



*National Institute for
Health Research*

Ophthalmic section

Catey Bunce, *Kings College London*

Ophthalmic Section





- In 2011, 7 letters were published in the British Journal of Ophthalmology entitled “Incorrect Statistical Analysis” reporting on statistical or design errors in papers which had been published in the BJO
- In 2012, two papers were published in leading US Ophthalmic Journals raising concern with regards to the statistical validity of research published in the ophthalmic domain ^{1,2}

1 Lee CF, Cheng ACO, Fong DYT, Ophthalmology. 2012 Apr;119(4):869-72 Eyes or Subjects : Are Ophthalmic Randomized Controlled Trials Properly Designed and Analysed?

2 Karakosta A, Vassilaki M, Plainis S, Elfadl NH, Tsilimbaris M, Moschandreas J. Am J Ophthalmol. 2012 Mar;153(3):571-579.e1. Choice of Analytic Approach for Eye-Specific Outcomes: One Eye or Two

Ophthalmic Section

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- 3.4.2012 meeting held at NIHR Moorfields BRC, - 14 medical statisticians from various institutions across England
 - Discussed statistical traps for the unwary ophthalmic researcher and merit in “raising the quality of statistics in ophthalmic publications”
 - Approached the British Journal of Ophthalmology – who agreed to publish a “drip-feed” series with applied ophthalmic examples
 - Set up the Ophthalmic Statistics Group – hosted by the BRC for Ophthalmology at Moorfields
- 

Ophthalmic statistics notes

British Journal of Ophthalmology

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Dr J Ophthalmol 2014;98:405-412 doi:10.1136/bjophthalmol-2013-304837

Education

Ophthalmic statistics note 1: unit of analysis

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Cathy Bunce¹, Krishna V Patel¹, Wen King¹, Nick Freemantle², Caroline J Dore³ On behalf of the

British Journal of Ophthalmology

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Ophthalmic Statistics Note 4: analysing data from randomised controlled trials with baseline and follow-up measurements

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Ophthalmic statistics note 7: multiple hypothesis testing—to adjust or not to adjust

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Ophthalmic statistics note 8: missing data—exploring the unknown

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Ophthalmic statistics note 2: absence of evidence is not evidence of absence

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Cathy Bunce¹, Krishna V Patel¹, Wen King¹, Nick Freemantle², Caroline J Dore³ On behalf of the

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Ophthalmic statistics note 5: diagnostic tests—sensitivity and specificity

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Ophthalmic statistics note 6: effect sizes matter

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Ophthalmic statistics note 9: parametric versus non-parametric methods for data analysis

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Ophthalmic statistics note: the perils of dichotomising continuous variables

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Philip M Cumberland¹, Gabriela Cramer², Cathy Bunce³, Caroline J Dore³, Nick Freemantle⁴, Maria Cougle⁵ On behalf of the Proboscis Research Group

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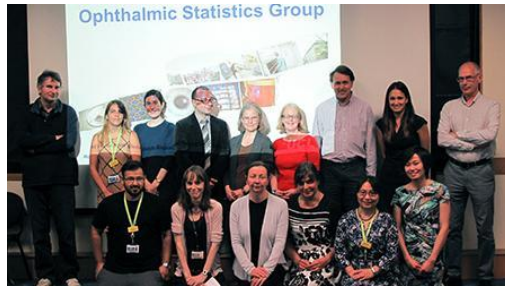
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Editorial

Ophthalmic Research Section

National Institute for
Health Research

- Championing collaboration between statisticians and non statisticians who are working in ophthalmic research
- Promoting good statistical practise with a view to getting better research conducted and published for the benefit of patients



- Different members have led on different approaches

The screenshot shows the RSS Merseyside website. At the top, there is a search bar and a 'RSS Merseyside' header. Below this, the page is titled 'Ophthalmic Biostatistics'. The main content area features a navigation menu with 'About Us', 'Events & Courses', 'Education & Training', 'Examinations', and 'Standards'. A prominent article is titled 'Seminar review: Ophthalmic study approaches to statistical analysis' with a sub-date of '16 February 2016'. The article text discusses the need for improving statistical knowledge in ophthalmology and mentions the Ophthalmic Statistics Group.

This screenshot shows a website header with social media icons for Twitter and Facebook, a 'Members Area' button, and a search bar with the placeholder text 'I am looking for:'.

The screenshot shows the ARVO website. The header includes the ARVO logo and navigation links for 'About', 'Conferences & Courses', and 'Awards & Grants'. A main announcement reads: 'Meeting hosted by the NIHR Moorfields Biomedical Research Centre 3rd November 2016'. Below this, there is a photo of a person in a lab coat and a 'Start your search' button. A sidebar contains a '2017 Course' announcement.

Meeting hosted by the NIHR Moorfields Biomedical Research Centre 3rd November 2016



Professor David Garway-Heath
Consultant Ophthalmologist, Moorfields Eye Hospital
Theme Lead for Visual Assessment and Imaging,
NIHR Moorfields Biomedical Research Centre



Professor Martin Bland
Emeritus Professor of Health Statistics
Department of Health Sciences
University of York

WHY does the correlation coefficient continue to be misused in method agreement studies?

Future plans



- Meeting planned on the 10th November 2017 – follow-up to meeting with Professors Martin Bland and David Garway Heath, exploring misuse of the correlation coefficient in method agreement studies in ophthalmology
 - Discussing with members of the OSG whether they are still keen for closed statistics meetings
 - If so, possible future events will have an Open Session for all and a Closed Session for “statisticians” only
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