Use of silicone finger prostheses in amputee patients: An integrative review

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INTRODUCTION

Human hands play important roles in functional movements performed by human beings, as well as, it is fundamental to interpersonal relationships within society. According to Atroshi and Rosberg,¹ finger amputation is the most incident, corresponding to 1.9 in 100,000 individuals.

However, in cases of crushing and severe lacerations in which microsurgical reconstruction by reimplantation is not advisable, finger rehabilitation with silicone prosthesis becomes a viable option to regain hope and make these patients feel comfortable in their social relationships, improvement in the psychological state with the development of personality, increased confidence and acceptance in society, besides recovering the esthetic and functional aspects of the lost limb.²⁻⁴

The finger prostheses can be constructed by several techniques (suspension with medical glue, vacuum,
osseointegrated implants, and mechanical attachment on fingers next to the stump). Considering aesthetics of finger prostheses, they must be made with good-quality silicones, that allow optimal reproduction of skin tone by means of extrinsic pigmentation, drawings of wrinkles, striations, and the characterization of fingernails in acrylic resin.3-8

Thus, for the rehabilitation to become usual, it is recommended to use the silicone technique, because it has higher esthetics, function and presents a low financial cost for the patient.9 With that in mind, this paper sought to conduct the first integrative review of the literature regarding the use of silicone finger prostheses in amputee patients.

MATERIAL AND METHODS

Research strategy and information sources
This research is an integrative review produced by following the methodological rigor described by Hermont et al.,10 which contribute to new investigations and clinical resolutions by professionals in the dentistry fields. The studies were analyzed critically according to: (i) Selection of the theme and hypothesis, (ii) Establishment of the inclusion/exclusion criteria of the studies; (iii) Information to be extracted from the articles; (iv) Evaluation of the quality of the studies; (v) Critical analysis of the results and their contributions; (vi) Capacity to produce scientific knowledge.

Guiding question
The central question was framed to address a study question based on population, interest, context:11 “What are the studies that have evaluated the use of silicone finger prostheses in amputee patients?”
- **Population** = Patient with the amputated finger
- **Interest** = Impact of silicone prosthesis
- **Context** = Rehabilitation of patients with finger prostheses.

Strategic search
The search strategy consisted of a bibliographic survey in PubMed, EMBASE (Excerpta Medica Database), Web of Science, Scielo (Scientific Electronic Library Online), and Cochrane Library databases, until July 2021. English terms used were “silicone” and “finger” and “rehabilitation” and “prosthesis.” The Boolean algorithm “AND” connected the search terms.

Data collection
Bibliographic searches were exported to the software EndNote Program™ version X7 (Thomson Reuters, New York, NY, USA) and the duplicates were removed. Review articles, clinical cases of limb rehabilitation, panels, short communications, technical notes, book chapter, in vitro studies, conference abstract publications, and letters to the editor were excluded. Clinical research and clinical articles related to silicone finger prostheses, articles in the English language and available in full were included. The papers were critically appraised in five important methodological steps:

- **a.** Exclusion of studies by title and abstract
- **b.** Systematic and critical analysis of the information contained in the clinical case reports
- **c.** Selection and extraction of data by two independent and calibrated researchers (coauthors F. I. D. C. and V. A. N.). In case of conflicting data and information, a third evaluator (coauthor M. F. H.) was requested
- **d.** Critical and systematic investigation of all references, searching for articles without keywords
- **e.** Data were classified according to the tool developed by Melynk and Fineout-Overholt that categorizes the levels of evidence as follows:12
  - I. Meta-analysis of controlled studies
  - II. Experimental design studies
  - III. Quasi-experimental design studies
  - IV. Experimental studies with nonexperimental design such as descriptive correlational and qualitative research or case studies
  - V. Case reports or data obtained systematically of verifiable quality or program evaluation data
  - VI. Qualitative studies
  - VII. Opinion of reputable authorities based on clinical competence or opinion of expert committees.

After careful analysis of the evidence levels, data were structured and sorted according to clinical findings on the rehabilitation of patients with silicone finger prostheses as shown in Table 1. To highlight the selected articles, they were grouped into themes for discussion.

Quality appraisal
Two evaluators (N coauthors F. I. D. C. and V. A.N.) assessed the quality of the studies, separately. Any disagreement was resolved through discussion with a third reviewer (coauthor M. F. H.). The Joanna Briggs Institute checklist was used for qualitative studies.13 Although there is no standard tool for assessing the quality of qualitative studies, this checklist proved to be effective for this type of analysis as described before.13,14 Studies were categorized according to the percentage of positive responses. The risk of bias was classified as high (when the study obtained 49% of “yes” responses), moderate (50% to 69% of “yes” responses), or low (70% of “yes” responses). The Effective Public Health Practice Project: Quality Assessment Tool
Table 1: Studies included in the integrative review about the rehabilitation of patients using silicone finger prostheses

| Author/year          | Country     | Sample  | Age  | Title of study                                                                 | Objective                                                                                                                                  | Clinical outcome                                                                                           | Study design/database |
|----------------------|-------------|---------|------|---------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------|-----------------------|
| Aduayom-Ahego et al., 2020 | Ghana      | Male: 0 Female: 1 | 25   | Prosthetic rehabilitation of multiple-digits amputations using silicone material in sub-Saharan African country Ghana | To describe the rehabilitation of a patient with multiple finger amputations in Ghana, West Africa                                            | Rehabilitation of multiple-digit loss using real silicone cosmetic finger prostheses. Regaining hope and be social comfortable | Level VI PubMed, EMBASE, Web of Science                           |
| Aggarwal et al., 2016 | India       | Male: 0 Female: 1 | 21   | Interdisciplinary approach for somatoprosthetic rehabilitation of a patient with clino-syndactyly and unusual dermatoglyphics | To report an interdisciplinary approach for somatoprosthetic rehabilitation of a patient with clino-syndactyly and unusual dermatoglyphics | The duplication of unusual dermatoglyphics made the prosthesis more realistic                             | Level VI PubMed       |
| Ahmad et al., 2013   | India       | Male: 0 Female: 1 | 21   | Comprehensive Rehabilitation of Partially Amputated Index Finger with Silicone Prosthesis | To describe a technique which eliminates the need for adhesive materials and utilizes copper wire to fabricate a finger ring as a primary means of retention | Restoration of both form and function. The custom-made prosthesis is esthetically acceptable, partially restores some degree of function, and is comfortable for patient resulting in psychological improvement with personality development. The patient was well satisfied with the prosthesis and was using it regularly | Level VI PubMed       |
| Asnani et al., 2015  | India       | Male: 1 Female: 0 | 23   | Rehabilitation of amputated thumb with a silicone prosthesis                     | To describe a simple technique for fabricating silicone finger prosthesis for a patient after an accident in childhood                | Silicone finger prostheses is comfortable improves function, has psychological advantage, and desirable cosmetic outcome | Level VI PubMed       |
| Aydin et al., 2007   | Turkey      | Male: 1 Female: 0 | 20   | Implant-retained digital prostheses with custom-designed attachments: A clinical report | To describe the use of osseointegrated implants with custom-designed attachments for retention of digital prostheses in a patient with traumatic amputation of 4 digits | Use of osseointegrated digital implants involves the same principles as facial implants. The patient must have a movable metacarpo-phalangeal joint to be able to achieve adequate function of the prostheses | Level VI PubMed, EMBASE |
| Baheti et al., 2014  | India       | Male: 0 Female: 1 | 51   | Finger prosthesis- an attempt to simulate divine creations: A clinical case         | To present the prosthetic rehabilitation of amputated fingers with a custom-made prosthesis fabricated using silicone elastomers and retained with the help of magnet | The custom-made finger prosthesis was aesthetically acceptable, partially restored some degree of functionality. Comfortable for patient’s use resulting in psychological improvement and her personal development | Level VI EMBASE       |
| Gaikwad et al., 2019 | India       | Male: 1 Female: 0 | 54   | Recreating the first digit with silicone prosthesis                               | To describe a straightforward technique for fabricating silicone thumb prosthesis for a patient with amputated thumb                   | Silicone thumb prosthesis for amputated thumb is a good alternative option for microsurgery which improves the normal functioning and gives life-like appearance to an individual | Level VI PubMed       |
| Goiato et al., 2009  | Brazil      | Male: 1 Female: 0 | 68   | Implant-retained thumb prosthesis with anti-rotational attachment for a geriatric patient | To present the use of a dental implant with an anti-rotational attachment for the retention of a thumb prosthesis | The implant-retained digital prosthesis presents some motor limitations, but its use allows the patient to return to normal life and achieve social interaction | Level VI PubMed, EMBASE |
| Goiato et al., 2012  | Brazil      | Male: 1 Female: 0 | 56   | Implant-retained finger prosthesis with modified retention system                 | To describe a simple technique for fabrication of implant-retained finger prosthesis with a modified base of the retention system | The prosthesis was made with silicone, and after osseointegration, it was installed without complications, leading to a patient satisfied with the end result and encouraged to return to social life. | Level VI PubMed, EMBASE, Web of Science                         |
| Author/year          | Country      | Sample          | Age   | Title of study                                                                 | Objective                                                                 | Clinical outcome                                                                 | Study design/database |
|---------------------|--------------|-----------------|-------|--------------------------------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------------------------------------------|----------------------|
| Goyal, Goel, 2014   | India        | Male: 1 Female: 0 | 28    | Prosthetic rehabilitation of a patient with finger amputation using silicone material | To describe the rehabilitation of a man whose ring finger was amputated following an RTA | Final prosthesis was found with adequate retention. The patient was satisfied with the aesthetic of the prosthesis | Level VI PubMed, EMBASE, Web of Science |
| Jacob et al., 2012  | India        | Male: 0 Female: 1 | 22    | Silicone Finger Prosthesis. A Clinical Report                                   | To present a case of rehabilitation of a finger defect with a silicone prosthesis and describe a method of retention for the same | There are many methods of retention such as implant and adhesives. An alternate method using both suction and vacuum was attempted and found to be quite successful | Level VI PubMed, EMBASE |
| Jain et al., 2016   | India        | Male: 1 Female: 0 | 25    | Three-part mold technique for fabrication of hollow thumb prosthesis: A case report | To describe a technique which helps in the fabrication of glove-type hollow thumb prosthesis using three-part mould technique | The thumb prosthesis helps in reduction in weight, easy packing of silicone material into the mold, and easy color customization at the knuckles area of the dorsal and ventral aspect of the prosthesis | Level VI PubMed |
| Kumar et al., 2012  | India        | Male: 1 Female: 0 | 42    | Finger Prosthesis with an Alternative Approach                                 | To present a case of finger prosthesis fabricated by a modified impression technique | The patient was highly appreciative of the social acceptance after he started wearing the finger prosthesis | Level VI PubMed |
| Kuret et al., 2018  | Slovenia      | Male: 20 Female: 22 | 17-70 | Adjustment to finger amputation and silicone finger prosthesis use             | To evaluate the adjustment to amputation and prosthesis use in patients after finger amputation | Silicone prostheses for finger amputation of the upper limb play an important role in the process of adaptation to amputation. They offer aesthetically satisfying results and alleviate social interactions, which influences overall quality of life | Level IV PubMed, EMBASE, Web of Science |
| Kuret et al., 2018  | Slovenia      | Male: 20 Female: 22 | 17-70 | Impact of silicone prosthesis on hand function, grip power and grip-force tracking ability after finger amputation | To describe the impact of silicone finger prostheses on hand function and gripping ability | A minimum improvement of hand function can be expected at best with silicone prostheses for finger amputation accompanied by a slight decrease in tip grip power | Level IV PubMed, EMBASE, Web of Science |
| Mehta et al., 2018  | India        | Male: 0 Female: 1 | 12    | Prosthetic rehabilitation of a partially amputated finger using a customized ring-wire substructure | To describe a cost-effective and simple approach of rehabilitation of a partially amputated finger with bulbous distal anatomy using a custom-made ring-wire substructure and maxillofacial silicone, thereby striking a balance between adequate retention and optimal esthetics | The finger prosthesis with custom-made ring-wire substructure was functionally adequate and esthetically acceptable by the patient. Even though there was a display of the wire on the lateral aspect of the index finger, the patient was highly satisfied with the appearance of the prosthesis | Level VI PubMed, Web of Science |
| Mehta et al., 2019  | India        | Male: 1 Female: 0 | 12    | Rehabilitation of missing digit using customized attachment supported prosthesis | To describe a novel method to achieve a secure prosthetic fit in patients where the residual finger stump is completely absent | Advantages of this customized attachment are as follows: cost-effective, easily customizable, improves functional ability, and provides a psychological advantage for patients who have lost a finger but do not have a residual stump | Level VI PubMed, Web of Science |

Contd...
Table 1: Contd...

| Author/year       | Country | Sample | Age | Title of study                                      | Objective                                                                                   | Clinical outcome                                                                                     | Study design/database |
|-------------------|---------|--------|-----|----------------------------------------------------|---------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------|-----------------------|
| O‘Farrell et al., 1996 | USA     | Male: 15 Female: 18 | 24-84 | Long-term follow-up of 50 duke silicone prosthetic fingers | To assess patient satisfaction with, and usage of, custom-made digital prostheses in the longer term | The success of prosthetic fingers depends largely on excellent primary surgery when fashioning the amputation stump, realistic goals of the surgeon and patient, careful patient selection, high manufacturing standards, and a follow-up facility which provides rapid efficient service for the patient’s lifetime | Level VI PubMed       |
| Raghu et al., 2013   | India   | Male: 1 Female: 0 | 65  | Esthetic finger prosthesis with silicone biomaterial | To describe a conventional method of finger prosthesis fabrication, with a new approach or modification of amputated fingers for better retention and comfort | The success of prosthesis depends on precision in planning, making the impression, carving the model and choosing the material that best suits the circumstances. Acceptance of prosthesis depends heavily on its ability to effectively represent the appearance and comfort. | Level VI PubMed       |
| Saxena et al., 2014 | India   | Male: 1 Female: 0 | 55  | Rehabilitation of Digital Defect with Silicone Finger Prosthesis: A Case Report | To describe a technique for the fabrication of made finger prosthesis with a silicone elastomer | With the availability of advanced technology and materials, it is possible to make a prosthesis that is made life-like. Well-fabricated finger prosthesis with good aesthetics greatly influences the psychology of the patient | Level VI PubMed, EMBASE |
| Thomas et al., 2017 | India   | Male: 1 Female: 0 | 22  | Osseo integrated finger prosthesis with a custom abutment | To report a case of Osseo integrated finger prosthesis with a custom abutment | Rehabilitation of defective finger by means of conventional and implant-retained artificial prosthesis improves patient’s confidence level to a great extent by improving the esthetic outcome. However, an implant-retained prosthesis showed more retentive and functional outcome in addition to esthetics. Whenever the residual bone quality and quantity is satisfactory its preferred to proceed with an osseointegrated prosthesis. | Level VI PubMed       |
| Tripathi et al., 2012 | India   | Male: 1 Female: 0 | 28  | A modified approach of impression technique for fabrication of finger prostheses | To show a simplified method to produce an accurate impression of partially amputated fingers | The procedure reduced the chances of voids as uniform pressure could be applied during insertion of the impression cap (filled with impression material) into the defected finger | Level VI PubMed       |
| Yadav, Chand, Jurel, 2016 | India   | Male: 0 Female: 1 | 21  | Rehabilitation of single finger amputation with customized silicone prosthesis | To describe a method to fabricate ring retained silicone finger prosthesis in a patient with partial finger loss | A simple method to fabricate ring retained finger prosthesis was attempted and found successful | Level VI PubMed       |

RTA: Road traffic accident

for Quantitative Studies was used for quantitative studies and the articles were scored as strong, moderate, and low as described by Costa et al. Data from the integrative review were converted into absolute (n) and relative (%) frequencies and analyzed by the statistical software R version 4.0.¹⁴
RESULTS

Initially, 152 original articles were obtained and, after removing all duplicates, 109 unique citations were retained. Then, the inclusion/exclusion criteria were established, identifying 23 studies that comprised the final sample, as shown in Figure 1. In relation to the level of scientific evidence, the studies were classified as level IV and VI.

It was possible to identify that 17.2% of the articles were published in the years 2012 and 2016, and 13.0% in 2014 [Figure 2a]. Most studies describing the rehabilitation with silicone prosthesis for fingers were developed in India (69.9%; n = 16) [Figure 2b]. The age of the rehabilitated patients ranged from 12 to 84 years, with a mean age of 38.1 years [Figure 2c]. Finally, most studies were indexed in PubMed 57.5% (n = 23) [Figure 2d].

Table 2 represents the methodological quality of the qualitative studies included in this integrative literature review. All the included articles presented low risk of bias, evaluated with 57.2% (n = 12) of yes and five studies reached the maximum score. Questions “4: Is there congruity between the research methodology and the representation and analysis of data?” “6: Is there a statement locating the researcher culturally or theoretically?” and “7: Is the influence of the researcher on the research, and vice versa, addressed?” were rated as not applied as they did not fit the type of study. Question nine rated negative.

The methodological quality of the quantitative articles is presented in Table 3. Studies scored with maximum values in categories of selection bias, blinding, and data collection methods.

DISCUSSION

This integrative literature review allowed to highlight studies that have rehabilitated patients with finger prostheses. Identifying such research becomes of fundamental importance since individuals rehabilitated by static or dynamic finger prostheses report an improvement in various functional movements, restoration of the appearance of naturalness, and significant changes in patients’ quality of life. Thus, profiles of patients wearing finger prostheses, the use of silicone to manufacture such prosthesis, the use of implant systems, retention devices, and their longevity will be discussed in this review.[17,18]

Profile of patients using finger prostheses

There was a proportionality between men and women with amputated fingers. Despite that, longitudinal studies show a prevalence of women rehabilitated with silicone finger prostheses.[2,3,19] This is justified by the fact that the absence of the limb can significantly interfere with women’s social interaction, femininity, and self-confidence, demonstrating
that in longitudinal studies the usability and clinical returns were preferentially by female patients.

The mean age of patients rehabilitated with silicone finger prostheses was 38 years, with a range of 12–84 years. Similar results were reported by Bamba et al.[20] in their systematic review of ring avulsion injuries and reaffirmed by Struckmann et al.[21] in their epidemiological studies of finger avulsion. The other significant factor observed in this study was the predominance of clinical case reports in India. The justification for such an incidence is due to the risks of accidents at work, in traffic, and in urban violence. These outcomes could be endorsed by Gupta et al., (2012) in which 26.2% of amputations were associated with accidents at work, as well as 27.8% of cases were related to urban violence and traffic.

### Table 2: Quality appraisal results: Qualitative studies

| Authors (year)       | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|----------------------|---|---|---|---|---|---|---|---|---|----|
| Aduayom-Ahego, 2020  | Yes | Yes | Yes | NA | Yes | NA | Yes | No | Yes |    |
| Aggarwal et al., 2016| Yes | Yes | Yes | NA | Yes | NA | Yes | Yes* | Yes |    |
| Ahmad et al., 2013   | Yes | Yes | Yes | NA | Yes | Yes | Yes | Yes* | Yes | Yes |
| Asnani et al., 2015  | Yes | Yes | Yes | NA | Yes | No | Yes | No  | Yes |    |
| Aydin et al., 2007   | Yes | Yes | Yes | NA | Yes | No | Yes | No  | Yes |    |
| Baheti et al., 2014  | Yes | Yes | Yes | NA | Yes | No | Yes | No  | Yes |    |
| Gaikwad et al., 2019 | Yes | Yes | Yes | NA | Yes | No | Yes | Yes* | Yes |    |
| Goiato et al., 2009  | Yes | Yes | Yes | NA | Yes | No | Yes | No  | Yes |    |
| Goiato et al., 2012  | Yes | Yes | Yes | NA | Yes | No | Yes | No  | Yes |    |
| Goyal, Goel, 2014    | Yes | Yes | Yes | NA | Yes | No | Yes | Yes* | Yes |    |
| Jacob et al., 2012   | Yes | Yes | Yes | NA | Yes | Yes | Yes | Yes* | Yes | Yes |
| Jain et al., 2016    | Yes | Yes | Yes | NA | Yes | Yes | Yes | Yes* | Yes | Yes |
| Kumar et al., 2012   | Yes | Yes | Yes | NA | Yes | Yes | Yes | Yes* | Yes | Yes |
| Mehta et al., 2018   | Yes | Yes | Yes | NA | Yes | No | Yes | Yes* | Yes | Yes |
| Mehta et al., 2019   | Yes | Yes | Yes | NA | Yes | No | Yes | Yes* | Yes | Yes |
| O’farrell et al., 1996| Yes | Yes | Yes | NA | Yes | No | Yes | No  | Yes |    |
| Raghu et al., 2013   | Yes | Yes | Yes | NA | Yes | No | Yes | Yes* | Yes |    |
| Saxena et al., 2014  | Yes | Yes | Yes | NA | Yes | No | Yes | No  | Yes |    |
| Thomas et al., 2017  | Yes | Yes | Yes | NA | Yes | No | Yes | Yes* | Yes |    |
| Tripathi et al., 2012| Yes | Yes | Yes | NA | Yes | No | Yes | Yes* | Yes | Yes |
| Yadav, Chand, Jurel, 2016| Yes | Yes | Yes | NA | Yes | NA | Yes | No  | Yes |    |

*Articles that presented only the letter of consent. NA: Not applicable,
1: Is there congruity between the stated philosophical perspective and the research methodology?, 2: Is there congruity between the research methodology and the research question or objectives?, 3: Is there congruity between the research methodology and the methods used to collect data?, 4: Is there congruity between the research methodology and the representation and analysis of data?, 5: Is there congruity between the research methodology and the interpretation of results?, 6: Is there a statement locating the researcher culturally or theoretically?, 7: Is the influence of the researcher on the research, and vice-versa, addressed?, 8: Are participant, and their voices, adequately represented?, 9: Is the research ethical according to current criteria or, for recent studies, and is there evidence of ethical approval by an appropriate body?, 10: Do the conclusions drawn in the research report flow from the analysis or interpretation, of the data?*

### Table 3: Quality appraisal results: Quantitative studies

| Authors (year) | Selection bias | Study design | Confounders | Blinding | Data collection methods | Withdrawals and drop-outs |
|----------------|---------------|--------------|-------------|----------|-------------------------|---------------------------|
| Kuret et al. (2016) | Strong        | Moderate     | Low         | Strong   | Strong                  | Moderate                  |
| Kuret et al. (2018) | Strong        | Moderate     | Low         | Strong   | Strong                  | Moderate                  |

**Use of silicone in finger prostheses**

Studies in this integrative review highlighted the use of silicone as the best material for the rehabilitation of missing fingers.[22–27] A study conducted in India by Kuret et al.[23] assessing the impact of silicone prostheses on the performance of motor functions in 42 patients showed that the use of the silicone-made prostheses showed higher scores in motor development, as well as in the satisfaction of their usability. Other studies corroborate such findings in India[17,28] and in Ghana.[9] Likewise, the use of silicone finger prostheses showed a statistically significant improvement in range of motion, gripping power, cosmetic benefits, and quality of life (psychological state) of patients who opted for this rehabilitation.[29]

**Rehabilitation with customized ring wire substructure in finger prosthesis**

The use of customized substructures for retention in silicone prosthesis for fingers was another important factor observed in this study. In this sense, a study conducted in India by Ahmad et al.[29] describing the use of a metal substructure for the retention of the silicone prosthesis, showed satisfactory results in relation to the improvement in the psychological state and personality of the patient, after 3-years follow-up. Similarly, the use of structures attached to the prosthesis allowed patients to reestablish self-confidence, function, esthetic sense of the amputated fingers, and the routine use of this artificial finger.[7,9,30]

**Implant-retained finger prosthesis rehabilitation**

The use of implant-retained silicone finger prostheses was also observed in this review. This device aims to promote retention and range of static and dynamic movement for the rehabilitated patient. Rehabilitation with a customized abutment (bone-integrated implant) provided the patient with superior retention compared to conventional prostheses, as well as safety in performing movements in India.[31] These results could be reaffirmed in Brazil by Goiato et al.[32] and Goiato et al.[33] and in Turkey by Aydin et al.[18] However, it was also observed that the high financial cost of installing bone-integrated implants was considered a limitation for its clinical use.

**Longitudinal use of finger prostheses**

In this context, rehabilitation using silicone finger prostheses has become a great option for patients, because...
they have been able to restore function and esthetics as demonstrated in longitudinal studies.

O’farrell et al.[19] evaluated the satisfaction and long-term use of custom-made prostheses in fifty prosthetic fingers. Their results showed that careful manufacturing, optimal installation, and longitudinal follow-up of these patients provide a better quality of life. Similarly, these findings could be reaffirmed by a 3-year follow-up clinical case report[29] and by cross-sectional studies.[2,3]

Partial study limitation
The inclusion of longitudinal clinical studies may be a partial limitation of this review, but they were necessary to expand our comprehension on the use of silicone finger prostheses. In addition, it was possible to identify what are the benefits that these prostheses provide to patients in addition to understanding their manufacturing technique.

CONCLUSION
Patients rehabilitated with silicone finger prostheses presented significant improvements in functional range of motion, restoration of self-esteem, and changes in quality of life. For this reason, new clinical research on the role and importance of silicone finger prostheses in amputee patients is needed, because the rehabilitation of these individuals is an important factor in functional capacity, providing psychological improvements, as well as promoting a more pleasant social interaction of rehabilitated patients.

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Conflicts of interest
There are no conflicts of interest.

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