Association between heavy computer users and glaucomatous visual field abnormalities

I congratulate Dr Tatemichi and his team on the interesting study on the possible association between heavy computer use and glaucomatous visual field abnormalities.1 I would like to take this opportunity to share some of my thoughts:

(1) The authors concluded that heavy computer users with refractive errors have an increased risk of FDT-VFA and that glaucoma might be involved. I do not totally agree to this. It has been established that heavy visual task is associated with myopic progression1,2 and significant myopia is associated with open angle glaucoma (OAG).3,4 But these arguments cannot lead to a sensible inference that heavy visual task is in any association with OAG. The authors have failed to find another underlying mechanism between heavy visual task and glaucoma other than myopia.

(2) Several limitations have been mentioned in this study, namely the limitations of a cross sectional study, possible bias towards male, myopia, normal tension glaucoma, and the significant data loss during investigation. The diagnosis of glaucoma requires confirmation of progression of visual field abnormalities. Hence, these limitations, this cross sectional study does not command full recognition.

(3) The stratification of hours of computer use into light/moderate/heavy sufferers formed the pitfall of oversimplification and coarse statistical analysis. The actual hours of visual demanding task should be computed instead.

(4) The study has only concentrated on Japanese people. In other words, the comparatively high rate of glaucoma may merely be a reflection of the underlying epidemiological properties of the population at interest.5 The association between visual task and glaucoma may be another of “bystander effect”.

Dr Tatemichi’s paper has certainly been an insightful manuscript. As our world is becoming more and more computer dependent, it is important to understand any health issues related to such development. The postulation on the correlation of glaucoma and computer use needs to be further investigated. Further proof may be established by carefully planned longitudinal studies on susceptible workers.

References


BOOK REVIEWS

Health inequality: an introduction to concepts, theories and methods


This book explains clearly the theory, concepts and methods used in health inequality work and its clarity makes it suitable for readers from diverse backgrounds. It is not a comprehensive précis of research results but rather an overview of the relations between socioeconomic position, sex, ethnicity, and health.

The book comprises 11 chapters, with extensive textual references together with tables and figures. Each chapter is appended by a useful list of further reading. The inclusion of a chapter on the most common methods used for description and analysis of health statistics provides a sound basis for understanding research relevant to health inequality. A chapter is devoted to each of the four models of aetiological pathways: behavioural and cultural, psychosocial, materialist, and life course, with an analysis of what each can contribute to our understanding of how health inequality occurs. A chapter on social ecology discusses how income distribution may effect differences in health between nations, states, and regions and which pathways might be involved.

This excellent book is slightly marred by a typographical error on page 13, which may be misleading to those new to the subject. In paragraph two, it is stated that “...where the differences in income between rich and poor are greater, health is better and life expectancy longer for the whole population.” This is, in fact, the opposite of what the quoted authors say, i.e. that health is better in countries with less income difference.

The author provides a comprehensive introduction to the subject of health inequality, stating where questions are too involved for discussion in this work. Emphasis on the interrelation between different causal pathways, together with political context in the complex aetiology of health inequality provides a good basis for further reading.

Carolyn Lester

MONICA monograph and multimedia sourcebook


The MONICA project, which aimed to provide information relevant to cardiovascular disease prevention, is familiar to health professionals and researchers around the world. As with any long term large scale study, it can be difficult to efficiently gain an overview of the project without a time consuming literature review. This monograph and multimedia source book aims to “bring everything together” in a way that is accessible to a range of readers from the general public and journalists to medical specialists and politicians.

The book covers the background and organisation of the project, recruitment, data collection and handling, and quality assessment. There are profiles of the MONICA populations, details of publications, and a selection of graphics with explanations of the principal findings. The accompanying CD ROMs include the MONICA manual, quality assessment reports, data books with aggregate data, a sample database and slide shows with and without a spoken commentary.

The resource book is well organised and easy to read. In addition to project design and results there is discussion of relevant epidemiological concepts, project challenges, and limitations. It includes clear illustrations and graphics with succinct explanations and summary boxes, and is complemented by the CD ROMs. All key areas are covered but it may have been advantageous to have a final summary re-emphasising how well MONICA met its aims, and listing principal results. It presents insights into the researchers and study centres involved, directs the interested reader towards more detailed documents, and provides a sample database for analysis. It also acts as a guide of important issues in research such as standardisation of measurement, quality control, and collaboration. The book can be read from cover to cover, or by dipping into specific sections, and it also provides a guide to other more detailed MONICA resources.

It would appeal to those with an interest in cardiovascular disease, epidemiology, public health, and prevention. This is an ambitious resource for what was an ambitious project, but it does fulfil its promise to “bring everything together.”

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