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Original article

INCREASING MOBILITY IN DAILY ACTIVITIES FOR CLIENTS WITH GONARTHRITIS THROUGH OCCUPATIONAL THERAPY

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Abstract

Organize the intervention program through specific occupational therapy methods to increase mobility in daily activities for clients suffering from gonarthrosis. This program helps maximize the ability to safely participate in diverse and diversified daily activities. The research methods used were established according to the research objectives, to establish the criteria for inclusion in the case study, namely to be an adult person suffering from gonarthrosis and presenting difficulties in carrying out daily activities, a fact that determined the design of a program individualized to help improve the client's abilities to support specific and necessary needs, in carrying out daily activities at a satisfactory level, as independently as possible. The Occupational Performance Process Model, used by occupational therapists as a reasoning tool to guide the intervention process, was used for the research. Regarding performance and participation in occupations, the CMOP questionnaire was used, it consists of a series of items on different most important occupational areas, based on which performance and satisfaction scores will be obtained. The Assessment of Motor and Process Skills (AMPS) was applied as barriers were encountered due to the gonarthrosis he was experiencing. At the final assessment the number of severe skills decreased, improving and moving to ineffective skills, improved skills. The Achievement Motivation Inventory (AMI) was applied to guide the client towards motivation in performance, in the initial assessment the client had a low motivational index, and in the final assessment the index increased, which indicates the acquired performance. Occupational therapy for the client with gonarthrosis is based on the process of evaluating the context but also on the intervention action in order to correct and/or minimize the impact. It involves a process of recovery, maintenance and development of the ability or skills to carry out activities or have meaningful occupations.

Keywords: occupational mobility, gonarthrosis, clients, individualization

Introduction

Occupational therapy helps the person with gonarthrosis to adapt to the environment, or adapts aspects of the environment (if necessary to support participation), with the goal of increasing self-esteem, increasing independence, reintegration into the family, social environment, so to offer the client the condition psychosocial of normality(Ingvild K., 2011).

Advanced symptoms of gonarthrosis lead to clients having difficulty carrying out self-care activities (dressing, eating, washing, personal care), as well as activities outside the home (shopping), work and of free time and leisure(Johann B., &,2009). As the disease progresses, some changes in overall lifestyle are required. It is important to organize the daily routine in such a way as to encourage independence, safety and confidence in as many areas of daily life as possible for as long as possible(Ferreira, SF.,2021).

The role of occupational therapy is to support people with gonarthrosis and enable them to maintain their usual level of self-care, work and leisure activities for as long as possible(Carri H., Mary L., Mary AM, 2011). But when it is no longer possible to maintain their usual activities, occupational therapists intervene in adapting their relationship with the physical and social environment to develop new activities(Bennett, S., & 2017).

At first, occupational therapy tends to establish relationships, preventing changes in roles and participation in the environment. This can help prevent client performance issues before they occur(KT Nielsen & EE Wæhrens,2015).

Occupational therapy helps clients with gonarthrosis improve their ability to perform their daily tasks. The intervention consists of assisting patients in developing a self-care routine, taking into account the limitations of functional mobility, encouraging patients to maintain maximum function in daily activities for as long as possible, learning adaptive techniques to reduce dolor(McAlindon T.E., &2014).

Treatment and care should take into account the individual needs and preferences of clients, enabling them to make informed decisions about their care and treatment(B. Langhammer & B. Lindmark, 2007, Wiederer C. 2019),

Along with medical treatment, occupational therapy and physical therapy are the important methods that are put into practice correlated with the mechanisms of gonarthrosis(Bannuru RR, &.2019).

Just as in the orthopedic-traumatic conditions that can occur in some fields of activity, gonarthrosis can have

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important physical and mental consequences, sometimes to the point of being out of work(Bespalova OO,&. 2021).

The duration of the illness or of the disability it causes, the impossibility of continuing the activity and occupation before the illness, lead to the loss of physical strength, and from a psychological point of view can lead to apathy and indifference(Codorean, H.; Codorean, I.,B., 2017).

The loss of working capacity means a loss of the respective working capital that each person represents, as a result of which both the respective person and the society are affected(Collado, H.,& *2011*).

Physical and mental deficiencies of this nature can be corrected and overcome and the capacity for effort and work can be recovered, although there is also the risk of relapse(Crețu, A., 2003). For this reason, the respective patients must be monitored continuously(Dalichau, S., & 2018). The treatment should be carried out in stages, until the patient overcomes the danger and can be integrated into the normal work activity(Ionescu, R., 2019).

The tendency of patients with such conditions to stay in bed or in an armchair as much as possible must be combated. Specific to these ailments, the physical condition is intensely felt by the patient(Law M, Baptiste S, McColl M, Opzoomer A, Polatajko H, Pollock N. 1990).

The therapeutic team aims to improve the physical condition through various means, including those of physical therapy, occupational therapy, through various benefits and by making objects, manually, to make the patient accept the recovery, which often takes a long time and is painful, with a difficult evolution(Kjeken, I., &*2016*).

The essential aspect in the recovery of the traumatic and rheumatic patient is to gain the amplitude of movements and muscle strength, but also to obtain his adhesion to actively contribute to regaining utility for him and for those around him (M., Ruest, & 2017, 2021).

Objectives

In all cases of gonarthrosis, when the remission of the disease begins to appear, when the pain no longer prevents functional re-education, occupational therapy, by specific means, can be applied, without the need for rest and strict immobilization positions(Möller, I, &.2006).

They seek, through occupation and work, the correction of defects in the execution of movements and gestures(WHO, 2019).

The main objectives of occupational therapy in gonarthrosis are(Robertson L. 1988):

- Toning the muscles and obtaining a good general condition;
- Prevention of deformations, ankylosis, muscle atrophy;
- Professional readjustment or reorientation.

In order to approach this group of ailments, the therapist must have in mind a certain sequence of re-education methods, related to the activities necessary for the patient from the first hours of the day (getting out of bed, hygiene, gymnastics, dressing, handling toilet items, communication, etc., then the use of household appliances, up to professional ones).

Methods

The purpose of the research is to create an effective intervention program through specific occupational therapy methods for clients suffering from gonarthrosis. This program helps maximize the ability to participate in activities safely and improve their quality of life.

Study admission objectives:

- establishing the criteria for inclusion in the case study, namely to be an adult suffering from gonarthrosis and presenting difficulties in carrying out daily activities.

- designing an individualization program that contributes to improving the client's abilities to support specific and necessary needs, in carrying out daily activities at a satisfactory level, as independently as possible.

The basic hypothesis of the study started from the idea that it is necessary to establish the optimal number of visits for the intervention program, their duration and the interval at which they will be made until the moment when an improvement in the degree of independence of carrying out activities is observed daily.

The research included a case study of a client diagnosed with gonarthrosis for more than seven years. His selection was made taking into account the diagnosis and the deputy's desire to increase his mobility indices in the activities of his daily life, with the aim of finding a permanent job.

To conduct the study, we used the Occupational Performance Process Model (O.P.P.M.). This tool (in translation the occupational performance process model) is used by occupational therapists as a reasoning tool to guide the intervention process(Fearing, V. G., Law, M., & Clark, J. 1997). It was developed by Fearing, Law & Clark, in 1997 and involves going through the seven steps. The model has been tested, revised and adapted to the needs of occupational therapists around the world.

Case presentation

Stage I. Naming, validating and prioritizing occupational performance issues (CAOT, 1997)

The client lives in an urban environment, is married and has no children. His wife is retired due to illness and is also severely disabled. He graduated from the vocational school, worked in the state environment and then in the private sector as a mold maker, he has been diagnosed with gonarthrosis (arthrosis of the knee) for a long time.

The interview with the client also revealed the fact that he is affected by financial problems as well as the fact that his role in the house is beginning to suffer.

Stage II choosing the intervention model

To assess occupational performance issues, the COPM questionnaire was used, the same questionnaire we used both at the initial assessment and at the final assessment to see the occupational evolution of our client.

As a result of the application of C.O.P.M., Several Problems of Occupational Performance (O.P.I.) were identified, which the client prioritized, one of them being finding a job.

In the occupational therapy intervention, the model aimed at the interaction between Person-Environment-Occupation (Person Environment Occupation Model - P.E.O.) was used (Law, Mary & Cooper, Barbara & Strong, Susan & Stewart, Debra & Rigby, Patricia & Letts, Lori. 1996).

The theoretical foundations of this model include: general systems theory, theories related to the environment, theories belonging to behavioral neuroscience and social and behavioristic psychology, with great influences from personality and motivation-based learning theories (Maslow).

This model was used for the following reasons:

- A healthy individual shows occupational performance in activities with a certain importance for him and exercises a balance between personal requirements and those of his environment. This person can take care of themselves, others, work, play, and participate actively in home and social life. He shows adaptations in his occupational performance as he overcomes certain obstacles normally encountered in his life. He has established healthy, normal role models that satisfy his social expectations.

- When a dysfunction occurs in a person's life, the occupational performance of that person is limited and restricted. In this case, the occupational competence is not achieved, just as in the case of the client. The client does not achieve his goals. Patterns that signal dysfunction can be seen when the client cannot perform their roles at a socially or personally satisfactory level (competence), due to certain deficiencies in their abilities or skills, caused by health problems (in our case gonarthrosis). The contradictory demands of multiple roles (role conflict) and unclear expectations regarding the roles the client must play in her culture/society have a significant impact on weakening occupational performance.

The P.E.O. model highlights the complexity of the person-environment-occupation relationship and defines occupational performance as the result of the interaction between these three elements.

Occupational performance is influenced by the person, the unique environment in which the person carries out his activity and occupations, which constitute the actions and tasks of the person and which, ultimately, create the role that the person has to play in life.

Likewise, occupational performance describes the actions that are important for the individual, taking care of oneself, others, working and actively participating in family and social life.

The person - made up of a series of intrinsic factors (psychological, cognitive, physiological, spiritual and neuro-behavioral), which compose the set of skills and abilities of an individual.

Environment - Participation is always influenced by the extrinsic characteristics (artificial, natural, cultural, economic, factors related to society, social interaction) of the environment in which the activity takes place.

Occupation - The term occupations refers to the activities and tasks that the person performs during his day-to-day life, grouped in a certain way, for the individual to fulfill his role.

Occupational performance and participation represent the culmination of the execution of occupations.

Human occupation is portrayed as a compromise between three main areas of achievement, these being represented by daily, leisure and productivity activities.

Daily activities are typical life tasks necessary for one's own care and support such as personal hygiene, feeding, cleaning the house, washing clothes.

Leisure activities are represented by those activities that are carried out for one's own pleasure, found in engaging in various sports, celebrations, as well as having certain hobbies.

Productivity activities are actions paid or not, which provide services to others, these being represented by help, information sharing, utilitarian or artistic objects. Activities such as study, practice and learning lead to the improvement of one's abilities.

Daily, leisure and productivity activities intersect and partially overlap during life.

The interaction between a person's intrinsic factors, extrinsic ones (environment) and his activity (occupations) results in occupational performance and participation.

The client encounters difficulties in carrying out the activities due to the barriers imposed by the condition he has. He wants to improve his quality of life and find solutions to the problems that have arisen. He has a developed practical spirit, is mentally balanced and is open to suggestions related to some major changes in his lifestyle.

The environment is represented by the family in which the subject carries out his daily activities, but also by the society in which he lives.

Occupation is represented by the fact that the client encounters barriers in finding a job.

The case is a client with a developed practical spirit, he has a good psyche, and he has will, motivation, his only problem being of an occupational nature.

Stage III Client evaluation

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C .O.P.M. was used to identify the most important occupational problems for the client, from the areas of: self-care, productivity and leisure time, to assess satisfaction with occupational performance and to understand how occupations are connected to the client's life purpose.

The client is not satisfied with his current state, but sees certain changes in his life, because he is a pessimistic person.

The client's need is that of occupational and financial independence. It is significant for him: to be able to have a daily activity that brings him material satisfaction and utility.

Information from C.O.P.M. was used to evaluate the client's performance, in the field of productivity and free time.

Occupational performance competencies (what the client can do – skills):

Engines:

The client has the following skills:

- Can take care of himself (wash, dress) by himself;
- Can grab and move some objects without encountering problems;
- Can perform manual (gross) activities.

Mental:

The client has no problems in understanding the activities and the constructive stages.

Person - Medium / Medium - Person

- relies on the help of his wife;

Environment - Occupation / Occupation - Environment

Person – Occupation/ Occupation – Person

- The activities are not difficult and do not demand a lot physically from the client.
- The motor framework for carrying out the actions is the one affected by the disease, which is why the carrying out under optimal conditions is slowed down.
- Also, in the case of most activities (e.g. locomotion), there are some physical impediments (pain), which have repercussions on the client's psyche (dissatisfaction, sadness, nervousness).

Stage IV. Strengths - Weaknesses

Person – strengths:

- the client's availability;
- strong psyche;
- discernment;
- •motivation;
- ability to move

Person - Weaknesses:

- the disease itself;
- Financial unavailability.

Medium - strong points:

- His wife who helps and supports him all the time;
- Parents help him (mother)

Medium - weak points:

- Lack of centers (protected units) for the social reinsertion of people with physical disabilities.

Following the findings, the multidisciplinary team is established with the role of putting into practice the solutions found, to solve the client's wishes.

Stage V. Establishing the objectives and the action plan based on the occupation

Long-term goal:

- the client will be able to find a job according to his skills, in the shortest possible time.

Short term goals:

- identification of an employer;
- mediating the relationship with the employer;
- identification of possible problems at the workplace.

Stage VI. Implementation of the intervention plan

Long-term objective (O1): the client will manage to find a job as soon as possible;

Strategy:

- We studied the job offer from the specialized agency for people with medical conditions;
- we talked with various employers who helped us with monetary donations at various events;

Short-term objective (O1): identifying an employer

Strategy:

- the offer of jobs from the specialized agency for people with medical conditions was studied;
- discussed with various employers who helped us with monetary donations at various events;
- possible jobs were negotiated with the client according to his skills;
- a potential employer was found - a person who owns a candle-making workshop, and needs a manipulator.

Short-term objective (O2): mediating the relationship with the employer

Strategy: the client's case was presented to the employer and wanted to set up a meeting with him.

Short-term objective (O3): identification of possible problems at work.

Strategy:

- We evaluated the future job;
- The client under the guidance of the employer did the main activities.

Stage VII. Reevaluation

After nine months we re-evaluated the results on the Canadian Occupational Performance Measurement Questionnaire (C.O.P.M.) and identified other occupational problems.

During this stage, we closely followed the implementation of the intervention plan based on the occupation; we monitored the client's activity, as well as his degree of satisfaction.

Within the therapeutic process, positive transformations of the client's behavior were discovered and the barriers that limited his participation and performance in occupations were diminished.

Results and Discussions

Evaluation of occupational performance

Regarding performance and participation in occupations, the CMOP questionnaire was used. It consists of a series of items on different most important occupational areas, based on which performance and satisfaction scores will be obtained. The initial score for occupational performance is 4.5 and the score for occupational satisfaction is 5.1. Following the final reassessment, new scores were obtained, namely for occupational performance a score of 6.1 and for satisfaction a score of 6.5 was obtained. The developments are as follows: maintaining personal hygiene: performance of 9, satisfaction of 3; dressed: performance of 8, satisfaction of 5; cooking: performance of 6, satisfaction of 7; shopping purchase: performance of 6, satisfaction of 9; time management at work: performance of 4, satisfaction of 10.

Occupational therapy programs have had positive results on the client's occupational performance, so therapy can continue because the client wants to live a healthy lifestyle through good occupational performance**.**

Table 1. – Evolution of occupational performance and satisfaction scores (COPM)

Evaluation	*Performance*	*Satisfaction*
Initial	4,5	5,1
Final	6,1	6,5

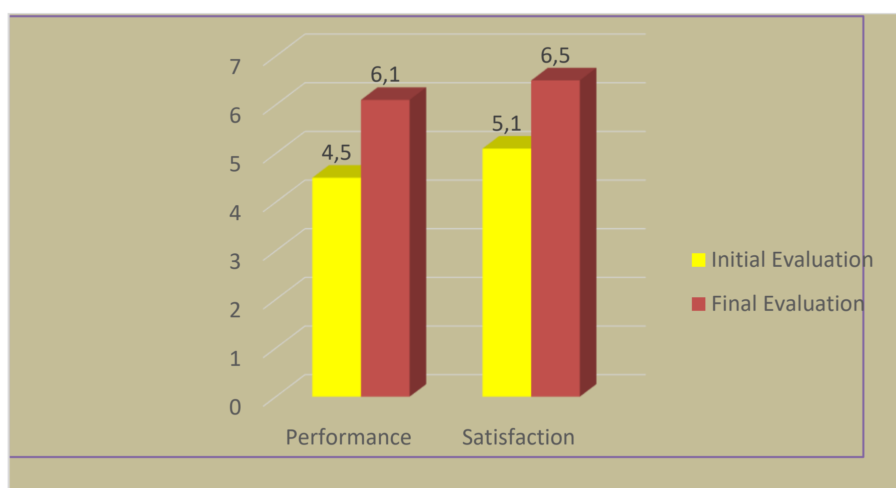

Figure 1. – Evolution of occupational performance and satisfaction scores between the initial and final evaluation

Assessment of motor skills

To assess motor and process skills, The Assessment of Motor and Process Skills (AMPS) was applied to test the client's motor skills as barriers were encountered due to the gonarthrosis he was experiencing. Regarding the initial evaluation of the functionality of the movements, it turned out that client, has a high level of severe skills MD- 10 severe/impaired skills: body position-stability, alignment, positioning; performance support - endurance, rhythm, involvement; self-movement- lifting, walking, moving, carrying, calibrating, fluency and I-12 ineffective skills: holding objects-bending, grasping, handling, coordination; application of knowledge-choice, rhythm, use, information; temporal organization-continuity, sequentiality, completion.

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At the final assessment the number of severe skills decreased to 6, improving and moving to ineffective skills, the improved skills being: body position - stability, alignment, positioning and self-movement - lifting, walking, carrying food and the ineffective skills became appropriate skills decreasing to 5, improved ones are: obtaining objects - bending, grasping, manipulation, coordination, application of knowledge - use, information.

Table 2. The Assessment of Motor and Process Skills results – motor skills

Evaluation	*Severe Skills*	*Ineffective Skills*
Initial	10	10
Final	5	5

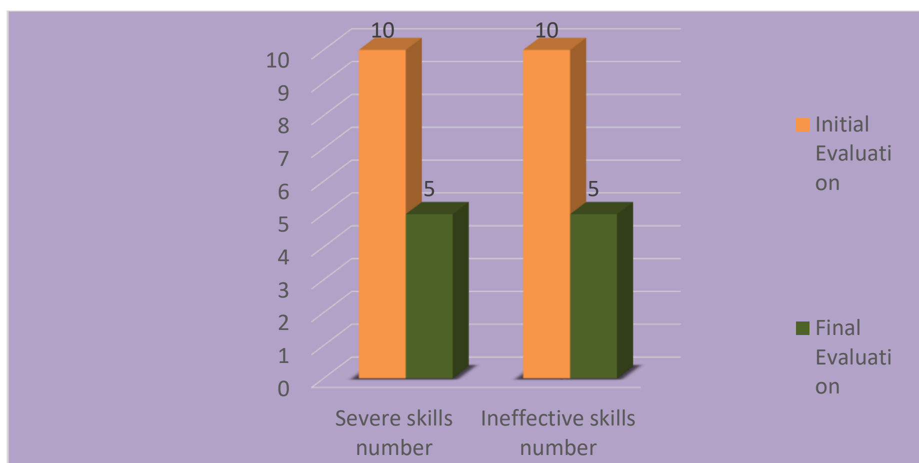

Figure 2. The evolution of The Assessment of Motor and Process Skills scores between the initial and the final assessment

Evaluation of the motivational profile of the client with gonarthrosis

To guide the client towards motivation in performance, we applied the AMI (Achivement Motivation Inventory) tool, which includes a motivational index from 1 to 9 where 1 is the weakest and 9 the highest, noted for each personality trait. Thus, in the initial assessment the client had lower motivational index scores, and in the final assessment the scores increased, which denotes the client's performance acquired during occupational therapy.

Table 3. – The evolution of the results of the client's motivational profile

Personality traits	**Initial Evaluation**	**Final Evaluation**
Perseverance	4	6
Dominant	2	2
Commitment	5	8
The certainty of success	3	5
Flexibility	4	6
Absorption (self-absorbed, engrossed in work)	1	6
fearlessness	6	9
Internality	2	2
Compensatory effort	3	5
Pride of performance	4	8
Availability of learning	6	9
Preference for difficulty	2	5
Independence	5	8
Self-control	4	6
Orientation towards satus	2	3
Orientation towards competition	6	9
Establishing objectives	1	8

In the graph that follows, only the evolution of the personality traits that led to the increase in performance motivation and occupational participation will be represented. Given the slow evolution of the changes that have occurred, the client is willing to continue participating in occupational therapy sessions to improve motivation. Strongly internalized traits (dominance, internality, etc.) need more time to improve; therefore they will not be represented in the graph because they do not currently show an evolution over time.

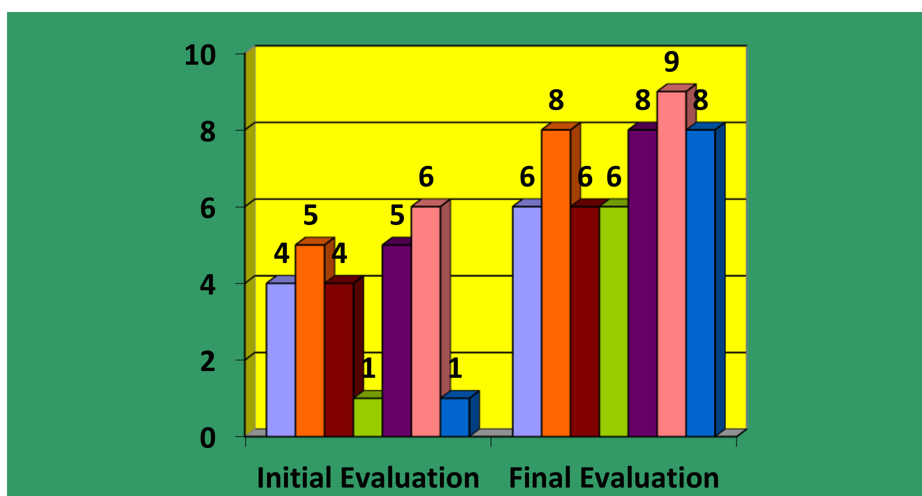

Figure 3 – The evolution of the scores for the skills that influence the occupational performance between the initial and the final assessment

Conclusions

Occupational therapy for people with gonarthrosis is based on the process of assessing the context but also on the action of intervention in order to correct and / or minimize the impact of the disease. It also involves a process of recovery, maintenance and development of the capacity or skills to carry out activities or have meaningful occupations, for certain individuals but also for the groups or communities of which they are a part.

The key terms of occupational therapy in the case of clients with gonarthrosis are: adaptation to the environment, support and facilitation of activity, improvement of ability, maintenance of health, orientation towards maximum performance by resorting to a person's remaining physical and mental function, self-control, orientation and integrity in the community, a greater degree of independence, increased quality of life, etc.

To identify the needs of a client with gonarthrosis, it starts, first of all, from the evaluation process. In general, along with the identification of personal needs, the occupational therapy specialist also analyzes the socio-familial, professional context, everything related to the client's environment and surroundings. Reported to family, friends, colleagues, both the goals to be achieved and the ways to achieve them will be established, the main goal being to gain optimal independence and self-confidence. The most useful way of evaluation is carried out by comparison, noting the current functional level of the client, by performing a clinical-functional balance and recording the type and level of daily activities carried out, including the professional ones as well as the level of physical effort carried out previously. The occupational therapy specialist is also interested in the environment in which the assessed personal life is carried out, whether she lives with her family or is alone. It is also taken into account that the spectrum of occupational therapy includes the physical but also the psychological, cognitive-behavioral, psychosocial aspects of a person. Finally, the functional level obtained at a given moment in time will be compared with the one from which it started and it will be possible to determine by comparison, the possible benefit obtained.

In the most concrete way, the occupational therapy specialist must assess the client's ability to perform controlled and coordinated movements, such as grasping and manipulating objects with a purpose, and the ability to carry out activities of daily living (ADL). . These daily activities are often confused with the basic activities of daily living, but they are those activities that allow a person to live independently in a community. Although they are not necessary for a functional life, however, the ability to perform these daily activities can significantly improve the quality of life. Occupational therapy has the role of ensuring the proper performance, correction or (re)learning of these daily activities. These are actions that are part of the arsenal through which occupational therapy ensures the achievement of socio-professional and family reintegration objectives

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