

A multidisciplinary Approach on Resilience as an Adaptive Coping Technique in Chronic Pain Patients

Ana Maria Dumitrescu¹,
Andreas Nilsen Myhre²,
Gotcă Ioan^{3*}, Ana-
Maria Slănină⁴, Armand
Rîjnoveanu⁵, Carmen
Valerica Rîpă⁶ and Roxana
Gabriela Cobzaru⁶

Abstract

Background and aim: The study aims to realize an inter-pluri-disciplinary research highlighting the important role of resilience as a very useful adaptive coping technique used in both psychotherapy and occupational therapy chronic pain patients, offering practical examples from Norway, Sweden and the UK.

Material and methods: A narrative review was realized on the basis of 20 up-dated articles from the specialty literature, having as main topic the role of resilience in chronic pain in occupational therapy, published over the period of the last 10 years.

Results: There are taken into considerations multiple aspects of resilience in the case of chronic pain patients such as resilience profiles intertwined with rehabilitation techniques, psychotherapy, nutrition, and patients' social background and interactions. Keeping patients motivated during the occupational therapy interventions, by giving them a new positive perspective upon their condition and engaging them into meaningful activities represents an important asset.

Conclusion: In the case of chronic pain, there is required an interdisciplinary approach, regarding its complexity. Therefore, pharmacologic therapy alone cannot offer the best outcomes and it must intertwine with occupational therapy interventions, pain psychology, physiotherapy and complementary or integrative therapies

Keywords: Occupational therapy; Resilience; Chronic pain; Norway; UK

- 1 Occupational Medicine, "Leon Daniello" Pneumology Hospital, Cluj-Napoca, Romania
- 2 Family Medicine, "Vik Helsetun", Sogn, Norway
- 3 Clinical Psychologist, "Dr. Ghelerter" Centre for Mental Health, Iasi, Romania
- 4 Department of Family Medicine, "Gregory.T.Popa" University of Medicine and Pharmacy, Romania
- 5 Department of Occupational Medicine, "Iuliu Hatieganu" University of Medicine and Pharmacy, Cluj-Napoca, Romania
- 6 Department of Microbiology and Parasitology, "Gregory T. Popa" University of Medicine and Pharmacy, Iasi, Romania

***Corresponding author:**
Gotcă Ioan

✉ igotca@yahoo.com

Tel: 0040742316959

Principal Clinical Psychologist, "Dr. Ghelerter" Centre for Mental Health, Iasi, Romania.

Citation: Dumitrescu AM, Myhre AN, Ioan G, Slănină AM, Rîjnoveanu A, et al. (2020) A multidisciplinary Approach on Resilience as an Adaptive Coping Technique in Chronic Pain Patients. Health Sci J. 14 No. 6: 751.

Received with Revision August 24, 2020, **Accepted:** September 07, 2020, **Published:** September 11, 2020

Background

Considered a major and challenging public health issue by the World Health Organization (WHO), through the negative impact that it has on both social and economic environments, chronic pain represents a pathological condition with a permanently growing percentage of appearance in western countries, with a higher incidence in back and arthritis pain.

This type of chronic condition is also being recognized as a disease within the International Classification of Diseases. The International Association for the Study of Pain (IASP) stated in 2013 that chronic pain consisted in continuous pain persisting for three months, being unresponsive to available therapies [1]. There is evidence in the specialty literature that in developing countries there is an increase in the development of neuropathic chronic pain, though this seems to be under-analysed due to insufficient population-based studies existing in these cases [2,3].

According to Gatchel et al. [4], the traditional models of the biopsychosocial approach to chronic pain were focusing on a dualistic

version related to the body and mind as two distinct elements, this being later substituted with new ones, such as the Neuromatrix theory of pain by L. Melzack in 2001. This relatively new biopsychosocial model is important in the approach of chronic pain patients because it focuses on inputs and outputs, with an emphasis on the function of proprioception

in our bodies. Therefore, it reveals the importance of a psychosocial healing first when it comes to physical pain, correlating these two elements, explaining how the human affects work on the immune system activators and the pain perception [3]. The important role of occupational therapy (OT) in the case of chronic pain patients is to engage people in meaningful activities, focusing on pacing techniques, sleep, hygiene, ergonomics education, the use of certain devices, allowing them to become more productive and self-fulfilled. Occupational therapy also plays an important part in preventing and offering intervention in early stages in the case of these patients. It is important that the occupational therapist encourages and helps the patients pace their daily activities so as to manage to increase their participation, by reducing the levels of experienced pain, conserving their energy and helping them feel more relaxed and comfortable. Motivation, in these cases, becomes a crucial element in the occupational therapist-patient relationship, contributing to the development of a better productivity and better outcomes.

In Australia there has been a lot of recent relevant research on the topic of resilience, coping and chronic pain. Newton-John et al. [5] refers to resilience in the case of chronic pain patients as the capacity to bounce back against the effects of a major traumatic stressor and to maintain a benefic state of balance, once this positive state of mind has occurred [6]. Another study published in the *Anesthesiology* journal in 2018, referring to central sensitization, mentions the damaging impact of trauma, major injuries, certain aggressive drug therapies, autoimmune diseases on neuroinflammation through nerve, central nervous system and tissue injuries and through immune activation, which act as trigger factors for the development of chronic pain and neurodegeneration [7].

The study aims to realize an inter-pluri-disciplinary research highlighting the important role of resilience as a very useful adaptive coping technique used in both psychotherapy and occupational therapy chronic pain patients, offering practical examples from Norway, Sweden and the UK. It is addressed mainly to occupational therapists, but also to other medical and psychology specialists.

Materials and Methods

A narrative review was realized on the basis of 20 up-dated articles from the specialty literature, having as main topic the role of resilience in chronic pain in occupational therapy, published over the period of the last 10 years.

Results

Within the greater context of therapy for chronic pain, resilience has a crucial role in coping with this particular condition, either in a medical-psychological or an occupational framework. With reference to the idea of drug therapy adjustment and reduction in these cases, resilience comes along with psychological coping helping at a better control of physical symptoms. Multiple recent Swedish and American studies indicate the benefic role of certain specific psychological pain therapies such as meaning-centered therapy, mindfulness, cognitive behavioral therapy, hypnotherapy, relaxation and visualization techniques. The latter ones would, according to clients, help them visualize the organic cause of their condition, thus offering them the possibility of better pain management and control, changing their responsiveness to chronic pain. These patients are usually seen by a multidisciplinary team consisting of the patient's general practitioner, physical rehabilitation doctors, psychologists and occupational therapists. Therefore, besides the classical allopathic treatment for chronic pain, consisting of non-steroidal anti-inflammatory drugs (NSAIDs), antidepressants, anti-anxiety selective serotonin reuptake inhibitors (SSRIs), corticosteroids and opioids, the therapy in these case should also consist in non-pharmacological interventions such as cognitive-behavioral therapy (CBT), physical therapy strategies and daily exercise, as well as the

use of certain complementary or integrative approaches which have been demonstrated as being very useful for the general state of health of the patients, however the benefits would be visible some time later than after the use of a classical pharmacological prescription. It would be important though to notice that the psychological and occupational therapy interventions could offer long-term positive outcomes in comparison with the short-term benefits and effects of the pharmacological therapies [8]. In an American study referring to pain catastrophizing and psychological resilience, Sturgeon JA & Zautra AJ [9] discuss models of individual pain adaptation and their role in recovery. Therefore, their research points out the importance of engaging in valued and likable activities by the patient, the necessity of recovering after traumatic experiences by obtaining a certain balance and cultivating personal development and growth by gaining new meanings in life, as individual modalities of coping with chronic pain and its repercussions.

In the case of Scandinavian countries and the UK, a great significance is given to returning back to work procedures mainly consisting of psychological resilience and occupational therapy activities alongside with physiotherapy. These countries have, also, invested capital over time in several rehabilitation-medical and psychological projects on the topics of occupational therapy, chronic pain and resilience. In Norway, long-term sick individuals that are at risk of losing their jobs, such as chronic pain patients in some cases, could be offered rehabilitation programmes that would work on their musculoskeletal pain and mental disorders, as well as on other comorbidities, regarded as a complex therapy framework [10]. An example of such rehabilitation projects from Norway would be the Reablement-2016, which consisted in home-based rehabilitation for older adults with the purpose of improving their general functional capacity, based on a team of physiotherapists, occupational therapists, nurses and carers [10]. In addition, it was based on ideas that came from other older versions of Reablement projects from the UK, US, Australia and New Zealand dating from approximately the year 2000.

A recent Swedish pilot study offers a very significant approach towards vulnerable chronic pain patients in occupational therapy and resilience as a useful healing method in these cases. In the same study, multiple psychological surveys were addressed to patients for filling out, in order to test their coping and vulnerability while suffering from chronic pain: the Beck Anxiety Inventory (BAI), the Beck Depression Inventory (BDI), the Pines Burnout Measure (PBM) and the Short Form 36 (SF36). From a pharmacological point of view, the patients were administrated nonopioid drugs such as Paracetamol, NSAID and low doses of Amitriptyline, as well as some antidepressants and Zopiclone or Zolpidem in the cases with sleep disturbances and depression states [11].

There were taken into observation and discussion four types of chronic pain patients in occupational therapy healthcare from the psychological coping point of view: the interpersonal distressed patient characterized by a fearful attachment pattern, an increased physical function, a high level of burnout and an older age; the adaptive coper characterized by a secure attachment pattern, two types of dysfunctionals: cluster 1 dysfunctional characterized by another fearful attachment pattern with a high level of burnout, but at a younger age and cluster 2 dysfunctional with a secure attachment pattern and older age [11].

A patient-centred approach was being discussed and the study drew the conclusion that clinical implications were related to psychological resilience and vulnerability, which might have been better understood by subgrouping the patients. Therefore, these were addressed the Multidimensional Pain Inventory (MPI), Sense of Coherence, anxiety, depression and other quality of life assessments. Therapy was adjusted according to personal needs, thus being required a personalized therapy scheme in some of the cases [11].

A Swedish Multidisciplinary pain management programme, mentioned

by Samuelsson et al. [12] in 2011, focuses on occupational performance and satisfaction with performance. The study also refers to a multidisciplinary team of healthcare providers that focus on forms of behavioral medicine for the treatment of various levels of pain. The programme actually consisted in several smaller multidisciplinary pain management programmes based on about 80 patients per group, taking place at the Pain and Rehabilitation Centre, University Hospital, Linköping, Sweden.

The programme tried to reach as much as possible patients' personal needs and goals. The patients received each of them an occupational therapist, a physiotherapist, a psychologist or a medical social worker. Within the programme there were offered group lectures on various topics such as: pain management, physical activity, stress management, concentration, memory and other ways of psychological coping, including according importance to sleeping hours. The multidisciplinary team would then meet regularly for the evaluation of the progresses that patients had made.

Another primary healthcare rehabilitation programme, mentioned by Martensson & Ivanoff [13] in their Swedish group-study of people suffering from chronic pain, described the patients' personal experiences and feelings towards the rehabilitation procedures in their cases, focusing on 24 patients organized in groups of 6, having a biopsychosocial approach. The programme was called Focus on health (FoH) and took place in a healthcare centre in Sweden. Within the project, 3 themes were taken into consideration: a theoretical theme, a physiotherapy theme and an occupational therapy theme which included the description of: pain relief mechanisms, the meaning of health, ergonomics, stress related issues, discussions on the topic of life without pain, body awareness, relaxation and breathing techniques, life roles and goals, pacing and planning of occupational therapy activities. Additionally, the groups benefited from a moderator who engaged the patients in various discussion topics regarding personal experience on living with pain such as: a place of belonging, the idea of a benefic environment, expectations during suffering from their painful conditions, the importance of their own contribution to their current states of mind and of health, the ideas of "reacting but not acting" and of "awareness and integration" [13].

In the UK, several occupational therapy projects have been taking place over the years on various topics within the academic environment. One of them focused on resilience in occupational therapy as a key to happiness, having as well a very suggestive name- "Resilience - a key to happiness" and was designed by Dr. Josh Cameron, senior occupational therapy lecturer, and his colleagues at the school of healthcare sciences, University of Brighton, in 2015 [14]. The project offers the multiple facets of resilience, connecting it to the field of occupational therapy, offering multiple definitions and classifications of resilience, such as personal resilience, resilience to health emergencies, young people's resilience, reporting aspects related to public health as well. The project was addressed not only to occupational therapists but also to other healthcare personnel willing to learn more about the impact of resilience in patients' lives. The same professional team from Brighton described during their project a resilient framework adapted by Cameron, Hart and Arnold-Jenkins, from a Hart & Blincow [15] study for adult mental health. This framework looks at aspects such as resilient moves consisting of following concepts: "good enough housing", "enough money to live", "being safe", "access and transport", "healthy diet", "exercise and fresh air", "enough sleep", "leisure and work occupations", and resilient roots like "basics, belonging", "learning and work", "coping", "core self", "accepting", "conserving", "commitment and enlisting" that intertwine [14]. The same project, related to resilience and happiness, presents the concept of resilient therapy, which according to Hart & Blincow [15], consists of a selection of specific therapies, having their origins in child and family therapy which was then extended to a larger population, having as purpose to determine people to collaborate for their recovery,

rather than just receiving a specific therapy which wouldn't require a long time specialized training.

Another project worth mentioning, a publication related to oncology and different comorbidities related to cancer, this time, would be the HOPE project-*Occupational Therapy Intervention in Cancer*, produced by an occupational therapy specialist section for HIV/AIDS, Oncology, Palliative Care and Education (HOPE), which is affiliated to the Royal College of Occupational therapists in the UK. The projects comprises interventions for specific symptoms and conditions such as pain, fatigue, bone metastases, cognitive deficit, weight loss, insomnia and specific palliative OT interventions in each of the cases, also containing some feedback and statements from various patients that show benefic outcomes in matters of resilience. In the case of interventions for pain, the OT is encouraged to identify the patients' goals and lifestyle, prioritise the interventions, manage to pace the OT activities for each patient and to work on anxiety, relaxation, ergonomics and environmental adjustment, by collaborating with the patient. It is also mentioned that the OT should see whether the patient would need special equipment and to be connected to a multidisciplinary team for a better pain management [16].

Recommendations and Conclusion

In the case of chronic noncancer pain, there is required an interdisciplinary approach, regarding its complexity. Therefore, pharmacologic therapy alone cannot offer the best outcomes and it must intertwine with occupational therapy interventions, pain psychology, physiotherapy and complementary or integrative therapies [8,17].

As presented by Sturgeon & Zautra [9], social networks and relationships seem to be very beneficial for patients suffering from chronic pain. It would be therefore recommended to obtain as much social support, attention and empathy as possible within a multidisciplinary team, besides the integrative therapies, in order to obtain a better resilience towards the painful condition. Keeping patients motivated during the occupational therapy interventions, by giving them a new positive perspective upon their condition and engaging them into meaningful activities represents an important asset [18,19]. Caring Conversations with a therapist would be valuable, as well, when combined with mindfulness, meditation, relaxation techniques and hypnosis [8]. Nutrition intertwined with psychological coping techniques, physiotherapy and occupational therapy interventions can also play a important role in developing better resilience when it come to chronic pain, according to Brain et al. [20]. A diet containing anti-inflammatory foods like gluten free, dairy free, therapeutic fasting could be very beneficial in these cases, as well as the use of certain food supplements such as: vitamin D, Omega 3, B group vitamins and Magnesium, that could be prescribed by the patient's general practitioner [8]. When being diagnosed with chronic pain, the medical specialist should explain to the patient about how they could embrace a different, more resilient approach to their condition, by trying a balanced lifestyle, being supportive and recommend valuable occupational therapy and psychological coping activities, that could enrich patients' mind and physical flexibility [21].

Finally, there would be a demand for further research projects in the field of occupational therapy interventions for chronic pain, considering their proven efficacy. It would be, as well, recommended the release of more publications on this topic including reviews and adverts of the most recent data within international occupational therapy and pain management programmes. Another useful strategy would be the organization of conferences, congresses and workshops amongst occupational therapists, general practitioners, physical rehabilitation teams and clinical psychologists. This would offer a multidisciplinary team the possibility to obtain even more experience and act rapidly in various clinical circumstances, following the latest practice models and guidelines.

References

- 1 Yeung EW, Arewasikporn A, Zautra AJ (2012) Resilience and Chronic Pain. *Journal of Social and Clinical Psychology* 31: 593-617.
- 2 Johnson MI, Elzahaf RA, Tashani OA (2013) The prevalence of chronic pain in developing countries. *Pain Management* 3.
- 3 Duenas M, Ojeda B, Salazar A, Mico JA, Failde I (2016) A review of chronic pain impact on patients, their social environment and the health care system. *J Pain Res* 9: 457-467.
- 4 Gatchel R, Peters ML, Peng YB, Fuchs PN, Turk DC (2007) The Biopsychosocial Approach to Chronic Pain: Scientific Advances and Future Directions. *Psychol Bull* 33:581-562.
- 5 Newton J, Mason C, Hunter M (2014) The Role of Resilience in Adjustment and Coping With Chronic Pain. *Rehabil Psychol* 59: 360-365.
- 6 Southwick SM, Bonanno A, Masten AS, Panter-Brick C, Yehuda R (2014) Resilience definitions, theory, and challenges: interdisciplinary perspectives. *European Journal of psychotraumatology* 2014: 5:1-14.
- 7 Ji RR, Nackley A, Huh Y, Terrando N, Maixner W (2018) Neuroinflammation and central sensitization in chronic and widespread pain. *Anesthesiology* 129: 343-366.
- 8 Kachko R (2020) Pain-Proof: building resilience to chronic pain. Inner Source Health webinar.
- 9 Sturgeon JA, Zautra JA (2010) Resilience: A New Paradigm for Adaptation to Chronic Pain. *Curr Pain Headache Rep* 14:105-112.
- 10 Moe A, Ingstad K, Brataas HV (2017) Patient influence in home-based rehabilitation for older persons: qualitative research. *BMC Health Serv Res* 17:736
- 11 Peilot B, Andréll P, Gottfries J, Sundler AJ, Mannheimer C (2018) Vulnerability and Resilience in Patients with Chronic Pain in Occupational Healthcare: A Pilot Study with a Patient-Centered Approach. *Pain Research and Treatment* 6:1-12.
- 12 Samuelsson K, Carlberg U, Hesselstrand M, Olander E, Wressle E (2011) Patient-Reported Outcome of a Multidisciplinary Pain Management Program, Focusing on Occupational Performance and Satisfaction with Performance. *The open Rehabilitation Journal* 4: 42-50.
- 13 Martensson L, Ivanoff SD (2006) Experiences of a primary health care rehabilitation programme. A focus group study of persons with chronic pain. *Disability and Rehabilitation* 28: 985-995.
- 14 Cameron J (2015) Resilience-A key to happiness? University of Brighton.
- 15 Hart A, Blincow D, Thomas H (2007) Resilient Therapy with children and families. London: Brunner Routledge.
- 16 Crompton S (2004) Occupational therapy intervention in cancer: Guidance for professionals, managers and decision-makers. College of Occupational Therapists.
- 17 Papadakis MA, McPhee SJ, Rabow MW (2019) Current Diagnosis and Treatment (58th edition) New York: McGrawHill.
- 18 West C, Stewart L, Foster K, Usher K (2012) The meaning of resilience to persons living with chronic pain: an interpretive qualitative inquiry. *J Clin Nurse* 21:1284-1292.
- 19 Gheshlagh RG, Sayehmiri K, Ebadi A, Dalvandi A, Dalvand S, et al. (2016) Resilience of Patients With Chronic Physical Diseases: A Systematic Review and Meta-Analysis. *Iran Red Crescent Med J* 18: e38562.
- 20 Brain K, Burrows TL, Rollo ME, Chai LK, Clarke ED, et al. (2018) A systematic review and meta-analysis of nutrition interventions for chronic noncancer pain. *J Hum Nutr Diet* 32: 198-225.
- 21 Thomson BL, Gage J, Kirk R (2020) Living well with chronic pain: a classical grounded theory. *Disabil Rehabil* 42:1141-1152.