Short Communication

Comparison of Two Different Curricula in Psychiatry Clerkship at Tehran University of Medical Sciences

Maryam Tabatabaee, MD [1]
Homayoun Amini, MD, MPH [1]
Fattaneh Abdi Masouleh, MSc[1]
Ali-Akbar Nejatisafa, MD [1,2]
Mohammad Arbabi, MD [1,2]
Majid Sadeghi, MD [1]
Vandad Sharifi, MD [1]
S. Ali Ahmadi-Abhari, MD [1]
Azim Mirzazadeh, MD [3]
Emran Mohammad Razzaghi, MD, MPH [1]
Ahmad Ali Noorbala, MD [1]

1 Department of Psychiatry, Tehran University of Medical Sciences, Tehran, Iran
2 Psychiatry and Psychology Research Center, Tehran University of Medical Sciences, Tehran, Iran
3 Department of Internal Medicine, Imam Khomeini Hospital, Center for Educational Research in Medical Sciences (CERMS), Tehran University of Medical Sciences, Tehran, Iran.

Corresponding author:
Maryam Tabatabaee, MD
Assistant Professor, Department of Psychiatry, Tehran University of Medical Sciences, Roozbeh Hospital, South Kargar Ave., Tehran 13337, Iran.
Tel: +98-21-55412222
Fax: +98-21-55419113
Email:
tabatabaee@sina.tums.ac.ir

Objectives: The aim of this study was to evaluate the efficacy of a new psychiatry clerkship curriculum which was designed to improve the knowledge and skills of medical students of Tehran University of Medical Sciences (TUMS), Iran.
Methods: This quasi-experimental study was conducted in two consecutive semesters from February 2009 to January 2010. In total, 167 medical students participated in the study. In the first semester, as the control group, the clerks' training was based on the traditional curriculum. In the next semester, we constructed and applied a new curriculum based on the SPICES model (student-centered, problem-based, integrated, community-based, elective and systematic).At the end of the clerkship, the students were given two exams: Multiple Choice Questions (MCQ) to assess their knowledge, and Objective Structured Clinical Examination (OSCE) to assess their skills. Baseline data and test performance for each student were analyzed.
Results: Compared to the control group, students in the intervention group showed significantly higher OSCE scores (P= 0.01). With respect to MCQ score, no significant difference was found between the two groups.
Conclusions: The results suggest that the revised curriculum is more effective than the traditional one in improving the required clinical skills in medical students during their psychiatry clerkship.

Key words: *Psychiatry, Clerkship, Education, Medical students, Curriculum*

Iran J Psychiatry 2013; 8:3: 145-148

A substantial proportion of patients who are visited by general practitioners are suffering from psychiatric illnesses, while only about one third of psychiatric cases are correctly detected (1). It is crucial that psychiatric teaching is relevant and useful to future doctors to ensure that patients with psychiatric illnesses receive appropriate care for both their physical and mental health problems (2). In the last decade, medical schools' curricula have been reformed to better prepare students for their future careers (3).Medical education curriculum in Iran follows a discipline-based, teacher-centered and hospital-based approach (4), but more attention has recently been paid to curriculum reform. At Tehran University of Medical Sciences (TUMS), undergraduate medical education includes2 years of basic sciences course, 4 years of clerkship and 18 months of internship,lasting7.5 years. Psychiatry clerkship in TUMS was a 4-week essential course taken in the fourth or fifth year; and the students were assigned to Roozbeh Hospital (Tehran, Iran), and spent 1.5 days per week in outpatient clinics and 4 days on inpatient services. They also attended didactic seminars on psychiatry during a 4.5-month semester. Each student's clinical performance was assessed by residents and attending physicians. Then, a written exam in the form of "multiple choice

questions" was given to students at the end of the semester.

The curriculum for psychiatry clerkship was traditional and revision was needed. The range of concerns about the traditional curriculum included: 1) a need for integrated clinical and theoretical education;2) a need for learning objectives to go beyond knowledge acquisition, and including fundamental clinical skills; and 3) a need to align the final assessment to the stated learning objectives (5).

In developing the new curriculum, we took steps to adopt some part of the SPICES model (student-centered/teacher-centered, problem-based/information-gathering, integrated/discipline-based, community-based/hospital-based, elective/uniform and systematic/apprenticeship-based) (6).

The goal of this study was to evaluate the efficacy of a new psychiatry clerkship curriculum for improving medical students' knowledge and skills.

Material and Methods

This quasi-experimental nonrandomized comparative study was conducted in the two consecutive semesters from February 2009 to January 2010. All medical students who started their required 4-week psychiatry clerkship in Tehran University of Medical Sciences during this period were invited to participate in this study. Information on demographic and educational factors was obtained at the time of entry into the study.

To compare educational background between the two groups, National Comprehensive Basic Sciences Examination Score (NCBSES) and Grade Point Average (GPA) were used. NCBSES is a national multiple choice question exam, which is set at the end of the two-year basic sciences course. Maximum score for NCBSES is 200, and maximum score for GPA is 20. GPA is the mean of scores of clinical courses.

In the control group, the clerks' training was based on the traditional curriculum. In the next semester, we constructed and applied a new curriculum which was approved by the Department of Psychiatry. The major changes in the new undergraduate curriculum included: 1)Integration of clinical training with teaching" Theory of Psychiatry" in a 4-week course (as opposed to the old curriculum where didactic lectures and the rotation of 4-week psychiatry clerkship were not simultaneous.(;2)Conducting 16-hour workshops to teach the essential topics (7, 8), which included effective skills in communication, history taking and interviewing, examining mental state and ability to recognize, assess and initiate the management of common psychiatric problems(instead of 6-hour lecture in the previous curriculum(;3)Doubling clinical practice in outpatient clinics;4) Using the Objective Structured Clinical Examination (OSCE),which is the most widely known modern method for assessment of skills. Students spent 3 days per week in the outpatient clinic and in the hospital's emergency room; and the remainder of their time was spent on inpatient services, but the control group spent more time in the inpatient setting. In our unrevised curriculum program, like traditional curricula in other countries, the most common form of assessment was a written examination (9).

At the end of the clerkship, students took two examinations. First, they were given Multiple Choice Questions (MCQ) for knowledge assessment, which was set by faculty members of the Department of Psychiatry in TUMS who were either psychiatrists or psychologists.

No significant differences were found between the two groups in terms of discrimination index and difficulty index. Also, the Objective Structured Clinical Examination (OSCE) was administered to students to assess their skills. Moreover, we conducted the OSCE with five stations to evaluate the students' skills in psychopathology, mental status examination, suicide or violence risk assessment and case formulation. The raters were trained psychiatry residents, and for each OSCE station raters were the same for the two groups.

Baseline data and test performance were analyzed using SPSS 17.Age, (NCBSES) and Grade Point Average (GPA) were assessed using independent student's t test or the Mann-Whitney test (depending on whether or not the distribution was normal). Gender was assessed using chi square test. Demographic and educational factors were assessed using the Mann-Whitney's test and the examination scores were compared by independent T-test. P-value was set at 0.05.

Result

In total, 167 medical students started their required psychiatry clerkship from February 2009 to January 2010. The control and the intervention groups consisted of 67 and 89 students, respectively. Eight students in the control group and3 in the intervention group did not agree to participate in the assessment portion of the study. Demographic and educational data of the two groups are demonstrated in table 1. There were no significant differences between the two groups with the exception of the mean age which was higher in the control group.

Compared to the control group, students in the intervention group showed significantly higher OSCE scores. Furthermore, no significant difference was found between the two groups with respect to MCQ scores (Table 2).

Table 1: Comparing Age, Gender, and Outcome Measures in Two Groups of Medical Students Entering Psychiatry Clerkship based on New vs. Traditional Curriculum two groups

Curriculum / Variables	Old	New	Statistic	P-value
Age (year)	23.5 ± 0.5	23.9 ± 1.8	T or z	0.016
Gender (female)	55.2%	44.3%	χ^2	0.178
NCBSES (Mean± SD)	142 ± 29	144 ± 28	T or z	0.417
GPA (Mean± SD)	16.3 ±1.2	16 ±1.1	T or z	0.342

NCBSES: National Comprehensive Basic Sciences Examination Score
GPA: Grade Point Average

Table 2: The comparison of final assessments between control group and intervention group

Curriculum / Assessments	Old (Control group)	New (Intervention group)	df	t	P- value
OSCE (score± SD) Max100	68.3±13.0	74.0±14.5	154	2.55	0.012
MCQ (score± SD) Max20	15.0±1.7	14.7±1.8	148	1.01	0.313

Discussion

The finding of this study revealed that the new curriculum, by adopting more outpatient clinical practice, integrated education and using interactive, students-centered teaching methods in workshops, is more effective than the traditional method in improving the required clinical skills of medical students during their psychiatry clerkship.

Limitations and Recommendations

This study was limited to medical students at one institution, and therefore not generalizable to other programs or specialties. Small sample size and the impossibility to blind the examiners are other limitations of the study. Certainly, more revision of our curriculum together wither form of medical education curriculum is needed. Also, designing a randomized blind research approach is required. To develop a modernized curriculum, we should put emphasis on competence-oriented, community-oriented and integrated education (4, 13,14).

Acknowledgements

We would like to thank the psychiatry residents in Roozbeh Hospital for their contribution to this study. This study was supported by a grant from Tehran University of Medical Sciences.

Table 1: Comparing Age, Gender, and Outcome Measures in Two Groups of Medical Students Entering Psychiatry Clerkship based on New vs. Traditional Curriculum two groups.

References

1. Harding TW, De Arango V, Baltazar J, Climent C, Ibrahim HH, Ladrido-Ignacio L , Wig NN. Mental disorders in primary health care: A study of their frequency and diagnosis in four developing countries. Psychological Medicine 1980; 10:231-241.
2. Oakley C, Oyebode F. Medical students' views about an undergraduate curriculum in psychiatry before and after clinical placements. BMC Med Educ 2008; 8:26.
3. Watmough S, Garden A, Taylor D. Pre-registration house officers' views on studying under a reformed medical curriculum in the UK. Medical Education 2006; 40: 893-899.
4. Tavakol M, Murphy R, Torabi S. Medical education in Iran: An exploration of some curriculum issues. Medical Education Online 2006; 11: 1-8.
5. Burke MJ, Brodkey AC. Trends in Undergraduate Medical Education: Clinical Clerkship Learning Objectives. Academic Psychiatry. 2006; 30: 158-165.
6. Harden RM, Sowden S, Dunn WR. Educational strategies in curriculum development: The SPICES model. Medical Education. 1984; 18**:**284 – 297.
7. Ring H, Mumford D, Katona C. Psychiatry in the new undergraduate curriculum. Advances in Psychiatric Treatment. 1999; 5: 415-419.
8. Sensky T. The place of the psychiatrist in the new undergraduate medical curriculum. Psychiatric Bulletin 1994; 18: 557-559.
9. Çingi Başterzi AD, Tükel R, Uluşahin A, Coşkun B, Alkin T, Murat Demet M, Konuk N, Taşdelen B. Undergraduate psychiatric training in Turkey. Turk Psikiyatri Derg 2010; 21: 195-202.
10. Hodges B, Inch C, Silver I. Improving the psychiatric knowledge, skills, and attitudes of primary care physicians, 1950–2000: A Review. Am J Psychiatry 2001; 158: 1579-1586.
11. Lovett LM, Abou-Saleh M. Teaching psychiatric interview skills to medical students. Medical Education 2009; 24**:**243 – 250.
12. Yamauchi T. Education of Psychiatry in Japan. Psychiatry Clin Neurosci 1998; 52 Suppl: S256-258.

13. Mazotti L, Kirsch HE, O'Brien B. Improving integration of clinical clerkship didactic curriculum. Medical Education Development 2011;1:1-3
14. Hauer KE, O'Brien B, Poncelet AN. Longitudinal integrated clerkship education: Better for learners and patients Point. Acad Med 2009; 84: 821.