PRIMARY ARTICLE

Affective Domain Training And Assessment Via Reflection Sessions Among First Year Medical And Dental Students Of A Malaysian Medical School

Aye Aye Mon[1,2], MuniraBhuiyan[1], Rajiv Pathak[1], Saeid R DoustJalali[1], Karim Al-Jashamy[1], Yasmin Samiah Abdul Kadir[1]

ABSTRACT

Background: A wholesome medical education encompasses three learning domains including cognitive, psychomotor, and affective domains. While the cognitive and psychomotor domains are routinely administered in most medical schools, the affective domain remains obscure in terms of delivery and assessment due to its subjective nature.
Aim: To Study the effectiveness of affective domain training and assessment via reflection sessions.
Methodology: At the Medicine Faculty, SEGiUniversity, Kota Damansara, we have innovatively developed a practical method of nurturing and assessing 79 first year medical and dental students in the affective domain. We introduced 10 weekly reflection sessions between groups of 8-10 students and their respective mentors to discuss and practice affective domain values towards achieving ten outcomes (integrity, empathy, motivation, appearance and personal hygiene, confidence, communication, time management, teamwork and diplomacy, respect, and steadfastness). Students submitted their reflective journals and academic folios for discussion and assessment in the reflection sessions. The overall assessment of the affective domain was derived from the reflective journal, academic folio, mentor assessment, peer assessment, self-assessment, the conduct of the reflection session, affective performance in large and small classes, and involvement in extracurricular activities. A survey was done periodically to measure students' perception on the effect of reflection sessions on their affective domain attributes.
Result: In week 8, a significant difference of affective domain marks compared with the first to seven week was observed thus showing an improvement trend in the weekly evaluation for effective domain. Student's perception on the affective domain showed the majority of the students understood affective domain. They found that the ten values or learning outcomes that were put up were appropriate to prepare them as future doctors and that affective domain should be part of the medical/dental curriculum. Reflection sessions revealed that the students favored the sessions and felt that their mentors took their interest at centre-stage. Student's perception for teamwork and mentoring revealed that majority would like to retain the team members and the mentors for at least one year.
Conclusion: We envision that the innovative training methods would produce wholesome future doctors who are knowledgeable, skillful and caring.

Keywords: Affective Domain, Reflection Session, Medical, Malaysia.

Introduction :

A wholesome medical education encompasses three learning domains in education that is cognitive, psychomotor, and affective domains. The cognitive domain involves Knowledge, Comprehension, Application, Analysis, Synthesis, Evaluation knowledge and the development of intellectual skills. This includes the r recognition of specific facts, procedural patterns, and

Aye Aye Mon[1,2], MuniraBhuiyan[1], Rajiv Pathak[1], Saeid R DoustJalali[1], Karim Al-Jashamy[1], Yasmin Samiah Abdul Kadir[1]
From
[1]Faculty of Medicine, SEGi University, Kota Damansara, Selangor, Malaysia
[2]Faculty of Medicine & Defence Health, National Defence University of Malaysia, Sungai besi camp, Kuala Lumpur, Malaysia

The Article is published on October 2013 issue & available at www.scienceparks.in

DOI: 10.9780/23218045/1152013/40

Name and Designation -
Dr. Aye Aye Mon ; Associate Professor
Qualification -
MBBS; M Med Sc (Medical Microbiology), MACTM
Professional Experience -
15 Years teaching experience as an academician ; 4 years clinical experience
Academic Projects -
Medical Eudation; antifungal activity on Medicinal plants, MRSA
Research Experience - 6 years

concepts that serve in the development of intellectual abilities and skills. There are six major categories and these can be thought of as degrees of difficulties. That is, the first ones must normally be mastered before the next ones can take place (1).

The psychomotor domain includes physical movement, coordination, and use of the motor-skill areas. Development of these skills requires practice and is measured in terms of speed, precision, distance, procedures, or techniques in execution (2).

The affective domain includes the manner in which we deal with things emotionally. Such as feelings, values, appreciation, enthusiasms, motivations, and attitudes. The dictionary explains that "affective" relates to emotion (i.e., causing or expressing feeling). Krathwohlet al.(3) elaborated that the affective domain focuses on how we learn with respect to our emotions. There are 5 five categories of behavior in the schema for the affective domain, from the simplest to the most complex: receiving (e.g., hearing), responding (e.g., answering and discussing), valuing (the worth one imparts to an activity), organizing (prioritizing values), and internalizing values (behavior based upon an individual's value system).

Chen P. W., upon relating her experiences as a medical student, considers affective domain as the "hidden curriculum" (4) and where it cannot be taught; as one of her lecturers quipped "You can't learn ethics or compassion. You either have it or you don't."

In researching "the hidden curriculum" on the medical students' perceptions of teaching revealed that four main themes emerged: personal encouragement, haphazard teaching, the importance of hierarchy, and getting ahead by being competitive. These themes indicate that the delivery of the affective domain in medical education requires both teachers and future doctors' participation and not a one way track by Lemptet al.(5).

Teachers' and students' professional values are continuously exemplified and enacted in the course of medical education through role modeling, setting expectations, telling stories and parables, and interacting with the health care environment, not just in courses on ethics and patient–doctor communication."(6).

Based on the common values that we identified ten values to be evaluated in a periodic manner: i) integrity, ii) empathy, iii) motivation, iv) appearance and personal hygiene, v) confidence, vi) communication, vii) time management, viii) teamwork and diplomacy, ix) respect and x) steadfastness.

While the cognitive and psychomotor domains are routinely administered in most medical schools, the affective domain remains obscure in terms of delivery and assessment due to its subjective nature.At the Medical Faculty, SEGIUniversity, we have innovatively developed a practical method of nurturing and assessing our students in the affective domain values.

Methodology

We introduced weekly reflection sessions between students and their respective mentors to discuss and practice affective domain values towards achieving ten outcomes (integrity, empathy, motivation, appearance and personal hygiene, confidence, communication, time management, teamwork and diplomacy, respect, and steadfastness (1-13).

Mentors undergo a series of training sessions on affective domain assessment before undertaking the reflection sessions with their mentees. Each group consists of 9-10 students. Students submit their reflective journals and academic folios for discussion and assessment in the reflection sessions. The overall assessment of the affective domain is derived from the reflective journal, academic folio, mentor assessment, peer assessment, self-assessment, the conduct of the reflection session, affective performance in large and small classes, and involvement in extracurricular activities.

The reflection sessions follow a standard protocol including discussions of SWOT analysis of the previous week's academic and non-academic performance, setting of goals for the coming week, and analysis of group dynamics. The whole process is documented in a standardised manner. Remedial actions were taken as soon as any academic or non-academic problem arises based on the weekly discussion in the reflection session.

A survey was done periodically to measure students' perception on the effect of reflection sessions on their affective domain attributes. We used established psychometric tools to measure the level of attainment of the stated affective domain outcomes as a result of the affective domain training.

Results

79 first year Medical/Dental students (9-10 per group) were introduced to affective domain for nine weeks. They were evaluated for affective domain weekly assessment via the reflection sessions (SWOT analysis of the previous week's academic and non-academic performances, setting of goals for the coming week, and analysis of group dynamics).

Weekly assessment of affective domain

An improvement trend in the weekly evaluation for effective domain was observed. In week 8, we could see the significant difference of affective domain marks compared with the first to seven week and it was illustrated in Figure 1.

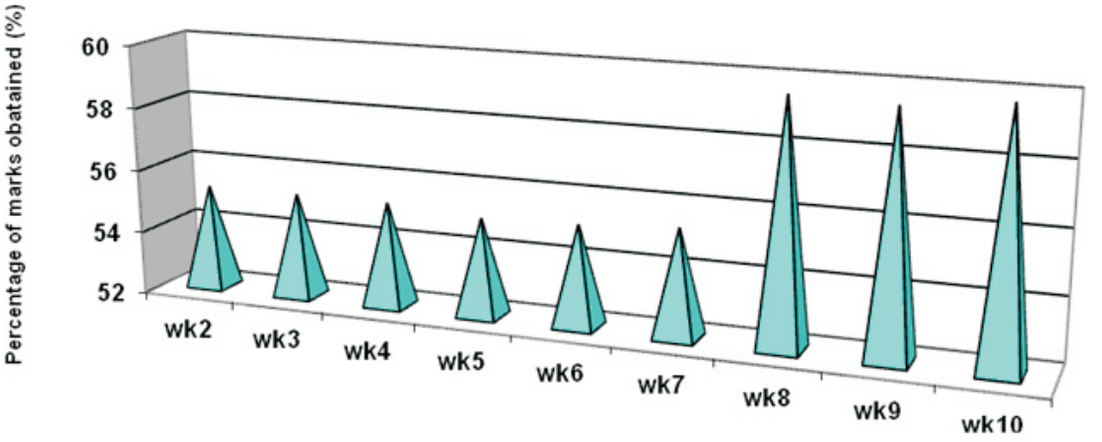

Figure 1: Mean value of affective domain weekly assessment

Perception of the students regarding affective domain

Majority of the students understood affective domain and how the training was carried out at SEGI University. Majority also disagreed that the exercise and reflective session were burdensome and a waste of time. They found that the ten values or learning outcomes that were put up were appropriate to prepare them as future doctors and that affective domain should be part of the medical/dental curriculum.

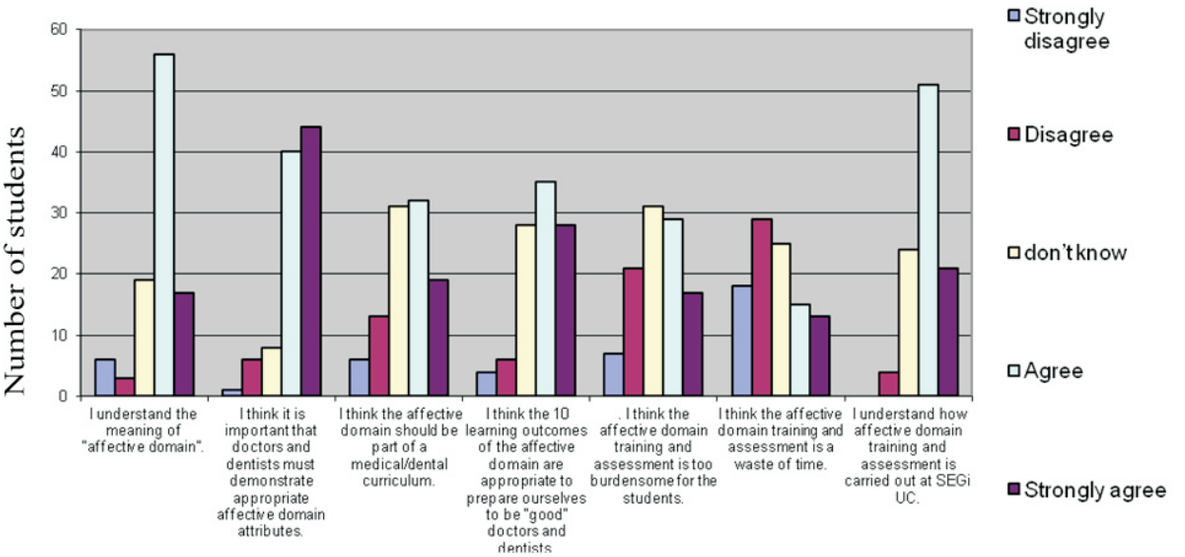

Figure 2: Perception of the students regarding affective domain

Feedback for the Reflection Sessions:

Analysis on the feedback of the reflection sessions revealed that the students favored the sessions and felt that their mentors took their interest at centre-stage as shown in Figure 3.

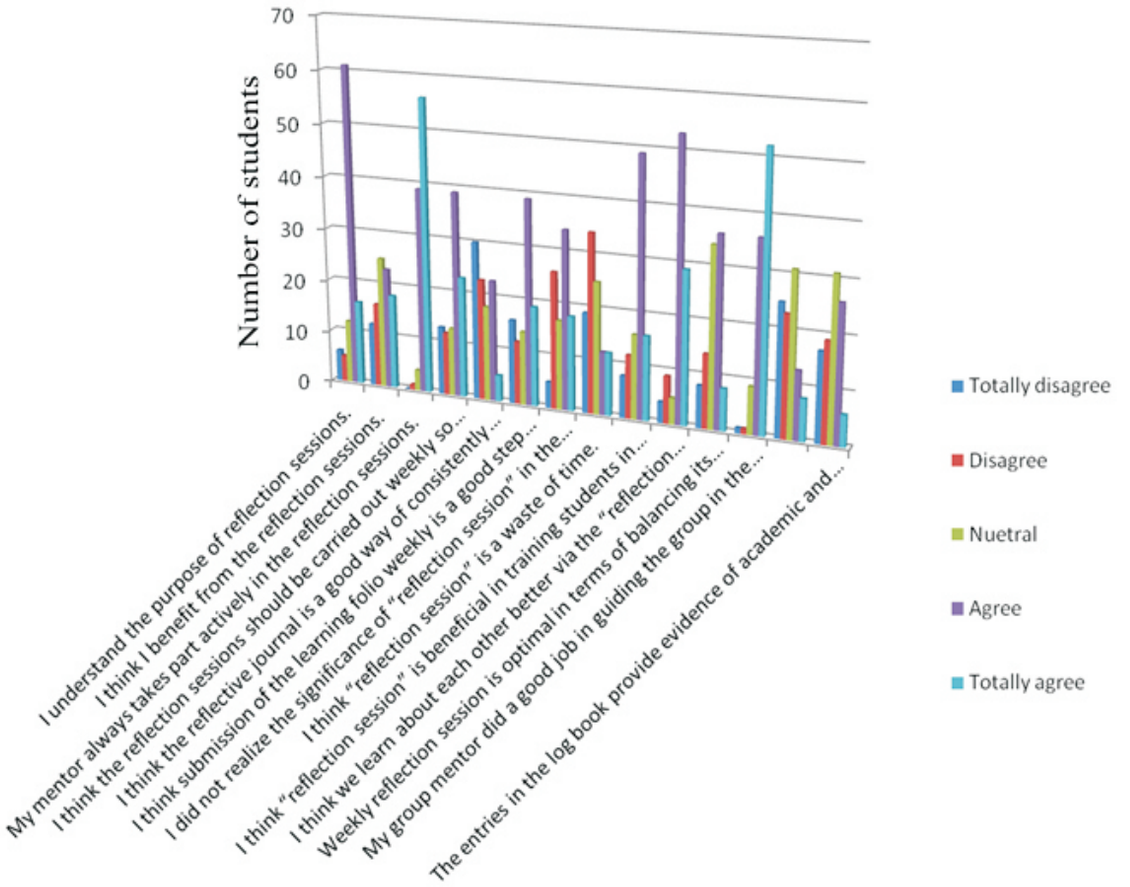

Figure 3: Feedback for the Reflection Sessions

Students' Perception for Teamwork and Mentoring

As for student's perception for teamwork and mentoring, (Figure 4) revealed that majority would like to retain the team members and the mentors for at least one year. They have no issue with the Faculty determining the members of each team and they like the system that emphasizes collaborative work. Majority disagreed that team members were to be changed every semester.

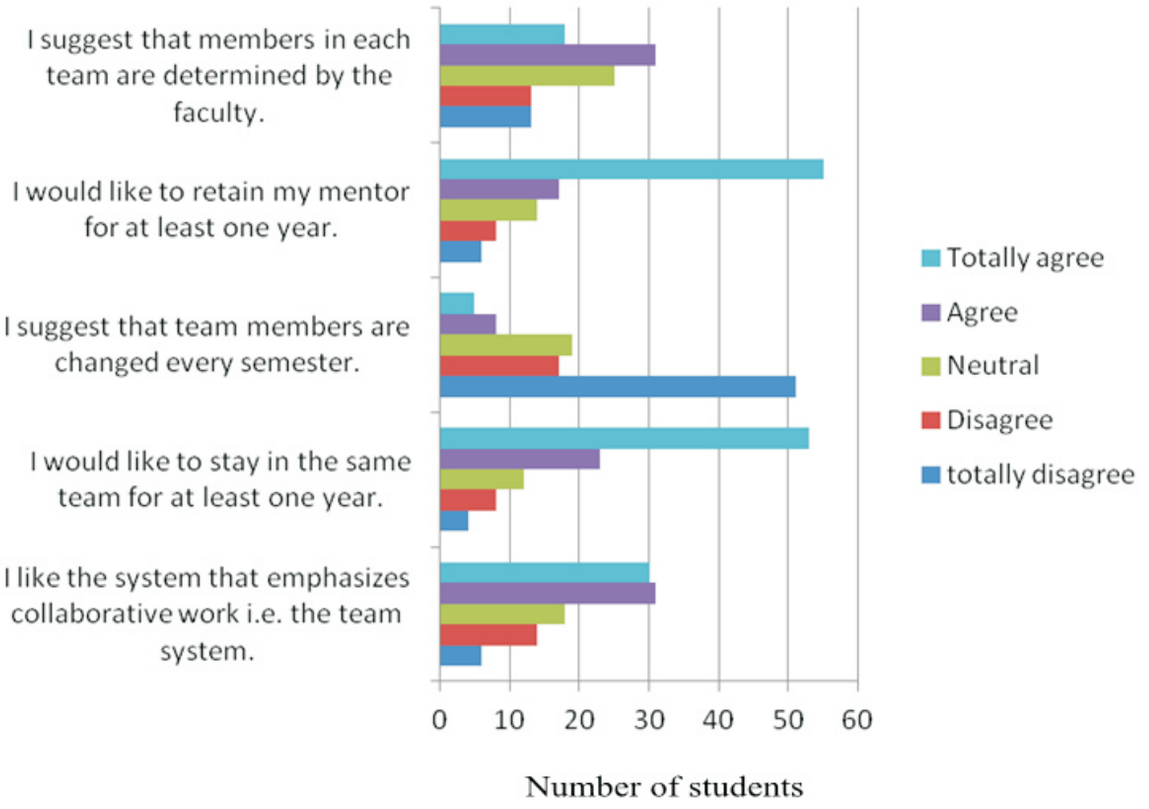

Figure 4: Feedback for the Reflection Sessions

Discussion

The purpose of this study was to explore the relationship among medical and dental students attitude for affective domain training. It's worthwhile to discuss several implications of the study findings as well as limitations and the directions for future research. With regards to the student's perception on the affective domain, the majority of the students understood affective domain. Major reports directing medical education have stressed the need for improving the training of interpersonal skills and attitudes (14-16). This need is supported by evidence that adequate communication improves health care quality (17-19). Therefore, several medical schools have introduced courses in communication skills expanding evidence and attitudes.

Medical school educators should consider the role of affective learning when teaching courses emphasizing communication skills (in addition to cognitive learning). This would be consistent with approaches to learning that integrate all three domains of Bloom's taxonomy (20).There is also a need for consistency between the attitudes and values implicit in an educational curriculum (21).

The affective domains were well infused in the instructions. Students were seen to be well equipped with all the domains that are important to their development of moral, attitudes, and feelings. This aspect of development is of utmost important to ensure that intellectual development as prescribed by the cognitive domains is fairly substantiated by the moral aspects of character development. This is in line with the intention of producing students who are not only cognitively smart but also morally upright and upstanding. Since attitudes are often important predictors of behaviors (22).

To assess attitudes of medical students and physicians, a clear definition is needed. A system of beliefs, feelings and action intentions is a well known classical definition of attitude (23). Affect and cognitions direct behavior. It may, however, be difficult and even question- able to assess beliefs, feelings and intentions of students. Do we care about the inside, if it doesn't show on the outside (24)? Education may well address personal feelings and beliefs (25). If we do not want to summatively assess the affective domain, it apparently is not valued highly. Students lay their priorities at what assessments demand, they `learn not what you expect, but what you inspect' (26). The sometimes disappointing results of education in the affective domain (27-28)

may improve with the introduction of summative assessment. A medical school that not only states that attitudes have to be assessed but that actually organizes such assessment may change the climate towards attitude training throughout the curriculum and many have experience, be it often anecdotal, with medical students and doctors who perform inadequately in terms of attitudes.This may not be a large proportion of the student population, but most clinicians remember students who graduate but should be considered unsuited for patient care. A recent survey confirms this (27). Apart from direct communication with patients, good teamwork is considered to belong to the affective domain: i.e. communication with colleagues and nurses, respecting patients' privacy, et cetera (28).

Conclusion

From this survey, we found that students appreciated and favored the affective domain training and assessment via reflection sessions that are being impregnated into the SEGi University MBBS and Dental curriculum. The improvement in affective domain assessment over the weeks and students' perception on the importance of being a team player and developing their own personal professional attributes serve as a form of motivation for us, the lecturers, to further nurture them towards becoming knowledgeable, skillful and caring future doctors.

Acknowledgements

We would like to acknowledge and thank our medical and dental students from faculty of Medicine, SEGi University, KotaDamansara who participated in this study.

References

1.Bloom BS (1956): Taxonomy of Educational Objectives, Handbook I: The Cognitive Domain. New York: David McKay Co Inc.
2.Simpson EJ (1972): The Classification of Educational Objectives in the Psychomotor Domain. Washington, DC: Gryphon House.
3.Krathwohl DR, Bloom BS, &Masia BB (1973): Taxonomy of Educational Objectives, the Classification of Educational Goals. Handbook II: Affective Domain. New York: David McKay Co, Inc.
4.The Hidden Curriculum of Medical School, New York Times article 30th January 2009 (http://www.nytimes.com/2009/01/30/health/29chen.html).
5.Lempp H, Seale C: The hidden curriculum in undergraduate medical education: qualitative study of medical students' perceptions of teaching. BMJ 2004; 329: 770-3.
6.Reisman AB: Outing the hidden curriculum. Hastings Cent Rep 2006; 36: 9.
7.Gaiser RR: The teaching of professionalism during residency: why it is failing and a suggestion to improve its success. AnesthAnalg 2009; 108: 948-54.
8.Rhoton MF: Professionalism and clinical excellence among anesthesiology residents. Acad Med 1994; 69: 313-5.
9.Tetzlaff JE: Assessment of competence in anesthesiology. CurrOpinAnaesthesiol 2009; 22: 809-13.
10.Waisel DB, Lamiani G, Sandrock NJ, Pascucci R, Truog RD, Meyer EC: Anesthesiology trainees face ethical, practical, and relational challenges in obtaining informed consent. Anesthesiology 2009; 110: 480-6.
11.Cooke M, Irby DM, Sullivan W, Ludmerer KM: American medical education 100 years after the Flexner report. N Engl J Med 2006; 355:1339-44.
12.BatenburgGaufberg EH, Batalden M, Sands R, Bell SK: The hidden curriculum: what can we learn from third-year medical student narrative reflections? Acad Med 2010; 85: 1709-16.
13.Karnieli-Miller O, Vu TR, Frankel RM, Holtman MC, Clyman SG, Hui SL, Inui TS: Which experiences in the hidden curriculum teach students about professionalism? Acad Med 2011; 86:369-77.
14.Physicians for the twenty-first century: the GPEP report : report of the Panel on the General Professional Education of the Physician and College Preparation for Medicine. Association of American Medical Colleges, 1984.
15.General Medical Council, United Kingdom 1993.
16.JCM Metz. Blueprint 1994: Training of doctors in the Netherlands: objectives of undergraduate medical education. Netherlands: University Publication Office, 1994.

17.Bertakis KD, Roter D, Putnam SM. The relationship of physician medical interview style to patient satisfaction. J FamPract 1991; 32 (2):175-81.
18.18. Stewart MA. Effective physician-patient communication and health outcomes: A review. CMAJ 1995;152(9):1423-33.
19. BensingJ, Schreurs K, Rijk AD. The role of the overall practitioner's affectional behavior in medical encounters. scientific discipline & Health 1996; eleven (6): 825-38.
20.ZE Neuwirth. Physician Empathy-Should we care? Lancet 1997; 350(9078):606.
21.Eagly AH, Chaiken S. The psychology of attitudes. Orlando (Fl): Harcour, Brace, Jovanovich; 1993.
22.Carter, R: "A taxonomy of objectives for professional education", Studies in Higher Education 1985; 10 (2), 135-49.
23.Feezel JD. Toward a confluent taxonomy of cognitive, affective and psychomotor abilities in communication. Communication Educ 1985; 34:1-11.
24.Ajzen, I., &Fishbein, M. (1980). Understanding attitudes and predicting social behavior. Englewood Cliffs, NJ: Prentice-Hall.
25.Batenburg V, Smal JA: Does a communication skills course influence medical students' attitudes? Med Teach. 1997; 19: 263-9.
26.GRAAT, J.M.J.M. (1995) Bewustwording van attitude [Appreciating ones attitude], in: J.C.M. METZ, A.J.J.A. SCHERPBIER & C.P.M. VAN DER VLEUTEN (Eds) MedischOnderwijs in de Praktijk [The Practice of Medical Education], pp. 94±101
27.Hart I. (1998) Communication at the AMEE conference key-note speech.
28.Baldwin DC, Daughtery SR, Rowley BD. Unethical and unprofessional conduct observed by residents during their first year of training. Academic Medicine; 1998, 73(11), 1195-1200.