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## Learning from lapses

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Additional file 3\_ Included 46 articles

Study	Design	Methods	Witnessed/admitted unprofessional behaviours of medical students	Quality
Aderounmu et al.,2011 <sup>50</sup>	Cross sectional survey	Questionnaires to students of four medical colleges in Nigeria, 382 students responded, no response rate given	<ul style="list-style-type: none"> <li>Parent seeks exam materials</li> <li>Let someone else sit for your University qualifying Exams</li> <li>Writing a full exam for another person</li> <li>Copying another student's work/ assignment</li> <li>Allowing others to copy your work</li> <li>Copying answers in a university exam before sitting for it</li> <li>Copying others laboratory results without performing any test</li> <li>Writing clinical exam "normal" when you didn't perform</li> <li>Smuggling materials to cheat into an exam hall</li> </ul>	3
Ainsworth & Szauter, 2006 <sup>15</sup>	Case study using qualitative analysis of student records	Unprofessional behaviours of 90 students described in 103 "Early Concern Notes" at one US medical school were compared with behaviours of 516 disciplined physicians	<ul style="list-style-type: none"> <li>Failure to fulfill responsibilities reliably</li> <li>Misrepresents or falsifies actions/information</li> <li>Inadequate personal commitment to patients</li> <li>Resistant or defensive in accepting criticism</li> <li>Inadequate rapport with patients/families</li> <li>Does not function /interact appropriately within groups</li> <li>Fails to accept responsibility for actions</li> <li>Unaware of limits</li> <li>Insensitive to needs, feelings of others</li> <li>Fails to respect patient confidentiality</li> <li>Accepts/seeks minimally acceptable level of performance</li> <li>Uses disrespectful language</li> <li>Abuses student privileges</li> <li>Impairment</li> <li>Arrogant or abusive during stress</li> <li>Fails to maintain professional appearance and attire</li> </ul>	5
Anderson & Obershain, 1994 <sup>47</sup>	Cross sectional survey	Questionnaires to 341 faculty and 291 students at one US medical school, response rate 60%	<ul style="list-style-type: none"> <li>Copying from another student during an end-of-block examination</li> <li>Permitting another student to copy from you during an end-of-block examination</li> <li>Observing a student copying from another student during an examination and doing nothing with the information</li> <li>Copying from a 'crib sheet" or another student during a closed book examination</li> <li>Reporting a lab test or X-ray as "normal" during rounds when in actual ordered or knew it had not been</li> <li>Reporting a pelvic examination as "normal" when it had been inadvertently omitted)from the physical examination</li> <li>Taking an examination for another student</li> <li>"Previewing" a stolen copy of Part1 National Boards the night before the exam</li> <li>Writing up a laboratory exercise in biochemistry without having done the</li> </ul>	5

			<p>work</p> <p>Working with a group of students on an assignment designed to be carried out individually</p> <p>Delaying taking an examination using a false excuse</p> <p>Looking at another students' examination and keeping your answer if both answers are the same</p> <p>Removing an assigned reference from the reserved shelf in the library, thereby preventing other students from gaining access to the information</p> <p>Changing a response after a quiz was graded and returned, then reporting that there had been a mistake and requesting credit from the altered response</p> <p>Plagiarizing a report for a biochemistry paper from a friend's paper from a prior year</p>	
Babu et al., 2011 <sup>42</sup>	Cross sectional survey	Questionnaire to 1268 undergraduate students from four private medical schools in India. 166 responses were analysed. Respons rate 13%	<p>Giving proxy for attendance</p> <p>Copying blindly from somebody's record</p> <p>Copying during exams</p> <p>Copying from unauthorised study material during their exams</p> <p>Trying to get an exam question paper before the commencement of the exam</p> <p>Influencing the teacher to get more marks</p> <p>Getting technical help during practical exam</p> <p>Getting help in knowing the findings of an exam case</p> <p>Mentioning a system as "within normal limits" without examining</p> <p>Forging teachers' signature in their record or log books</p>	4
Baldwin & And, 1996 <sup>53</sup>	Cross sectional survey	Questionnaire to 3975 second year medical students at 31 US schools, 2459 responses were analyzed, respons rate 62%	<p>Copying answers on a test</p> <p>Getting a copy of a test prior to an exam</p> <p>Getting information about a test from others prior to an exam</p> <p>Exchanging answers during an exam</p> <p>Turning in an written assignment prepared by someone else and calling it his or her own</p> <p>Moving labels or altering slides during an exam</p> <p>Using a "cheat sheet" during an exam</p> <p>Taking an exam for someone else</p> <p>Altering his or her grades in the official record</p>	5
Barlow, 2015 <sup>63</sup>	Cross sectional survey	Online survey to all medical students in 20 Australian medical schools . Of 16 993 eligible students, 880 completed the survey	<p>Online posting of patient identifying material</p> <p>Discussing a clinical site in a negative light</p> <p>Discussing university in a negative light</p> <p>Discussing another health care worker in a negative light</p>	4
Bazoukis & Dimoliatis, 2011 <sup>49</sup>	Cross sectional survey	Triangulation of four cross sectional surveys using questionnaires about self-reported cheating of students in 7 medical schools in Greece	<p>Cheating in exams</p> <p>Passing an exam by using help from acquaintances</p>	4

Ben-Yakov , 2015 <sup>66</sup>	Cross sectional survey	530 responses of senior medical students of a Canadian medical school Response rate 49,1%	Use Facebook to research patients Use Google to research patients	4
Bilic-Zulle et al., 2005 <sup>59</sup>	Comparative case series	Essays of 198 medical students, based on complex/less complex sources and electronic/printed sources, were examined using plagiarism software in one medical school in Croatia.	Plagiarism	5
Burack et al., 1999 <sup>9</sup>	Multi method study, including qualitative analysis of action-based observations	Multi-method study (observation, thinking aloud task, interviews, patient chart review) of 4 ward teams existing of 1 attending physician, 1 senior resident, 2 interns and max 3 students, in one university affiliated hospital in the US.	Showing outright hostility, malice or rudeness Reluctance in pursuing clinically appropriate diagnostic and therapeutic steps, including avoiding admission, pressing for premature discharge, or otherwise cutting corners Referring to patients in disparaging or derogatory ways, or otherwise showing disrespect	5
Chretien et al., 2009 <sup>52</sup>	Cross sectional survey	Survey under deans of student affairs in 130 US medical colleges, 78 completed questionnaires were analysed	On line posting sexual-relational content, i.e. posting sexually suggestive/explicit content or posting sexually provocative photographs of students, requesting inappropriate friendships with patients on Facebook, sexually suggestive comments. On line posting negative content related to experiences in medical school, i.e. using profanity or other disparaging or discriminatory language in reference to specific faculty, courses or rotations, classmates, or medical school. On line posting content like comments, photos and videos suggesting intoxication or illicit substance use. On line posting content which posed threats to patient confidentiality, i.e. detailed references to patients putting patient privacy at risk	5
Coverdale & Hanning, 2000 <sup>51</sup>	Cross sectional survey	137 medical students completed a questionnaire addressing their own cheating behaviours. Overall response rate 54%.	Altering or manipulating data Falsifying references or a biography Reporting an aspect of a physical examination as 'normal' when it was inadvertently omitted from the examination Copying a report for a preclinical or clinical paper from a friend's paper from a prior year Copying from a neighbour during an examination without the person realizing Permitting another student to copy from another student during an examination Removing an assigned reference from a shelf in the library and thereby preventing others from gaining access to the information in it Reporting a lab test or X-ray as 'normal' during ward rounds when in actual fact there had been no attempt to obtain the information Taking unauthorised material into an examination A student taking an examination for someone else or having someone else taking an examination	5

			for him or her	
Dans, 1996 <sup>52</sup>	Comparative cross sectional survey	Questionnaires to 358 students of one US medical school, at school entry and in fourth year of medical school	Copying from someone else's paper Using crib notes Falsifying lab data Reuse old examinations Cheating in clinical examinations Recording tasks that were not performed Reporting findings that were elicited by others Lying about having ordered tests	4
Dyrbye, 2010 <sup>44</sup>	Cross sectional survey	Questionnaire sent to all medical students attending 7 US medical schools. Overall response rate 61%. Outcome: self-reported cheating/dishonest behaviours.	Copying from a "crib-sheet" or another student during a "closed-book" examination Took credit for another person's work Permitted another student to copy from you during a closed book examination Said you ordered a test when you actually had not Reported a laboratory test or x-ray as pending when not sure it was ordered or knew it had not been Reported result as normal when you knew it had been inadvertently omitted from the physical examination Signed an attendance sheet for a student who was not present Endorsed more than one unprofessional behaviours Acceptance of gifts	5
Friedman et al, 1978 <sup>65</sup>	Qualitative study based on student observations	Observation of 6 sex education seminars in which 70 students participated	Negative responses in a sex education seminar Whispering animatedly about material that was obviously not of general educational value Subgroup formation Belligerence Withdrawal Sleeping in class Verbally expressed hostility , eg. posing provocative questions in a challenging manner Outright angry disruptive opposition to learning materials	2
Garner & O'Sullivan, 2010 <sup>64</sup>	Cross sectional survey	Questionnaires to students from year 1-3 in one medical school in the UK. 56 completed questionnaires, response rate 31 %	Unprofessional behaviours on Facebook: - excessive drinking, - various stages of undress and - the discussion of clinical experiences with patients	4
Hafeez et al., 2013 <sup>43</sup>	Cross sectional survey	Students from three medical colleges in Pakistan. 274 completed questionnaires, overall response rate 33%	Cheating during exams Using mobile phone to exchange answers during an exam Trying to find out about test questions in advance Marking answers on the question paper during the OSCE/OSPE Asking the teacher for answers during OSCE Telling friends the questions which were asked in first shift in the OSCE Copying assignments/presentations from seniors/class mates	5

			<ul style="list-style-type: none"> <li>Marking proxy for your friends</li> <li>Asking friend to mark attendance</li> <li>Forging teacher's signature</li> <li>Pay someone to pass an exam</li> <li>Writing fake histories for assignments</li> <li>Writing fake examination findings without performing it</li> </ul>	
Hauer et al., 2007 <sup>30</sup>	Qualitative study using interviews (grounded theory)	Interviews with individuals responsible for remediation from different public and private schools in the US. Data from 33 interviews were analysed until saturation of data was obtained.	<ul style="list-style-type: none"> <li>Detachment</li> <li>Emotional distance</li> <li>Poor verbal communication</li> <li>Poor nonverbal communication</li> <li>Fail to elicit the patient's perspective</li> <li>Fail to determine the impact of psychosocial factors on the patient</li> <li>Treat simulation patients as symptoms and diagnoses rather than as people with feelings and concerns</li> <li>Poor insight</li> <li>Lack of empathy</li> <li>Resistance to the examination process</li> <li>Dressing too casually during examination,</li> <li>Speaking too casually in examination</li> <li>Arriving late for exam</li> <li>Chewing gum during exam</li> <li>Denying own performance</li> <li>Blaming external factors rather than skill deficiencies for bad exam results</li> </ul>	5
Heiman et al., 2014 <sup>57</sup>	Cross sectional survey	Third year student of one US medical school. 123 completed questionnaires, response rate 75%	<ul style="list-style-type: none"> <li>Copying and pasting elements of another provider's notes in the electronic health record documentation (EHRD)</li> <li>Copying elements of my own previous notes</li> <li>Copying elements of residents' notes</li> <li>Copying elements of attendings' notes</li> <li>copying elements of other students' notes</li> <li>using auto-inserted data for vital signs</li> <li>using auto-inserted data for lab results</li> <li>using auto-inserted data for the medication list</li> <li>using templates for the entire note</li> <li>using templates for the physical or mental status exam</li> <li>using auto-inserted data for the problem list</li> <li>Documenting while signed in under an attending's name</li> <li>Documenting while signed in under a resident's name</li> </ul>	5
Hejri et al., 2013 <sup>39</sup>	Cross sectional survey	Questionnaires to clerks and interns of one medical school in Iran., 124 were analysed, response rate 86%	<ul style="list-style-type: none"> <li>Cheating in examinations</li> <li>Helping others to cheat in examinations</li> <li>Gaining illegal access to examination questions</li> <li>Impersonating an absent person in a class</li> <li>Escaping teamwork</li> </ul>	5

			<ul style="list-style-type: none"> <li>Legitimising absences by falsified testimony</li> <li>Legitimising absences by using bribes</li> <li>Data fabrication</li> <li>Data falsification</li> <li>Plagiarism</li> <li>Forging signatures</li> <li>Writing thesis on behalf of others</li> <li>Fabricating the whole or part of a patient's history</li> <li>Reporting abnormal physical examination findings as normal</li> <li>Using other people's medical stamps</li> <li>Buying hospital shifts</li> <li>Selling hospital shifts</li> </ul>	
Hendelman & Byszewski 2014 <sup>38</sup>	Cross sectional survey	Questionnaires to students of one medical school in Canada. 255 questionnaires were analyzed. 45% Respons rate	<ul style="list-style-type: none"> <li>Arrogance</li> <li>Impairment</li> <li>Cultural and religious insensitivity</li> <li>Breach of confidentiality</li> <li>Lack of conscientiousness</li> <li>Bias and sexual harassment</li> <li>Misrepresentation</li> <li>Collaboration with industry</li> <li>Acceptance of gifts</li> <li>Compromising ethical principles</li> </ul>	5
Howe et al., 2010 <sup>41</sup>	Mixed methods study including qualitative analysis of student records	Mixed methods utilising exam board and administrative data of one UK medical school for statistical and descriptive analysis of unprofessional behaviour of 118 students	<ul style="list-style-type: none"> <li>Plagiarism</li> <li>Collusion</li> <li>Unexplained/unauthorised absence</li> <li>Lack of meeting responsibilities</li> <li>Falsification of signatures</li> <li>Significant misconduct</li> </ul>	3
Hrabak et al., 2004 <sup>45</sup>	Cross sectional survey	Questionnaire to year 2-6 medical students of a medical school in Croatia. 827 were analysed, respons rate 70%	<ul style="list-style-type: none"> <li>Submitting another student's work under one's name</li> <li>Paying an examiner to pass an examination</li> <li>Using private connections to arrange passing an examination</li> <li>Forging a teacher's signature in a matriculation book</li> <li>Finding out about test questions in advance</li> <li>Using a crib sheet during an examination</li> <li>Using a mobile phone to exchange answers during an examination</li> <li>Copying answer from a colleague during examination</li> <li>Arranging with administrative personnel to be assigned to a lenient examiner</li> <li>Altering a class attendance list</li> <li>Asking a colleague to sign you in on a class attendance list</li> <li>Signing in an absent colleague</li> </ul>	5

<p>Hunt et al., 1989<sup>28</sup></p>	<p>Cross sectional survey</p>	<p>Questionnaires to residents and teachers of several medical disciplines of one medical school in the US about observed behaviour of medical students in their clinical rotations . 466 responses were analyzed, respons rate 79%.</p>	<p>Bright with poor interpersonal skills  Excessively shy, non-assertive  Poor integration skills  Cannot be trusted  Over-eager  Hostile  Cannot focus on what is important  Disorganised  Rude  Disinterested  Too informal  Avoids work  Avoids patient contact  Does not show up  Challenges everything  'All thumbs' (clumsy)  'Con artist '- (manipulative behaviour)  A poor fund of knowledge  Does not measure up intellectually</p>	<p>5</p>
<p>Kapoor, 2016<sup>68</sup></p>	<p>Cross sectional survey</p>	<p>Questionnaires to 400 students at 1 medical school in India</p>	<p>Bullying  Physical  Verbal  Victimization</p>	<p>4</p>

Kulac et al., 2013 <sup>31</sup>	Cross sectional survey	Survey of 215 year 3 and 4 students of one Turkish medical school. 215 responses were analysed, response rate 68%.	<ul style="list-style-type: none"> <li>Making fun of patients, peers, or physicians</li> <li>Being introduced as “doctor” to patients</li> <li>Reporting an impaired colleague to faculty before approaching the individual</li> <li>Poor condition of white coats</li> <li>Taking food meant for patients</li> <li>Discussing patients in public spaces</li> <li>Making derogatory comments about patients</li> <li>Discuss with patients information beyond your level of knowledge</li> <li>Late to rounds</li> <li>Absent from mandatory lectures</li> <li>Wear white coats/scrubs in a nonclinical environment (e.g., the cafeteria)</li> <li>Wear white coats/scrubs out of the hospital (e.g., the hospital courtyard)</li> <li>Untidy dress</li> <li>Not correcting someone who mistakes you for a physician</li> <li>Being introduced as “student doctor” to patients</li> <li>Eating or drinking in patient corridors</li> <li>Taking food from lectures you are not attending</li> <li>Having personal conversations in patient corridors</li> </ul>	5
Monrouxe, 2012 <sup>56</sup>	Qualitative study with narrative interviewing of individuals or groups	Qualitative analysis of 200 narratives of a convenience sample of 833 students from 2 UK and 1 Australian medical school.	<ul style="list-style-type: none"> <li>No consent for clinical examination of a patient</li> <li>Placing own learning above patient safety</li> <li>Judgmentally talking about patients</li> <li>Misrepresentation</li> <li>Acting beyond their own levels of competence</li> <li>Poor hand-washing practice</li> </ul>	5
Mukhtar et al., 2010 <sup>67</sup>	Cross sectional survey	Survey of first and fourth year students of one medical school in India. 106 completed questionnaires, overall response rate 53%. Students report about abuse of peer students.	<ul style="list-style-type: none"> <li>Physical abuse</li> <li>Written abuse</li> <li>Ignoring and excluding a peer student</li> <li>Behavioural abuse</li> <li>Verbal abuse</li> </ul>	5
Papadakis et al., 1999 <sup>34</sup>	Case study using qualitative analysis of student records	29 reports of 24 students presented to the dean's office were analysed	<ul style="list-style-type: none"> <li>Lack of initiative</li> <li>Unmet professional responsibility</li> <li>Poor relationship with team</li> <li>Poor rapport with patients and families</li> <li>Arrogant</li> <li>Falsifies information</li> <li>Resistant to change</li> <li>Unaware of inadequacies</li> <li>Resistant to criticism</li> <li>Avoided patients</li> <li>Disruptive with team</li> <li>Lack of interest</li> </ul>	3

			<p>Inappropriate dress Lack of timeliness Argumentative Lack of effort towards self-improvement English language difficulties</p>	
Papadakis et al., 2004 <sup>37</sup>	Comparative case control study	Behaviours of 68 graduates of one US medical school, who were disciplined by a state medical board, were compared with 196 non-disciplined graduates to find predicting variables of professionalism issues	<p>Immature Resistant to accepting feedback Needs continuous reminders to fulfill ward responsibilities Unnecessary interruption in class Inappropriate behaviour in small groups with peers and with faculty Cannot work with peers</p>	5
Papadakis et al., 2005 <sup>35</sup>	Comparative case control study	235 graduates of three US medical schools who were disciplined by a state medical board were compared with 469 non-disciplined graduates, to find predictor variables of professionalism issues	<p>Irresponsibility Diminished capacity for self-improvement Immaturity Poor initiative Impaired relationships with students, residents or faculty Impaired relations with nurses Impaired relationships with patients and families Unprofessional behaviour associated with anxiety, insecurity or nervousness</p>	5
Parker et al., 2008 <sup>5</sup>	Case study using qualitative analysis of student records	Evaluation of a teaching program at one medical school in Australia, including the description of students' unprofessional behaviours from 291 "needs assistance reports"	<p>Unsatisfactory responsibility/reliability Unsatisfactory participation Unsatisfactory respect Unsatisfactory relating to others Unsatisfactory self-appraisal Unsatisfactory honesty/integrity Unsatisfactory compassion Unsatisfactory doctor/patient relationship Discrimination</p>	3
Phelan & And, 1993 <sup>14</sup>	Case study using qualitative analysis of student records	Evaluation of a PB assessment system at one medical school in the US. Analysis of 32 assessment forms indicating non-cognitive behaviours that caused concern	<p>Inappropriate behaviour in lecture, Negative attitude, Seems to feel put upon when asked to do authority, Students do not want to work with him, Manipulative, aggressive, and badgering of faculty, Doesn't respond to written requests to discuss low grades, Non-participating, seems withdrawn.</p>	3
Reddy et al., 2007 <sup>32</sup>	Comparative cross sectional survey	Pre and post-survey of medical students' perception and observation of, and participation in unprofessional behaviours at one US medical school. 61 participants, response rate 62%	<p>Arriving late to rounds Absent from mandatory lectures Women's dress Men's dress Making fun of patients, peers or physicians Not correcting someone who mistakes you for a physician Being introduced as doctor or student-doctor to patients</p>	5

			<p>Reporting an impaired colleague to faculty before approaching the individual</p> <p>Poor condition of white coats</p> <p>Taking food from lectures you are not attending</p> <p>Discussing patients in public spaces</p> <p>Making derogatory comments about patients</p> <p>Inebriation at school events</p> <p>Discuss with patients information beyond your level of knowledge</p> <p>Consent a patient for minor procedures without supervision</p> <p>Perform procedures beyond your level of skill on patient</p> <p>No feedback to residents or faculty regarding their unprofessional behaviour</p> <p>Unclear expectations or insufficient feedback by faculty or residents</p>	
Rees, 2013 <sup>55</sup>	Cross sectional survey	Quantitative thematic and discourse analysis of 680 narratives about professionalism dilemmas written by students who responded to an online questionnaires (n=2327) sent to all students of 29 UK medical schools. Respons rate not given.	<p>Communication violation to patients</p> <p>Communication violation about patients</p> <p>Breaching patients' confidentiality</p> <p>Putting own learning needs ahead of patient care, and thereby causing the patient discomfort</p> <p>Acting beyond level of competence</p> <p>Participating in examinations or procedures with no or invalid patient consent</p>	5
Shukr & Roff, 2014 <sup>46</sup>	Cross sectional survey	Student survey in two Pakistani medical colleges. 480 completed questionnaires with self-reported unprofessional behaviour of medical students. Respons rate 92%.	<p>Take the work or idea from a fellow student and passing it off as one's own without acknowledging it or purchasing work from a supplier</p> <p>Getting or giving help for coursework, against a teachers rule (e.g. lending work to another student to look at</p> <p>Claiming collaborative work as one's individual effort</p> <p>Paying a fellow student, or being paid by a fellow student, for completion of coursework</p> <p>Resubmitting work previously submitted for a separate assignment or earlier work</p> <p>Intentionally paraphrasing text in an assignment, or copying text directly, without acknowledging the source</p> <p>Failing to correctly acknowledge a source (e.g., copying the text directly but only including the source in reference list)</p> <p>Citing sources that have not in fact been read in full</p> <p>Altering or manipulating data (e.g., adjusting the data to obtain a significant result)</p> <p>Removing an assigned reference from the shelf in the library in order to prevent other students from gaining access to the information in it</p> <p>Deliberately damaging another students' work</p> <p>Attempting to use personal relationships, bribes, or threats to gain academic advantage</p> <p>Copying answers from a neighbor or enabling a neighbor to copy your answers during an exam</p>	5

			<p>Exchanging answers using mobile phones during an exam</p> <p>Receiving information about the paper from a student who have already sat in the exam, or providing information about a paper to students who have yet to sit in it</p> <p>Persuading faculty members into providing copies of paper prior to exam through bribery, force or threat</p> <p>Taking unauthorised materials (e.g., crib sheets, "Bootee") into an exam</p> <p>Sitting an examination for someone else, or someone else s an examination for you</p> <p>Inventing unrelated or irrelevant circumstances to delay sitting in an exam</p> <p>Arranging to pass an exam using private connections, or bribery</p> <p>Signing attendance sheet for absent friends, or asking classmates to sign attendance sheets for you in labs or lectures</p> <p>Missing lectures frequently</p> <p>Intentionally falsifying the test results or treatment records in order to disguise mistakes</p> <p>Failing to follow proper infection control procedures</p> <p>Examining patients without knowledge or consent of supervising clinician</p> <p>Forging a health care worker's signature on a piece of work, patient chart, grade sheet, or attendance sheet</p> <p>Falsifying references or grades on curriculum vitae</p> <p>Altering grades in official record</p> <p>Sexually harassing a university employee or fellow student</p> <p>Threatening or verbally abusing a university employee or fellow student</p> <p>Physically assaulting a university employee or fellow student</p> <p>Engaging in substance abuse (e.g., drugs)</p> <p>Providing illegal drugs to the students</p>	
Sierles & And, 1980 <sup>54</sup>	Cross sectional survey	Student survey at two US medical schools. 482 completed questionnaires, respons rate 95%	<p>Cheating in exams</p> <p>Falsifying information about a patient from a laboratory examination, history or physical examination</p> <p>Reporting a finding on a patient as normal without obtaining the information</p>	5
Silva-Villarreal et al., 2013 <sup>61</sup>	Cross sectional survey	Student survey with questionnaires in one medical school in Panama. 472 participants, respons rate not given	<p>Bullying:</p> <p>Stealing or breaking things</p> <p>Threatening others</p> <p>Spreading rumours</p> <p>Profanity</p> <p>Exclusion</p> <p>Insulting</p>	5
Simpson, 1977 <sup>58</sup>	Qualitative study using interviews	Interviews with doctors, medical students and staff attorneys at four US teaching hospitals, by a law-scholar	Misrepresentation	3

Subba et al., 2013 <sup>60</sup>	Cross sectional survey	Student survey about mobile phone usage at one medical school in India, 336 completed questionnaires, response rate not given	Use of phones in restricted areas	4
Taradi & Taradi, 2012 <sup>48</sup>	Cross sectional survey	Student survey among students of four Croatian medical schools, 662 completed questionnaires, response rate 62%	Turning in work done by someone else Getting exam questions from someone who already has taken the test Helping someone else cheat on a test Copying from another student during a test or exam without his/her knowledge Copying from another student during a test or exam with his/her knowledge Copying text without appropriate attribution Using unpermitted crib notes during a test Taking a test or a part of a test for someone else Allowed someone else to copy from your test Using false excuse to obtain extension on due date	5
Teherani et al., 2005 <sup>36</sup>	Case study using qualitative analysis of student records	Retrospective qualitative analysis of 68 student cases (disciplined) and 196 matched cases (nondisciplined).	Poor reliability and responsibility Lack of self-improvement and adaptability Poor initiative and motivation Immaturity Poor relationships with students, faculty, staff Poor relationships with patients and patient families Does not uphold medical school honor code Apple polisher, show-off, needs to be center of attention Anxious, insecure	5
Teherani et al., 2009 <sup>33</sup>	Qualitative study using interviews	Interviews with 33 faculty from 33 different US medical schools, responses for remediation were analyzed by using a validated framework.	Inability to accept and incorporate feedback Negative attitude Arrogant Overconfident Poor character Brusque, hostile or argumentative Falsifies Undesirable as a physician Fails to establish rapport Displays inappropriate interpersonal skills Not respectful Insensitive to patient needs Late or absent for assigned activities Unreliable Lacks motivation Oversensitive	5
Vengoechea et al., 2008 <sup>40</sup>	Cross sectional survey	Survey in one medical school in Colombia to find perceptions and actual unprofessional behaviours. Questionnaires of 433 medical	Copying from another in an exam Copying literally from published books or articles Lending work to another so he/she may copy	4

		students were analyzed, overall response rate 80%	<ul style="list-style-type: none"> <li>Using downloaded material without reference</li> <li>Writing the heart rate in a medical chart without taking it</li> <li>Leaving the hospital during a shift</li> <li>Presenting work with the name of someone who did not participate in it</li> <li>Paying someone to do a shift for you</li> <li>Obtaining a copy of a test before presenting it</li> <li>Asking someone to include you in the assistance list</li> <li>Answering 'negative' if asked about patient past history you did not obtain</li> <li>Paying someone to change a grade</li> </ul>	
Yates, 2014 <sup>27</sup>	Case study using qualitative analysis of student records	Case study of students records of one UK medical school, 189 forms of 143 students were analyzed	<ul style="list-style-type: none"> <li>Inappropriate comments made to a patient in front of others</li> <li>Inappropriate advice to a patient</li> <li>Giving other students inappropriate advice about clinical care</li> <li>Illegible writing</li> <li>Failing to listen to patients' opinion</li> <li>Failing to contribute to patient care</li> <li>Absence from teaching with notice or prior permission</li> <li>Failure to follow the timetable and/or get assignments signed off</li> <li>General lack of commitment to teaching &amp; learning activities and/or tutor meetings</li> <li>Failure to engage with research project, poor note-keeping and general disorganisation</li> <li>Ignoring emails or other contacts from teaching or administrative staff</li> <li>Disruptive behaviour in group teaching sessions</li> <li>Dismissive or arrogant behaviour to other individuals during teaching</li> <li>Rudeness to colleague in presence of simulated patient</li> <li>Making a patient feel uncomfortable during examination</li> <li>Inconveniencing patients by not attending and not appreciating the problems caused</li> <li>Not respecting professional boundaries (deciding to visit a patient at home)</li> <li>Abrupt and non-empathetic manner with patients</li> <li>Rude or aggressive to fellow students or to staff, with confrontational, intimidating or arrogant behaviour</li> <li>Making fun of others inappropriately</li> <li>Using offensive language during teaching sessions</li> <li>Lack of engagement with clinical teams, disrespect, lack of insight into behaviour</li> <li>Poor body language, inattention, disinterest and casual behaviour</li> <li>Plagiarism or fabrication in written work</li> <li>Failing to obey rules &amp; regulations, particularly in Halls of Residence</li> <li>Giving false identification when challenged</li> <li>Drunk &amp; disorderly behaviour in Halls, noise disturbance</li> <li>Asking another student to sign them in for teaching, or signing another in</li> </ul>	4

			<p>themselves</p> <p>Arrest or criminal offence</p> <p>Writing rude/inappropriate comments on exam script</p> <p>Work or attendance affected by health disorders such as depression</p> <p>Student failing to appreciate the effects of poor health on performance and seek support</p>	
Ziring, 2015 <sup>29</sup>	Cross sectional survey	Mixed method analysis of 93 telephone or email interviews with key administrators of 153 eligible US and Canadian medical schools	<p>Lapses in responsibility:</p> <p>Missed deadlines</p> <p>Unexcused absences</p> <p>Tardiness</p> <p>Lapses in relationships</p> <p>Disrespectful communication by e-mail or in person</p> <p>Inappropriate use of social media</p> <p>Poor availability</p> <p>Lapses related to diminished capacity for self-improvement</p> <p>Lack of self-awareness</p> <p>Lack of awareness of one's limitations</p> <p>Lack of initiative</p> <p>Being defensive to feedback</p> <p>Cheating in exams</p> <p>Committing a felony</p> <p>Falsifying patient information</p> <p>Falsifying resident application information</p> <p>Forging prescriptions</p>	5