INTRODUCTION: The purpose of this bibliometric analysis was to describe trends in publication of the Journal of Prosthetics and Orthotics (JPO) over the past three years. We focused on publication patterns in the areas of article type, subject demographics, study details, component/intervention type, funding, and author training. The results of this analysis reflect current trends in publication in JPO.

METHOD: All articles published in JPO from 2009, 2010, and 2011 were included in the review; editorials written by the journal editor, as well as letters to the editor, were excluded. Two authors (RMM and ALL) would conduct the review and a third (MJH) would review in the event of any disagreement.

Six main domains were chosen: Article Listing Description, Article Type, Subject Demographics, Study Details, Funding, and Author Training. Each domain was then broken down into sub-categories from which selections were made.

Article Type: The option of an article being a survey was given for all article types.
Level of amputation/orthotic: Non-anatomic was selected if the article was a modeling study.
Subject Demographic: The option of non-anatomic was given for all sub-categories under this domain; this was selected if the article was based on a study with no human subjects, such as a modeling study.
Baseline Component: Used if the patient entered the study using a baseline component, either prosthetic or orthotic.
Component/Intervention type: The component or intervention used in the study (i.e. ankle-foot orthosis, C-Leg, physical therapy, etc.).
Degree Held: An author with multiple credentials could be listed as having more than one degree. For example, if an author held a PhD and a CPO, they would be given credit as having both an academic doctorate and being a clinician.
Other Information: This sub-category was used to document relevant information that did not fall into any other domain or sub-category.
Authors agreed a priori that reliability testing would be conducted until reliability reached >90%. Articles were then analyzed independently.

RESULTS: A total of 95 articles were reviewed. The majority (34.7%) were case study/reports/series and 33.7% were prospective studies. 68.4% of the articles reviewed were prosthetics-related and 27.4% were orthotics-related. The median age of orthotic subjects was 15.4y (interquartile range: 10.8–40.4y) while prosthetics studies reported a median age of 33y (interquartile range: 21–47.5y). Of 67 studies involving human subjects, the number of subjects ranged from 1 to 368 with a median of five. Trauma and diabetes/PVD/vascular comprised the two largest etiologies in prosthetics-related studies (27% and 19%, respectively). Thirty-eight percent (38%) of prosthetics studies and 35% of orthotics studies received external funding.

DISCUSSION: More than half of the articles (68%) in this three-year review contained prosthetics as the main topic. Such a trend may point to greater research interest in the field, with impetus toward publishing research results. In a year-by-year analysis, however, while orthotics related articles increased from 8 in both 2009 and 2010 to 10 in 2011, the number of prosthetics related articles increased from 2009 to 2010, then dropped in 2011.

Subject gender was more evenly distributed in orthotics related articles. In the prosthetics articles reviewed, males outnumbered females by a greater than 3:1 ratio.

CONCLUSION: This bibliometric analysis of the JPO reveals that greater prosthetic articles are published than are orthotic articles. The great majority of articles are of the case study/report/series classification. By age, subjects are not highly representative of the demographics of device users according to epidemiologic data. A similar issue is present regarding amputation etiology where more traumatically amputated subjects participate in research published in JPO. Regarding financial research support, it appears that the majority of prosthetic and orthotic research published in JPO is unfunded.

REFERENCES