

**Objectives:** Our aim was to verify the intra- and inter-rater reliability and agreement of SET measurements in the rectus femoris (RF), vastus medialis (VM), vastus lateralis (VL), tibialis anterior (TA), and gastrocnemius lateralis (GL) of post-COVID-19 participants who experienced moderate or severe infection.

**Methods:** This is an observational prospective study that evaluated 20 post-COVID-19 patients (10 males and 10 females), age:  $44.95 \pm 11.07$  years, weight:  $87.99 \pm 19.08$ kg, height:  $1.69 \pm 0.09$ m. Two independent raters took two evaluations using the SET on RF, VM, VL, TA and GL of the right lower limb in each participant. The intra-class correlation coefficient (ICC) and 95% limits of agreement defined the quality and magnitude of the measures.

**Results:** For intra-rater reliability, all measurements presented correlations classified as high or very high (ICC: 0.71-1.0). For the inter-rater reliability, rheobase, chronaxie, accommodation, and accommodation index presented high or very high correlations, except for the accommodation index of the GL (ICC=0.65), which was moderate.

**Conclusion:** The reliability of the SET obtained by independent raters was very high, except for the GL accommodation, which presented moderate ICC. Therefore, SET is a reliable tool for evaluating neuromuscular electrophysiological disorders in post-COVID-19 patients.

**Implications:** The SET test can be a reliable tool to assess NED in post-COVID-19 patients. Our results may improve understanding of peripheral NED assessment and thus guide treatment programs for post-COVID-19 patients.

**Keywords:** Chronaxie, Electrodiagnosis, Reliability

**Conflict of interest:** The authors declare no conflict of interest.

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## BIBLIOMETRIC ANALYSIS ON SCIENTIFIC PRODUCTION RELATED TO ADHERENCE OF PATIENTS WITH FOOT ULCER DIABETIC TO OFFLOADING RESOURCES

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**Background:** Diabetic foot is one of the main complications of diabetes mellitus, defined as the presence of ulcers, infection, or destruction of deep tissues of the feet and even by the loss of sensation affecting feet and legs. Diabetic foot ulcers (DFU) have a significant impact on quality of life, the capacity for walking. Reducing excessive mechanical stress is considered the cornerstone of treatment for neuropathic DFU. called offloading intervention which includes devices and footwears, to redistribute weight on the plantar face. Despite strong evidence support the efficacy of offloading devices, the effectiveness of the intervention depends on adherence from the patient to the treatment, an apparently underexplored subject in the scientific literature. Bibliometric analysis can be used to evaluate publications quantitatively and to predict future research directions.

**Objectives:** To identify and analyze current status of scientific production related to diabetic foot ulcer patient's adherence to offloading resources.

**Methods:** A bibliometric analysis of the publications was performed on publications from the main collection of the Web Of Science (WoS) database. The search was carried out in the "topics" field of advanced search, using the terms: cast, offloading, off-loading, off-loading device, offloading intervention, non-surgical offloading, ulcer\*, diabetic foot, adherence, and patient compliance. We exclude those publications in which adherence was not the dependent variable. The software VOSviewer Copyright © was used to analyze the journals, authors, institutions, countries, and keywords using standard bibliometric indicators. Data were organized in table, graph, and graph format.

**Results:** The search strategy used resulted in 64 documents that were reduced to 37 after manual analysis. 29 studies were published between the years 2014 and 2022, with the largest number of publications occurring in 2016 (n=6). More cited was "Activity patterns of patients with diabetic foot ulceration – Patients with active ulceration may not adhere to a standard pressure off-loading regimen" authored by David Armstrong, Lawrence Larvey, Heather Kimbriel and Andrew Boulton. The journal Diabetes Care had the highest number of publications. 134 authors have published on the subject of this review. The highest-ranked institution by number of publications was The University of Amsterdam. England, USA and Netherlands were the 3 top ranked countries by citation.

**Conclusion:** The findings of this study provided information about the trajectory of scientific publications on the subject over the years. The small number of publications on this subject indicates a gap in the scientific literature, providing insight into trends for future studies, considering that adherence directly impacts on the effectiveness of the intervention. In addition, publications found were in English and come from the northern hemisphere, so data from other regions is needed.

**Implications:** We believe that this study can be useful to professionals who are looking to understand the current status of publications on DFU patient's adherence to offloading devices and to point out its relevance as an emerging research subject.

**Keywords:** Diabetic foot, Revision, Offloading

**Conflict of interest:** The authors declare no conflict of interest.

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## BIBLIOMETRIC REVIEW ON THE SCIENTIFIC PRODUCTION RELATED TO THE ADHERENCE OF PATIENTS WITH DIABETIC FOOT ULCERS TO HEALTH CARE RESOURCES OFFLOADING

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**Background:** Diabetic foot (PD) is one of the main complications of diabetes mellitus, being characterized by the presence of ulcers, infection or destruction of deep tissues of the feet and even by the loss of sensitivity of that member in its carriers. Ulcerations can lead to a worse quality of life, because as an ulcer develops, mobility is compromised, requiring the reduction of mechanical loads on the site to favor healing of the lesion. A form of intervention called offloading has been used to redistribute weight on the soles of the feet. It is necessary to consider the factors that involve the patient's adherence to such treatment. However, the topic seems to be little

addressed in the literature. From a bibliometric review, it is possible to delimit an overview of publications and point out directions for research.

**Objectives:** To carry out a bibliometric review of the scientific production related to the adherence of patients with diabetic foot ulcers to offloading resources.

**Methods:** This is a cross-sectional and quantitative study. For the search and extraction of data, the Web Of Science (WoS) database was used. The search was carried out in the advanced search tab, using the "topics" field, with the terms: cast, offloading, off-loading, offloading device, offloading intervention, non-surgical offloading, ulcer\*, diabetic foot, adherence, and patient compliance. Articles in which adherence was only mentioned or not mentioned were excluded. For the analysis of the results, the software VOSviewer Copyright © was used. The data were organized in table, graph and graph format.

**Results:** The search strategy used resulted in 64 documents that were reduced to 37 after manual analysis. A total of 29 publications were made between 2014 and 2022, with the largest number occurring in 2016 (n=6). The most cited publication was "Activity patterns of patients with diabetic foot ulceration - Patients with active ulceration may not adhere to a standard pressure off-loading regimen" by David Armstrong, Lawrence Larvey, Heather Kimbriel and Andrew Boulton. The journal Diabetes Care had the highest number of publications. 134 authors published on the subject of this review. The University of Amsterdam institution was featured in publications. England, USA and Netherlands were the most cited countries.

**Conclusion:** The findings of this study provided information on the development of research on the subject over the years. The small number of publications on this topic indicates a gap in the scientific literature, pointing to the need for further studies, mainly to define how adherence to treatment will be measured. In addition, the publications found were in English and concentrated in the northern hemisphere, requiring data from other regions.

**Implications:** We believe that this study can be useful to professionals who are seeking to know the panorama of publications on adherence of patients with PD to offloading devices and understand its relevance as an emerging research topic.

**Keywords:** Diabetic foot, Revision, Offloading

**Conflict of interest:** The authors declare no conflicts of interest.

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## MONITORING THE SENSORY-MOTOR DEVELOPMENT OF RISK INFANTS

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**Background:** An infant at risk is one who may have impaired sensorimotor development due to risk conditions such as prematurity, low birth weight, neonatal distress, risk exposure during pregnancy.

**Objectives:** Evaluate, detect, and intervene early in the sensorimotor development of infants at risk.

**Methods:** Follow-up was carried out twice a week, in the Early Intervention Project for Infants (IPL), running since 2008 at the Federal University of Triângulo Mineiro, with 409 infants. For the present study, 307 infants were selected. As inclusion criteria were considered: diagnosis of risk at birth, assessment of motor development before starting physical therapy, and at least two reassessments up to 6 months of chronological age. The instrument used to evaluate the infants was "Assessment of the Neurosensory-motor Development of the Baby at Risk", which allows the assessment of muscle tone (MT); supine (PS), prone (PP), traction for sitting (TS), sitting with support (S) postures; primitive reflexes (PR); postural reactions (RPos); and, primary sensorimotor coordination (CSMP), from 20 to 180 days of postnatal life. In this assessment, a score different from zero indicates a risk for developmental delay, justifying the need for monitoring and early intervention. For intervention, infants were stimulated with colorful, sound toys of different sizes and textures. Caregivers received guidance during the service, and information leaflets with guidance on typical and atypical motor development, home stimulation, in addition to guidance through the project's social media on Instagram, Facebook, and WhatsApp groups of parents and caregivers. The project had the participation of residents and undergraduates in Physical Therapy.

**Results:** All 307 participants had a clinical diagnosis of risk at birth, mainly due to prematurity and low weight. The initial physiotherapeutic evaluation indicated alterations in 100% of the infants: 51.15% in muscle tone, 52.44% in the supine posture, 59.93% in the prone position, 57% in the tractioned posture for sitting, 56.02% when sitting with support, 43.97% in primitive reflexes, 59.28% in postural reactions, and, 42.02% in primary sensorimotor coordination. The age at which changes were most observed was between the 2nd and 4th month of chronological age, enabling the diagnosis and consequently early intervention. It is worth noting that during the health emergency period due to Covid-19, the monitoring of infants was carried out remotely through telemonitoring.

**Conclusion:** The results demonstrate evidence regarding pre, peri and post birth risks, the importance of detection and early intervention. Added to this is the important involvement of parents/caregivers following the guidelines for stimulation at home, in addition to the actions of residents and undergraduates who seek to improve the theoretical and practical knowledge of child health care.

**Implications:** The positive results arising from early intervention indicate the importance of having more health services with better trained and humanized professionals who serve this population, which can also contribute to the implementation of public policies to care for infants at risk and their families.

**Keywords:** Physiotherapy, Early Intervention, Infant

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