

Prevalence of *Blastocystis* in Argentina: Review of scientific literature (1995-2014)

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Background

Blastocystis is considered an emerging parasite with a worldwide distribution. Developing countries have higher prevalence of parasite than developed countries. In Argentina, scientific research on *Blastocystis* has been conducted in spatially limited areas, showing heterogeneity in geographic and population distribution. These publications are scattered among numerous sources of information, making their access and visibility to the scientific community harder.

Objective

The aim of this study was to realize a review of scientific publications about prevalence of *Blastocystis* in humans of Argentina between 1995 and 2014.

Materials and Methods

- ✓ *Design of study:* non-experimental exploratory, retrospective, cross-sectional.
- ✓ *Period:* 1995 to 2014.
- ✓ *Area of study:* Argentina
- ✓ *Electronic search:* databases, virtual libraries and repositories: Cochrane-MEDLINE-PubMed-LILACS-SciELO-BIREME- REDALyC-DOAJ-SEDICI-PAHO.
- ✓ *Manual search:* printed journals.

- ✓ We have included publications with information of human infection with *Blastocystis* (as a single parasite and co-infected with other intestinal parasites).
- ✓ The papers were incorporated in a digital information system designed for this purpose using specific software (Visual@ 6.0, and Microsoft Access®).
- ✓ The spatial analysis of the data was performed with Geographic Information Systems (GIS) (ArcMap © v.10).

Results

✓ 91 papers selected which correspond to 140 data published on *Blastocystis*.

✓ Overall prevalence in humans: 34.7% with a heterogeneous distribution across the country (Figure 1 and Table 1).

✓ Annual prevalence of *Blastocystis* varied between 9.4% and 55% (Figure 2).

Table 1: Global Prevalence of *Blastocystis* in humans in Argentina according period of study (1995-2014).

Period	Prevalence (%)
1995 - 2004	30.9 %
2005 - 2014	36.6 %

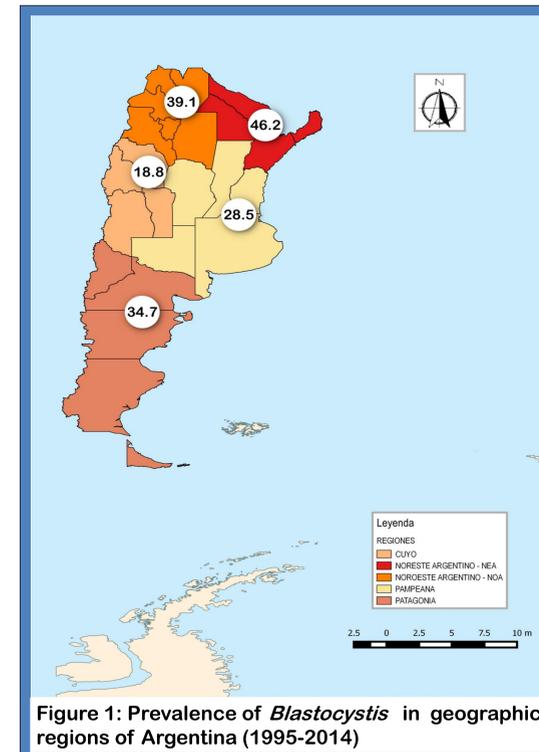


Figure 1: Prevalence of *Blastocystis* in geographic regions of Argentina (1995-2014)

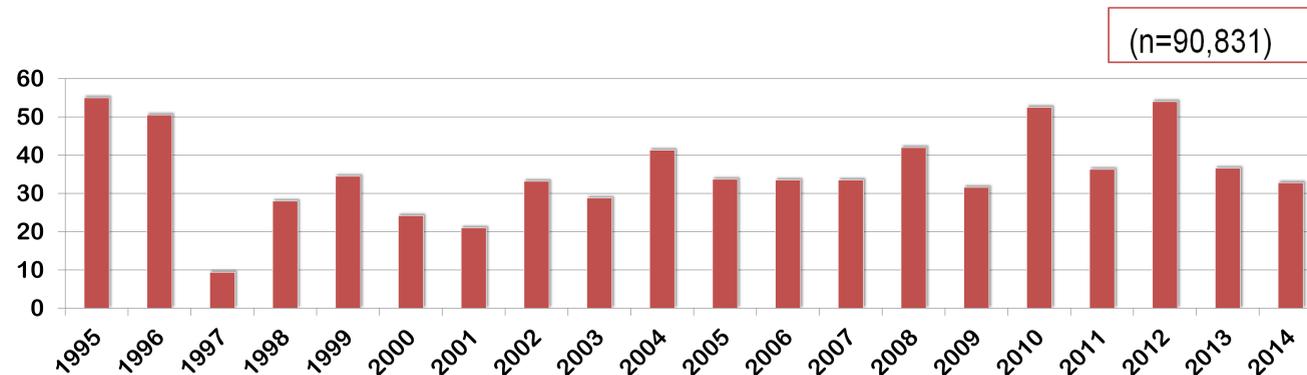


Figure 2: Annual prevalence of *Blastocystis* (%) in humans of Argentina, 1995-2014

Conclusion

The accumulated evidence has highlighted the importance of this parasite on human health. *Blastocystis* has been frequently detected in the population of Argentina during last two decades, with elevated prevalence rates in all regions of the country.

Summary

Blastocystis is considered an emerging parasite with a worldwide distribution. In Argentina, scientific research on this protist has been conducted in spatially limited areas, showing heterogeneity in geographic and population distribution. These publications are scattered among numerous sources of information, making their access and visibility to the scientific community harder. The aim of this study was to realize a review of scientific publications about prevalence of *Blastocystis* in humans of Argentina between 1995 and 2014. The study was conducted from a quantitative methodology perspective, with application of a non-experimental, retrospective, cross-sectional design analysis of the information. Electronic databases, virtual libraries and regional and institutional repositories were included (Cochrane, MEDLINE/PubMed, LILACS, SciELO, BIREME, REDALyC, DOAJ, SEDICI, PAHO). Manual search was done in printed journals. In total, 91 papers were obtained, which correspond to 140 data on *Blastocystis*. These publications surveyed 90,831 humans during last 20 years. According published works, the overall prevalence of *Blastocystis* in humans was 34.7% with a heterogeneous distribution across the country. The accumulated evidence in recent years has highlighted the importance of *Blastocystis* on human health. This parasite has been frequently detected in the population of Argentina, with elevated prevalence rates in all regions of the country.

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