

## Profile of users attended by dermatofunctional physiotherapy in a clinical school of Belém, Pará

### Perfil dos usuários atendidos pela fisioterapia dermatofuncional em uma clínica escola de Belém, Pará

Rainara dos Santos Monteiro<sup>1</sup> 

Ketiane Moura Bezerra<sup>2</sup> 

Thiffany da Costa Lima<sup>3</sup> 

Sidney de Assis da Serra Braga<sup>4</sup> 

<sup>1</sup>Corresponding author. Centro Universitário do Estado do Pará (Belém). Pará, Brazil. rainarasantos3@gmail.com

<sup>2-4</sup>Centro Universitário do Estado do Pará (Belém). Pará, Brazil. keti.ane@hotmail.com, thiffany220@gmail.com, sidneyserrabraga@gmail.com

**ABSTRACT | INTRODUCTION:** Dermatofunctional Physiotherapy acts on physical-aesthetic-functional dysfunctions resulting from pathologies, surgical procedures and / or sequelae that directly and indirectly affect the integrity of the integumentary system. **OBJECTIVE:** To analyze the clinical profile of patients treated at a Clinical School of Physiotherapy in Belém / PA who seek the dermatofunctional physiotherapy service. **METHODS:** This study is a descriptive, quantitative and retrospective analysis, performed through the analysis of medical records of patients in the area of physiotherapy in dermatofunctional. **RESULTS:** 140 medical records were evaluated, with the majority of patients being female, married and with a mean age of 36.77 years and sedentary. Regarding the psychological function, the patients declared to feel depressed and had a low self-esteem; the main complaint most found was localized adiposity and the most used resource in the visits was the 3 MHz therapeutic ultrasound. **CONCLUSION:** Through the present study it was possible to describe that in the dermatofunctional physiotherapy sector of the school clinic, the main complaint was aesthetics, the most treated dysfunction was localized adiposity and the most used resource was TUS and to guide the most prevalent complaints, since the demand for this specialty is growing. Thus, it is necessary to know the characteristics of the clinical profile of patients seen in the area and the different techniques used to treat dysfunctions.

**KEYWORDS:** Physical Therapy. Health profile. Esthetics.

**RESUMO | INTRODUÇÃO:** A fisioterapia dermatofuncional atua nas disfunções físico-estético-funcionais decorrentes de patologias, procedimentos cirúrgicos e/ou sequelas que afetem direta e indiretamente a integridade do sistema tegumentar. **OBJETIVO:** Analisar o perfil clínico dos pacientes atendidos em uma Clínica Escola de Fisioterapia de Belém/PA que procuram o serviço de fisioterapia dermatofuncional. **MÉTODOS:** Esse estudo trata-se de uma análise descritiva, quantitativa e retrospectiva, realizado através da análise prontuários dos pacientes da área de fisioterapia em dermatofuncional (CAAE 25678819.5.0000.5169). **RESULTADOS:** Foram avaliados 140 prontuários, sendo a maioria dos pacientes do sexo feminino, casados e com idade de média de 36,77 anos e sedentários. Em relação à função psicológica, os pacientes declaravam sentir-se deprimidos e estavam com a autoestima diminuída; a principal queixa mais encontrada foi a adiposidade localizada e o recurso mais utilizado nos atendimentos foi o ultrassom terapêutico de 3 MHz. **CONCLUSÃO:** Através do presente estudo foi possível descrever que no setor de fisioterapia dermatofuncional da clínica escola, a principal queixa foi estética, a disfunção mais tratada foi adiposidade localizada e o recurso mais utilizado foi UST e nortear quanta as queixas mais prevalentes, visto que, a procura por essa especialidade está crescendo. Dessa forma, faz-se necessário conhecer as características do perfil clínico dos pacientes atendidos na área e as diferentes técnicas utilizadas para o tratamento das disfunções.

**PALAVRAS-CHAVE:** Fisioterapia. Perfil de saúde. Estética.

## Introduction

Physiotherapy dermatofunctional every day has been occupying its space and gaining more followers, the first reports of physiotherapists working in the field of aesthetics were in the mid-70s, but only in the 90s did the first national scientific publications appear<sup>1</sup>. In Brazil this specialty was recognized by COFFITO through Resolution No. 362, of May 20, 2009 and it became more popular in the country due to the search for treatments that aimed, in addition to physical recovery, to improve health, well-being and self-esteem<sup>2,3</sup>.

The physiotherapist who works in this area has the duty to maintain and promote optimal physical function, also aiming at the well-being and quality of life of patients<sup>4</sup>. Addressing the physical-aesthetic-functional dysfunctions resulting from pathologies, surgical procedures and / or sequelae that directly and indirectly affect the integrity of the integumentary system<sup>5</sup>. Thus, this specialty is extremely important within physiotherapy, since its performance is not restricted only to aesthetics, but is of paramount importance in the reparative part.

THE physiotherapy performance dermatofunctional it is very wide and varied, both in the preventive and rehabilitation aspects, within the following sub-areas: dermatological dysfunctions, such as dermatoses, acne, rosacea; vascular dysfunctions, such as phleboedemas, lipedemas, lymphedemas; healing dysfunctions, such as burns, hypertrophic scars, keloids, dehiscences, adhesions, ulcers; aesthetic dysfunctions, such as fibroedema geloid (FEG), atrophic streaks, lipodystrophies; and post-operative reconstructive plastic surgery with or without lymphadenectomy, cosmetic plastic surgery and vascular surgery, among others<sup>6</sup>. Besides that in Guide to physical therapist practice, published by the North American Physiotherapy Association (APTA), it was clarified that physical therapy dermatofunctional it is an area referred to as responsible for maintaining the integumentary system as a whole<sup>7</sup>.

Previously aesthetic treatments were generally treated as empirical, physical therapy dermatofunctional brought the area, greater specialty and scientificity<sup>4</sup> which is emphasized by Tacani<sup>5</sup> when stating that physiotherapeutic resources, when used in a coherent way and based on the current scientific model, can improve several dysfunctions of the integumentary

system. In the bibliographic survey carried out by Milani<sup>3</sup>, it is concluded that there is a basis in the scientific literature to justify the choice of the various resources used in the pathologies encompassed by this area of physiotherapy. According to the authors, there is a need to expand the number of scientific researches, thus consolidating physical therapy dermatofunctional as a relevant area in the context of Brazilian health.

Knowing the profile of patients seen in the dermatofunctional physiotherapy sector is essential for students of the course and professionals, as it will allow for better planning in the development of conducts according to the characteristics and needs of patients. Given the above, the present study aimed to analyze the clinical profile of patients seen at a Clinical School of Physiotherapy in Belém/ PA seeking dermatofunctional physiotherapy service.

## Methodology

It is a descriptive, quantitative and retrospective analysis. The medical records of the patients seen were analyzed in the sector of Physiotherapy in Dermatofunctional from a school clinic in Belém do Pará, from August 2017 to September 2019. Data included in patients' portfolios were included medical records that presented incomplete data were attended to and excluded.

Data collection was carried out through the evaluation form made available through the electronic medical record Fisio Office which is the system available at the Physiotherapy school clinic, which contains information about the evaluation form and the evolution of each patient. Variables such as: age, sex, marital status and skin color, the main reason for demand (main complaints), the life habits, psychological function and the physiotherapy resources used in the consultations. This study was approved by the Research Ethics Committee of the University Center of the State of Pará (CAAE 25678819.5.0000.5169). The data obtained were stored in a spreadsheet of the Microsoft Excel program, version 2013 and subsequently the descriptive statistical analysis was performed in the Epi Info™ program, representing percentages calculation, measures of central tendency (means) and dispersion measures (standard deviation).

## Results

155 records of patients undergoing physical therapy treatment were evaluated, 15 of these records were excluded due to incomplete data, and 140 remaining records were used what expressthe following sociodemographic characteristics that are presented in Table 1, where the information related to sex, age, marital status and skin color are listed. Qu characterized the sociodemographic profile with a mean age of 36, 77 (SD  $\pm$  12.14) years, where 113 (80.7%) were female and 27 (19.2%) male. Regarding marital status, they were single 35 (25%), married 77 (55%), divorced 19 (13.5%) and widowers 9 (6.4%), regarding skin color 71 (50.7%) they were brown.

**Table 1.** Record of characteristics sociodemographic

Variables	Mean (standard deviation)	N (%)
<b>Age (years)</b>	36, 77 $\pm$ 12.14	-
<b>Sex</b>		
Feminine	-	113 (80.7%)
Male		27 (19.2%)
<b>Marital status</b>		
Single		35 (25%)
Married		77 (55%)
Divorced / Separated	-	19 (13.5%)
Widowed		9 (6.4%)
<b>Skin color:</b>		
White		46 (32.8%)
Parda	-	71 (50.7%)
Black		16 (11.4%)
Yellow		7 (5%)

Source: Research data, year 2019.

Regarding life habits, it was possible to observe that the analyzed medical records were sedentary 89 (61.2%), non alcoholics 91 (65%) and non-smokers 109 (77.8%). Of these patients, they used medications 78 (55.7%) (Table 2).

**Table 2.** Record of life habits

Variables	No°	(%)
<b>Physical activity</b>		
Yes	51	36.4%
Not	89	61.2%
<b>Alcoholism</b>		
Yes	49	35%
Not	91	65%
<b>Smoking</b>		
Yes	31	22.1%
Not	109	77.8%
<b>Medicines</b>		
Yes	78	55.7%
Not	62	44.2%

Source: Research data, year 2019

About psychological function of patients who sought physical therapy dermatofunctional, was verified to thenalise at "How do you feel" variables that 52 (37.1%) reported feeling saddened and what about "Self-esteem" 65 (46.4%) with decreased self-esteem. When asked if they had any limited activity due to their pathology, they answered no 96 (68.5%) (Table 3).

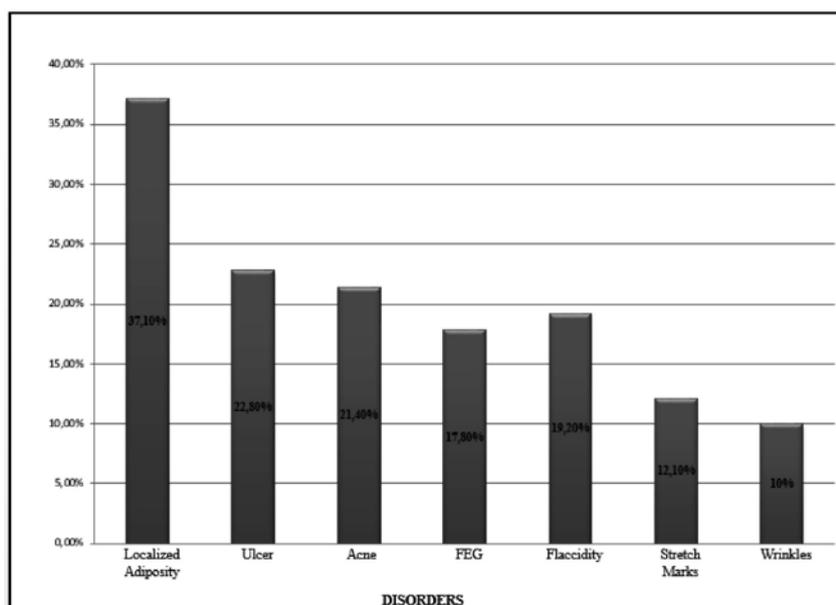
**Table 3.** Psychological function

Variables	Mean (standard deviation)	N (%)
<b>Psychological function (How it feels)</b>	-	
Feel joyful		21 (15%)
Feel anxious		41 (29.2%)
Feel sad		52 (37.1%)
Feeling depressed		26 (18.5%)
<b>Psychological function (Self-esteem)</b>	-	
Increased self-esteem		23 (16.4%)
Decreased self-esteem		65 (46.4%)
Normal self-esteem		43 (30.7%)
<b>Limited activities</b>	-	
Yes		44 (31.4%)
Not		96 (68.5%)

Source: Research data, year 2019.

Among the main dysfunctions found and described in the medical records the data referring to the main complaints and physiotherapy treatments proposed in the area of dermatofunctional physiotherapy. Seven types of dysfunctions were found: localized adiposity, wrinkles, FEG, ulcer, flaccidity, stretch marks and acne. Regarding the main complaints, the following results were observed: localized adiposity was the biggest reason for seeking service with 51 (37.10%), followed by ulcer 31 (22.80%), acne 29 (21.40%), flaccidity 26 (19.20%), FEG 24 (17.80%), stretch marks 16 (12.10%), wrinkles 14 (10%). It is also observed that 51 (37.10%) of patients who seek the physiotherapy service due to complaints of localized adiposity, Yet 89 (61.2%) they do not perform even one type of physical activity, (Figure 1).

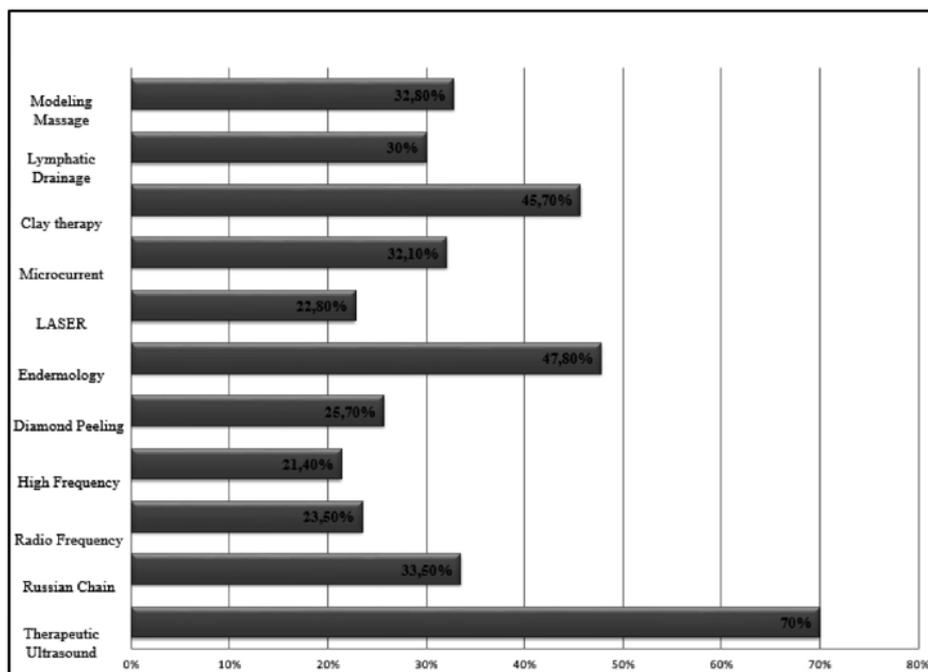
**Figure 1.** Graph referring to the analysis of the main reason for treatment Dermatofunctional.



Source: Research data, year 2019.

Figure 2 shows the characteristics of the services sought and performed by the patients. As to the reason that led them to seek the physiotherapy service dermatofunctional, it was observed that most patients reported aesthetic complaints. That way with regard to the type of resources most frequently carried out, it was noted that the most used in care was therapeutic ultrasound (TUS) 98 (70%), can be used isolated or associated with more procedures. It was also observed that the endermology resource was used by 66 (47.80%) followed by: clay therapy 63 (45.70%), russian chain 45 (33.50%), modeling massage 45 (32.80%), microcurrent 44 (32.10%), lymphatic drainage 42 (30%), diamond peeling 35 (25.70%), radio frequency 32 (23.50%), LASER 31 (22.80%), high frequency 29 (21.40%).

Figure 2. Graph referring to the most used resource analysis



Source: Research data, year 2019.

## Discussion

When analyzing the data collected in the clinical records, it was observed that the prevalence of patients attended was female 80.7%, although the service is offered for both sexes, this prevalence may be due to the standard of beauty imposed by society, in which the lean, slim and fat-free pattern prevails added to body image dissatisfaction<sup>8,9,10</sup>.

The main reason that led patients to seek the physical therapy service dermatofunctional referred to the aesthetic complaint, with adiposity being 37.10% the biggest reason for looking for service. Corroborating the findings of Torres et al.<sup>4</sup>, who in their research showed that 47.50% of respondents reported aesthetic complaints, with 43.75% of these complaints indicating more than one dissatisfaction and 33.7% of this dissatisfaction was related to localized adiposity. Flaccidity of the skin, excess body fat and FEG cause functional and emotional problems, leading to a decrease in self-esteem, which may be interfering in interpersonal relationships, impacting the quality of life of women<sup>11</sup>.

In this research, 37.10% of the patients sought the service with the main complaint of localized adiposity, in contrast 61.2% did not perform physical activity. Physical activity is an important factor for maintenance and loss of body weight, with the benefits of controlling the metabolic rate, improving sleep quality, reducing anxiety and stress levels, in addition, physical exercises together with low-calorie diets promote decreased body fat and increased lean mass, while physical inactivity is an important risk factor for obesity<sup>12,13,14,15</sup>.

During data analysis regarding psychological function it was noticed that patients who sought care reported feeling saddened and with diminished self-esteem, partially corroborating the study by Skopinski et al.<sup>16</sup> carried out with women in the post-menopausal period attended at the physiotherapy service dermatofunctional, in which, most of the sample showed dissatisfaction with their body image and presented symptoms suggestive of depression.

Ulcer treatment was the second most sought after complaint, in the physiotherapy sector dermatofunctional from the clinic, demonstrating a characteristic of the profile of patients who are attended at the school clinic in this specialty. The result of the present study differs from other studies where the main search for physiotherapy treatment dermatofunctional was related to lymphedema<sup>6,17</sup>.

Several studies have shown male vulnerability to chronic and serious illnesses, noting that men are more susceptible to poorly controlled chronic illness and external causes such as trauma resulting from accidents<sup>18</sup>. Notwithstanding Rogenski and Santos<sup>19</sup> observed in their study carried out at the University Hospital of USP a male dominance for both the group with and without ulcer 52.4 and 56.6%, respectively. Result equal to that obtained in the present study, in which there was a higher prevalence in males for complaints of ulcers and the author also observed that the age of patients with ulcers ranged from 22 to 95 years.

Among the resources available to physiotherapy dermatofunctional, the 3.0 MHz therapeutic ultrasound stands out in this study, as the most used resource in localized adiposity. In the study by Texeira et al.<sup>20</sup> carried out with 27 sedentary women, it was observed that the use of 3 MHz ultrasound, in continuous mode, showed results in reducing the adiposity of the infra-abdominal region, when associated with lipolytic assets or used in isolation.

Treatment with 3 MHz ultrasound is indicated for superficial tissues, while 1MHz ultrasound is indicated for deep tissues, which can be associated with phonophoresis, introduction of active ingredients through the skin using ultrasound<sup>21,22</sup>. Among its physiological effects, vasodilation, increased membrane permeability, neovascularization, increased metabolism and increased extensibility of collagen fibers stand out<sup>21</sup>.

The second most used resource was endermotherapy, which consists of a therapeutic technique that uses a device that allows a double synergistic action of aspiration and dermal mobilization, where negative suction pressure is used, associated with the roll exerted by the rollers present in the head, in addition, it has the physiological effects of vasodilation, improves oxygenation and tissue nutrition, improves the lymphatic system and helps eliminate toxins<sup>23</sup>. In this study, it was noted that 47.80% of therapists used endermotherapy, justly because it is a resource that contributes to the treatment of localized adiposity, acting on adipose tissue, vascular and lymphatic structures, stimulating and transforming fat into glycerol so that it is absorbed by the circulation and eliminated by the body, in addition to promoting the remodeling of fat cells and improvement of body contour<sup>3,24</sup>.

Filippo and Júnior<sup>25</sup> in their clinical study evaluated the safety and effectiveness of a technique that combines four different technologies: ultrasound, radiofrequency, Light Emitting Diodes (LEDs) and endermology, in 21 women aged between 24 and 39 years, it was possible to notice a reduction in 2.85 cm in the measure of the abdominal circumference and an average of 6.83 in the degree of the rating of satisfaction with the treatment, with endermology being a technique well used in patients with complaints of localized adiposity, which can also be associated with ultrasound.

The third most used resource was clay therapy and, according to the study by Toyoki and Oliveira<sup>26</sup>, this is a treatment that has numerous benefits to the health and aesthetics of the skin, such as improving blood circulation, promoting the removal of toxins, toning, nutrition of the skin. skin, in addition to presenting antiseptic, healing, anti-inflammatory, exfoliating/ moisturizing properties, it is also noteworthy that each clay has its particularity with regard to therapeutic purposes. Exist various types of clay: white, yellow, red, pink, black and green, this is due to several minerals in its composition such as: aluminum, iron, magnesium, silicon and among others which are responsible for their coloring and each of these substances will give therapeutic action to the clay<sup>27</sup>.

## Conclusion

Through this study it was possible to describe that in the dermatofunctional physiotherapy sector of the school clinic, the main complaint was aesthetics, the most treated dysfunction was localized adiposity and the most used resource was TUS and guide as the most prevalent complaints, since, the demand for this specialty is growing. Thus, it is necessary to know the characteristics of the clinical profile of patients seen in the area and the different techniques used to treat dysfunctions.

## Author contributions

Monteiro RS participated in the conception, design, search and statistical analysis of the research data, interpretation of the results, writing of the scientific article. Bezerra KM participated in the data collection of the research and writing of the scientific article. Lima TC participated in the data collection of the research and writing of the scientific article. Braga SAS guided the study and participated in the writing. All authors participated in the critical review of the manuscript for content.

## Competing interests

No financial, legal or political conflicts involving third parties (government, companies and private foundations, etc.) have been declared for any aspect of the submitted work (including, but not limited to grants and funding, participation in advisory council, study design, preparation of manuscript, statistical analysis, etc.).

## References

1. Paiva PCB, Castro P, Andrade GM, Coutinho BG. Levantamento do perfil dos pacientes e tratamentos mais utilizados em uma clínica de dermato-funcional em pelotas-rs. *Revista Campo do Saber*. 2018;4(6):25-30.
2. Conselho Regional de Fisioterapia e Terapia Ocupacional de Rio de Janeiro. Definição Fisioterapia [Internet]. 2018. Disponível em:<http://www.crefito2.gov.br/fisioterapia/definicao/--32.html>
3. Milani GB, João SMA, Farah EA. Fundamentos da Fisioterapia Dermato-Funcional: Revisão de literatura. *Rev Fisioter Pesqui*. 2006;13(1):37-43. doi: [10.1590/fpusp.v13i1.76159](https://doi.org/10.1590/fpusp.v13i1.76159)
4. Torres JS, Ibiapina LC, Ferreira LHM, Moura RO, Carvalho KC. Perfil dos usuários atendidos pela fisioterapia dermato-funcional em Teresina/PI. *Fisioter Bras*. 2014;15(2):84-88. doi: [10.33233/fb.v15i2.318](https://doi.org/10.33233/fb.v15i2.318)
5. Tacani RE, Campos MSMP. A fisioterapia, o profissional fisioterapeuta e seu papel em estética: Perspectivas históricas e atuais. *Rev Bras Cienc Saúde* 2004;2(4):46-9.
6. Tacani PM, Machado AFP, Tacani RE. Perfil clínico dos pacientes atendidos em fisioterapia dermatofuncional na clínica da universidade municipal de São Caetano do Sul-USCS. *Rev Bras Ciên Saúde*. 2009;7(21):36-41. doi: [10.13037/rbcs.vol7n21.300](https://doi.org/10.13037/rbcs.vol7n21.300)
7. Leite CBS, Sousa ML, Zaramella SA, D'afonsêca A. Atuação do fisioterapeuta dermatofuncional e seu reconhecimento pela classe médica. *Rev Inspirar Mov Saude*. 2013;5(1):1-4.
8. Tacani PM, Tacani RE, Machado AFP, Peroni AE, Silva MA, Freita JOG. Perfil clínico de pacientes atendidos em fisioterapia assistencial à cirurgia plástica: análise retrospectiva. *ConScientiae Saúde*.2013;12(2):290-297. doi: [10.5585/conssaude.v12n2.4276](https://doi.org/10.5585/conssaude.v12n2.4276)
9. Tacani PM, Machado AFP, Souza DAA, Tacani RE. Efeito da massagem clássica estética em adiposidades localizadas: estudo piloto. *Rev Fisioter Pesqui*. 2010;17(4):352-7. doi: [10.1590/S1809-29502010000400013](https://doi.org/10.1590/S1809-29502010000400013)
10. Pinto MCCC, Pereira LP, Bacelar IA. O uso do ultrassom no tratamento de lipodistrofia localizada–revisão de literatura. *Revista Saúde em Foco*. 2018, (10): 485-495.
11. Silva RMV, Cavalcanti RL, Rego LMF, Nunes PFL, Meyer PF. Efeitos do Kinesio Taping® no tratamento do Fibro Edema Gelóide: Ensaio clínico controlado randomizado e cego. *MTP&RehabJournal*. 2014;12: 261-278.
12. Kenney WL, Wilmore JH, Costill DL. *Fisiologia do esporte e do exercício*. 5.ed. São Paulo: Manole; 2013.
13. Schweitzer V, Claudino R. Importância da atividade física durante o processo de envelhecimento. *Efdeports*. 2010;14(141):1.
14. Fonseca-Junior SJ, Sá CGAB, Rodrigues PAF, Oliveira AJ, Fernandes-Filho J. Exercício físico e obesidade mórbida: uma revisão sistemática. *Arq Bras Cir Dig*. 2013; 26(Supl 1):67-73. doi: [10.1590/S0102-67202013000600015](https://doi.org/10.1590/S0102-67202013000600015)
15. Freire RS, Lélis FLO, Fonseca Filho JA, Nepomuceno MO, Silveira MF. Prática regular de atividade física: estudo de base populacional no Norte de Minas Gerais, Brasil. *Rev Bras Med Esporte*. 2014;20(5):345-9. doi: [10.1590/1517-86922014200502062](https://doi.org/10.1590/1517-86922014200502062)
16. Skopinski F, Resende TL, Schneider RH. Imagem corporal, humor e qualidade de vida. *Rev Bras Geriatr Gerontol*. 2015;18(1):95-105. doi: [10.1590/1809-9823.2015.14006](https://doi.org/10.1590/1809-9823.2015.14006)
17. Tacani PM, Arcas CS, Silva FFD, Carasco M, Machado AFP, Tacani RE. Perfil dos pacientes atendidos em fisioterapia dermatofuncional. *Fisioter Bras*.2016;14(5):351-356. doi: [10.33233/fb.v14i5.417](https://doi.org/10.33233/fb.v14i5.417)

18. Sousa RG, Oliveira TL, Lima LR, Stival MM. Fatores associados à úlcera por pressão (UPP) em pacientes críticos: revisão integrativa da literatura. *Univ Ci Saúde*. 2016;14(1):77-84. doi: [10.5102/ucs.v14i1.3602](https://doi.org/10.5102/ucs.v14i1.3602)
19. Rogenski NMB, Santos VLCG. Estudo sobre a incidência de úlceras por pressão em um hospital universitário. *Rev Latino-am Enfermagem*. 2005;13(4):474-80. doi: [10.1590/S0104-11692005000400003](https://doi.org/10.1590/S0104-11692005000400003)
20. Teixeira CG, Chartuni JN, Sossai LS. Efeitos do ultrassom 3MHZ associado a ativos lipolíticos na adiposidade infraabdominal: Ensaio Clínico Randomizado. *Perspect Online Cienc Biol Saúde*. 2011;1(1). doi: [10.25242/8868112011515](https://doi.org/10.25242/8868112011515)
21. Borges FS. *Dermato-Funcional: Modalidades Terapêuticas nas disfunções estéticas*. 1.ed. São Paulo: Phorte; 2006.
22. Hoppe S, Marin MF, Simões NDP, Simionato G. Fonoforese na redução da adiposidade abdominal. *Rev Bras Terap e Saúde*. 2010;1(1):13-26. doi: [10.7436/rbts-2010.01.01.02](https://doi.org/10.7436/rbts-2010.01.01.02)
23. Costa PS, Mejia DPM. Efeitos fisiológicos da endermoterapia combinados a massagem modeladora no tratamento de gordura localizada na região do abdômen [monografia]. Goiânia: Faculdade Cambury; 2013.
24. Palma MR, Araujo MFS, Nakamura JYM, Silva BB, Najas CS, Pacagnelli FL et al. Ação da Endermologia no Tratamento da Lipodistrofia Localizada. *Colloquium Vitae*. 2012;4(especial):84-90.
25. Filippo AA, Salomão Júnior A. Tratamento de gordura localizada e lipodistrofia ginóide com terapia combinada: radiofrequência multipolar, LED vermelho, endermologia pneumática e ultrassom cavitacional. *Surg Cosmet Dermatol* 2012; 4(3):241-6.
26. Toyoki BK, Oliveira ACT. *Argiloterapia: levantamento dos constituintes e utilizações dos diferentes tipos de argila* [monografia]. São Paulo: Centro Universitário das Faculdades Metropolitanas Unidas; 2015.
27. Abel A. *Caracterização de argilas para uso em saúde e estética* [monografia]. Criciúma: Universidade do Extremo Sul Catarinense; 2009.