

Mental health training in primary care

Impact on physicians knowledge

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ABSTRACT

Objective: The objective of this study was to measure changes in the Primary Health Care (PHC) physicians' knowledge towards mental illnesses after a short-term training course.

Method: The interventional study consisted of a sample of 31 PHC physicians randomly selected from different PHC centers in Eastern Saudi Arabia. The physicians were exposed to a 4-day intensive training course in mental illnesses in June 1999. They were assessed using multiple choice questions testing before (pre-test) and after (post-test) to assess their knowledge regarding mental illnesses.

Results: The analysis of the accumulated data indicated that there was a significant improvement in the PHC physicians'

knowledge of mental illnesses after the course ($p < 0.0001$). The effect of recall bias was excluded in the post-test evaluation. In addition, multiple regression analysis indicated that the undergraduate psychiatric training courses had a positive contribution in both pre- and post-tests.

Conclusion: The authors surmised that a mental training course could improve the knowledge base of PHC physicians. Furthermore, by giving substantial weight to the undergraduate and internship psychiatric training might improve the delivery of mental health services at the PHC level.

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Mental illness is a global health problem, accounting for an enormous amount of disabilities and human suffering. Some estimations state that 20-40% of primary health care (PHC) patients have some type of mental health problem,¹⁻³ most of which are depression, anxiety, and somatoform disorders.^{3,4} Patients with such disorders tend to present with physical complaints rather than psychological ones,⁵ and usually in PHC settings rather than specialized clinics.⁶ Most of these patients remain unidentified or misdiagnosed by PHC physicians.^{4,7} Some studies carried out in the Kingdom of Saudi Arabia (KSA), provide similar findings.^{4,8} Failure to recognize, assess and manage such cases leads not only to prolonged human suffering, but also unnecessary

consumption of health resources.⁹ A 2-week study was carried out by Qureshi et al¹⁰ revealed that favorable changes in PHC physicians' knowledge and motivation to practice psychiatry at PHC centers, was enhanced by training in mental health issues and problems. Therefore, psychiatry and behavioral science should be an essential component of the training curricula for PHC physicians in order to promote comprehensive primary health care.^{11,12} Although, extensive training is needed for PHC physicians, the authors decided to shorten the duration of the training to 4 days instead of weeks.

This study aims to evaluate the impact of a brief training course on the psychiatric knowledge of PHC physicians.

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Methods. This is a cross-sectional intervention study, with a target population of 296 PHC physicians working in 111 PHC settings in Eastern Saudi Arabia. Four cities were excluded, Al-Hassa, Naaria, Khafjee and Hafr Al-Batin, due to the shortage of resources and distance involved from the training center. One criteria of selection involved PHC physicians with no previous exposure to postgraduate psychiatric training or work in a psychiatric clinic. From this, 191 PHC physicians were selected during the first stage. During the second stage, a sample of 31 (16.2%) PHC physicians were selected randomly. It should be noted that 31 was the maximum number of PHC physicians who could be released from their clinics at a given time due to the of lack of replacements. The training course was held in June 1999. It ran for 4 days, consisting of 14 didactic contact hours and 5 3-hour practical workshops. It was designed to focus on the recognition and management of the most common forms of mental problems presented in primary care; depression, anxiety, somatoform, eating and sleeping disorders. Added to that their management; basic psychotherapy and psychotropic treatments, along with a referral system. The course also included childhood and adolescent psychiatry. Various teaching methods were used, audiovisual presentations, role-play and group discussions. Workshops were jointly facilitated by experienced psychiatrists and were conducted in small groups in order to facilitate individualized participation. Consultants and specialists from the Psychiatric Departments at King Faisal University (KFU), Dammam Central Hospital and Al-Amal Hospital Dammam, KSA were involved in the training. A total of 60 multiple choice questions (MCQ) were carefully selected by an expert Professor in psychiatry from the Psychiatric Department at KFU. Questions were randomly divided into 3 equal groups of 20 questions each, referred to as group A, B and C. Group A was included in both pre-test and post-test. Group B was included in the pre-test but not in the post-test. Where, group C was included in the post-test but not in the pre-test. Thus, each test was composed of 40 randomly generated MCQ, half of which were common to the 2 tests provided. This technique was utilized in order to avoid, if possible, recall bias of the trainees and ensure consistency of the pre and post-tests.

Data analysis. The data was analyzed by using the Statistical Package of Social Science for Window, version 10. Multiple choice questions scores values were compared by means and SD, and were tested by Student t-test. Multiple linear regression was used to assess the relationship between the MCQ scores from the following independents variables; sex, age, nationality, PHC work period, medical school, undergraduate psychiatry training. A p-value of ≤ 0.05 was considered as the statistical level of significance. Every candidate acts as their own control, for example each trainee's post-test [case] was compared with their pre-test [control].

Results. The study sample composed of 31 PHC physicians. Of these 16 (52%) were men and 15 (48%) women. Twenty (65%) were Saudis, 6 (19%) from other Arab countries, and 5 (16%) were non-Arabs. Ages ranged from 26-49 years with a mean of $34.2 \pm SD \pm 7.5$ years. Their work in PHC settings ranged from 1-20 years (mean 4.8 ± 5.2). The mean score in the pre-test MCQ examination was 122.1 ± 7.5 (the maximum score of the exam was 200). The achieved scores range from 95-154, with only 4 (13%) scoring above 70%. The post-test scores ranged from 118-164, with a mean $\pm SD$ of $147.7 \pm 14.9.1$; and 23 (74%) trainees achieved more than 70%. **Table 1** displays a comparison between the PHC physicians' scores in pre- and post-tests. There was significant improvement in the different MCQ groups; group A in the pre-test compared with the same questions as repeated in the post-test [p-value <0.0001]. Also, improvement was achieved in group B compared with group C [p-value <0.0001]. By the end of the course, an average trainee achieved a 21% increase in their clinical psychiatric knowledge. **Table 2** shows that most participants have improved their knowledge regarding mental health care (p-value <0.0001). Multiple linear regression equations were used to elicit the independent variables that could contribute to the explanation of variance in PHC physicians' knowledge of psychiatric before and after the course. Only undergraduate psychiatric training had a positive contribution on the pre-test assessment (p-value = 0.0067), which jointly explained 23% of the variance. Likewise, the variables affecting the post-test scores were medical school and undergraduate psychiatric training, p-values were <0.0037 and <0.0391 jointly explaining 54% of variance.

Discussion. This interventive study indicated that a short structured training course in mental health could markedly improve the PHC physicians' knowledge. This conclusion supports Qureshi et al.¹⁰ However, knowledge of mental illness is fundamental to develop the clinical skills of PHC physicians. Where before they lacked adequate knowledge regarding different forms of mental illnesses, co-morbidity and their prevalence. This severely limited their ability to provide comprehensive mental health care for their patients.

Our findings indicated that 16% of the trainees in the course were non-Arabic speaking, which may contribute to a communication barrier in the delivery of mental health service. Further, the findings indicated a relationship between the undergraduate psychiatric training courses and the PHC physicians' knowledge. As seen in the multiple regression result, up to 23% of the mental knowledge variance in the pre-test is related to the undergraduate psychiatric training. It's effect, and medical schools were the strong related factors to the PHC physicians' achievement in the post-test. The duration of the undergraduate psychiatric training courses could explain the contribution of medical

Table 1 - The impact of a brief mental training course on primary health physicians knowledge, Eastern Province, Kingdom of Saudi Arabia (N=31).

MCQ groups	Pre-Test Mean \pm SD	Post-Test Mean \pm SD	p-value
B	57.5 \pm 6.8	-	*
A	64.5 \pm 9.7	76.5 \pm 10.0	<0.0001
C	-	71.3 \pm 5.8	**
Total score	122.1 \pm 14.9	147.9 \pm 14.2	<0.0001

MCQ - multiple choice questions
 * no statistical significance between group B & group A (in Pre-Test)
 ** no statistical significance between group C & group A (in Post-Test)

Table 2 - The impact of a brief mental training course on primary care physicians knowledge of different demographic and professional characteristics, Eastern Province, Kingdom of Saudi Arabia (N=31).

Variables	n	Pre-Test Mean \pm SD	Post-Test Mean \pm SD	p-value
PHC physicians	31	122.1 \pm 14.9	147.9 \pm 14.2	<0.0001
Sex				
Male	15	126.3 \pm 14.3	148.0 \pm 15.1	<0.0001
Female	16	118.1 \pm 14.9	147.5 \pm 13.7	<0.0001
Age				
\leq 30 years	14	116.3 \pm 14.2	147.27 \pm 13.4	<0.0001
31-40 years	9	121.26 \pm 13.7	144.1 \pm 15.0	0.004
>40 years	8	133.1 \pm 12.5	152.7 \pm 14.9	0.130
Nationality				
Saudi	20	118.3 \pm 15.1	147.0 \pm 13.2	<0.0001
Other-Arab	6	122.7 \pm 6.1	150.7 \pm 4.3	<0.0001
Non-Arab	5	136.6 \pm 14.6	145.2 \pm 25.2	0.528
PHC Work				
\leq 2 years	15	119.6 \pm 14.2	146.0 \pm 13.2	<0.0001
>2-10 years	10	117.5 \pm 12.9	143.8 \pm 16.3	0.001
\geq 10 years	6	135.8 \pm 13.6	158.7 \pm 7.3	0.005
Medical school				
Saudi	15	117.5 \pm 14.0	147.1 \pm 13.6	<0.0001
Other Arabic	9	124.9 \pm 13.2	152.0 \pm 8.7	<0.0001
Non-Arabic	7	132.4 \pm 19.8	141 \pm 24.5	0.559
Undergraduate psychiatric training				
\leq 4 weeks	12	112.8 \pm 13.9	138 \pm 14.2	<0.0001
>4 weeks	19	127.9 \pm 12.6	153.3 \pm 11.3	<0.0001

PHC - primary health care

schools. As cited in the literature, the improvement after an education intervention was not related to age, sex and work years in a PHC setting.¹³ So, enhancing educational training is an important issue for PHC physicians to promote mental health care. The main limitation of this study was an inability to have sufficient number of trainees to attend this course. That was related to the shortage of PHC physicians and the lack of replacements of them. Finally, a broad mental knowledge base during the undergraduate period and continuous medical education with regards to mental illness should be considered positively to provide mental health services in PHC setting. Further studies to explore the effect of the undergraduate psychiatric training for providing mental health care are recommended.

In conclusion, despite the inherent logistic difficulties, this study indicates that the mental health-training program can improve the PHC physicians' knowledge towards mental illness even in a short period as 4 days. Additional training in the practical management of mental illness for PHC physicians on continuous bases is essential for improving mental health care.

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Related Abstract

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Title: The attitude of primary care physicians to psychiatry

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Abstract

Objective: The primary goal of this study was whether the clinical psychiatric training of already employed primary care physicians would favourably change their attitudes towards psychiatry. **Design, setting, and subjects:** The sample of this case-control research was comprised of general practitioners who were randomly selected from different primary health care centers of Al-Qassim Region, Kingdom of Saudi Arabia. **Intervention and main outcome measures:** They took a one week intensive psychiatric training course during the year 1989 and were requested to complete a standardized questionnaire encompassing the attitudes towards the psychiatric profession, mental hospitals, mentally ill people, and other related aspects of psychiatric practice, in order to evaluate their attitudes towards psychiatry pre-and post-psychiatric training conducted in Buraidah Mental Health Hospital. **Results:** The analysis of data showed some statistically significant attitudinal changes of GPs following their psychiatric training reflecting more favourable attitudes to psychiatry ($p < 0.05$). **Conclusions:** It was concluded that a condensed psychiatric training could engender an immediate favourable change in attitudes of primary care physicians towards psychiatry. The other most important implication of this research might be that adequately psychiatric trained primary care physicians would be better equipped from psychiatric perspectives to screen the population attending different primary health care centers.