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Fourth year medical students' perception of their scheduled clinical training activities

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2013-03-18
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TITLE: **FOURTH YEAR MEDICAL STUDENTS' PERCEPTION OF THEIR SCHEDULED CLINICAL TRAINING ACTIVITIES**

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A dissertation submitted to the Faculty of Health Sciences, University of the Witwatersrand,

in fulfilment of the requirements for the degree of

Master of Science (Medicine)

Johannesburg, 6th November, 2012

DECLARATION

I, Amina Cassim declare that this dissertation is my own work. It is being submitted for the degree of Master of Science (Medicine) in the University of the Witwatersrand, Johannesburg. It has not been submitted before for any degree or examination at this or any other University.

Signature……

This ……day of……, 2012

ABSTRACT

This study investigated fourth year medical students' perceptions of their learning in the clinical skills programme (CSP) in the new undergraduate medical curriculum, viz. the Graduate Entry Medical Programme (GEMP) at the University of the Witwatersrand (Wits). Fourth year medical students, officially referred to as the GEMP II students, in this programme attend clinical training activities once a week in the Health Practice Day (HPD).

Following on a 2006 evaluation of the HPD changes were made resulting in a weekly programme with three activities, the Shadowing Session (SS) which involves shadowing of an assigned doctor in the hospital, the Formal Session (FS) of patient clerking and the Clinical Skills Session (CSS) which offers practice in a simulated clinical skills unit (CSU).

The broad aim of the study was to evaluate the quality of the HPD as reported by students. The main questions investigated in this study were student perceptions of their experiences of learning in the new CSP in the HPD, and whether these changes had an effect, and student performance in the study period for the 2006 and 2009 cohorts.

In the case of the SS the study assessed the level of student participation in their assigned units' activities, student perception of the role of their doctor and the range of clinical problems experienced in this session. The FS programme delivery was investigated for its provision of adequate opportunities for patient clerking and level of student engagement in learning following curricular reform in 2006. Finally, the CSS was investigated in its provision of adequate resources and facilities, and medical supervision to guide hand-on

clinical practice. The study also compared the GEMP II student performance in an Objective Structured Clinical Examination (OSCE) for the study period (2006 and 2009).

The design of this study was a student survey of two cohorts of GEMP II students' registered in the Faculty of Health Sciences at Wits in the 2006 and the 2009 academic years respectively. The data collected in this study was mainly descriptive but also analytical. Stratified proportionate sampling by hospital was used to select two samples, i.e., 42 and 75 students for the 2006 and 2009 student cohorts respectively. The study instrument for the 2009 cohort was a self-administered student questionnaire comprising 22 items of mainly quantitative data. The instrument used to collect data pertaining to the FS for the 2006 student survey was also a student questionnaire; data pertaining to items of this questionnaire related to the questions under the stated objectives for the FS thus enabled comparison between for the 2006 and the 2009 cohorts.

A total of 68 questionnaires were returned by the 2009 sample and 32 for the 2006 cohort corresponding with a 90.2% and a 69.6% response rate respectively. Participation in this study was strictly voluntary and anonymous. The OSCE performance for all students attending the GEMP II OSCE I for the 2006 and 2006 years were compared by using their final averages for this examination, accessed from the official published lists for this examination.

The quantitative data was manually entered into a database created in the Epi Info ™ 7 programme, frequencies were computed and the data exported to the programme. Data were analysed mainly with Microsoft Excel 2007 and a small number with STATA 12.0 yielding graphic representations for ease of analysis. Data from the 2006 and 2009 studies were compared statistically. Qualitative data were thematically analysed.

Validation of the data obtained from students was attempted in two ways:

Firstly, the data from the GEMP II OSCEs for June 2006 and 2009 which tested skills learnt in two blocks corresponding with the study period were compared. This would enable changes perceived by students to be partly corroborated.

Secondly, the findings of the student end-of-block evaluations for the Endocrine and Musculoskeletal blocks for 2006 and 2009 were considered for inclusion as this evaluation is administered as a student survey of the entire class and participation is anonymous and voluntary. However, the data for the end-of-block evaluations for the 2006 cohort were not available. Data for the corresponding period for the evaluation of the end-of-block evaluation of GEMP II students in the 2009 academic year were used to corroborate the student perceptions data from this study.

The results relating to the SS confirmed students' attendance in a spectrum of the rostered activities for their assigned units but inadequate in students experience for learning about team members. The majority of students, however, perceived their role to be of a passive nature, indicating their expectation of active participation in the shadowing of doctors; this potential for encouraging students' active engagement with the opportunities in this session for enhancing their learning in this clinical context.

The findings of the FS demonstrated improved student access for practice opportunities compared to their 2006 peers but still inadequate in its delivery; specifically the inadequate provision of suitable patients for clerking and reduced tutor availability for presentation of cases and discussion.

Students' perceptions of the 'doctors' role' and the organization of these clinical activities had not changed significantly between 2006 and 2009. Despite these problems students' self-ratings of their clinical skills were increased in comparison to previous findings.

The findings of the CSS indicated adequate provision of equipment and facilities but insufficient time and with reduced opportunities for all students to obtain hands-on clinical practice, and reduced medical supervision, consequent on inadequate numbers of clinical tutors with large student tutor ratios.

The OSCE performance for the 2009 cohort whilst of a very high standard was significantly reduced in comparison with their peers of 2006. The main reason for this seemingly anomalous observation is judged to be the inclusion in 2009 of a 'global rating' to complement scoring with standardised checklists for the hands-on stations, and in the variations in weighting for these two methods for the assigned skills stations. OSCE scores were therefore not a useful parameter for assessing the validity of comparative data about the FS in the 2006 and 2009 cohorts.

The findings of this study whilst limited by its generalisability for other settings can be applied to GEMP I students in this programme and to the CSP in the undergraduate medical curricula at other universities using the structure of the activities in the HPD at Wits.

Following on the study findings recommendations are made to improve students' clerking opportunities by exploring innovative ways of increasing access to suitable patients; to

enhance the performance of tutors by the introduction of formal courses for tutor training and orientation of especially new tutors and the selection of sufficient numbers of appropriate patients for students' clinical practice, to institute dedicated tutor time for teaching, to increase the numbers of clinically skilled tutors and to explore the potential for peer tutoring to increase time for students to obtain hands-on clinical practice and improved medical supervision. Students need to be motivated to take an active role in their learning and to seek opportunities in interacting with patients in any free time left over in the hospital visit.

Future studies of this programme would benefit from an all inclusive methodology including other sources of information available from the evaluations of the GEMP programme and other participant groups with a variety of instruments for data collection. Follow-up OSCE evaluations are regularly required for assessing the multiple interventions in this programme and in this format of examination.

At Wits, the findings of this study will enable planning of further intervention and evaluation in the CSP.

ACKNOWLEDGEMENTS

I extend my acknowledgements to the following persons and units who have contributed to my improved understanding of the research process and assisted in providing advice and material resources towards my completion of this research study.

1. Professor D. R. Prozesky

- Supervision, support and encouragement in my pursuance of and completion of this study towards the qualification of M.Sc. (Med).
- Motivation for sabbatical time to be approved towards completion of study, viz. data analysis and initial writing of the draft chapters.

2. The Deanery

- Approval of sabbatical time for completion of the latter part of this study.

3. CHSE

- Provision of funding for attendance at faculty statistics courses and university writing courses to complement learning in this research Endeavour
- Availability of office facilities and infrastructure: printing, graphics and IT support.

4. Professor Beverley Kramer and the Research Office in the faculty

    - Services of a Mellon Mentor.

5. Professor Trefor Jenkins

    - Advice and reading of the initial drafts of my writing.

    - Mentorship.

6. CLTD

    - Complementing the funding to cover the outstanding course registration fees

7. Clinical skills unit staff

    - Dr. J. Fadahun
        - Advice and assistance with some of the statistical analysis.
    - Ms. Mafuya
        - Encouragement with completing the dissertation

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ACRONYMS & ABBREVIATIONS

AAMC - Association of American Medical Schools

AMC - Australian Medical Council

CME - continuing medical education

CLTD - Centre for Learning, Teaching and Development

CSP - clinical skills programme

CSS - Clinical Skills Session

CSU - clinical skills unit

CVS - Cardiovascular System

EBM - evidence-based medicine

ENT - ear, nose and throat

Epi Info - an acronym for a public domain epidemiologic, statistical software package

Excel - a spreadsheet of the Microsoft Company for the computation of statistics

FS - Formal Session

GEMP - Graduate Entry Medical Programme

GIT - Gastrointestinal tract

GMC- General Medical Council

GP - General practitioner

HPD - Health Practice Day

HPCSA - Health Professions Council of South Africa

MBBCh - The degree of bachelor of medicine and bachelor of surgery awarded on successful completion of undergraduate medical training at Wits

MCQ – Multiple-choice question

MEQ - Modified essay questions

NSW - New South Wales

OPD - outpatient department

OSCE - objective structured clinical examination

PBL - Problem-based learning

STATA - a data analysis and software package supported by WITS for its staff and students

SP - Simulated patient

SS - Shadowing Session

UK - United Kingdom

USA - United States of America

Wits - University of the Witwatersrand

WFMS - World Federation of Medical Schools

UNIVERSITY OF THE WITWATERSRAND, JOHANNESBURG

Division of the Deputy Registrar (Research)

HUMAN RESEARCH ETHICS COMMITTEE (MEDICAL)
R14/49 Cassim

CLEARANCE CERTIFICATE	**PROTOCOL NUMBER M080846**
PROJECT	The Organization of Hospital Visits and Its Impact on the GEMP Students' Learning Experience' (Previously M050651) Mr B Bello)
INVESTIGATORS	Dr A Cassim
DEPARTMENT	Centre for Health Science Ed
DATE CONSIDERED	08.08..15
DECISION OF THE COMMITTEE*	

Unless otherwise specified this ethical clearance is valid for 5 years and may be renewed upon application.

DATE **CHAIRPERSON** .....
(Professor P E Cleaton Jones)

*Guidelines for written 'informed consent' attached where applicable

cc: Supervisor : Prof D Prozesky

DECLARATION OF INVESTIGATOR(S)

To be completed in duplicate and **ONE COPY** returned to the Secretary at Room 10004, 10th Floor, Senate House, University.
I/We fully understand the conditions under which I am/we are authorized to carry out the abovementioned research and I/we guarantee to ensure compliance with these conditions. Should any departure to be contemplated from the research procedure as approved I/we undertake to resubmit the protocol to the Committee. **I agree to a completion of a yearly progress report.**

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