



# **Evaluation of Patient Satisfaction after 10 Kinesitherapy Sessions at Dschang District Hospital, Cameroon**

**Joseph Fondop<sup>a++</sup>, Marie Christine Atyam Ekoto<sup>a++\*</sup>,  
Richard Ekango Essoh<sup>a++</sup>, Faustin Atemkeng<sup>a++</sup>  
and C. A. Djam<sup>a++</sup>**

<sup>a</sup> *Dschang District Hospital, Cameroon.*

## **Authors' contributions**

*This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.*

## **Article Information**

DOI: 10.9734/JSRR/2023/v29i81777

## **Open Peer Review History:**

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/102302>

**Original Research Article**

**Received: 13/05/2023**  
**Accepted: 15/07/2023**  
**Published: 01/08/2023**

## **ABSTRACT**

Physiotherapy is that part of medicine which, in its multidisciplinary, affects almost all medical fields. It therefor operates in different techniques to empower patients in a drive to rehabilitate, and restore functional capacities, by maintaining, strengthening, and restoring them. Despite the history of this discipline and its proven evidence, physiotherapy turns out to be always in the shadows because very little known by a large number of Cameroonians. The objective of this study is to promote physiotherapy by evidence of its importance in the management of chronic and acute pathologies, by assessing the satisfaction rate of patients after 10 physiotherapy sessions at the HDD. Our descriptive prospective study was conducted from February 12 to May 12, 2020, using a 4 part questionnaire, and 32 questions including, 09 reliable questions, used for data collection. The data thus collected after compliance with the inclusion criteria were analyses using the Epi info V3.5.3

<sup>++</sup> *Cardiopediatrician;*

<sup>\*</sup>*Corresponding author: E-mail: dr\_atyamekoto@yahoo.fr;*

software and presented in the form of tables and graphs using Excel and Word software. 36 participants participated in the study, therefore 22 are women and 14 are men. At the end of this study, 03 participants had a satisfaction rate below 50%, 30% for two patients and 40% for one of them. On the other hand, 33 patients recorded a satisfaction rate above 50% ranging from 65% to 95% after 10 sessions. At the end of this study, it emerges that physiotherapy improves the defective condition of patients after 10 sessions. However, it remains imperative to increase the promotion of physiotherapy by virtue of it for well-being of all in city of Dschang in particular and in Cameroon in general.

*Keywords: Evaluation; satisfaction; physiotherapy; traumatologists; gynaecologists.*

## 1. INTRODUCTION

Physiotherapy is a branch of medicine that uses movement and biological properties of physical agents to restore, strengthen and maintain functional capacities [1]. This is achieved through re-education, rehabilitation and restoration sessions for patients with functional limitations and impotence, and who have a poor life expectancy as a result of their illness, with the aim of restoring their autonomy and improving their quality of life [9-14]. This is a multidisciplinary field, in which the physiotherapist works in collaboration with other medical professionals such as neurologists, traumatologists, gynaecologists, orthopaedists, neurosurgeons, etc., in order to be more effective in loosening and resolving patients' problems and to put a smile back on their faces within a short space of time, through physiotherapy sessions [19-23]. The satisfaction rate of such interventions can be evaluated according to the pathologies and the number of sessions [2-8].

The Dschang District Hospital most often receives patients suffering from pathologies such as facial paralysis, which is paralysis of the nerves innervating the muscles of the face; brachial plexus paralysis, which is paralysis of the network formed by several threads of nerves intended to innervate the muscles of the arm and forearm; lumbago and lumbosciatica, which are lumbar pains with the same or different aetiologies; hemiplegia, paraplegia and paresis, which are all central or peripheral neurological disorders; and post-cast patients with ankylosis and joint limitations following direct or indirect trauma [15-18]. In view of all these pathologies, it was necessary to evaluate the satisfaction rate of patients after 10 physiotherapy sessions and to know the quality of care in this structure on one hand and the therapeutic compliance of patients on the other hand, in order to promote physiotherapy in the town of Dschang and its surroundings.

### 1.1 Question of Research

After how many sessions, does physiotherapy gives enough satisfaction in the treatment of pathologies?

### 1.2 Aim

The aim of our research was to evaluate the satisfaction rate of patients attending the physiotherapy department of the Dschang District Hospital after 10 physiotherapy sessions.

### 1.3 Hypothesis of Research

Better patient management and compliance with treatment generally lead to a higher satisfaction rate after 10 physiotherapy sessions for patients and their pathologies at the Dschang District Hospital.

### 1.4 Research Objectives

**General objective:** To promote physiotherapy by evaluating patient satisfaction rates after 10 follow-up sessions in the physiotherapy department of the Dschang District Hospital, and to reduce their consumption of drugs, including NSAIDs.

#### Specific objectives :

- ✓ Evaluate patients before and after 10 physiotherapy sessions at the HDD;
- ✓ Identify their various clinical pathologies;
- ✓ To assess patient satisfaction after 10 physiotherapy sessions at the HDD.

## 2. MATERIALS AND METHODS

This is was a prospective descriptive study, carried out in the physiotherapy department of the Dschang District Hospital from the 12<sup>th</sup> of February to 12th May, i.e. over a period of 4 months in the HDD physiotherapy department.

Our study population consisted of all patients who came to the HDD's physiotherapy department for treatment.

All patients who had at least 10 physiotherapy sessions and who agreed to take part in the study till the end of the 10 sessions were included in the study.

All those who did not finish their 10 sessions and who did not respect the regularity of the sessions, i.e. three sessions per week with a gap of one day per session, were excluded from the study.

The sampling method adapted to this study was non-probabilistic. All patients who came for consultation and met all the inclusion criteria were admitted to the study and completed a questionnaire.

The sample size was exhaustive, representing all 36 patients who met the inclusion criteria.

The data collection instrument consisted of a questionnaire containing 32 questions subdivided into 04 parts: part I was the socio-demographic criteria, part II illustrated the various physiotherapy pathologies, part III evaluated patients before the start of the 10 physiotherapy sessions, and part IV evaluated patients after 10 physiotherapy sessions.

After obtaining informed consent, the questionnaires were administered to the patients. The confidentiality of the patients was preserved by the use of a code in place of their name. The response was voluntary and no compensation of any kind was envisaged within the framework of this study. Obtaining the informed consent of each patient enabled us to respect their autonomy and anonymity during data collection.

Each questionnaire was correctly filled in and checked, the analysis was carried out using EPI Info software version 3.5.3, the graphs and the report were done using Microsoft Excel and Word respectively.

This study has a beneficial interest for the whole society. The results obtained after analysis will be published in order to contribute to a better promotion of physiotherapy in general in

Cameroon, especially at the UDS and HDD. The above methodology allowed us to obtain the following results.

### 3. RESULTS

Out of 50 patients surveyed in our study, 36 were retained and 14 patients were excluded from the study for non-compliance with the inclusion criteria. This gave us a response rate of 72% and an exclusion rate of 28%.

There were 22 female patients (61.10%) and 14 male patients (38.90%).

The participants' ages ranged from 11-20 to 81-90, with a total of 21 women and 15 men. The 21-30, 51-60 and 61-70 age groups are the most represented, at 16.70%, while the 11-20, 41-50 and 81-90 age groups are less represented, at 8.30%.

Students were the most frequent group with 8 participants, i.e. 22.20%, followed by farmers with 6 participants, i.e. 16.70%, 5 teachers, i.e. 13.90%, 4 housewives, i.e. 11.10%, 3 shopkeepers, police officers and others, i.e. 8.30% each, 2 footballers and dressmakers, i.e. 5.60% each.

54.30% of patients were married, 28.60% single, 11.40% widowed and 5.70% cohabiting.

Low back pain was recorded in 14 patients (38.90%), cervicobrachial neuralgia and cervicarthrosis, knee sprain, post-stroke hemiplegia in 4 patients (11.10%), facial paralysis, shoulder dislocation and muscle aches/weakness in 2 patients (5.60%) and 4 other pathologies (11.10%). (Table 1).

Illnesses which lasted for at least 1 year were the most represented, at 44.40%, followed by those which lasted 1 to 11 months, at 33.30%, those lasting 1 to 3 weeks, at 16.70%, and those lasting 1 to 5 days, at 5.60%, which are the least represented.

More than half of our patients experienced mechanical pain in 57.10% of cases, inflammatory pain in 17.10%, morning pain in 14.30% and night waking up pain in 11.40% of cases.

**Table 1. Breakdown of patients by pathology**

Pathologies	Frequency	Percentage
Lumbago (herniated disc; lumbarthrosis; lumbodiscarthrosis; lumbosciatica)	14	38,80%
Knee sprain	4	11,10%
Cervicobrachial neuralgia; cervicarthritis	4	11,10%
Post-stroke hemiplegia	4	11,10%
Other	4	11,10%
Shoulder dislocation	2	5,60%
Facial paralysis	2	5,60%
Muscle soreness/weakness	2	5,60%
Total	36	100,00%

Pain was very severe in 47.20% of patients, severe in 38.90%, unbearable in 8.30% and moderate in 5.60%.

22 had difficulties to stand( 73.30%), compared to 08 who had no problem at all (26.70%).

21 (70.00%) had problems maintaining their balance, compared with 09 (30.00%) who had no problems at all.

25 had difficulty walking with and/or without support( 83.30%), compared with 5 who had no problems, (16.70%).

40% had some difficulty walking, 24.00% had too much difficulty, 28.00% had no difficulty at all, and 8.00% were unable to walk at all.

40% had too much difficulty walking without support, 32.00% were unable to walk without support, 24.00% had little difficulty and 4.00% had no difficulty walking without support.

More than half of the participants (57.10%) had pain when walking on flat surfaces, 25.00% had pain when climbing stairs/hills and 10.70% when descending, compared with 7.10% who had no pain when walking.

43.30% of patients had a loss of feeling in the affected limbs, 36.70% had no problem and 20.00% had a complete loss of feeling in the affected limbs.

17 (70.80%) had no difficulty when speaking, while 7 (29.20%) had some difficulty.

17 patients (73.90%) had no difficulty when chewing, compared with 6 (26.10%) who did.

To blink, 5 (65.20%) had no difficulty when compared with 8 (34.80%) who did.

More than half of the participants (52.90%) had more difficulty mobilising the affected limbs, 26.50% had little difficulty, 17.60% had no difficulty and 2.90% were unable to mobilise the affected limbs without assistance.

Half the patients (50.00%) have too many difficulties with their daily tasks, 47.10% have few difficulties and 2.90% have no difficulty at all with their daily independence.

#### After kinesiology therapy :

- More than half the patients (78.80%) had a good improvement in their pain, 15.20% had little change and 6.10% had no more pain.  
When walking, more than half the respondents had a good improvement (59.30) and 25.90% had a perfect improvement, compared with 11.10% who had little improvement and 3.70% who had no improvement.
- Equilibrium was found in 34.80% of patients with good progress, in 43.50% with excellent progress, in 4.30% with no progress and in 17.40% with little progress.
- Sensitivity was as follows: good progression in 22.70% of patients, excellent progression in 72.70% and poor progression in 4.50%.
- Coordination was 42.90% excellent, 28.60% good, 3.60% unchanged and 25.00% slightly changed.
- Muscular strength was 20.70% excellent and 62.10% good 17.20% poor.
- The facial deficit was 66.70% positive compared with 33.30% negative (Table 2).

**Table 2. Distribution of patients according to changes in balance, sensitivity, coordination, muscle strength and facial deficit**

Evolution	No change	Little change	Good development	Excellent development
Balance	4,30%	13,40%	38,80%	43,50%
Sensitivity		4,60%	22,70%	72,70%
Coordination	3,50%	25,00%	28,60%	42,90%
Muscular strength		17,20%	62,10%	20,70%
Facial deficit		33,30%	66,70%	

**Table 3. Distribution of patients according to percentage of recovery based on VAS**

EVA	Pain	Frequency before sessions (%)	Frequency of kinesiotherapy sessions (%)
0	no pain	0	6,10
1-2	minor pains	0	78,70
3-4	moderate pain	8,30%	15,20
5-6,	severe pain	38,90%	0
7-8	very severe pain	47,20%	0
9-10	unbearable pain	5,60%	0
total		100	100

**Table 4. Breakdown of recovery by percentage**

Percentage recovery rate	Number of patients
30%	2
40%	1
55%	3
60%	7
65%	1
70%	4
75%	4
80%	5
85%	2
90%	3
95%	4
Total	36

- Recovery of patients were satisfactory in 54.30%, perfectly satisfactory in 17.10% and not very satisfactory in 11.40%.
- Evaluating recoveries as a percentage, 3 patients recorded a satisfaction rate of less than 50%, one patient (40%), two patients (30%), and 33 patients recorded a satisfaction rate of more than 50%, ranging from 55% to 95%. (Table 3).
- More than half of patients were satisfied (54.30%), compared with 17.10% who were perfectly or considerably satisfied and 11.40% who were not very satisfied.
- According to the VAS at the end of kinesiotherapy, 6.10% of patients had no pain. 78.70% of patients had low pain with a VAS between 1 and 2.
- 15.50% had average pain with a VAS of between 3 and 4
- no patient had severe, very severe or unbearable pain with a VAS greater than 4, whereas before physiotherapy 91.7% of patients had pain with a VAS greater than 4 (Table 3)
- EVA
- 3 patients recorded a satisfaction rate of less than 50%, i.e. 30% for two patients

and 40% for one patient. There were 33 patients with a satisfaction rate of over 50%, ranging from 55% to 95% (Table 3).

#### 4. DISCUSSION

Our study included 36 patients, 14 of whom (38.90%) suffered from low back pain (common low back pain 8.30%; herniated disc 2.80%; low back arthrosis 5.60; low back disc arthrosis 11.10%; low back pain 11.10%), 11.10% suffered from post-stroke hemiplegia, cervicobrachial neuralgia and cervicarthrosis, and knee sprain respectively. This result is unlike the study conducted by MAKOUNGOM in 2010 [24] in which of 50 patients, the most frequent diseases were: hemiplegia in 23 patients (46%); low back pain in 10 patients (20%); osteoarthritis in 10 patients (20%) and trauma in 6 patients (12%). Of all our patients, 61.10% were women and 38.9% men and in agreement with the study by Mohammed J and collaborators in 2018. [25] in which the predominant sex was female (76.70%). This could be explained by the fact that at the menopause there is a reduction in hormone production, which causes bone demineralisation and exposure to fractures, osteoporosis and arthrosis. This justifies the high representativeness of the age groups between 51 and 70 (Table I).

We observed an improvement in our patients' symptoms, functional capacities, autonomy and quality of life after 10 sessions of treatment. We achieved:

- A reduction in pain intensity (VAS), i.e. 78% improvement, with 6.10% no longer experiencing pain compared with 15.20% with little reduction in pain, which is in line with the work of FAGHRI and collaborators in 1994 [26] and ADA I and collaborators in 2002 [27] which showed a significant improvement in shoulder pain: 80.70% compared with 55.1%; subluxation 78.9% compared with 58.6% and motor recovery 77.1% compared with 60.3% in a series of 120 patients with painful shoulder followed over 24 months. This confirms the effectiveness of physiotherapy in pain management, while reducing the consumption of NSAIDs and the cost of drugs.
- Significant improvement in gait, with 85.20% improvement compared with 11.10% little improvement and 3.70% no improvement;

- An improvement in balance, i.e. 82.30% compared with 13.40% with little change and 4.30% with no improvement;
- A 95.40% improvement in sensitivity, compared with a 4.60% little improvement in sensitivity; (Table 4)
- An improvement in coordination, at 71.50%, compared with 25.00% little improved and 3.50% unchanged;
- An increase in muscle strength: 82.80%, compared with 17.20% with little change;

Patient satisfaction is one of the indicators that are generally considered to be the desired results of the care provided and the services available, or even as elements of the patient's state of health, as DONABEDIAN stated in 1988 [28].

After 10 ECP sessions in the HDD physiotherapy department, we found that almost all patients were satisfied with the ECP. Thus, 54.30% found the ECP satisfactory, 17.10% judged it perfectly satisfactory against 11.40% who judged it unsatisfactory. This is shared by MAKOUNGOM in 2010 [24] who, in his study stipulates that: concerning satisfaction with the quality of care, 26 patients, i.e. 52% declared being very satisfied and 20 patients, i.e. 40% declared being fairly satisfied with the treatment received from physiotherapy staff, against 4 people, i.e. 8% who declared not being satisfied with the treatment received.

Our study thus enabled us to record a total satisfaction rate of all patients above half varying between 60% and 95%, against a few who were not satisfied by half, (30% and 40%). In agreement with the study by MAKOUNGOM in 2010 [24] according to which, 30% of patients going to the physiotherapy department for functional re-education sessions, including: arthrosis (15%); trauma (15%); hemiplegia (30%); and low back pain (10%), have a satisfaction rate of 70% after treatment.

This once again confirms the importance and effectiveness of physiotherapy in the management of acute, sub-acute and chronic pathologies, in the management of pain, which is the main reason for medical consultation, and in the management of functional deficiencies, improving quality of life, reducing the cost of living, and empowering patients.

In this study, the main limitation was information bias due to the fact that some of the information

provided by the participants could be false, either intentionally or by default.

## 5. CONCLUSION

At the end of our study carried out in the physiotherapy department of the Dschang District Hospital, the general objective of which was to promote physiotherapy by evaluating the patient satisfaction rate after 10 sessions of treatment and by reducing the consumption of NSAIDs by patients, The results showed that, after 10 physiotherapy sessions, 60% to 95% of patients were satisfied with the quality of the treatment, after improving their state of health by improving their quality of life by remedying pain, functional incapacity and loss of autonomy in HDD patients.

Similar studies would be needed in other health facilities in order to extrapolate the results to the general population.

## 6. RECOMMENDATIONS

With a view to the effective promotion of physiotherapy and all its virtues, we suggest the following recommendations:

**Ministry of Public Health (MINSANTE):** Organise an awareness campaign, i.e. publicise the very existence of physiotherapy and its benefits via a BCC (behaviour change communication) or an educational communication (EC).

To create an equipped physiotherapy department in each public hospital, and to recruit physiotherapists each year to practise this profession and for the well-being of the population.

**To the Director of Dschang District Hospital:** Establish a reception system that is attractive, representative and more indicative through images of the existence of physiotherapy and its situation within the structure.

Doctors should work in collaboration with physiotherapists, referring patients for treatment as soon as possible.

People to consult a doctor as soon as possible for all their health problems, to ensure their well-being.

## CONSENT

As per international standard or university standard, patient(s) written consent has been collected and preserved by the author(s).

## PERSPECTIVES

In view of the exponential growth in disability in Cameroon, with the advent of motorbike taxis, strokes and other road accidents, and the recurrence of back pain in both the elderly and young people, the question is whether the population is widely informed about the existence of physiotherapy and its effectiveness in treating these various pathologies in certain institutions, and more specifically at the HDD.

## COMPETING INTERESTS

Authors have declared that no competing interests exist.

## REFERENCES

1. Yves Xhadez. Book: Vade-mecum of physiotherapy and functional rehabilitation, 7th ed. by Yves Xhardez, Maloigne, books-medicaux.com; 2015.
2. National Council of the Order of Physiotherapists. Official Bulletins Archive > Publications of the Order of Physiotherapist Masseurs;2009.
3. Michel dufour. Michel Dufour (physiotherapist), fundamental knowledge and techniques for practice; Masso-kinesitherapy and Practical Manual Therapy (volume 3) chap 12.
4. WHO. Memory aid. Decree no. 2016-942 of 8-07-2016 on the organization of continuing professional development for healthcare professionals. Official Journal. 2016;10-07(0160).
5. WHO| World Health Report 2004 press pack. WHO; 2004.
6. Jacques MONET, The birth of physiotherapy. Collection: Society, History and Medicine:12; 2009.
7. BESSE JEAN AMIEL. History of Antiquities and Counts of Carcassonne by Besse Jean Amiel 1928 Aude | Carcassonne, Antiquity, Old Books; 1928.
8. Georgii Augustus. Kinesitherapy, or treatment of diseases through movement according to the method of Ling by Georgii Auguste, Ed. Germer Baillière; 1847.

9. Touwaide Alain. Jacques Jouanna, Hippocrates. In: Classical Antiquity. 1993;62:415-416.
10. Decree No. 96-879 of October 8, 1996 relating to professional acts and the exercise of the profession of masseur-physiotherapist - Article 2 Legifrance; 1996.
11. French Federation of masseur-physiotherapists physiotherapy re-educators all school; 1963
12. Bulteux J. Kinesithérapie / mobilization techniques. Paris: Simep. 1988;120.
13. Chou R, Qassem A, Snow V, Casey D et al. Diagnosis and treatment of low back pain: a joint clinical practice guideline from the American college of Physicians; American Pain Society Low Back Pain Guideline Panel. Ann Intern Med.2007; 147(7):478-91.
14. Daviet JC, Dudognon PJ, Salle JY, Munoz M, Lissandre JP, Rebeyrotte L, et al. Rehabilitation of cerebrovascular accidents. In: Kinesitherapy-Physical Medicine-Rehabilitation. Assessment and support. Encycl Med Chair (Elsevier SAS, Paris). 2002;24 :26-455-A-10.
15. Elsevier-Masson. BOOKS in 2014 from Elsevier-Masson - LES "DYS": a site dedicated to learning Disabilities ; 2014.
16. Youssoufa Maiga et al. Longitudinal study of cervicobrachial neuralgia in the neurology department of CHU Gabriel Tour, Bamako (Mali). Pan African Medical Journal. 2013;16:46.
17. Ravaud P. Non-pharmacological treatments for osteoarthritis. The Medical Press. 2002;31(39):50-52
18. Marc Safran, James E. Zachazewski, David A. Stone, Instructions for sports Medicine Patients, Philadelphia, PA, Elsevier Health Sciences. 2011;1344: 402.
19. Recognizing and Treating Simple Ankle Sprains, Rev Prescribe. 24, n°247, 2004;129-134.
20. Magee E, Quillen, William S. Traumatic hip dislocation, Pathology and intervention in musculoskeletal rehabilitation, Missouri Saunder Elseserver. 2009;974.
21. Kahan A, Amor B, Menkes CJ. "Lyme arthritis" Biomed Pharmacother. 1989;43(6):401-3
22. Graham Riley. Tendinopathy-from basic science to treatment | Nature Reviews Rheumatology. Nature Clinical Practice Rheumatology. 2008;4:82-89.
23. Roger B. Imaging in traumatic pathology of muscles and tendons. Journal of Sports Traumatology. 2005;22(n°3):166-178.
24. Flora Tatiana Makoungoum. Memory Online - Satisfaction Following Physiotherapy Treatment of Elderly People with Motor Disorders at Hgopy ; 2010.
25. Mohammed J, Alhamidah M, Alammam R, Jawkhab M, Bukhari L. Awareness and Knowledge of Physical Therapy among Saudi Arabia Adult Population. Journal of Physiotherapy and Rehabilitation. 2019-03-06; 2018.
26. Faghri PD et al. Faghri PD, Rodgers MM, Glaser RM, Bors JG, Ho C, Akuthota P. The effects of functional electrical stimulation on shoulder subluxation, arm function recovery, and shoulder pain in hemiplegic stroke patients. Arch Phys Med Rehabilitation. 1994 ;75(1):73-79. Stroke Engine ; 1994.
27. Ada L, Foongchomcheay A. Efficacy of electrical stimulation in preventing or reducing subluxation of the shoulder after stroke: A meta-analysis. Australian Journal of Physiotherapy. 2002;48:257-67.
28. Donabedian A. The quality of care. How can it be assessed? JAMA. 1988;260: 1743-17488.

© 2023 Fondop et al.; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

*Peer-review history:*

*The peer review history for this paper can be accessed here:*  
<https://www.sdiarticle5.com/review-history/102302>