Impact of intensive training on mental health, the experience of Port Said, Egypt.

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Abstract

Background

Mental disorder is extremely common globally and integration of mental health in primary health services represents a critical gap especially in Low- and Middle-Income Countries like Egypt. The World Health Organization has repeatedly called for effective training and support of primary care providers in the identification and treatment of mental health problems over the last decades.

Methods

This paper aimed to evaluate attitudes and knowledge of health care providers toward mentally ill patients and measure knowledge and retention of training messages over time. A three-day mental health training workshop for nurses of public health facilities in the Governorate of Port Said was organized. Pre-training and post-training questionnaires (immediately after the workshop and three months later) were used. Significance of gain in scores was examined between baseline and following cross sectional rounds.

Results

The 73 participants at the study revealed a statistically significant improvement in knowledge and attitude toward mental health from the baseline (pre-training), from a general mean score for desirable answers of 10.5 (+/- 1.2) to 21.2 (+/- 0.6). However, results slightly declined after the months from the workshop (18.5 (+/- 0.6)).

Conclusions

Intensive short-term training on mental illness could be instrumental in improving knowledge and attitudes in a country like Egypt with extensive needs in terms of quality of comprehensive healthcare at primary and secondary level. However, additional evidence is needed to improve retention of information over time and to translate knowledge in clinical practice.

Introduction

Mental disorder is extremely common in all countries, both in high-resourced and in low-resourced settings. While 14% of the global burden of disease is attributed to these disorders, most of the people affected, 75% in many low-income countries, do not have access to the treatment they need.¹

Impact of long-standing disability due to mental health conditions is huge and integration of mental health in primary health services represents a critical gap in several countries, especially low- and middle-

income countries (LMICs).²

The World Health Organization (WHO) has repeatedly called for effective training and support of primary care providers in the identification and treatment of mental health problems over the last decades.^{3,4}

The area of mental health and psychiatric services comprises a number of challenges in Egypt, where projects have been made to integrate mental health in the public health system⁵. The scale of training in medical schools and other training institutions does not reflect the importance of this field as contributor to morbidity. On the other hand, most resources are allocated to a few large centralized psychiatric hospitals, with inadequate availability of beds for acute inpatient care provision, especially due to the fact that around 60% of beds are occupied by long stay patients.⁶

We organised a three-day mental health training workshop for nurses of General Hospitals in the Governorate of Port Said, Egypt, in order to train them in core skills such as communication, assessment, mental state examination, diagnosis, and management of patients with mental illnesses. We also distributed questionnaires to the study-participants to pursue a three-fold objective of: 1) evaluating (pre-training) attitudes and knowledge of health care providers toward mentally ill patients; 2) to measure knowledge after the training; and 3) to explore the retention of training messages over time.

Methods

Training

We organised a three-day mental health training workshop for nurses of General Hospitals in the Governorate of Port Said, in order to train them in core skills such as communication, assessment, mental state examination, diagnosis, and management of patients with mental illnesses.

The training package was adapted using the modules for the training of primary care workers in low- and middle-income countries utilized in countries like Kenya and Iraq.^{7,8} The package is highly structured into five overall units. The first focuses on core concepts (mental health and mental disorders, and their contribution to physical health, economic and social outcomes). The second addresses core skills such as communication, assessment, mental state examination, diagnosis, management, managing difficult cases, management of violence and breaking bad news. Common severe disorders were discussed, including schizophrenia and bipolar disorder.⁹

Each unit was subdivided into a series of 30-minute modules delivered by trained Psychiatrists over 3 days and consisted of a combination of lectures, case studies and solving-problems scenarios, and took place in the month of April 2018.

Questionnaire

This is an observational analytical follow-up study. Each participants was invited to fill a questionnaire, based on previous studies,^{2,10} including several aspects of the subjects part of the training (Table 1). The questionnaire was pre-tested and validated among a small sample of nurses of the Port Said Nursing Institute.

In order to assess the retention of information provided during the training, the same questionnaire is distributed and administered (1) before the training, (2) immediately and (3) three months after the training.

The workshop was conducted in the Port Said Nurses Institute and was supported by the Egypt Ministry of Health and by the Italian Cooperation.

This study was carried out amongst nurses, operating in public health facilities of the Port Said Governorate, who already participated in previous courses organized by the Italian Cooperation. While sample size calculation was not performed, we invited all the available nurses from the Port Said public health services in accordance with availability and working time.

Statistical analysis

Desirable responses for each item in the questionnaire (Table 1) was given a score of 1 while undesirable responses will be given a score of 0. Score before and after training, as well as after 3 months was calculated. Significance of gain in scores was examined between baseline and following cross sectional rounds using Paired T-Student test. The software Stata/MP v.14 was used for analysis.

Table 1. Questionnaire

Question

- 1.Health is absence of illnesses
 - 2.Depression is a form of disability
 - 3.Criteria of Schizophrenia include double or multi-personality
 - 4.Psychiatric patients are usually aggressive and represent a danger for himself and for others
 - 5.Psychiatric medication cause addiction
 - 6.Delusion is the hallucination of schizophrenia patients
 - 7.Headache, stomach ache, fatigue, muscle pain are symptoms of depression
 - 8.Psychiatric nurses are always subject to verbal or physical aggression during care for psychiatric patient
 - 9.To improve depressed patient status, advice to be more religious, to pray, and to appreciate positive sides of life
 - 10.Stop working, lack of concentration, and insomnia, and being sarcastic towards other people, and non-flexibility on others' opinion, are some of the criteria for maniac episodes
 - 11.Electro-convulsive therapy (ECT) is not a safe treatment for mental ill patients
 - 12.Before diagnosing a psychiatric patient we need to exclude the following: HIV, Hypothyroidism, DM, cerebral palsy
 - 13.No need to measure vital sign for psychiatric patient unless he is diagnoses with a physical disease
 - 14.Reading Quran and prayer will cure psychiatric illness
 - 15.Nurses could support and help depressive patient by reporting stories of other patients in worse conditions
 - 16.Psychiatric nurse assessment includes physical appearance, social status, stuttering, and lab investigation
 - 17.Psychiatric hospital is the best place to treat psychiatric patients
 - 18.Psychiatric patient needs special care that is not available in general hospital
 - 19.Neglect answering question is the best way to deal with anxious patient
 - 20.Most of psychiatric diseases are because of lack of faith and not being religious
 - 21.Religious clergy are the best ones to treat obsessive compulsive patients (OCD)
 - 22.Schizophrenia percentage increases in lower income society more than high income society
 - 23.We should not ask depressed patient about suicidal thoughts so he will not commit it
 - 24.Family and social support are very important to support psychiatric patients
 - 25.Psychiatric diseases are considered chronic diseases like DM and hypertension
-

Results

The final sample consisted on 73 nurses; 14 from primary health centres, 5 from the Dental Hospital, 2 from El Ahrab Hospital, three from El Masah El Bahary Hospital, four from El Nasr Hospital, three from Epidemic Hospital, three from Geriatric medical centre, seven from the Ophtalmology Hospital, nine Port Fouad General Hospital, six from Port Said General Hospital, 11 from Psychiatric Hospital Port Said, and five from Zohour Hospital, 1 from the Obstetric Hospital; the average age was 34.5 years. While all participants took the training, pre-test and first post-test in April 2018; only 49 (67.1%) took the second test post-training in September 2018.

Pre-training test

The general mean score for desirable answers was 10.5 (+/- 1.2) and ranged from a minimum of 3 up to a maximum value of 18 (consider that the maximum score would have been 25). The mean score for desirable answers in NON psychiatric nurses was 9.4 (+/- 1.4) and ranged from a minimum of 3 up to a maximum value of 18. The mean score for desirable answers in psychiatric nurses was 13.9 (+/- 1.0) and ranged from a minimum of 9 up to a maximum value of 18. The most problematic questions were the n° 3 (Criteria of Schizophrenia include double or multi-personality), the n° 6 (Delusion is the hallucination of schizophrenia patients), the n° 8 (Psychiatric nurses are always subject to verbal or physical aggression during care for psychiatric patient), and the n° 18 (Psychiatric patient need special care that is not available in an general hospital), which respectively totalled 4, 6, 3, and 6 correct answers. The least problematic questions were the n° 7 (Headache, stomach ache, fatigue, muscle pain are symptoms of depression), and the n° 24 (Family and social support are very important to support psychiatric patients), which totalled 39 and 43 correct answers.

Table 2. Distribution of nurses by health facility

<i>Health Facility</i>	<i>N (%)</i>
Primary Health Centers	14 (19.2)
Port Said Dental Hospital	5 (6.8)
El Ahrab Hospital	2 (3.1)
El Masah El Bahary Hospital	3 (4.1)
El Nasr Hospital	4 (5.1)
Port Said Epidemic Hospital	3 (4.1)
Port Said Geriatric Medical Centre	3 (4.1)
Port Said Ophthalmology Hospital	7 (9.6)
Port Fouad General Hospital	9 (12.3)
Port Said General Hospital	6 (8.2)
Port Said Psychiatric Hospital	11 (15.1)
Zohour Hospital	5 (6.8)
Port Said Obstetric Hospital	1 (1.5)

Post-training tests

The first post-training test general mean score for desirable answers was 21.2 (+/- 0.6) and ranged from a minimum of 14 up to a maximum value of 24. The mean score for desirable answers in NON psychiatric nurses was 20.0 (+/- 0.7) and ranged from a minimum of 14 up to a maximum value of 24. The mean score for desirable answers in psychiatric nurses was 21.8 (+/- 0.3) and ranged from a minimum of 16 up to a maximum value of 22. More than 20 participants replied correctly for all questions except for n°8 (Psychiatric nurses are always subject to verbal or physical aggression during care for psychiatric patient) for which only 10 nurses answered correctly, and the n°18 (Psychiatric patient need special care that is not available in general hospital) for which only 16 did. Almost all participants correctly answered to question n°1 (Health is absence of illnesses), n°7 (Headache, stomach ache, fatigue, muscle pain are symptoms of depression), n°10 (Stop working , lack of concentration , and insomnia, and being sarcastic

towards other people, and non-flexibility on others' opinion, are some of the criteria for maniac), n°11 (Electro-convulsive therapy (ECT) is not a safe treatment for mental ill patients), n°13 (No need to measure vital sign for psychiatric patient unless he is diagnoses with a physical disease), n°20 (Most of psychiatric diseases are because of lack of faith and not being religious), and n°25(Psychiatric diseases are considered chronic diseases like DM and hypertension).

The second post-training test general mean score for desirable answers was 18.5 (+/- 0.7) and a similar decline was noted for both groups, psychiatric nurses and NON psychiatric nurses, which recorded respectively 18.9 (+/- 0.6) and 18.1 (+/- 0.6).

Discussion

This experience showed the potential value of training nurses of different departments and operating at both primary and secondary health level. The statistically significant improvement in acquisition of knowledge and positive attitudes towards mental disorders is a fundamental finding of this study. Such a combination (knowledge and attitudes) is indeed is critical for quality and efficient service delivery.

Similar results were indicated by previous reports that examined changes in knowledge and attitude of primary healthcare workers and primary care physicians after short-term trainings.¹¹⁻¹⁴

A WHO collaborative study also showed an equal magnitude increase in knowledge and behavior of general health workers in six different low- and middle-income countries despite approaches to training varied between study areas.¹⁵ The same study emphasized the persistence of knowledge and attitude for 18 months post training, which is in line with our study in spite of a slight decline.

As correctly inferred by Ignacio et al., some cultural ingrained beliefs are reflected in specific negative attitudes and may require longer term interventions to reverse them.¹⁵ In the case of our experience in Port Said, this is particularly true for the questions "Psychiatric nurses are always subject to verbal or physical aggression during care for psychiatric patient", whose correct answer is *No*, and "Psychiatric patient need special care that is not available in general hospital", whose correct answer is again *No*.

While a general improvement in knowledge was registered, is also important to remark how no significant changes were detected for some items, which remained similar to the baseline scores. This was showed also by Chinnayya et al.,¹⁰ and reinforces the theory of culturally ingrained beliefs and attitudes, which might require alternative and longer strategies of training.

It is essential to embed mental health knowledge and skills within primary and secondary care and the integration of mental health into the basic training of staff would be fundamental in association with post basic training and continuing professional development and for building independent mental health researchers.¹⁶.

As very well-emphasized by Makanjuola et al.,² there is “no health without mental health” and overall service delivery would drastically benefit from the inclusion of mental health knowledge and positive attitudes. In fact, essential universal health would be an unattainable goal if the complex relationship between physical and mental health is not addressed at the healthcare service delivery portal level.¹⁷⁻¹⁹

While the protocol for our study was substantiated by literature review and each step was carefully implemented, few limitations are present.

First of all, this study did not explore whether the skills acquired would impact the clinical practice. However, some studies have reported significant improved skill changes in workplaces after intensive training with similar approaches.¹³ Secondly, although questionnaires were anonymous and completely confidential, changes were obtained by self-report and may have been influenced by a need to please trainers rather than being a “true conviction”.

To conclude, intensive short-term training on mental illness could be instrumental in improving knowledge and attitudes in a country like Egypt with extensive needs in terms of quality of comprehensive healthcare at primary and secondary level. However, retention of information seems to decline overtime; this requires additional evidence tailored to local contexts and how such programs translate in clinical practice.

Declarations

Ethics approval and consent to participate. This study was conducted in accordance with the agreement between the Ministry of Health of Egypt, the Health Directorate of Port Said and the Italian NGO AISPO, which operates under the umbrella of the Italian Cooperation in Egypt in the Port Said Training Institute. Questionnaires were completely anonymous and all participants gave consent to use data for this report.

Consent for publication. Not applicable

Availability of data and materials. Data are available under request

Competing interests. Authors declare that there are no competing interests

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Authors' contributions. SB and SP conceived the idea of the project; AK and AS conducted the training; SB, AN and LL collected and analyzed data; SB, AN, LL and AS interpreted data; SB and SP wrote the first draft of the manuscript; all authors read and approved the final version of the manuscript for submission.

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