

## The Reading Habits of Medical Students at Medical College King Saud University

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### Abstract

#### Background

Understanding the reading habits of medical students provide insights and opportunities for medical educators to evaluate the learning needs of the students and improve the teaching methods. The purpose of the present study was to describe the reading habits of King Saud medical students in a fifth year clinical rotation, which previously have not been described.

#### Methods

A questionnaire was administered to 96 medical students rotating through their fifth year at the King Saud University College of Medicine during 2008-2009 academic years. The questionnaire focused on issues related to the reading habits.

#### Results

Seventy three of 96 (76%) medical students in a fifth year clinical rotation completed the questionnaire. Students reported reading for an average of 4.3(SD 5) (median three hours per week, range zero to 35 hours per week). The most commonly used and useful reading resource were pocket books and medical text books. Approximately 90% of students reported problems in reading about their patients.

#### Conclusions

Students spend sufficient amount of time reading medical pocket books and lecture handouts with less time spend on online sources. The majority of students reported problems in reading that medical educators need to address.

**Key words:** reading, medical, student

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## Introduction

Acquiring knowledge through reading is crucial for the learning process of a medical student. When medical students start their clinical practice, they are concerned with attending rounds, examining patients. They are unlikely to read medical text books about management of patients<sup>1</sup>. The reading habits of medical students at King Saud University have not been described. Limited information suggest that they receive advices on reading resources that may direct their learning to a "hidden curriculum" that may be entirely consistent with the learning objectives<sup>2</sup>. In addition, as the internet has increasingly become an important source of requiring information, medical students rely on internet resources<sup>3</sup>.

Reading in clinical practice is important as it relates to clinical competencies including patient care, medical knowledge and practice based learning<sup>4</sup>. Understanding the reading habits of medical students provide an insight on their information backgrounds and help develop educational plans that meet their learning needs. The aim of the present study is to describe the reading habits of medical students at King Saud University.

## Materials and Methods

### *Study population*

We conducted the study among 96 Medical Students rotating through their fifth year at the King Saud University College of Medicine during 2008-2009 academic years. Each clinical rotation is 12 weeks. The study was conducted at week 11. The study was conducted before the final exams at the end of the year, so the students already studied basic sciences and are done with all the clinical rotations. At the middle of the rotation, students will be evaluated by a mid cycle written MCQ exam. At the end of the rotation, students will be evaluated by a final written MCQ exam as well as a clinical OSCE exam.

During the rotation, course organizers usually provide students with information

resources, such as medical textbooks. An easily accessible library is available within the medical school, where students can make use of their free time. The library is well equipped with comfortable seating and internet access as well as wide variety of medical text books medical journals.

### *Data Collection*

We administered a questionnaire (Appendix 1) included open and closed questions. Question domains included student's demographic characteristics and reading habits such as what sources they were reading, how useful they found them, the difficulties they encountered, and the guidance they received. The questions identifies reading resources as basic medicine textbooks, review of medical textbooks, pocket-books, online sources (online version of textbook, online journal article and medical websites), journal articles, lecture handouts prepared by teachers and students, and test preparation books.

The questionnaire was piloted on a sample of medical students to ensure readability and remove ambiguity. The questionnaires required 5-10 minutes to complete. Students were assured on confidentiality of the questionnaire and that no harm or legal consequences will issue regarding the results of the study.

### *Statistical Analysis*

First exploratory data was analyzed by calculating means, medians, and ranges to describe the data. Statistical analysis was conducted using Microsoft Excel 2007. Data were tabulated in frequencies and percentage.

## Results

The study was conducted in the College of Medicine, King Saud University, Riyadh, Saudi Arabia. The study includes medical students in a fifth year clinical rotation in 2008-2009. Seventy three of 96 (76%) of students completed the questionnaire. Table 1 demonstrates the reading sources used by the students.



Table 1: Reading resources used by students in a fifth year clinical rotation, King Saud College of Medicine, Riyadh Saudi Arabia 2008-2009

Source	No (%) of students who used this source	Percentage
Medical textbook	56	77
Review of a basic medical textbook	49	67
Online sources:		
• Online version of textbook	13	18
• Online journal article	14	19
• Medical websites	27	37
Pocket books	68	93
Journal articles (print version)	6	8
Lecture handouts made by teachers	67	92
Lecture handouts made by students	58	80
Test Preparation	34	47

Table 2: Number of reading hours spent by students in a fifth year clinical rotation, King Saud College of Medicine, Riyadh, Saudi Arabia, 2008-2009

Source	Hours per week spent reading the source Mean (SD) hours	Median hours	Range
Medical textbook	6.5 (6.6)	4.5	0.5-35
Review of a basic medical textbook	3.5 (2.7)	3	0.5-15
Online sources:			
• Online version of textbook	4.3 (3.7)	3	0.5-11
• Online journal article	2.2 (1.9)	1.3	0-6
• Medical websites	3.9 (4.5)	2	0.5-20
Pocket books	6.1 (5.6)	5	1-35
Journal articles (print version)	3.5 (3.0)	2	0-10
Lecture handouts made by teachers	5.2 (5.4)	3.5	1-30
Lecture handouts made by students	4.5 (4.5)	3	0-24
Test Preparation	3.6 (4.8)	3	0-24

**Table 3: Usefulness of the reading resources used by students in a fifth year clinical rotation, King Saud College of Medicine, Riyadh, Saudi Arabia, 2008-2009**

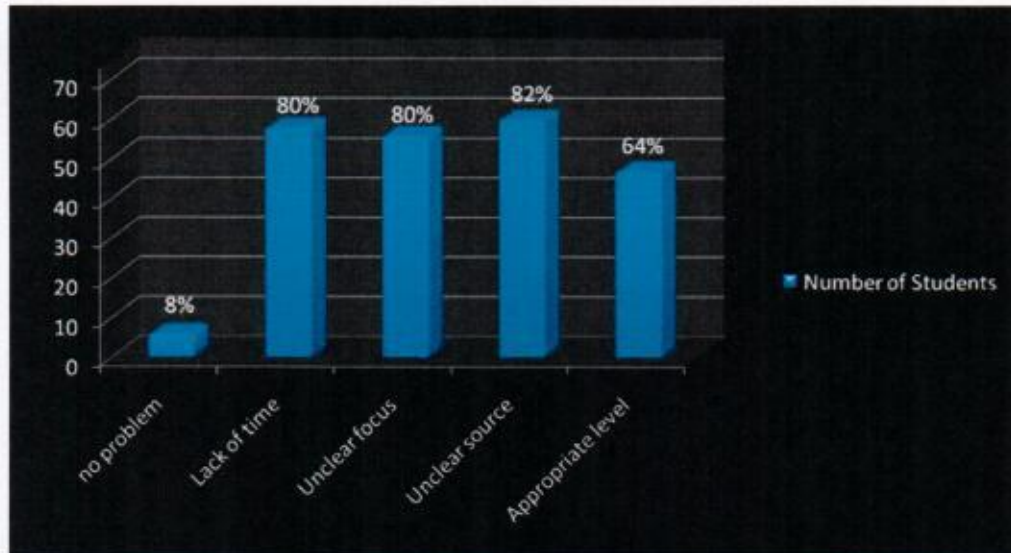
Source	No (%) of students who found this source: Not useful at all	Not very useful	Neutral	Somewhat useful	Extremely useful
Medical textbook	1 (2)	2 (4)	4 (7)	31 (59)	18 (32)
Review of a basic medical textbook	0	2 (4)	12(24)	10(2)	25(51)
Online sources:					
• Online version of textbook	0	0	6(46)	4(31)	3(23)
• Online journal article	0	0	8(57)	4(29)	2(14)
• Medical websites	0	1 (4)	2(7)	21(78)	3(11)
Pocket books	0	2 (3)	6(9)	25(37)	35(51)
Journal articles (print version)	0	1(17)	4(67)	1(17)	0
Lecture handouts made by teachers	0	4 (6)	10(15)	38(57)	15(22)
Lecture handouts made by students	0	6 (10)	14(24)	29(43)	9(16)
Test Preparation	0	0	10(3)	15(44)	9(26)

**Table 4: The single most useful source for reading identified by students in a fifth year clinical rotation, King Saud College of Medicine, Riyadh, Saudi Arabia, 2008-2009**

Source	No. (%)
Medical textbook	21 (29)
Review of a basic medical textbook	11 (15)
Online sources:	
• Online version of textbook	0
• Online journal article	0
• Medical websites	4 (6)
Pocket books	27 (37)
Journal articles (print version)	1 (1)
Lecture handouts made by teachers	7 (10)
Lecture handouts made by students	2 (3)
Test Preparation textbooks	0



Figure 1: Problems experienced in "Reading about patients" by students in a fifth year clinical rotation, King Saud College of Medicine, Riyadh, Saudi Arabia, 2008-2009



The most commonly used sources were pocket books (68 students, 93%), lecture handouts made by teachers (67 students, 92%) and lecture handouts made by students (58 student, 80%). 56 students (77%) used medical textbooks. Table 2 shows the time they reported spending in an average week. Students reported reading an average of 4.3 hours per week (median three hours per week, range zero to 35 hours per week). Table 3 demonstrates the rating of the utility of each source. Students rated utility using a five-point scale where 1= not useful at all and 5= extremely useful. Pocket books was rated as the extremely useful by 35 students (51%) who used them.

Table 2 shows the source rated as the single most useful by each student. Pocket books were rated as the single most useful source for reading (Table 3). Figure 1 shows problems that students described in their reading. Eight percent reported no problems in reading about their patients. The main problem related to reading was that they didn't know the best source to use. Fifty eight students (80%) reported problems related to insufficient time to read. Fifty six students (77%) reported that they did not know how to focus reading on their

patients. Forty seven students (64%) reported difficulty in finding sources appropriate to their level.

### Discussion

To our knowledge, this is the first study to provide data on the overall reading habits of medical students in Saudi Arabia. Our study suggests that the medical students spent substantial time, an average of 4.3 hours per week (median three hours per week, range zero to 35 hours per week) reading and the most used sources by the students were pocket books and lecture hand outs prepared by teachers and students.

Previous study of medical reading habits has been limited. A study of medical reading habits of medical clerks at John Hopkins University school of Medicine in 2002-2003<sup>5</sup> found that medical clerks reported reading for an average of 10.8 hours per week. The most useful source rated by students was online sources. Another study reported that internists read for an average of 4.4 hours per week, focusing on medical journals<sup>6</sup>. Surgeons read for an average of 8.7 hours per week, of which half was spent reading about their



patient cases<sup>7</sup>. Medical students<sup>7</sup> were reported in another study to read for an average of 10.8 hours per week and relied solely on medical textbooks. Students in our study reported less reading time, an average of 4.3 hours per week.

Our data suggest that medical students appear to read less hours per week, and focusing on pocket books and lecture notes more than update online sources. While online sources are easily accessible and provides up to date information on patient management, it may not be the most efficient means for students to obtain critical information. However, students need to be encouraged to use online sources to facilitate patient management and diagnosis of illness that occur in clinical ward rounds.

The majority of students reported problems with reading. The main problem was unclear source to read about their patients. This can be attributed to the lack of students' skills to search and find the proper information needed. This issue needs to be enhanced in the first year of medical school to teach students' how to be self learners and how to get use of the available learning resources. Another main problem was the lack of time to read. This is consistent with previous studies that suggest that students may benefit from having more time during their clinical rotation to read<sup>1,3,8</sup>.

One of the strength of the current study is the high response rate to the questionnaire. In addition, to our knowledge, this is the first study to provide data on the reading habits of medical students in Saudi Arabia. The main limitation of the study was that it was done at one clinical rotation at a single medical school and its generalizability may be limited. Another point was that the data are self-reported and may be subject to bias as there are no methods to determine if the students reported the actual amount of time they spent reading. However, the study shed some light on the reading habits of medical students and open the way toward additional studies.

In conclusion, medical students spend less amount of time reading during their clinical rotation and rely on medical pocket books and lecture handouts. Our data suggest that

students need to spend more time in reading that maximizes their efficiency and performance during the clinical rotations. Students need to be advised to use the update online sources more frequent.

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# Appendix 1

## Questionnaire

Name (optional):

Age:

Sex:

Medical College year:

### 1. What do you usually read as a medical reference?

Item	Yes	No
Medical textbook		
Essential version of a basic medical textbook		
Online sources:		
Online version of textbook		
Online journal article		
Medical websites		
Pocket books		
Journal articles (print version)		
Lecture handouts		
Test Preparation textbooks		

### 2. Time Spent in using the following items?

Item	Time (hours/week)
Medical textbook	
Essential version of a basic medical textbook	
Online version of textbook	
Online journal article	
Medical websites	
Pocket books	
Journal articles (print version)	
Lecture handouts	
Test Preparation textbooks	

### 3. How do you find these sources?

Item	Not useful at all	Not very useful at all	Neutral	Somewhat useful	Extremely useful
Medical textbook					
Essential version of a basic medical textbook					
Online version of textbook					
Online journal article					
Medical websites					
Pocket books					
Journal articles (print version)					
Lecture handouts					
Test Preparation handouts					



4. What problems do you experience during reading?

Item	Yes	No
No problems		
Lack of sufficient time to read		
Did not know on what to focus reading		
Did not know the best resources		
Difficult to find sources appropriate to my level		

5. What was the single most useful source for reading (only one)?

Item	
Medical textbook	
Essential version of a basic medical textbook	
Online version of textbook	
Online journal article	
Medical websites	
Pocket books	
Journal articles (print version)	
Lecture handouts	
Test Preparation textbooks	