The European Proceedings of
Social & Behavioural Sciences
EpSBS

ISSN: 2357-1330

https://doi.org/10.15405/epsbs.2019.08.03.27

EDU WORLD 2018
The 8th International Conference

APPLICATION OF THERAPEUTIC EDUCATION IN STROKE PATIENTS – AN OCCUPATIONAL THERAPY PERSPECTIVE

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Abstract

The use of occupational therapy (OT) interventions that integrates a component of therapeutic education (TE) for stroke patients is a viable alternative that goes beyond the traditional classical model. Through a focus group with 20 students in OT, we proposed a model of TE program for a representative clinical case of stroke. The focus group has proved useful in terms of developing students' competencies for applying a practice model in OT, based on the TE of the patient with stroke. Thus, the key elements can be summarized as follows: the exploratory anamnestic interview with the patient to identify the educational needs (educational diagnostic interview); the building and implementation of the TE plan oriented toward two major directions: prevention of cardioneurovascular risks of the patients by educating them to manage their own pathology and to alleviate the physical and cognitive consequences of stroke. An important unanimously accepted and appreciated conclusion from the debate refers to the fact that the occupational therapist must implement the TE program for the stroke patient especially from the perspective of promoting compensatory strategies. The patient's TE model was built by promoting the innovative concept of early self-management of the disease. The diagnosis of the patient's educational needs should be the starting point in order to increase participation in occupations considered to be significant. Further, the instructive-educational intervention should aim to facilitate the patient's adaptation to the disease status through his own involvement in the management and control of the disease and its limiting consequences.

Keywords: Patient, stroke, therapeutic education, occupational therapy.

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1. Introduction

According to the World Health Organization (WHO), patient therapeutic education includes patient-educating activities in the sense of acquiring self-care and self-management skills, adapting treatment to disease conditions, and preventing the onset of illness complications (World Health Organization, 1998).

The patient therapeutic education is part of the generic approach to health promotion (DeCleene et al., 2013), which is the mediation strategy between people and their environment (ecosystem) that synthesizes personal choice and society's responsibility towards health (Enachescu & Marcu, 1994).

Through the widespread application of patient therapeutic education programs, the quality of life of patients can be improved and, at the same time, the cost of long-term care are considerably reduced, an aspect that implies the reducing of the pressure on society in general and on health services in particular.

The main purpose of patient therapeutic education is to produce an additional therapeutic effect for other types of interventions (pharmacological, surgical, physiotherapeutic, etc.) (World Health Organization, 1998).

At present, institutions providing health care services unanimously recognize the benefits of patient therapeutic education, in particular as regards the safety and active involvement of the patient in the intervention, while increasing the level of satisfaction and improving the self-esteem (D'Ivernois & Gagnayre, 2008).

Several studies have highlighted that patient therapeutic education has the potential to limit medical costs by reducing the expenses of subsequent treatments, the trained or educated client succeeding to manage the chronic condition as profitable as financially.

2. Problem Statement

Adopting patient therapeutic programs contributes to achieving substantial results in the participant's quality of life, a goal to be met by all health care professionals and not only. Starting from this idea, it is easy to understand why, in most highly industrialized countries and with a stable economy, health policies focus on promoting patient therapeutic education. In fact, the patient therapeutic education is seen as a necessity, in the absence of which the patient would face a series of limitations and barriers, without knowing how to deal with them and address them in an optimistic manner.

Direct involvement of the patient in taking treatment decisions, assuming responsibility for identifying the objectives of their own treatment, limiting and managing the consequences of the disease are important experiences through which the patient can implement the aspects learned during therapeutic education programs. The success of these patient therapeutic programs is conditioned by the solutions chosen following a careful and comprehensive critical thinking process, the key element of which will always be represented by the patient together with all the problems that impede him from fulfilling roles in various contexts of personal and professional life.

The content of the patient therapeutic education program will be structured to take into account specific needs and cultural differences, respecting the values and dignity of each person (Dreeben-Irimia, 2010). It also emphasizes the idea of offering a flexible and individualized service. The patient is treated as a unique human being to whom the application of standard treatment prescriptions will never be successful.

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In the field of occupational therapy, the patient therapeutic education finds its meaning, being seen as a way of transmitting a message to a population given for therapeutic purposes in order to a definitive learning. Thus, whether it is to maintain a certain level of quality of life (referring in particular to the individual's autonomy), or to avoid certain risk situations (falls, deformations, clinical condition worsening, etc.), occupational therapy is often the guarantor that provides information and messages for the patient to put into practice in his interest (Chagny, 2010).

3. Research Questions

Through his work and skills, the occupational therapist proposes an intervention that is based on theoretical concepts very close to the patient therapeutic education. We can appreciate that the educational approach is an important component of his activity, regardless of the beneficiary target group to which we report to. Thus, we can say that the patient therapeutic education not only valorises the occupational therapist's skills but also gives him the opportunity to highlight his profession within the therapeutic relationship (alliance) with the patient.

Currently, stroke is a potentially serious condition, responsible for an important part of the adult's morbidity, disability, and mortality, but especially of the elderly (Ovbiagele & Nguyen-Huynh, 2011). The epidemiological impact of this type of pathology translates into very high costs associated with the subsequent specialized health care, which is why health policies are directed mainly towards the active prevention side (Guzik & Bushnell, 2017). Other negative connotations of stroke refer to the reserved prognosis for many clinical cases and significant impairment of patients' quality of life (Kessler, Egan, Dubouloz, Graham, & McEwen, 2014), especially in the context of a deficient clinical therapeutic approach (Steultjens et al., 2003).

The stroke patient is an excellent candidate for therapeutic education services (Daviet et al., 2012), and the extent to which occupational therapy can meet this goal remains to be proven by extensive clinical investigations.

4. Purpose of the Study

Starting from this informational context, we set as the objective of the research the development of a model of occupational therapy practice, supposable to a patient with a recent history of stroke, which integrates a therapeutic education approach.

5. Research Methods

Using the focus group method, we considered building a model of intervention through therapeutic education for a representative and paradigm generator clinical case with the diagnosis of post-stroke status. The focus group was carried out by a group of teachers (one of whom had the role of a moderator), with the participation of 20 third year students in Occupational Therapy undergraduate program at the University of Pitesti.

A focus group is a form of qualitative research that aims to collect the opinions of a relatively small group of subjects related to a concept, product or idea (Leung & Savithiri, 2009). In order for the focus

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group to generate pertinent and valuable solutions, it is very important to stimulate the interaction between the facilitator and the participants, as well as between the participants.

For the focus group, we considered several steps and tasks: establishing the organizational technical conditions, selecting the subjects and implementing the project, at an opportune moment.

The focus group session lasted about 2 hours, during which successive activities were carried out, as follows: presentation of the participants, setting the rules for the session and the objectives related to students' representations, a brief introduction to the topic, presentation of some theoretic elements (general notions about stroke, the current framework of clinical-therapeutic management of the disease and the principles of the concept of therapeutic education), the presentation of a clinical case study of stroke and finally the actual debate related to the construction of the therapeutic education program, from the perspective of the occupational therapy field, for the proposed patient.

It is worth mentioning that the presentation of the mediator (about 50 minutes) meant to reach an optimal level of understanding by the participants of the clinical context of the stroke, the following subtopics being covered: introductions in the area of stroke, definitions and classifications of the main clinical entities, epidemiological data, clinical and pathophysiological elements, diagnosis and treatment principles, complications (including occupational disabilities), introduction in the field of therapeutic education and required skills, areas of application, presentation of a clinical relevant case of stroke patient according to the descriptive and analytical classic model.

Further to the presentation, *the objectives of the focus group debates* were set in the following sequence:

- Identifying students' representations associated with cerebrovascular pathology.
- Identifying students' representations related to the clinical-therapeutic management of stroke, highlighting the following: semiology classical notions of stroke, dysphagia and swallowing disorders, neuro-motor disorders (paresis, paralysis, plegia), Aphasia and cognitive disorders, depression, urinary incontinence, fall, risk of recurrent falls and complications of fall, immobilization syndrome and eschar, physical activity regime (sedentary versus physical exercise).
- Identifying common or original strategies aimed at increasing the adherence of the patient with stroke to the therapeutic project.
- Identifying the possibilities for assessing the needs and the expectations of the patient with stroke.
- Identifying the necessary knowledge and skills for the patient with stroke for efficient self-care and self-management of disease, on a short, medium and long term.

Through the applied methodology, we tried to capture the perspective and the attitudes of the majority of participants, in a manner in which each of them was stimulated to identify and clarify his visions, through a structured participatory approach, reporting on the group's views.

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6. Findings

The focus group session has proven useful in terms of developing students' skills to apply a model of practice specific to occupational therapy, with a therapeutic education component, for a selected clinical case of a patient with stroke.

Thus, from the discussions at the group level, for the development and implementation of a model of therapeutic education program for the analysed clinical case, the following essential steps were considered necessary:

1. An exploratory anamnestic interview with the patient to identify his educational needs (educational diagnostic interview).

2. Designing and implementing the therapeutic education plan for the patient with stroke, oriented towards the following major directions:

A. prevention of cardio-neuro-vascular risks of the patient by education in the sense of managing his / her own pathology;

B. improving the physical and cognitive consequences of stroke.

As a matter of fact, according to most authors, the process of patient therapeutic education involves four successive stages:

1. developing an educational diagnosis;

2. defining a personalized program of patient therapeutic education, with learning priorities;

3. planning and implementation of patient therapeutic education sessions, individual or collective, or alternating;

4. performing an assessment of the patient's acquired skills as a result of the program (Pichori, 2013).

Obviously, the two variants are superposable, with the mention that in the field of occupational therapy, the practice centred on the needs of the patient induces additional valences in the educational process, in the sense of respecting the individual rights of self-management of the disease and of the informed consent.

We continue to synthesize the main elements recorded during the debates, which received the group validation, according to the algorithm presented above. Further, we synthetically present the main elements recorded during the debates, which received the group validation, according to the algorithm described above:

A. Prevention of cardio-neuro-vascular risks of the patient with stroke is accomplished through advice on:

1. Healthy diet in the context of the disease: hyposodic regimen (especially in the hypertensive patient), avoiding an excess of saturated animal lipids, with the reduction of fast-absorbing carbohydrates (controlled hypoglycaemic regimen in a diabetic patient).

2. The prohibition of coffee and alcohol consumption or other food pathogens, smoking and exposure to cold, high temperature, sunshine, humidity and air currents.

3. Wearing appropriate clothing for the ambient temperature and maintaining a constant temperature inside the house, at the thermic comfort level (22^0 C), with humidification of the air in case of winter heating.

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4. Correct hydration (minimum 2 l fluids/day, depending on physical activity, hormonal status, and ambient temperature).

5. Prevention falls through: securing the patient by controlling the risk factors of the fall; walking with assistive devices (cane, frame, support on balustrades, etc.) without hurry, under sufficient lighting conditions and visual insuring of the route; avoiding bumps, obstacles, precipitating factors of falls; appropriate, ergonomic, slip-resistant footwear; environment adaptation (fixed and adherent carpets inside the house, free routes to facilitate the residence, learning of the usual routes, sufficient room lighting, accessibility of household objects, supporting devices such as handrail, elevators, assisted transfer tools, etc.).

6. Periodic blood pressure control (daily self-monitoring of blood pressure values, or at least two or three times a week is recommended), with immediate reporting of dangerous variations.

7. Regular medical check-up through the primary and/or secondary medical network, recommended monthly or at least once every three months, with prompt alert of the emergency medical intervention system in case of need (cardiovascular symptomatology such as precordial pain, palpitations, headaches, visual disturbances, balance loss, syncope and faintness, digestive disorders, etc.).

8. Avoiding immobilization and occurrence of deconditioning syndrome, while practicing occupations as much as possible but at the limit of individual tolerance, with the prevention of the risks of falling and overloading the body.

B. Improving the physical and cognitive consequences of stroke is achieved by:

1. Rehabilitation activities through physical therapy and occupational therapy: physical exercises with rehabilitation visa – to increase muscle strength and muscular resistance, to correct muscle tone (combat spasticity), to improve joint mobility at the limit of movement intervals, to avoid deconditioning syndrome, to recover neuro-muscular deficits, to prevent complications on short, medium and long term; massage and self-massage, using common and special techniques; rehabilitation of gesture, speech therapy, rehabilitation of gait and prehension, etc.; occupational, recreational and leisure activities; spa treatments in a non-aggressive physical environment, etc.

2. Counseling activities to combat neuro-psychic symptoms such as attention and memory disorders, affectivity disorders (especially depression), confusion and concentration disorders by: creating and learning daily routines that do not lead to fatigue; intercalation of frequent and long breaks between various activities, at appropriate times; keeping household objects in the same order so they are easier to find and manipulate; maintaining a rest program (constant sleep-conscious rhythm, with at least 8 hours of sleep per day, preferably nocturnal); using compensation strategies in the context of permanent deficits and coping with different forms of daily stress; including rehabilitation activities in an occupational context, to increase patient adherence.

3. Teaching the patient to be as autonomous as possible, within the limit of occupational status, for the activities of daily living, especially for self-care occupations: functional mobility and transfer; sfincterian control and personal hygiene; dressing; alimentation.

4. Teaching the patient to be as autonomous as possible, within the limit of occupational status, for the instrumental activities of daily living: household; food preparing; administration of the medication prescribed by the physician and management of the own state of health; managing financial resources; shopping for daily existence; mobility outside of the home, within the community; using the telephone or

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other technical means of communication; taking care of pets or other domestic animals; managing hobbies (walking, gardening, reading, listening favourite radio shows, etc.); participation in the religious life of the community.

Regarding the staggering over time of these intervention steps, it is unanimously accepted that this is a whole process of active rehabilitation, which begins during acute hospitalisation, then orientates to complex rehabilitation services to continue naturally, indefinitely (Rowland, Cooke, & Gustafsson, 2008), in the context of an individual's return to the community (Aichner, Adelwöhrer, & Haring, 2002).

The role of the occupational therapist becomes more important in the context of the post-acute stages of stroke when it comes to the participation of the convalescent patient or residual symptomatology/sequelae to daily life, by returning home (Gillen, 2014). From this point on, the occupational therapist, along with family and community (Kristensen, Tistad, Koch, & Ytterberg, 2016), becomes an important actor who proposes those cognitive-behavioural strategies that help the patient overcome the consequences of a chronic limiting state (Koh, Hoffmann, Bennett, & McKenna, 2009; Wolf, Baum, & Connor, 2009; Wolf, Chuh, Floyd, McInnis, & Williams, 2015).

An important conclusion from the debate unanimously accepted and appreciated refers to the fact that, by excellence, the occupational therapist must implement the therapeutic education program for the stroke patient, especially from the perspective of promoting those compensatory strategies that will reinsure, as much as possible, the level of autonomy.

From a conceptual point of view, this vision can be explained by the concept of rehabilitation based on cerebral neuroplasticity, which involves the possibility of reorganizing cerebral nerve functions by modulating/facilitating external inputs (Govender & Kalra, 2007).

7. Conclusion

The therapeutic education model of the patient with stroke was developed through the focus group session starting from the concept of early self-management of the disease. Thus, the starting point refers to the diagnosis of the patient's educational needs, in order to increase the participation in occupations considered to be significant at the personal level. In addition, instructive-educational intervention should facilitate patient adaptation to the functional level through own involvement in the management and control of the disease and its limiting consequences.

The implications of the research are important if we take into account that the group of students in occupational therapy, who participated in the focus group, represents a representative sample of future professionals that will be involved in clinical practice. Therefore, the training in the development of the therapeutic education competence, exemplified for patients with neurovascular pathology, can be considered as a topical approach, in the context in which medicine and its related fields are increasingly approaching the concept of personalized therapy.

References

Aichner, F, Adelwöhrer, C, & Haring, H. P. (2002). Rehabilitation approaches to stroke. *Journal of Neural Transmission-Supplement, 63*, 59-73.

Chagny, F. (2010). Éducation thérapeutique: la place de l'ergothérapeute, *Entretiens de Rééducation*,[Therapeutic Education: The Place of the Occupational Therapist, Rehabilitation Interviews] 51-53.

D'Ivernois, J. F., & Gagnayre, R. (2008). *Apprendre à éduquer le patient. Approche pédagogique*,[Learn to educate the patient. Pedagogical approach]. Paris, Fr: Maloine.

Daviet, J. C., Bonan, I., Caire, J.M., Colle, F., Damamme, L., Froger, J., Leblond, C., Leger, A., Muller, F., Simon, O., Thiebaut, M., & Yelnik, A. (2012). Therapeutic patient education for stroke survivors: Non-pharmacological management, A literature review, A*nnals of Physical and Rehabilitation Medicine, 55* (9-10), 641-656.

DeCleene, K. E., Ridgway, A. J., Bednarski, J., Breeden, L., Mosier, G. G., Sachs, D., & Stephenson, D. (2013). Therapists as educators: the importance of client education in occupational therapy, *The Open Journal of Occupational Therapy*, (1), 4, Art. 5.

Dreeben-Irimia, O. (2010). Patient education in rehabilitation. Sudbury, MA: Jones and Bartlett Publishers.

Enachescu, D., & Marcu, M. G. (1994). *Sănătate publică și management sanitar* [*Public health and health management*]. Bucharest: All.

Gillen, G. (2014). What is the evidence for the effectiveness of interventions to improve occupational performance after stroke? *American Journal of Occupational Therapy*, 69, 6901170010p1-6901170010p3. https://dx.doi.org/10.5014/ajot.2015.013409

Govender, P, & Kalra, L. (2007). Benefits of occupational therapy in stroke rehabilitation, *Expert Review of Neurotherapeutics, 7* (8), 1013-1019.

Guzik, A, & Bushnell, C. (2017). Stroke epidemiology and risk factor management, *Continuum (Minneap Minn), (1, Cerebrovascular Disease)*, 15-39, https://dx.doi.org/10.1212/CON.0000000000000416

Kessler, D. E., Egan, M. Y., Dubouloz, C. J., Graham, F. P., & McEwen, S. E. (2014). Occupational performance coaching for stroke survivors: a pilot randomized controlled trial protocol, *Canadian Journal of Occupational Therapy, 81* (5), 279-288.

Koh, C. L., Hoffmann, T., Bennett, S., & McKenna, K. (2009). Management of patients with cognitive impairment after stroke: A survey of Australian occupational therapists. *Australian Occupational Therapy Journal*, 56, 324-331. https://dx.doi.org/10.1111/j.1440-1630.2008.00764.x

Kristensen, H. K., Tistad, M., Koch, Lv., & Ytterberg, C. (2016). The importance of patient involvement in stroke rehabilitation. *PLoS ONE, 11*(6), e0157149 https://dx.doi.org/10.1371/journal.pone.0157149

Leung, F. H., & Savithiri, R. (2009). Spotlight on focus groups, *Canadian Family Physician*, *55*(2), 218–219.

Ovbiagele, B., & Nguyen-Huynh, M. N. (2011), Stroke Epidemiology: Advancing Our Understanding of Disease Mechanism and Therapy, *Neurotherapeutics,* 8*(*3), 319–329.

Pichori, T. (2013). *L'influence de l'education therapeutique du patient sur l'approche des ergotherapeutes – L'exemple de la polyarthrite rhumatoïde*. [*The influence of patient therapy education on the approach of occupational therapists - The example of rheumatoid arthritis*] (Bachelor's thesis). Lyon: Université Claude Bernard Lyon 1. Retrieved from http://www.sudoc.abes.fr/xslt//DB=2.1/SET=2/TTL=1/SHW?FRST=2.

Rowland, T. J., Cooke, D. M., & Gustafsson, L. A. (2008). Role of occupational therapy after stroke, *Annals of Indian Academy of Neurology*, 11, Suppl S1, 99-107.

Steultjens, E. M. J., Dekker, J., Bouter, L. M., Van de Nes, J. C. M., Cup M E. H. C., & Van den Ende, C. H. M. (2003). Occupational therapy for stroke patients, a systematic review. *Stroke*, *34*, 676 – 686.

Wolf, T. J., Baum, C., & Connor, L.T. (2009). Changing face of stroke: implications for Occupational Therapy practice, *American Journal of Occupational Therapy*, *63*(5), 621-625.

Wolf, T. J., Chuh, A., Floyd, T., McInnis, K., & Williams, E. (2015). Effectiveness of occupation-based interventions to improve areas of occupation and social participation after stroke: an evidence-based review, *American Journal of Occupational Therapy*, *69*(1), 6901180060p1–6901180060p11.

World Health Organization (1998). *Therapeutic patient education – Continuing education programme for healthcare providers in the field of prevention of chronic diseases*. Copenhagen, Den: World Health Organization Office for Europe.