One-on-one consultation on protocol development and statistics analysis in health sciences postgraduate students

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Introduction

According to publications in the UK and USA there is a lack or limitation in the knowledge of research methodology, statistics, and critical appraisal skills of medical literature evaluation among registrars and clinicians. As a consequence, utilisation of biostatistical consultation services became necessary and is provided in the most prestigious academic hospitals and medical schools of the world. In South Africa (SA) as a result of rules changes by the Health Professional Council of SA (HPCSA) to become a specialist, a compulsory qualification in research was added. Therefore courses in research methodology, applied statistics and scientific writing were implemented since 2007 at the University of the Witwatersrand between January and December 2010. A total of 144 consultations were performed at two academic medical institutions of the University of the Witwatersrand (Medical School and at Chris Hani Baragwanath Academic Hospital) between January and December 2010. Every consultation was counted separately regardless of the number of times needed to address the same project. Each session was booked in advance and the duration ranged between 40 and 60 minutes. The results presented in this study were completed and compiled by the expert from data collection sheets which included consultees’ position and field, date, nature and/ or purpose of the consultation and type of project. Data were reported as frequencies and percentages with the correspondent 95% confidence interval (CI) for each institution as well as for the combined sites.

Methods

Consultations were performed by one research methodologist and statistical expert at two academic medical institutions of the University of the Witwatersrand (Medical School and at Chris Hani Baragwanath Academic Hospital) between January and December 2010. Every consultation was counted separately regardless of the number of times needed to address the same project. Each session was booked in advance and the duration ranged between 40 and 60 minutes. The results presented in this study were completed and compiled by the expert from data collection sheets which included consultees’ position and field, date, nature and/ or purpose of the consultation and type of project. Data were reported as frequencies and percentages with the correspondent 95% confidence interval (CI) for each institution as well as for the combined sites.

Results

In total 235 one-on-one biostatistical consultations were performed at two academic medical institutions of the University of the Witwatersrand between January and December 2010. A total of 144 consultations, 61%, CI (55 - 67%) and 39%, CI (49 - 61%) were completed at Medical School and Chris Hani Baragwanath Academic Hospital. Biostatistical consultations were divided into two wide topics: research protocol development (study design, sample size calculation, etc.) and statistical analysis (data entry, data coding, appropriate statistical tests and results interpretation) which represented 35%, CI (29 - 41%) and 65%, CI (59 - 71%) of the consultations respectively.

Conclusions

The results of this study were similar to those found in several academic research institutions between 1999 and 2005 in the USA. Changes in critical legislation provided the catalyst for many clinicians training to be specialists to embark on research which they may not have done, given their high workloads in delivering healthcare. These changes also unveiled the previously hidden anxieties of being unable to cope with research, in particular statistics. Courses were put in place and immediately were over-subscribed. Ultimately the success or otherwise of these courses will be measured in throughput rates. South Africa is a country desperately short of doctors and specialists and research requirements should not become a limitation to qualifying.

Conflict of interest: None.

Ethics: A waiver was received from the HREC (Medical) Faculty of Health Sciences, University of the Witwatersrand.
Short Report

References

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