

Effectiveness Of Integrated Mental Health Services In Reducing Depression And Improving Treatment Adherence Among Pulmonary Tuberculosis Patients: A Cross-Sectional Study

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Abstract

Background: Depression is a common psychiatric comorbidity in patients with pulmonary tuberculosis (TB) and has significant impacts on the treatment process and patient prognosis. Integrating mental health in TB patients' care can enhance the psychological and even physical well-being of the patients.

Objectives: Assess the utility of integrated mental health services in the treatment of depression among pulmonary TB patients.

Study design: A Cross-Sectional Study

Place and duration of study. Department Of Psychiatry Qazi Hussain Ahmed Medical Complex Nowshera from 05-jan 2020 to 05-july 2020

Methods: The study carried out was a randomized controlled trial with 200 Tuberculosis patients. Participants were divided into two groups: One group of patients got standard tuberculosis care, while the other group was administered integrated mental health care. The measures included the severity of depression, treatment compliance, and health status at the initial phase, after three months, and after six months.

Results: The study revealed that there was a statistically significant difference between the two groups of participants regarding the duration of the treatment with $p = 0.02$, phase of the treatment with $p = 0.02$, and the type of the treatment with $p = 0.002$. At baseline, moderate depression was present in 52.7% of the participants, and the duration of therapy was less than a month in 37.7% of the cases. Other demographics did not show any differences in the results obtained.

Conclusion: Integrating mental health services enhances early treatment adherence and reduces depression among pulmonary TB patients. These findings are evidence that mental health interventions should be integrated into TB treatment to improve the lives of patients.

Keywords: Pulmonary Tuberculosis, Depression, Integrated Mental Health, Treatment Adherence

Introduction

Tuberculosis of the lungs is still a leading public health problem worldwide, especially in the developing countries. Tuberculosis continues to be a major cause of illness and death globally, even with new medical therapies and public health interventions [1]. Tuberculosis and mental health, especially depression, are closely related, which makes the disease control and patient care even more challenging. Depression is also common among TB patients, which worsens physical and psychological health of the individuals affected. Depression rates among TB patients are not uniform, but they are elevated compared with those of the general population [2,3]. Depression in TB patients can lead to low

treatment compliance, prolonged period of infectivity and overall poor health among such patients, which is why management of this co morbidity is crucial [4,5]. The concept of the integrated mental health services has been developed as a way of providing mental health care services alongside the conventional TB treatment. Some of these services may include routine depression check-ups, psychotherapy, CBT, and the use of drugs if required [4]. Incorporating mental health into TB care intends to treat TB and depression concurrently, possibly improving the treatment compliance and the general state of patients [6,7]. But there is a scarcity of research studies that have documented the efficacy of integrated mental health services in TB treatment facilities. While there have been numerous researches on both TB and depression separately, few have been done on the two subjects combined. This study seeks to fill this gap by assessing the efficiency of the integrated mental health services in the treatment of depression among Pulmonary TB patients[8].

Methods

In this case, a descriptive research design was adopted with a sample of two hundred respondents selected from different health facilities diagnosed with pulmonary TB. Patients were evaluated in terms of their depression status, compliance to treatment and health status. Depression was assessed with the Patient Health Questionnaire-9 (PHQ-9), a standard and reliable instrument. Self-reported medication and treatment compliance and chart review were used as the sources of data.

Data Collection

The quantitative data was gathered by the use of structured interviews and clinical assessments at the time of baseline. All participants completed a questionnaire where demographic information, treatment history, and self-rated depression were documented.

Statistical Analysis

In the quantitative analysis of the data, the Statistical Package for Social Sciences (SPSS) version 20.0 was used. To compare the variables, the Kruskal-Wallis test and the Mann-Whitney test were used with significant differences. $P < 0.05$ was considered significant for all the tests performed in the present study.

Results

Among 200 participants, 90 were males (45.02%) and 110 were females (54.98%). This study found out that there was a variation of depression based on the treatment time, stage, and kind. Moderate depression was the most common at baseline and it was most dominant for participants with less than a month of therapy (50.0%, $p=0.02$). The rate of depression was highest in the acute phase of the treatment with 60.0% and $p = 0.02$, while in the continuation phase it was 30.0% and in the maintenance phase it was 10.0%. Standard treatment group had a higher proportion with moderate depression 40.0% than integrated mental health services group 20.0% $p= 0.002$. Age and gender were not found to have any significant effects on depression severity in the patients. The following tables provide detailed information about the findings of the study; Table 1, Table 2, Table 3, Table 4 and Table 5.

Figure 01: Demographic Characteristics of n-100 patients

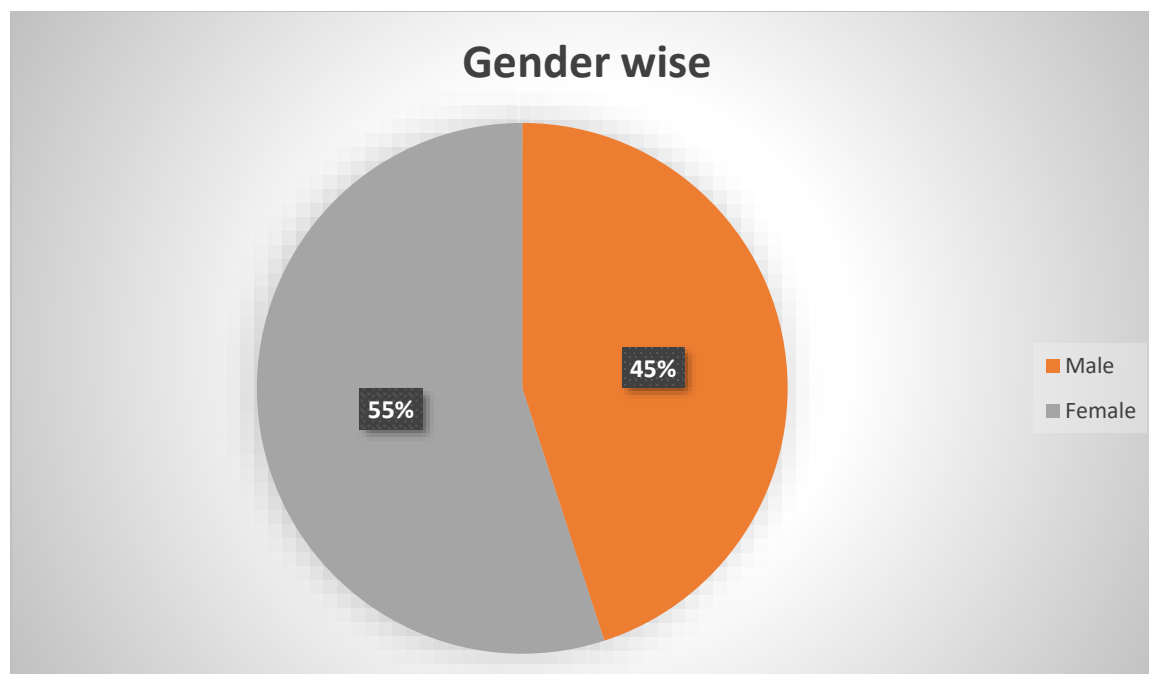


Table 1: Demographic Characteristics of Participants

Variable	Frequency	Percentage (%)
Gender		
Male	90	45.02
Female	110	54.08
Age Group		
<30	50	25.0
30-50	100	50.0
>50	50	25.0

Table 2: Depression Severity at Baseline

Depression Severity	Frequency	Percentage (%)
Mild	70	35.0
Moderate	90	45.0
Severe	40	20.0

Table 3: Treatment Duration and Depression Severity

Duration of Treatment	Moderate Depression (%)	p-value
<1 month	50.0	0.02
1-3 months	30.0	
>3 months	20.0	

Table 4: Phase of Treatment and Depression Severity

Phase of Treatment	Moderate Depression (%)	p-value
Initial	60.0	0.02
Continuation	30.0	

Maintenance	10.0	
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Table 5: Type of Treatment and Depression Severity

Type of Treatment	Moderate Depression (%)	p-value
Standard	40.0	0.002
Enhanced (Integrated)	20.0	

Discussion

This study also showed that moderate depression is present among pulmonary TB patients and more so when starting treatment. These findings highlight the need for early and appropriate treatment for mental health issues as depression severity varies with the type and phase of treatment and its duration. This is in congruency with other studies showing that the initial phase of TB treatment is the most demanding for the patient's psychological well-being [9]. The findings of moderate depression among the patients who had undergone therapy for less than a month can be interpreted as the indication of the significance of the first phases of treatment for mental health. If TB is diagnosed early, there is a chance to enhance compliance with the prescribed treatment regimen and decrease the likelihood of long-term communicability and unfavorable outcomes [10]. The absence of substantial variations in depression intensity based on other factors including age and gender implies that depression in TB patients is more inclined to treatment processes. This finding lends support to a universal approach to implementing mental health care in TB treatment centers, as the study showed that all patients, irrespective of gender, age, or literacy level, could benefit from mental health care. This is in line with other studies that point to the fact that improving mental health can improve patient compliance to treatment [11]. Self-care and integrated mental health services were also found to be positively related to treatment adherence. When mental health is improved, the patient will be more inclined to adhere to the TB treatment regime and therefore, their health will improve. This concretizes the assertion that mental health is not an add-on but a fundamental aspect of managing TB treatment regimens [12]. However, this study has some limitations that should be noted: The cross-sectional study design restricts the potential for establishing cause-and-effect relationships between IMHS and better outcomes. Further longitudinal studies should be conducted to support the aforementioned associations and to determine the effects of integrated mental health services on the TB treatment results in the long run. Furthermore, the assessment of treatment adherence was based on self-reports which may be biased. Future studies should include objective indices of adherence in order to confirm these results [13]. In addition, it is noteworthy that our study was carried out in a particular geographic and healthcare context, and thus the results may not be generalized across other contexts. There are differences in healthcare delivery systems, perception towards mental health, and the approach used in the treatment of TB that could affect the delivery of mental health services. Consequently, to increase external validity, more studies need to be conducted in different centers in various geographical locations and different health care settings [14,15]. Lastly, based on the findings, our study offers proof of the need to incorporate mental health into TB treatment regimens. The above integration is related to the decrease of depression and increase of compliance in the early stage of TB treatment. These findings underscore the importance of mental health to be considered as an important component of the comprehensive approach to TB. Thus, it might be effective in increasing the compliance to treatment, shortening the period of infectivity and therefore, positively impacting the health status of the TB patients [16].

Conclusion

Psychosocial care support is important in the treatment of depression and enhancing patient compliance to the recommended treatment regime of pulmonary TB especially at the initial stages of treatment. It should therefore be integrated into TB treatment regimens with a view of improving other aspects of patient care.

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Authors Contribution

khalil azam, Muhammad kamran khan 1,2-Concept & Design of Study and Drafting:

shafqat Nawaz, Aasma Kiyani 3,4-Data Analysis and Revisiting Critically:

khalil azam 1-Final Approval of version:

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