

# International Comparisons of Mortality from Diabetes Mellitus and Other Cardiometabolic Disorders in The Ontopathogenic Model

Goudochnikov V.I.\*

Member of ISOAD, PhD in Biochemistry, Santa Maria – RS, Brazil.

**\*Corresponding Author:** Viktor I. Goudochnikov, Rua Matoso Camara 73, Bairro Menino Jesus, CEP 97050-500, Santa Maria RS, Brazil.

**Received Date:** 20 December 2022; **Accepted Date:** 30 December 2022; **Published date:** 06 January 2023.

**Citation:** Goudochnikov V.I., (2023). International Comparisons of Mortality from Diabetes Mellitus and Other Cardiometabolic Disorders in The Ontopathogenic Model. Journal Endocrine System and Diabetes. 2(1). DOI: 10.58489/2836-502X/002.

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## Abstract

Previously we have studied relative morbidity and mortality in Southern region of Brazil, and recently we have compared these parameters with epidemiologic indices of Argentina and Chile. In the present work we have used the database of World Health Organization (WHO), in order to perform direct comparisons of relative or proportional mortality caused by diabetes mellitus and other cardiometabolic disorders in Argentina and 3 European countries: Spain, France and United Kingdom (UK), during the two chronologic periods: 2008-2010 and 2011-2013. It was shown that age-related dynamics of relative mortality from hypertensive disorders was similar in the countries evaluated, however the patterns of such dynamics for diabetes mellitus and ischemic heart diseases were different in Argentina, as compared to 3 European countries evaluated. On the other hand, the calculation of feminine fraction of mortality has shown in all the 4 countries evaluated significant masculine predominance in mortality caused by hypertensive disorders and ischemic heart diseases in the intermediate age categories, as well progressive increase in feminine fraction of relative mortality, beginning from the age category 50-59 years, thus confirming our earlier proposal about accelerated aging of women with the onset of menopause. It is concluded that ontopathogenic model should be elaborated further by means of analyzing different databases including that of WHO, via international comparisons in various regions of the world.

**Keywords:** relative mortality, cardiometabolic disorders, accelerated aging

**Abbreviations:** AR - Argentina ES – Spain, FR – France, ICD-10 – International Classification of Diseases, version 10 UK – United Kingdom, WHO – World Health Organization

## Introduction And Methodology

Previously we have studied relative morbidity and mortality in Southern region of Brazil [1] and recently we have compared these parameters with epidemiologic indices of Argentina and Chile [2]. In the present work we have used the database of World Health Organization. ([http://apps.who.int/healthinfo/statistics/mortality/who\\_dpms/](http://apps.who.int/healthinfo/statistics/mortality/who_dpms/)), in order to perform direct comparisons of relative or proportional mortality [3] caused by diabetes mellitus and other cardiometabolic disorders in Argentina and three European countries: Spain, France and United Kingdom (UK) during the two chronologic periods: 2008-2010 and 2011-2013. The codes of International Classification of Diseases, version 10 (ICD-10) is presented on descriptions of

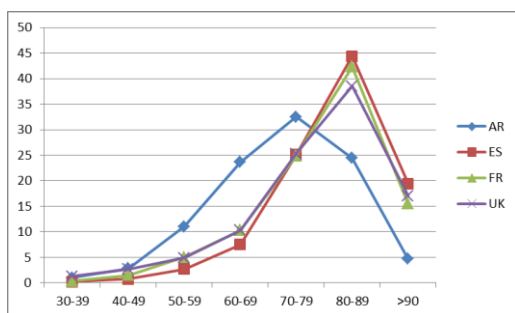
the figures that contain arithmetic means of mortality in each 3-year period.

## Results

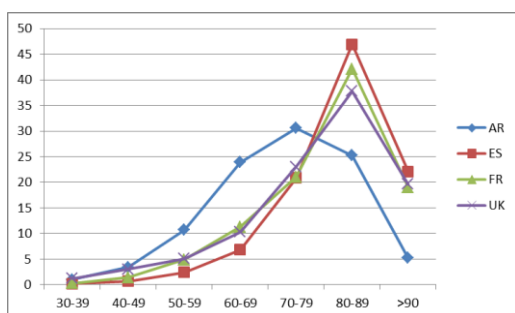
It was shown that age-related dynamics of relative mortality for hypertensive disorders was similar in the countries evaluated (fig. 3 and 4), however the patterns of such dynamics for diabetes mellitus and ischemic heart diseases were different in Argentina, as compared to three European countries evaluated (fig.1,2 and 5,6). On the other hand, the calculation of feminine fraction of mortality has shown in all the 4 countries studied the significant masculine predominance of mortality caused by hypertensive disorders and ischemic heart diseases in the intermediate age categories, as well as progressive increase in feminine fraction of relative mortality

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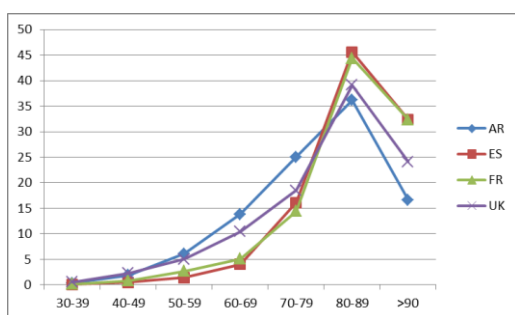
caused by all 3 cardiometabolic disorders, beginning from the age category of 50-59 years (Fig.7-12), thus confirming our earlier proposal about accelerated aging of women with the onset of menopause [4].



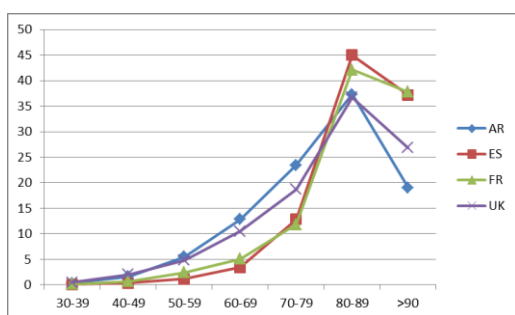
**Fig 1:** Relative mortality (in percent of total) from diabetes mellitus (E10-E14) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2008-2010.



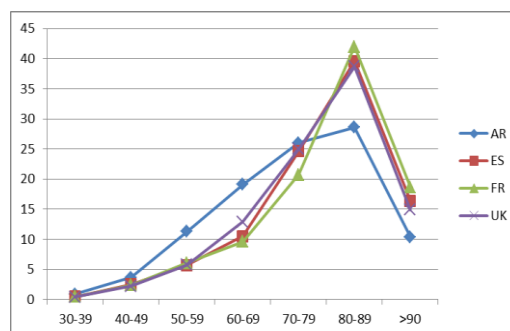
**Fig 2:** Relative mortality (in percent of total) from diabetes mellitus (E10-E14) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2011-2013.



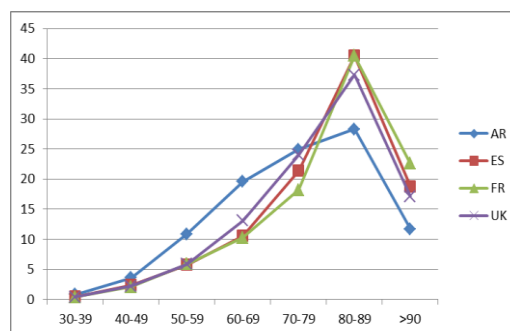
**Fig 3:** Relative mortality (in percent of total) from hypertensive disorders (I10-I15) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2008-2010.



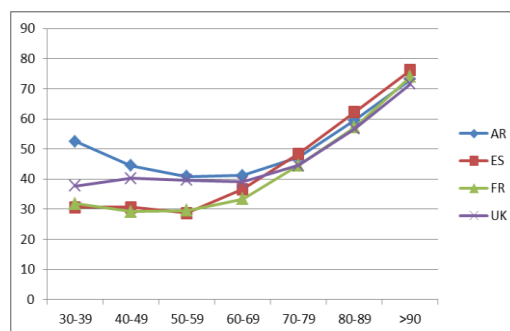
**Fig 4:** Relative mortality (in percent of total) from hypertensive disorders (I10-I15) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2011-2013.



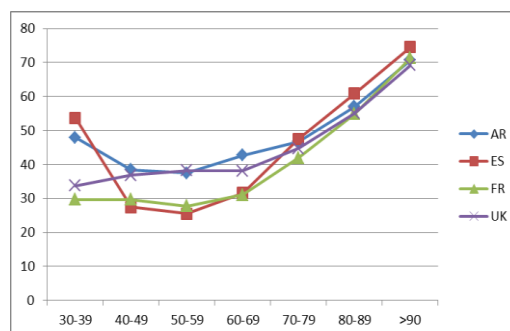
**Fig 5:** Relative mortality (in percent of total) from ischemic heart diseases (I20-I25) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2008-2010.



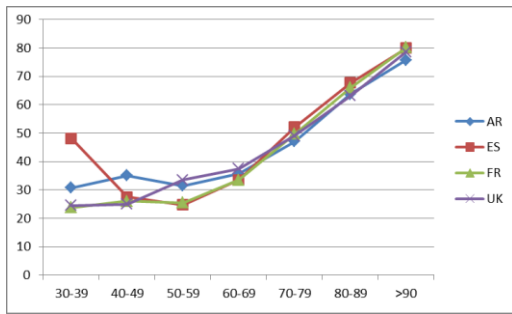
**Fig 6:** Relative mortality (in percent of total) from ischemic heart diseases (I20-I25) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2011-2013.



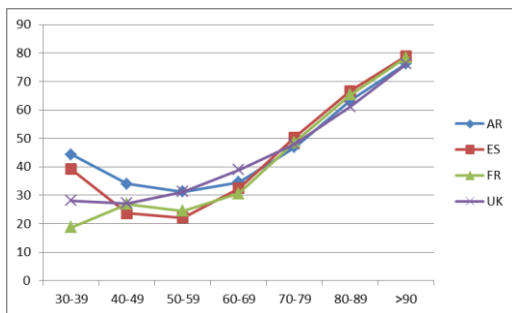
**Fig 7:** Feminine fraction of relative mortality (in percent of total) from diabetes mellitus (E10-E14) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2008-2010.



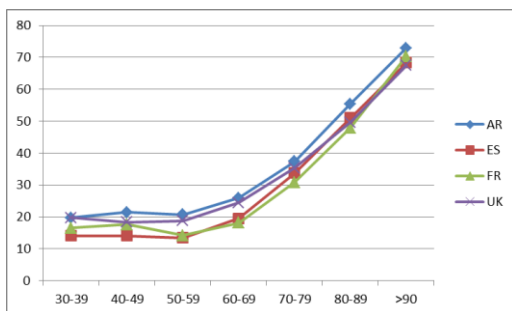
**Fig 8:** Feminine fraction of relative mortality (in percent of total) from diabetes mellitus (E10-E14) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2011-2013.



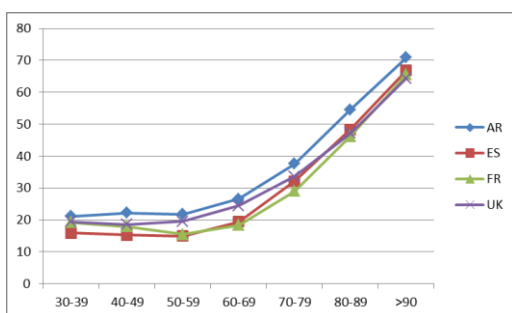
**Fig 9:** Feminine fraction of relative mortality (in percent of total) from hypertensive disorders (I10-I15) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2008-2010.



**Fig 10:** Feminine fraction of relative mortality (in percent of total) from hypertensive disorders (I10-I15) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2010-2013.



**Fig 11:** Feminine fraction of relative mortality (in percent of total) from ischemic heart diseases (I20-I25) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2008-2010.



**Fig 12:** Feminine fraction of relative mortality (in percent of total) from ischemic heart diseases (I20-I25) in Argentina and 3 European countries (Spain, France, UK) at various decades of age (in years) during chronologic period 2010-2013.

**Conclusion**

It can be concluded that ontopathogenic model [5] should be elaborated further by means of analyzing the different databases including that of WHO, via

international comparisons in various regions of the world.

**Acknowledgement**

This work was published in abstract form in Portuguese in the Annals of 22. Congresso Brasileiro de Geriatria e Gerontologia, held in virtual form online on 4-6 March 2021

(<http://www.cbgg2021.com.br/>).

**Conflict Of Interest**

The author affirms that conflict of interest does not exist.

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