

From the Department of Public Health Sciences
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NOVEL METHODS FOR DOSE-RESPONSE META-ANALYSIS

Alessio Crippa



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NOVEL METHODS FOR DOSE-RESPONSE META-ANALYSIS

THESIS FOR DOCTORAL DEGREE (Ph.D.)

By

Alessio Crippa

Principal supervisor:

Associate Professor Nicola Orsini
Karolinska Institutet
Department of Public Health Sciences

Opponent:

Professor Christopher H. Schmid
Brown University
Center for Evidence Based Medicine, School of
Public Health

Co-supervisor:

Professor Alicja Wolk
Karolinska Institutet
Institute of Environmental Medicine

Examination board:

Associate Professor Nele Brusselaers
Karolinska Institutet
Department of Microbiology, Tumor and Cell
Biology

Professor Matteo Bottai
Karolinska Institutet
Institute of Environmental Medicine

Associate Professor Antonio Gasparrini
London School of Hygiene and Tropical Medicine
Department of Social & Environmental Health
Research

Professor Donna Spiegelman
Harvard T.H. Chan School of Public Health
Department of Epidemiology

Professor Paul Lambert
University of Leicester
Department of Health Sciences

“Dedication text.”

—Author’s name, *Source*

Abstract

My abstract:

In Paper I,

In Paper II,

In Paper III,

In Paper IV,

In Paper V,

In conclusion,

List of publications

- I. Alessio Crippa, and Nicola Orsini
Multivariate dose–response meta-analysis: the dosresmeta R Package
Journal of Statistical Software, Code Snippets 2016; 72(1), 1–15
- II. Andrea Discacciati, Alessio Crippa, and Nicola Orsini
Goodness of fit tools for dose–response meta-analysis of binary outcomes
Research Synthesis Methods 2015
- III. Alessio Crippa, Polyna Khudyakov, Molin Wang, Nicola Orsini, and Donna Spiegelman
A new measure of between-studies heterogeneity in meta-analysis
Statistics in medicine 2016; 35(21), 3661–75
- IV. Alessio Crippa, Ilias Thomas, and Nicola Orsini
A pointwise approach to dose-response meta-analysis of aggregated data
Manuscript 2018
- V. Alessio Crippa, Andrea Discacciati, Matteo Bottai, Alicja Wolk, and Nicola Orsini
One-stage dose–response meta-analysis for aggregated data
Manuscript 2018

The articles will be referred to in the text by their Roman numerals, and are reproduced in full at the end of the thesis.

Related publications

- Alessio Crippa, Susanna C. Larsson, Andrea Discacciati, Alicja Wolk, and Nicola Orsini
Red and processed meat consumption and risk of bladder cancer: a dose–response meta-analysis of epidemiological studies
European journal of nutrition 2016, 1–13
- Andrea D. Smith, Alessio Crippa, James Woodcock, and Søren Brage
Physical activity and incident type 2 diabetes mellitus: a systematic review and dose–response meta-analysis of prospective cohort studies
Diabetologia 2016, 1–19
- Marco Vinceti, Tommaso Filippini, Alessio Crippa, Agnès de Sesmaisons, Lauren A. Wise, and Nicola Orsini
Meta-Analysis of Potassium Intake and the Risk of Stroke
Journal of the American Heart Association 2016, 5(10), e004210
- Alessio Crippa, and Nicola Orsini
Dose–response meta-analysis of differences in means
BMC medical research methodology 2016, 16(1), 91
- Emir Veledar, Alessio Crippa, Chukwuemeka U Osondu, Adnan Younus, and Khurram Nasir
Letter to Editor: Ideal cardiovascular health metrics and risk of cardiovascular disease or mortality
International journal of cardiology 2016, 222, 737
- Alessio Crippa, Andrea Discacciati, Nicola Orsini, and Viktor Oskarsson
Letter: coffee consumption and gallstone disease—a cautionary note on the assignment of exposure values in dose–response meta-analyses
Alimentary Pharmacology & Therapeutics 2016, 43(1), 166-167
- Susanna C. Larsson, Alessio Crippa, Nicola Orsini, Alicja Wolk, and Karl Michaëlsson
Milk consumption and mortality from all causes, cardiovascular disease, and cancer: a systematic review and meta-analysis
Nutrients 2016, 7(9), 7749-7763
- Daniela Di Giuseppe, Alessio Crippa, Nicola Orsini, and Alicja Wolk
Fish consumption and risk of rheumatoid arthritis: a dose-response meta-analysis

Arthritis research & therapy 2014, 16(5), 446

- Alessio Crippa, Andrea Discacciati, Susanna C. Larsson, Alicja Wolk, and Nicola Orsini
Coffee consumption and mortality from all causes, cardiovascular disease, and cancer: a dose-response meta-analysis

American journal of epidemiology 2014, 180(8), 763-775

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List of abbreviations

AIC	Akaike Information Criterion
CI	Confidence Interval
df	Degrees of Freedom
GLS	Generalized Least Squares
GRSS	Generalized Residual Sum of Squares
GTSS	Generalized Total Sum of Squares
FP2	Second-degree Fractional Polynomials
HRR	Hazard Rate Ratio
IR	Incidence Rate
IRR	Incidence Rate Ratio
logRR	log-Relative Risk
MR	Mortality Rate
MRR	Mortality Rate Ratio
RCS	Restricted Cubic Splines
R^2	Coefficient of Determination
RR	Relative Risk
WLS	Weighted Least Squares

Chapter 1

Background

Write my background with subsections

Chapter 2

Introduction

Write my introduction

Chapter 3

Aims of the thesis

The overall aims of this thesis were to <>.

More specifically, the aims were:

- <>
- <>
- <>
- <>

Chapter 4

Materials and methods

Write materials and methods with subsections as in the background section

Chapter 5

Results

Write the results with subsections as in the background section

Chapter 6

Discussion

Write the discussion with subsections as in the background section

Chapter 7

Conclusions

Write summary of conclusions.

More specifically we conclude the following:

- $\langle \rangle$
- $\langle \rangle$
- $\langle \rangle$
- $\langle \rangle$

Chapter 8

Future research

Based on the conclusions presented in this thesis, future research includes:

- <>
- <>
- <>

Appendix A

Supplementary figures

Figures.

Appendix B

Supplementary tables

Tables.

References

- Crippa A, Discacciati A, Bottai M, Spiegelman D, Orsini N (2018a). “One-stage dose–response meta-analysis for aggregated data.” *Manuscript*.
- Crippa A, Khudyakov P, Wang M, Orsini N, Spiegelman D (2016). “A new measure of between-studies heterogeneity in meta-analysis.” *Statistics in medicine*, **35**(21), 3661–3675.
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- Crippa A, Thomas I, Orsini N (2018b). “A pointwise approach to dose-response meta-analysis of aggregated data.” *Submitted*.
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