



## Effects of environmental contaminants in inflammatory bowel disease: a systematic review

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## PUBLIC HEALTH

## The use of telehealth in pediatric occupational therapy

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**Introduction:** The need for an on-time assertive and specialized approach to pediatric clients of occupational therapy is growing. Not all children have access to on-time intervention, and some are not even identified as needing so. Engaging in web-based social communication groups/sites/pages, etc., either from parents [1], but also from colleagues provides, amongst other advantages/benefits: a) a way to bring the occupational therapy prevention /assessment/intervention to the children and their families; b) it is an effective and up-to-date manner of spreading the word about occupational therapy. There were identified some gaps/needs in pediatric occupational therapy intervention [2], mainly in babies population (0–24m), which were not identified/diagnosed with any specific issue/problem/concern. Although, when in daily routine, specific questions/doubts/concerns arise related mainly with routines, self-regulation and mother anxiety.

**Objectives/Goals:** Evidence the use of telehealth in pediatric occupational therapy and its potential; Evidence the role of the occupational therapist; Identify the main concerns/issues of the mothers who use the social media to obtain answers.

**Materials and methods:** There were 3 phases for this pilot study: Informal Contact Phase, Formal Contact Phase and Evaluation Phase. This pilot study abides by the Declaration of Helsinki. The formal contact phase sample size was of 57 participants. From the formal contact phase, only 31,5% passed to the Evaluation phase. The data collected, voluntarily and anonymously, in the Evaluation phase included: Age distribution, Formal contact issue, Feelings towards formal contact, Client Satisfaction, Recommendation to others, Hour of the day of the formal contact.

**Results:** The results revealed that 51% of respondents were mothers of babies between 0–12 months of age; mainly concerned about Daily Routines (56%), specially Feeding and Sleep. Over 55% felt Clarified and Supported, with 89% Satisfaction Rate and 94% Recommendation to others rate.

**Discussion and conclusions:** Clear evidence of the effectiveness of the use of Telehealth in Pediatric Occupational Therapy. Further needs rely on gathering a larger sample size, include geographical data collection and the need to share study results with the paediatric health professional community.

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### References

- [1] Benson S, Dimian A, Quest K, et al. Coaching Parents via Telehealth to Conduct Functional Analysis and Functional Communication Training for Challenging Behavior. [cited 2016Oct24]; Available from: <http://www.cehd.umn.edu/research/news/posters/2016/Benson.pdf>.
- [2] Lee JF, Schieltz KM, Suess AN, et al. Guidelines for Developing Telehealth Services and Troubleshooting Problems with Telehealth Technology When Coaching Parents to Conduct Functional Analyses and Functional Communication Training in Their Homes. *Behavior Analysis in Practice*. 2014;8(2):190–200. doi:10.1007/s40617-014-0031-2

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## Effects of environmental contaminants in inflammatory bowel disease: a systematic review

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**Introduction:** The Inflammatory Bowel Disease (IBD) is characterized by a chronic inflammation of the gastrointestinal tract and it has two important forms: Crohn's Disease and Ulcerative Colitis. Although the pathophysiology of the disease is mostly unknown, an interaction between the immune system, genetics, microbiome and environmental factors seems to be responsible for the disease onset. The role of environmental factors in the pathophysiology of this disease is reinforced if we consider the rapid growth in incidence and prevalence rates of IBD in areas where the incidence was previously low as, for example, Asia. However, the literature on the role of environmental factors in IBD is reduced and is not systematized. Hence, in this work a Systematic Review of the literature was performed.

**Materials and methods:** For this systematic review the methodology "Navigation Guide Method for Grading Human Evidence" was used [1]. The research was carried out in three databases (Scopus, Web of Science, PubMed / MEDLINE). The inclusion criteria used were: research articles with original human data, clinically diagnosed inflammatory bowel disease, quantification of environmental contaminants and study of the association between environmental contaminants and inflammatory bowel disease. Only articles written in Portuguese, English, French or Spanish were included.

**Results:** Sixteen studies were included in this systematic review. Of these, 13 studied Inflammatory Bowel Disease in general, 2 studies included only patients with Crohn's Disease and 1 study included only patients with Ulcerative Colitis. The most studied environmental contaminants were sulfur dioxide, nitrogen dioxide, carbon monoxide, particulate matter (PM), perfluorooctanoic acid, aluminum, iron, zinc, copper, titanium dioxide, silicates and endotoxins. We also identified different categories of studies, 4 studies on the effects of air pollution, 3 on the intake of contaminated water and 3 on the effects of diet. Additionally, 2 studies evaluated the serum concentrations of contaminants, 1 studied the impact of exposure to house dust, 2 attempted a cell characterization of IBD patients and in another colitis was induced. Overall, the quality of evidence was rated "moderate to low" and the strength of evidence as "Inadequate evidence on toxicity".

**Discussion and conclusions:** In this systematic review, we have identified different classes of environmental contaminants associated with IBD, but studies reporting their concentration in biological matrices are rare. Based on a moderate to low level of quality, the available evidence gathered in this Systematic Review is insufficient to access the role of environmental contaminants in inflammatory bowel disease. New epidemiological studies are necessary.

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## Reference

- [1] Woodruff TJ, Sutton P. The navigation guide systematic review methodology: A rigorous and transparent method for translating environmental health science into better health outcomes. *Environ Health Perspect.* 2014;122(10):1007–1014. doi:[10.1289/ehp.1307175](https://doi.org/10.1289/ehp.1307175)

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## Evolution of the prevalence and incidence of oral disorders in Portugal, 1990–2016: findings from the Global Burden of Disease 2016 Study

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**Introduction:** Oral disorders are highly prevalent worldwide and remain a major public health challenge [1]. In addition to the increasing burden associated with these disorders, there has been an increase in their direct treatment costs and productivity losses [2]. The Global Burden of Disease (GBD) Study goals are to provide up-to-date estimates for descriptive epidemiology, such as information on disease prevalence, incidence and severity, nationally and globally, since 1990 [1]. The aim of this study is to present the prevalence and incidence of oral disorders in Portugal since 1990.

**Materials and methods:** Data was retrieved from the GBD Study 2016, coordinated by the Institute for Health Metrics and Evaluation (IHME) and from national databases. Case definitions followed the WHO definitions for dental caries, periodontal diseases and severe tooth loss. Detailed methods are described elsewhere [1].

**Results:** Oral disorders are extremely prevalent in the Portuguese population since 1990, affecting 60% of the population.