Deficiencies of history taking among medical students

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ABSTRACT

Objective: This study was designed to identify the deficiencies of the history taken by final medical students at the University of Bahr Elghazal, Khartoum, Sudan, during the academic year 2000 through to 2001.

Methods: Throughout the academic year the author observed the students while taking history. Each student was asked to give a fully written case history. I assessed the basic skills of history taking (questioning, facilitation, clarification, jargon use, initiation of interview and keeping to time limits). I also assessed the amount and accuracy of data obtained. The findings were rated on a 3-point scale (good, fair, poor).

Results: For the 45 students assessed, the deficiencies of history taking obtained included poor questioning (66.6%), poor facilitation (51.1%), poor clarification (40%), use or acceptance of jargons (42.2%), failure of proper initiation of interview (37.8%), failure of keeping to time limits (33.3%), failure of identification of major symptoms (33.3%), poor analysis of symptoms (53.3%), lack of control of the interview (31.1%), poor elucidation of previous events (48.9%) and poor coverage of social aspects (62.2%).

Conclusion: The history obtained by our medical students is deficient and they generally lack the basic skills of interviewing. Many factors contribute to this, (namely deficient training, lack of staff and deficit of teaching hospitals). The author discussed possible solutions to remedy the history taking deficiencies.

Keywords: History-taking, interviewing and clinical skills.

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The diagnosis of disease is based on 3 firm foundations; history obtained from the patient, physical signs noticed on examination and necessary laboratory investigations. Then they are all interpreted in the light of factual knowledge and clinical experience. The medical history is a chronological record or account of the patients symptoms from the onset of his illness until the time of presentation to his treating doctor. Also the history includes the effects of social, family and occupational environment on the illness (and vice versa) in addition to the past significant, similar or different, illnesses. Apart from clinching the diagnosis the history can serve to establish a rapport with the patient, identifying patients at early stages of disease and rule out diagnostic hypotheses and then reduce the cost of care). Consequently an unskilled interview does not only lead to a wrong diagnosis but also impairs the doctor-patient relationship and generates annoyance and frustration to the patient.[1] It also led to non-compliance of the patients to doctor's recommendations for treatment and change of habits. In diseases like angina, irritable bowel syndrome and epilepsy the history is more important than physical examination whereas in primarily psychogenic symptoms history is the only diagnostic tool. It was

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suggested that more than 50% of diagnoses in primary care were established by the end of history.[2] A study to evaluate importance of history compared to examination and laboratory investigations in 80 new patients in an outpatient clinic was carried out. A diagnosis that agreed with the one finally accepted was made after reading the referral letter and taking the history in 66 patients.[3] In a guide suggested by the author for case taking of diabetic patients, useful data to classify, assess the glycemic control and identify complications of diabetes mellitus can be derived from the history only.[4]

Despite the advancements in computer technology the key to a successful diagnosis still mainly depends on the physician judgement and competence. Until the foreseen future the computer history or electronic physical assessment can not replace the individual doctor patient encounter. Also the computer technologies are too expensive, time consuming and not always available. At the same time the traditional history methods are not without defects.

Medical students (junior and senior) are deficient in history skills like putting patients at ease, establishing a rapport with patients, follow-up of verbal and non verbal clues and discussion of more personal matters.[5] Books and teaching on clinical methods devote more space to eliciting signs (at the expense of history skills). There is an increasing dependence on laboratory investigations in the clinical practice (a proportion of them are unnecessary).[3] Even expert consultants are not immune from the deficiencies of the history skills. Although they often make a correct diagnosis on the history, they may overlap important psychological and social components of physical disease which may be as important as the disease itself.[6] The aim of the present paper is to discuss the deficiencies and errors in the history taken by the final medical students in internal medicine through assessing the skills, amount and accuracy of data of the history taken by them.

Methods. This study was conducted among the final year students in the Faculty of Medicine, University of Bahr (UBG), Elghazal, Sudan, during the academic year 2000 through to 2001 in the weekly hospital rounds of internal medicine. The students were within their 3rd year of the clinical phase of a 6 year curriculum. They completed 2 years introductory clinical courses in medicine, surgery, pediatrics and obstetrics and gynecology. I chose the final years students to rule out the argument that by further training.[1] Each student was asked to take a full history from one of the patients in the medical wards of Omdurman Teaching Hospital, Omdurman city, Sudan, (1000-bed hospital) within 30 minutes and to give a written version at the end of the interview. The patients were previously unknown to the students, fully conscious, cooperative and with no language barriers. The students were not told that their history taking skills were under assessment but were observed most of the time by the author. The work was designed to assess the skills of the history taking, the content and accuracy of data obtained by the students. The skills assessed included questioning, facilitation, clarification, and jargon use initiation of interview keeping to time limits and control.

A rating scale was used to evaluate the outcome of the students. The discrete techniques were considered as absent or present. The complex techniques were rated as good (3), fair or neither good nor bad, (1) or poor (0).

Results. **Table 1** summarizes the major findings of the study. The inappropriate questioning style is a common deficiency among the group. Students tended to ask lengthy questions that unless fragmented could not be understood by the patients. Also students asked too many direct or closed questions namely "Did you pass red urine?" instead of the "Did you notice a change in the color of your urine". Some patients were over questioned rather than allowed some freedom to tell the story of their illnesses, and this resulted in disjointed stories. Some questions are irrelevant. Half of the students found difficulty in facilitation of the interview Some students were not on good terms with patients; they did not show tolerance to some 'irritant' things said by the patients like problem drinking or domestic

Table 1 - Ratings of techniques and contents of histories obtained by 45 students.

History techniques of contents	Students ratings %					
	Good		Fair		Poor	
	n	(%)	n	(%)	n	(%)
Questioning	11	(24.5)	4	(8.9)	30	(66.6)
Facilitation	10	(2.2)	12	(26.7)	23	(51.1)
Clarification	11	(24.5)	16	(35.5)	18	(40)
Jargons use or acceptance	15	(33.3)	11	(24.5)	19	(42.2)
Control	14	(31.1)	17	(37.8)	14	(31.1)
Identification of major problems	14	(31.1)	16	(35.5)	15	(33.3)
Analysis of symptoms	9	(20)	12	(26.7)	24	(53.3)
Elucidation of previous events	17	(37.8)	6	(13.3)	22	(48.9)
Coverage of social aspects	9	(20)	8	(17.8)	28	(62.2)
Initiation of interview	13	(28.9)	15	(33.3)	17	(37.8)
Keeping to time limits	11	(24.5)	19	(42.2)	15	(33.3)

violence. The excessive note taking leads to absence of eye contact, open posture, encouraging noises and attentive facial expression. Also the tendancy of some patients to talk too much irrelevance, leads to the failure of students to bring them back to the point (lack of control). Many students obtained histories of conflicting contents due to their failure to correct the inconsistencies or to fill the gaps in the patients' histories (lack of clarification). Some communication difficulties were generated by failure of some students to put their patient at ease at the beginning of the conversation even by simple acts like introducing themselves or shaking hands with patients. A 3rd of the students failed to end their histories in the time specified. Much of the time was lost in discussing, in detail, minor or irrelevant matters or repetition of areas already discussed.

The contents, the histories, were marked by severe deficiencies. More than half of the students failed to give a complete characterization or analysis of the major symptoms (onset, chronology or course, severity, associated phenomena, and relieving and aggravating factors). They only listed a group of symptoms or a prolonged list of negatives in the 'review of systems'. Fewer students even, did not identify correctly the major problems of their patients. They concentrated on minor complaints or even the side effects of the patients' drugs. Also there is failure to elicit the significant negative data or pertinent negatives. The details of the social aspects of the histories were deficient in 62.2% of the group. Some female students were reluctant to ask with regards to areas like alcohol drinking or sexual life.

Discussion. A common problem in teaching clinical medicine is the poor and deficient medical history presented by both junior and senior students. The history deficiencies encompass defects of skills, contents and accuracy of data.

The poor techniques in history taking are commonly encountered. The students usually fail to formulate more than one hypothesis or simply fail to turn their theoretical knowledge into purposeful questions. In consequence some students may react nervously to the answers that do not fit into the picture of the hypothesis they have formulated. Some students tend to assume that there would be only one system involved.[7] They seize on the first symptoms volunteered by the patients without trying to search for another problem of equal or greater importance. This problem is aggravated by failure of students to discriminate between the main and secondary symptoms.[7] The main symptom is defined as that reported in the patient's spontaneous narrative usually early in the encounter and their nature is emphasized by anxiety and discomfort.[5] The secondary symptoms are usually elicited by closed questions at the end of the interview.[5] Some patients only reveal their main complaints through closed questions. This usually creates a feeling of disappointment to the interviewers by bringing the interview back to square one. The students should be trained to identify the main symptoms (in case of doubt) by developing the habit of summarizing the history at different stages during the interview, thus confronting the patients with their stories and challenging them to correct possible misunderstandings.[8]

There are also problems in communication between the students and patients. There is little awareness of non-verbal signs from patients. As well the verbal communication is complicated by the tendency of students to use the medical vocabulary incomprehensible to the patients.[9] In fact the modern medicine has become stuffed with words (like stress, strain, dyspepsia indigestion) which may carry different meanings even by the same patient at different times. It should be stressed that students avoid using jargons and technical terms. Patients rarely admit incomprehension and should be asked to explain what they mean by words of no one agreeable meaning.

As were saw, there are serious problems in questioning the patients. There is a lack of organized instruction in techniques of questioning in a previous study, a patient remarked ("the students seemed more interested in getting answers to his own questions than he was in trying to find out my concerns and worries".[10] The leading questions that contribute largely in producing deficient and inconsistent history should be avoided except in qualifying the symptoms, testing the reliability of some answers and checking irrelevancies or to cover areas not volunteered by the patient. It is important to oppose the traditional approach "stick to the patient's own words "as it is often misinterpreted by students who then record the patients' entire narrative without making any attempt to discriminate between relevant and irrelevant data.[11]

Poor history analysis produces disorganized, redundant and inaccurate statements of the section of the history of the present illness (HPI). The students in our study failed to accurately qualify the different symptoms in regard to (onset, duration, frequency, nature, course, relieving and aggravating factors). The deficient HPI is compensated by irrelevant data on other sections or by giving a long list of negatives in the section of 'review of systems'. It may help a lot if all the students receive introductory instruction a pathophysiology and analysis of the common symptoms before the start of the bedside training.[11]

There is a trend among students to neglect the social aspects of the history and fail to qualify to general life situations of the resultant disabilities in their patients.[1] This maybe due to the current defective teaching which concentrates on the physical complaints (to reach a diagnosis of a physical

illness). In a minority of students shyness and inhibition to invade others' privacy may persist even after graduation.[9]

There are many reasons of the student's deficient history. The skilled and experienced teachers are not always available, or engaged in administrative commitments in their schools. The number of medical students in Sudan in the clinical phase rose from 700 in 1990 to several thousands nowadays. The very low teacher-student ratio usually leads to hurriedly conducted teaching rounds and to poor monitoring of student's performance. Unless corrected early, some errors of history taking skills (slip through into the postgraduate years.[12] Nothing can substitute the skilled teacher. Some authorities tried to overcome the problem of teacher's deficit by depending on pre arranged printed sheets to be ticked in the appropriate lines. The pre arranged questions can not cater for all possible combinations of symptoms, assess reliability of answers or evaluate the important emotional factors. They also hinder the gradual development of the automatic skills of interviewing. The large numbers of students against very few teaching hospitals made the few patients, continuously rushed by the interviewers, so frustrated that they usually refused to cooperate with them. Should the classical hospital persist the only place to teach clinical medicine? With the international movement to the community based medical education, there is accumulating data that the student can acquire their clinical skills in the community primary care units as well as in hospitals.[13,14] There is an inherent trend among clinical teachers to concentrate only on eliciting physical signs both at teaching sessions and at final examinations. This may divert the attention of students from acquiring the proper skills of history taking. The teachers devote less time (if any) to supervised instruction.[15] They adopt the traditional case presentation with more reliance on the elegance of organization rather than accuracy of the presented data.[16]

The deficient history taking skills among students is a common problem and may hinder the development of clinical competence. The students should receive the same basic instruction in clinical skills before they are divided into small groups (this may also rectify the deficits of standards and experience of some teachers). The educational planners can progress to review the traditional curriculum to have an optimum balance between hospital and community-based training (so as to gain use of all the resources in the community). Other solutions to remedy the problems of history skills were suggested in the above discussion.

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