

# Plastic Fisio: Physiotherapeutic Care Website for Lipoabdominoplasty Patients Using Design Thinking and the Delphi Methods

## *Plastic Fisio: Website de cuidados fisioterapêuticos para pacientes de lipoabdominoplastia utilizando-se dos métodos design thinking e Delphi*

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### Abstract

**Introduction** Lipoabdominoplasty yields esthetic and functional benefits to the abdomen. Physical therapy plays a crucial role in the pre-, intra-, and postoperative managements. The present study aimed to develop and validate a website containing guidelines for physical therapy care for patients undergoing lipoabdominoplasty, aiding in recovery and promoting evidence-based health communication and education.

**Materials and Methods** The website development adopted the design thinking method, following its four stages, that is: *discover*, *define*, *develop*, and *deliver*. We conducted a literature review and retrieved articles published between 2014 and 2024 in Portuguese and English from the PubMed, LILACS, Cochrane, and PEDro databases.

**Results** Through the search strategy, 43 articles were found that met the inclusion criteria, of which 15 were mentioned in this study. The questionnaires applied to professionals and patients indicated the need for a reliable source on pre-, intra-, and postoperative care. During the development stage, the content of the “Plastic Fisio” website was validated using the Delphi method. In the delivery stage, we launched the website at under the address [www.plasticfisio.com.br](http://www.plasticfisio.com.br) and optimized its dissemination using search engine optimization (SEO) strategies. The e-book, an additional product of the professional master’s degree program, will be available for download on the website.

**Conclusion** We developed the “[plasticfisio.com.br](http://plasticfisio.com.br)” website to promote health education and communication. The website contains reliable information about physical therapy before and after lipoabdominoplasty, and it encourages patient autonomy and interaction with professionals. The project has potential for expansion and can serve as a model for digital health initiatives.

### Keywords

- health communication
- health planning
- lipoabdominoplasty
- physical therapy modalities
- postoperative care
- surgery, plastic

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## Resumo

### Palavras-chave

- cirurgia plástica
- comunicação em saúde
- cuidados pós-operatórios
- lipoabdominoplastia
- modalidades de fisioterapia
- planejamento em saúde

**Introdução** A lipoabdominoplastia proporciona benefícios estéticos e funcionais ao abdômen. A fisioterapia desempenha um papel fundamental no manejo dos pacientes no pré, intra e pós-operatórios. Este estudo tem como objetivo desenvolver e validar um *website* com orientações de cuidados fisioterapêuticos para pacientes de lipoabdominoplastia, para auxiliar na recuperação e promover comunicação e educação em saúde baseada em evidências.

**Materiais e Métodos** Para o desenvolvimento do *website*, adotou-se o método de *design thinking*, seguindo as fases de *descobrir*, *definir*, *desenvolver* e *entregar*. Realizou-se uma busca na literatura por artigos publicados entre 2014 e 2024, em português e inglês, nas bases de dados PubMed, LILACS, Cochrane e PEDro.

**Resultados** Com a estratégia de busca, foram encontrados 43 artigos que atenderam aos critérios de inclusão, sendo que 15 foram mencionados neste estudo. Os questionários aplicados aos profissionais e pacientes indicaram a necessidade de uma fonte confiável sobre cuidados pré, intra e pós-operatórios. Na fase de desenvolver, o *website* “Plastic Fio” teve seu conteúdo validado por meio do método Delphi e, na fase de entregar, o *website* foi lançado no endereço “www.plasticfio.com.br”, e sua divulgação foi otimizada com estratégias de otimização de ferramentas de busca (*search engine optimization*, SEO, em inglês). O *e-book*, produto adicional do mestrado profissional, será disponibilizado para *download* no próprio *website*.

**Conclusão** O *website* “plasticfio.com.br” foi desenvolvido para promover educação e comunicação em saúde, e oferece informações confiáveis sobre fisioterapia do pré ao pós-operatórios de lipoabdominoplastia, o que incentiva a autonomia dos pacientes e a interação com profissionais. O projeto tem potencial de expansão, e pode servir como modelo para iniciativas de saúde digital.

## Introduction

Lipoabdominoplasty is an increasingly popular procedure. Brazil ranks second worldwide in the number of plastic surgeries performed, according to the International Society of Aesthetic Plastic Surgery (ISAPS).<sup>1</sup> In addition to the esthetic benefits, lipoabdominoplasty aims to correct abdominal function and is a safe surgery.<sup>2</sup> However, as with any surgical procedure, there are potential risks and complications, including edema, seromas, and fibrosis. Physical therapy plays a fundamental role in patient recovery and in the effective management of these complications.<sup>3</sup>

The increased use of the internet to search for health information highlights the need for reliable sources. Social isolation during the coronavirus disease 2019 (COVID-19) pandemic has accentuated the transition to the digital world, reinforcing the significance of safe and accessible information.<sup>4,5</sup>

According to Ng et al.<sup>6</sup> and Martins et al.,<sup>7</sup> a preoperative consultation is essential to clarify doubts and establish clear communication, helping to align expectations and prevent frustration in the pursuit of unrealistic results. Moreover, this visit provides an opportunity to explain the procedure, discuss potential complications, and raise awareness about the general changes that may occur after surgery.

Quality information from ethical and scientifically-validated content can contribute to promote a safer and more

effective recovery in the postoperative period.<sup>8</sup> Based on these considerations, the present study aimed to contribute to the education and autonomy of patients undergoing lipoabdominoplasty and, consequently, to indirectly support healthcare professionals in achieving better outcomes.

## Objective

The current study aimed to develop and validate the content of a physical therapy website for patients undergoing lipoabdominoplasty.

## Materials and Methods

The present descriptive and exploratory study developed and validated the content of a website for physical therapy in patients undergoing lipoabdominoplasty, from preoperative planning to postoperative treatment. The study was developed at the Postgraduate Program in Science, Technology, and Management Applied to Tissue Regeneration at Universidade Federal de São Paulo (UNIFESP). The university's Research Ethics Committee approved the study on March 14, 2023 (project number 0989/2022, CAAE: 64516322.8.0000.5505).

The process of development of the website used the design thinking method, represented by the double-diamond diagram, following the *discover*, *define*, *develop* and *deliver* stages.<sup>9</sup>

During the discover stage, we conducted prior art and literature searches. The prior art search was conducted on the main internet search engines, such as Google, Yahoo, and Bing, as well as on the website of aforementioned professional master's degree program. In the literature search on the Medline, LILACS, Cochrane, and PEDro databases, we used search strategies with Health Sciences Descriptors/Medical Subject Headings (Descritores em Ciências da Saúde, DeCS, in

Portuguese/MeSH) presented in ►Table 1 to compile the evidence and scientific content on the topic. The eligibility criteria were publications from the last 10 years (from 2014 to 2024) in Portuguese or English on primary and secondary study designs, such as systematic reviews with or without meta-analysis, randomized or quasi-randomized clinical trials, guidelines, and technical standards, prospective or retrospective cohorts, and case series. The exclusion criteria were

**Table 1** Literature search strategies

Literature search strategies – Medline			
Strategy	Terms or combinations used	Number of retrieved articles	Number of selected articles
1	(Lipoabdominoplast* OR abdominoplast* OR dermolipectom* OR Lipectom* OR Aspiration lipectomy OR Suction Lipectomy OR Liposuction* OR lipoplast*) AND (Complication* OR seromas OR ecchymoses OR edema OR dehiscence OR necrosis OR epitheliolysis OR Scar OR healing OR Wound healing OR hypertrophic scarring) AND (drainage OR Manual Lymphatic Drainage OR Low-level laser therapy OR Low intensity laser therapy OR laser OR photobiomodulation OR exercise OR physical activity) AND abdom*	144	16
2	(Tape OR Taping OR lymphotape OR Lymph tape OR mechanical tape OR Plastic Surgery) AND (Mechanotherapy)	5	1
3	(Extracellular matrix) AND (Transduction Mechanical) AND (Myofibroblasts) AND (healing)	9	1
4	(eHealth OR Digital Health OR Telecommunication* OR telehealth OR telerehabilitation OR internet OR Website*) AND (physiothera* OR physical therapy) AND plastic surgery	16	3
Literature search strategies – LILACS			
Strategy	Terms or combinations used	Number of retrieved articles	Number of selected articles
1	(Lipoabdominoplasty OR abdominoplasty OR liposuction OR Lipectomy) AND (seromas OR ecchymosis OR edema OR dehiscence OR necrosis OR epitheliolysis OR Scar OR healing OR scar* OR Fibrosis) AND (Lymphatic Drainage OR Low-level Laser Therapy OR laser therapy OR photobiomodulation OR physical activity OR compression*)	5	2
2	(Tape OR Taping OR lymphatic tape OR lymphatic taping OR lympho taping OR mechanical tape) AND (Plastic surgery)	1	1
3	(Extracellular matrix OR Myofibroblasts) AND (healing)	7	0
4	(eHealth OR Digital Health OR Telecommunication* OR telehealth OR telerehabilitation OR internet OR Website*) AND (physiothera* OR "physical therapy) AND plastic surgery	1	0
Literature search strategies - Cochrane			
Strategy	Terms or combinations used	Number of retrieved articles	Number of selected articles
1	(Lipoabdominoplast* OR abdominoplast* OR dermolipectom* OR Lipectom* OR Aspiration lipectomy OR Suction Lipectomy OR Liposuction* OR lipoplast*) AND (Complication* OR seromas OR ecchymoses OR edema OR dehiscence OR necrosis OR epitheliolysis OR Scar OR healing OR Wound healing OR hypertrophic scarring OR Fibrosis) AND (drainage OR Manual Lymphatic Drainage OR Low level laser therapy OR Low intensity laser therapy OR laser OR photobiomodulation OR exercise OR physical activity OR Compressive garment ) AND abdom* AND postoperative NOT lymphedema	30	2

(Continued)

**Table 1** (Continued)

Literature search strategies – Cochrane			
Strategy	Terms or combinations used	Number of retrieved articles	Number of selected articles
2	(Tape OR Taping OR lymphotape OR Lymph tape OR mechanical tape OR Plastic Surgery) AND (Mechanotherapy)	2	0
3	(Extracellular matrix) AND (Transduction Mechanical) AND (Myofibroblasts) AND (healing)	0	0
4	(eHealth OR Digital Health*OR Telecommunication* OR telehealth OR telerehabilitation OR internet OR Website*) AND (physiothera* OR physical therapy) AND plastic surgery	3	0
Literature search strategies - PEDro			
Strategy	Terms or combinations used	Number of retrieved articles	Number of selected articles
1	Plastic Surgery, postoperative	12	1
2	Tape, Taping mechanical	15	0
3	Healing, plastic surgery	11	0
4	eHealth Digital Health	3	0

studies with samples including patients under 18 years old, animal studies, case-control studies, and case reports. We excluded duplicate studies or those not directly addressing the topic after reading their full texts.

Still in the discovery stage, we collected information by applying online questionnaires for health professionals to 5 plastic surgeons registered with the Brazilian Society of Plastic Surgery (Sociedade Brasileira de Cirurgia Plástica, SBCP, in Portuguese), 5 physiotherapists with 5 years or more of experience in treating patients undergoing plastic surgery procedures, and 10 invited patients, who had already undergone body plastic surgery, and these were the inclusion criteria.

The exclusion criteria were patients or professionals who no longer agreed to participate in the study after their inclusion without any harm, and those who did not fill out at least 50% of the questionnaire.

The purpose of the questionnaires was to capture experiences, perceptions, and challenges faced by these subjects regarding plastic surgery and communication between patients and professionals. ► **Table 2** shows the questionnaires. The data collected in the questionnaires were significant to guide the subsequent stages of the research.

The define and develop stages considered the results from the previous stage to develop the website. In the define stage, we entered the database results into the Zotero (free and open source) reference manager to eliminate duplicates. After reading the articles in full, we selected the studies to compose the website. At the same time, we analyzed the answers to the questionnaires to identify experiences and challenges. This data supported the development of the website content.

The develop stage used specialized support from a marketing professional, 2 information technology (IT) professionals, an advertising professional to create the logo, and a lawyer to address registration issues. The hiring was based on the best cost/benefit, references from previous work,

experience, and compliance with deadlines. In addition, all professionals signed a confidentiality agreement and helped with the development of the website, following the recommendations of Díaz-Martín et al.,<sup>5</sup> who state that the effectiveness of a digital health education tool depends not only on the quality of its content but also on its ease of use.

The website was designed to be a reliable source of information throughout the lipoabdominoplasty journey, with its content validated by the Delphi method. We developed the Delphi Method questionnaire based on a previous study by Chung et al.<sup>10</sup> and included instructions for filling out and returning the document.

On that occasion, we selected 11 specialists, including 5 plastic surgeons from SBCP with more than 5 years of experience in performing the liposuction procedure (with or without technologies such as laser, radiofrequency etc.) with abdominoplasty, and 6 physical therapists with more than 5 years of experience in the postoperative period of plastic surgeries, with a focus on the abdomen, and these were the inclusion criteria.

We excluded experts who did not fill out the questionnaire within 10 business days or those who did not participate in all the required rounds. Expert selection relied on non-probability convenience sampling.

We invited judges to provide opinions on the topic based on their knowledge and experience by filling out a questionnaire on Google Forms. ► **Table 3** shows the questions, divided into three stages.

The questionnaire collected responses from experts to validate the website content using the content validity index (CVI) and the Likert scale as follows: 4) totally adequate (TA); 3) adequate (A); 2) partially adequate (PA); and 1) inadequate (I). The purpose of the descriptive question was to obtain suggestions for website improvements.<sup>11</sup>

In the delivery stage, we finalized the website layout and completed content adjustments. The final version was

**Table 2** Questionnaire for patients and professionals

Questionnaire for patients
1- What is your level of schooling?
2- What is your profession?
3- How old are you?
4- What is your gender?
5- Which of these surgeries have you already undergone? (You can check more than one item.) <input type="checkbox"/> Abdominoplasty <input type="checkbox"/> Liposuction <input type="checkbox"/> Lipoabdominoplasty <input type="checkbox"/> Breast augmentation <input type="checkbox"/> Breast augmentation and liposuction <input type="checkbox"/> Breast augmentation and abdominoplasty <input type="checkbox"/> Breast augmentation + liposculpture + abdominoplasty <input type="checkbox"/> Mastopexy without prosthesis <input type="checkbox"/> Mastopexy with prosthesis
6- In what year did you undergo your plastic surgery?
7- Did you search the internet for information about the plastic surgery you underwent and pre- and postoperative care?
8- What were your sources of information? (You can check more than one item.) <input type="checkbox"/> Friends <input type="checkbox"/> Apps <input type="checkbox"/> Blogs <input type="checkbox"/> E-books <input type="checkbox"/> Family <input type="checkbox"/> Digital Influencers <input type="checkbox"/> Scientific article platforms <input type="checkbox"/> Health professionals <input type="checkbox"/> Social networks <input type="checkbox"/> Websites <input type="checkbox"/> I do not know
09- Did your doctor recommend postoperative treatment?
10- Have you undergone postoperative sessions?
11- Which professional performed your postoperative sessions?
12- In addition to your medical consultation, did you attend any visit or undergo preoperative assessment with another professional?
13- With which professional, other than the doctor, did you have a preoperative consultation or evaluation?
14- Did you perform any intraoperative care, using bandages, a procedure known as <i>taping</i> , at the end of your plastic surgery (in the surgical center or another hospital environment)?
15- Which professional performed the intraoperative taping procedure?
16- Have you prepared yourself financially for postoperative care sessions?
17- Did you know the significance of physical therapy in pre-, intra- and/or postoperative care?
18- If you were to undergo a new surgical procedure, would you like to have a reliable source of information on the internet about each step involved in your surgery?
19- If any topic has not been addressed in this questionnaire and you would like to contribute to this research, please leave your comments:
Questionnaire for healthcare professionals
01- How much experience do you have?
02- How long is your experience in cosmetic plastic surgery?
03- On a scale of 1 to 5 (with 1 being "never performed" and 5 being "very frequently performed"), how often do your patients undergo the following surgeries? <input type="checkbox"/> Abdominoplasty <input type="checkbox"/> Lipoabdominoplasty <input type="checkbox"/> Breast augmentation <input type="checkbox"/> Breast augmentation and liposuction <input type="checkbox"/> Breast augmentation and abdominoplasty

(Continued)

**Table 2** (Continued)

<input type="checkbox"/> Breast augmentation + liposculpture + abdominoplasty <input type="checkbox"/> Mastopexy without prosthesis <input type="checkbox"/> Mastopexy with prosthesis
04- Do your patients come to consultations with prior information about the procedures that will be performed?
05- Where do your patients report obtaining information about plastic surgery before, during, and after the procedure? (You can check more than one item.) <input type="checkbox"/> Friends <input type="checkbox"/> Apps <input type="checkbox"/> Blogs <input type="checkbox"/> E-books <input type="checkbox"/> Family members <input type="checkbox"/> Digital influencers <input type="checkbox"/> Scientific article platforms <input type="checkbox"/> Health professionals <input type="checkbox"/> Social networks <input type="checkbox"/> Websites <input type="checkbox"/> I do not know
06- How often do you consider this information to be reliable? <input type="checkbox"/> Often <input type="checkbox"/> Occasionally <input type="checkbox"/> Rarely <input type="checkbox"/> I do not know
07- In your clinical practice, when your patient comes with reliable information, does it encourage adherence to treatment?
08- What communication difficulties do you encounter when your patient comes with contradictory and/or inadequate prior information?
09- Do you have any reliable sources that you can recommend to your patients when seeking information on pre-, intra-, and postoperative care? If so, what would they be?
10- If there was a reliable source with physical therapy information about pre-, intra-, and postoperative procedures to guide patients, would you recommend it?
11- If any topic has not been addressed in this questionnaire and you would like to contribute to this research, please leave your considerations.

published at [www.plasticfisio.com.br](http://www.plasticfisio.com.br). The marketing professional and the researchers defined marketing strategies focusing on traffic management to promote and direct patients to the website.

## Results

During the discover stage, we did not find patient-oriented content matching the website's proposal. The literature search retrieved a total of 264 articles, and we randomly added 17 studies pertinent to our proposal. After screening the results, 43 studies met all our eligibility criteria (► **Fig. 1**), and 16 articles were used in the study.

Still in the discover stage, the questionnaire for patients, plastic surgeons, and physical therapists showed that they would appreciate a reliable source with physical therapy information about preoperative, intraoperative, and postoperative procedures. We excluded two of the five surgeons invited as they did not fill out the survey.

In the define stage, we planned the website content based on the literature search and the needs identified in the discover stage. ► **Table 4** shows the website content.

In the development phase, the website content was produced, concurrently with the development of the logo, which was created following the researchers' specifications,

including the color palette. To define the website name, we conducted a preliminary search on Google, Yahoo, and Bing using the terms *Plasticfisio* and *Plastic Fisio*, as well as on the website of the Brazilian National Institute of Intellectual Property (Instituto Nacional de Propriedade Intelectual, INPI, in Portuguese). After confirming the lack of registration of the brand *Plastic Fisio*, we selected it for our website.

The search for the domain for website registration was conducted on 'registro.br', with the terms *plasticfisio.com.br*, and on 'uolhost.uol.com.br', using *plasticfisio.com*. Both domains were available, and we acquired them.

We defined search engine optimization (SEO) with the traffic manager for good positioning on Google and other search engines. Moreover, we adopted some suggestions from the design thinking and Delphi questionnaires to ensure the scientific content and attractiveness of the website to the target audience. We defined keywords and searched for them on Google Trends and on the website 'answerthepublic.com' to understand the demand for the term *lipoabdominoplasty* in the last 12 months to guide and improve the content established in the define stage considering the marketing strategies.

At the end of the website development, expert judges evaluated and validated the content using the Delphi method. This validation relied on CVI, measuring the degree of



**Table 3** Delphi method questionnaire

Questions for expert judges
1. Objective: refers to the goals or purposes that one wishes to achieve by using the website.
1.1 Is it adequate for the needs of patients who wish to undergo lipoabdominoplasty?
1.2 If your answer was 'inadequate' or 'partially adequate', please justify it.
1.3 Are the preparation guidelines before lipoabdominoplasty adequate?
1.4 If your answer was 'inadequate' or 'partially adequate', please justify it.
1.5 Is the presentation of procedures of physical therapy care of patients during the intraoperative period adequate?
1.6 If your answer was 'inadequate' or 'partially adequate', please justify it.
1.7 Is the presentation of procedures of postoperative physical therapy care adequate?
1.8 If your answer was 'inadequate' or 'partially adequate', please justify it.
1.9 Although the website targets patients, do you consider it adequate that the content can be used in scientific environments in the healthcare sector?
1.10 If your answer was 'inadequate' or 'partially adequate', please justify it.
1.11 Does it adequately meet societal needs for planning and treating those who will undergo lipoabdominoplasty?
1.12 If your answer was 'no' or 'partially adequate', please justify it.
1.13 Suggestion to improve the objective item:
2. Structure and presentation: refers to the website presentation, such as general organization, structure, presentation strategy, coherence, and layout.
2.1 Does the website provide guidelines for adequate preoperative, intraoperative, and postoperative physical therapy care?
2.2 If your answer was 'no' or 'partially adequate', please justify it.
2.3 Are the messages presented clearly and objectively?
2.4 If your answer was 'no' or 'partially adequate', please justify it.
2.5 Is the information presented scientifically correct?
2.6 If your answer was 'no' or 'partially adequate', please justify it.
2.7 Is the website adequate for the proposed target audience?
2.8 If your answer was 'inadequate' or 'partially adequate', please justify it.
2.9 Is there a logical sequence in the proposed content?
2.10 If your answer was 'no' or 'partially adequate', please justify it.
2.11 Is the information well-structured in terms of agreement and spelling?
2.12 If your answer was 'no' or 'partially adequate', please justify it.
2.13 Does the writing style match the target audience's knowledge level?
2.14 If your answer was 'no' or 'partially adequate', please justify it.
2.15 Are the sizes of the fonts of the title and topic appropriate?
2.16 If your answer was 'no' or 'partially adequate', please justify it.
2.17 Are the images expressive and sufficient?
2.18 If your answer was 'no' or 'partially adequate', please justify it.
2.19 Suggestion to improve the structure and presentation section:
3. Relevance: refers to the assessment of the significance of the educational material
3.1 Do the topics portray key aspects that should be reinforced in the physical therapeutic care of lipoabdominoplasty patients?
3.2 If your answer was 'no' or 'partially adequate', please justify it.
3.3 Does the website propose that the user acquire knowledge about preoperative, intraoperative, and postoperative physical therapy care for lipoabdominoplasty?
3.4 If your answer was 'no' or 'partially adequate', please justify it.

(Continued)

**Table 3** (Continued)

3.5 Is the website suitable for use by professionals in educational activities for lipoabdominoplasty patients?
3.6 If your answer was 'no' or 'partially adequate', please justify it.
3.7 Suggestion to improve the relevance item:

agreement expressed by the judges' responses 4 and 3 to each item (►Fig. 2). In the deliver stage, the logo created by the advertising agency following the defined specifications was completed (►Fig. 3).

We delivered and published the "Plastic Físio" physical therapy website for lipoabdominoplasty patients at the electronic address [www.plasticfisio.com.br](http://www.plasticfisio.com.br) (►Fig. 4). We created an e-book based on the website (►Fig. 5), an additional product to the project, available via download on the website.

## Discussion

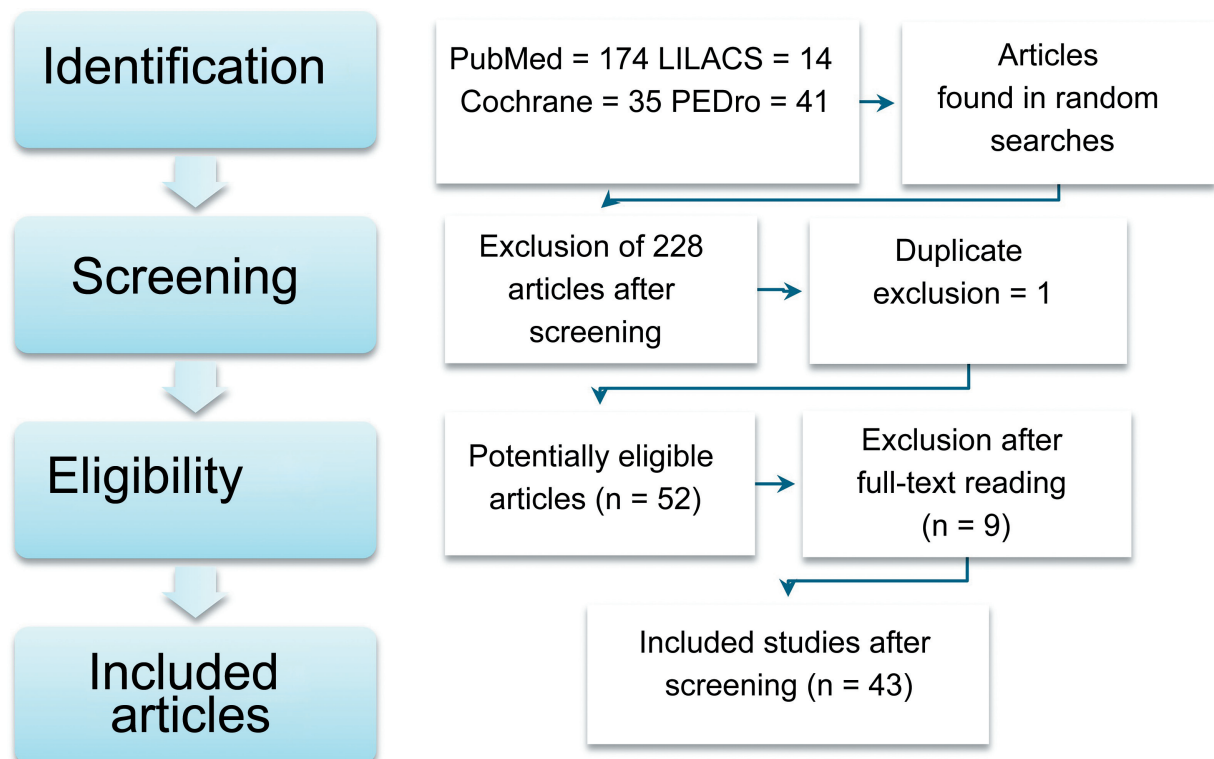
The content covers the entire patient journey, from the preoperative period to the postoperative follow-up, with a focus on physical therapy care, and it presents information on complication prevention and self-care.

The Delphi method was efficient in validating the content. This methodology collects expert opinions on a specific topic through questionnaires to achieve greater consensus among evaluators in its rounds.<sup>12</sup> In the current study, the overall CVI score was of 0.92, higher than the CVI described in the literature. We implemented some suggestions from experts,

such as the inclusion of demonstrative images and videos. However, we were unable to address issues such as the exact number of physical therapy sessions due to the lack of consensus in the literature.

Physical therapeutic care during the intraoperative (immediately after the end of surgery) and postoperative periods is essential to prevent complications and optimize physical and functional recovery.<sup>13</sup> "Plastic Físio" was designed to align with this premise, promoting adherence to treatment and improving the patient's experience in the surgical process. Santos et al.<sup>13</sup> highlighted that early care, starting in the preoperative period, reduces postoperative edema, bruising, and fibrosis formation, decreasing the number of physical therapy sessions required. This care enables a faster recovery in the postoperative period of abdominal surgeries by using manual lymphatic drainage, electrothermophototherapy resources, and/or taping in the operated area, among other methods.<sup>13,14</sup>

Data from the discover stage reinforces the significance of preoperative education and clear communication among physicians, physiotherapists, and patients. Patients participating in the survey expressed the need to access reliable

**Fig. 1** Flowchart of the review process for articles retrieved in the literature search.



**Table 4** Website content

Welcome
What is lipoabdominoplasty?
How is lipoabdominoplasty performed?
What is abdominal diastasis?
What is seroma?
Physical therapy
Why seek a physical therapist for lipoabdominoplasty care?
Preoperative physical therapy
Planning
What does the physical therapist do preoperatively?
Intraoperative physical therapy
What is taping?
What are the differences in their applications?
Postoperative physical therapy
What is manual lymphatic drainage?
Postoperative care is not lymphatic drainage alone
Therapeutic modalities
Photobiomodulation
Kinesiotherapy – therapeutic exercises

(Continued)

**Table 4** (Continued)

Mechanomodulator therapy
Belts and orthoses
Message from the authors
About the authors
References
Consulted sources

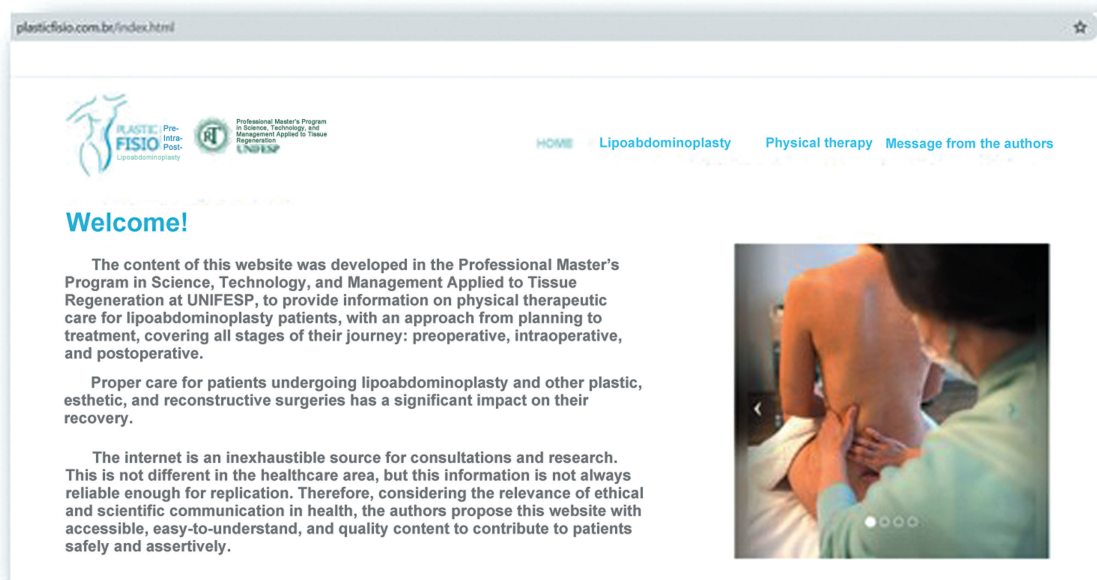

**Fig. 3** Logo for the "plasticfisio.com.br" website.

Questions	Items	Total sum of expert judges' answers	Sum of the number of judges' answers 3 and 4	Sum of the judges who answered 3 and 4	Individual CVI*
1.1	1	39	39	10	1
1.3	2	39	39	10	1
1.5	3	38	36	9	0.9
1.7	4	37	35	9	0.9
1.9	5	37	37	10	1
1.11	6	37	35	9	0.9
2.1	7	37	37	10	1
2.3	8	36	32	8	0.8
2.5	9	39	39	10	1
2.7	10	36	34	9	0.9
2.9	11	36	36	10	1
2.11	12	37	37	10	1
2.13	13	35	31	8	0.8
2.15	14	39	39	10	1
2.17	15	25	14	4	0.4
3.1	16	38	38	10	1
3.3	17	38	38	10	1
3.5	18	37	37	10	1
				Sum of individual CVI	16.6
Global CVI** 0.92					

\*Sum of items (3) and (4) divided by the 10 participating judges

\*\*Sum of individual CVIs divided by the 18 questions

**Fig. 2** Global and individual content validity index (CVI) results by expert judges through the Delphi method.



**Fig. 4** “Plastic Físio” website home page.



**Fig. 5** Cover of the e-book, an additional product to record the website content.

information online, avoiding the misinformation common on non-specialist websites, as described by Carvalho Júnior et al.<sup>15</sup> The e-book to supplement the website content and its availability on social networks expanded the reach of the information. Atiyeh et al.<sup>16</sup> pointed out that social media is

gradually crowding out plastic surgeons' practice websites and other traditional e-marketing platforms. The goal with “Plastic Físio” is to provide an informative and scientifically-validated product that is accessible and attractive to the general public.

## Conclusion

The development of the “plasticfisio.com.br” website aimed to promote communication and health education, providing an accessible and validated resource with reliable information about physical therapy before and after lipoabdominoplasty for patients seeking greater autonomy. However, we did not neglect the significance of encouraging stronger patient interactions with healthcare professionals, physical therapists, and plastic surgeons. This project has the potential of expanding physical therapy care to other surgeries, and it can be a model for future digital health education initiatives.

## Authors' Contributions

SSS: study conception and design, methodology, data collection, data analysis and/or interpretation, project management, final manuscript approval, writing – original draft, and writing – review & editing. ACM: data collection, data analysis and/or interpretation, and writing of the original draft; LMMA: data collection and data analysis and/or interpretation. VYS: conceptualization and supervision. DN: study guidance, supervision, validation, and final manuscript approval.

## Clinical Trials

None.

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### Conflict of Interests

The authors have no conflict of interests to declare.

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