshops* were numerous. Here we chose to present the minimum and maximum for each activity, the mean for each activity and the standard deviation (table 3).

For the first applications, the lowest scores were recorded for the items regarding *correctness of product accomplishment, identification of specific motor activities* and, especially, for *the completion of the product* (at A1 and A2 the minimum score was 4 points, achieving below 25% of the product being very common; at A1, the 0 grading for the *completion of the product* was recorded in 31 of the participants, representing 73.80%, whereas at A2 it decreased to 27 participants, representing 64.28%).

Table 3. Results at the *Scoring grid*, for the 12 activities

|                  | N    | Min  | Max   | Mean   | Std. Deviation |
|------------------|------|------|-------|--------|----------------|
| scor_act_1       | 42   | 4,00 | 7,00  | 5,5476 | ,96783         |
| scor_act_2       | 42   | 4,00 | 8,00  | 6,5238 | 1,01784        |
| scor_act_3       | 42   | 5,00 | 8,00  | 7,0952 | ,79048         |
| scor_act_4       | 42   | 6,00 | 9,00  | 7,7619 | ,72615         |
| scor_act_5       | 42   | 7,00 | 10,00 | 8,6190 | ,79487         |
| scor_act_6       | 42   | 8,00 | 10,00 | 8,9524 | ,66083         |
| scor_act_7       | 42   | 8,00 | 10,00 | 9,2381 | ,61721         |
| scor_act_8       | 42   | 8,00 | 10,00 | 9,4524 | ,59274         |
| scor_act_9       | 42   | 8,00 | 10,00 | 9,3095 | ,71527         |
| scor_act_10      | 42   | 9,00 | 10,00 | 9,6429 | ,48497         |
| scor_act_11      | 42   | 8,00 | 10,00 | 9,6667 | ,52576         |
| scor_act_12      | 42   | 9,00 | 10,00 | 9,6429 | ,48497         |
| Valid (listwise) | N 42 |      |       |        |                |

It may be noted that the involvement of the participants increased progressively from A1 to A8, at A9 appears a slight decrease in activity when moving from individual work to teamwork (adapting to the team task influenced the involvement in completing the product) and we registered a plateau for A10, A11, A12 (Figure 1).

Fig. 1 - Average scores on activities



## 5. Conclusions

Our concerns in the field of art therapy [7, 8] revealed the functional aspect of art, highlighting its role as occupation. This gives an *occupation* to the person in a deadlock (mentally, physically or socially) and distracts them from focusing on their own problem. The results obtained during the experiment lead to the obvious conclusion of the efficiency of this programme. Data from pre-test and post-test are to be presented in another study, which will also analyse the products obtained in the twelve workshops.

The involvement of the kinetic therapist in the occupational therapy programme that he designed for the patient is the original aspect of our approach. As a result, we highlight the need for developing the kinetic therapist's ability to empathise with the patient.

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