

# ENVIRONMENTAL CONTAMINATION AND ITS IMPACT ON PREGNANCY FREQUENCY IN ESTUARY OF SANTOS AND SÃO VICENTE, SÃO PAULO, BRAZIL

**Mariana Guimarães**, *University of São Paulo Faculty of Medical Sciences, Brazil*

**Michele Cunha**, *Catholic University of Santos, Brazil*

**Tatyana Ribeiro**, *Catholic University of Santos, Brazil*

**Daniele Carvalho**, *University of São Paulo Faculty of Medical Sciences, Brazil*

**Alfésio Braga**, *University of São Paulo Faculty of Medical Sciences, Brazil*

**Luiz Alberto Pereira**, *University of São Paulo Faculty of Medical Sciences, Brazil*

**Background and Aims:** There are many sources of pollution like capital goods industries, port terminals and open air dump sites in the region of Santos and São Vicente Estuary. Heavy metals, organochlorine pesticides, polychlorinated biphenyl, dioxins and furans are stood out within toxic substances found in this region that are deleterious to health and cause mostly effects on reproductive system. The aim of this study was to evaluate occurrence of pregnancy in these contaminated areas comparing to a non contaminated area (control).

**Methods:** We adopted a cross sectional study. A structured and pre-tested questionnaire was applied to 820 families in each one of the five studied areas: four of them in the Estuary region and one in a control area without evidences of environmental contamination but with the same socioeconomic profile of the contaminated ones. We estimated the proportion of pregnant, controlling to important fertility risk factors (time of exposure in the area, occupational exposure, use of alcohol and tobacco), in those areas and tested differences among them and the control area using the Fisher's exact test and adopting a significance level of 5%. This study is part of a wide project which aims to estimate the effects to health associated to environmental contaminants exposure in the Santos and São Vicente Estuary Region.

**Results:** We found a significant association between living in contaminated areas in three of four areas and decrease of pregnancy percentage. Area 2 (Cubatão) 26,2% (133), Area 3 (São Vicente) 30,7% (125), Area 4 (Guarujá) 30,9% (141) compared to control area (Bertioga) 38,4% (128).

**Conclusions:** This study shows enough evidence in reducing number of pregnancies in contaminated areas and reinforces the necessity of deepening additional studies in the region of the Santos and São Vicente Estuary.