

# **Medication Management Review for Females Diagnosed with Depression and Anxiety in Jordan**

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## **Abstract:**

Depression and anxiety are common mental diseases in women. Women are about twice as likely as men to develop major depression. The medication management review (MMR) service is a service conducted by pharmacist to help patients better manage their diseases. In different previous studies, the MMR service showed a positive effect on several health outcomes. Our study presents the effect of the MMR service on females diagnosed with depression and anxiety in Jordan.

The aim of this study is to assess the impact of pharmacist delivered MMR service on the number and frequency of identified treatment related problems (TRPs), medication adherence, scale of depression and anxiety in females diagnosed with depression and anxiety in Jordan. It is also aimed to assess patient's perspective of the service, and physician's acceptance of the pharmacist's recommendations.

Patients were interviewed at the outpatient psychiatric clinic at the Jordan University Hospital (JUH).

The study was designed as a single-blinded randomized control clinical trial. Patients were recruited randomly from the psychiatric outpatient clinic at JUH in Amman, Jordan. Ethics approval was obtained from JUH. Recruited patients were randomized into two groups: control and intervention. Both groups were interviewed at baseline at the clinic. Demographic characteristics, medications and diseases information of the study samples were collected for both groups. Pharmacist identified TRPs in each group, and pre-prepared validated questionnaires about medication adherence, scale of depression and anxiety were used. Pharmacist recommendations, counseling and education was delivered only for the intervention group. All data was analyzed in the SPSS version 18. Follow up assessment was conducted for both groups after 3 months.

A total of 73 patients were recruited for the study. Mean age of the study sample was  $41.81 \pm 16.27$ , and mean number of diseases per patient was  $2.21 \pm 0.98$ . A total of 177 TRPs were identified during the study period. The mean number of TRPs per patient was  $2.42 \pm 1.06$  at baseline. The most common types of TRPs found were the safety related problems (31.63%), followed by inappropriate adherence (28.24%) and efficacy related problems (14.68%). Patient education and counseling, change of drug, need for consultation were the most frequent types of pharmacist's interventions. A high number of the submitted recommendations were accepted by the physician (82.60 %) and 67.39% were implemented. About two third (69.00%) of the TRPs in the intervention group were resolved/ improved at follow-up. A significant improvement in medication adherence was found in the intervention group ( $P=0.003$ ), in contrast to the control group ( $P=0.902$ ). Anxiety and depression scale was significantly improved in the intervention group ( $P<0.001$  for both anxiety and

depression scales), and in the control group ( $P=0.002$ ,  $P=0.007$  for anxiety and depression scales respectively).

The MMR service conducted by pharmacist showed positive impact on decreasing the total number of TRPs, improving medication adherence and scale of anxiety and depression in females with depression and anxiety in Jordan. Although the improvement in the depression and anxiety scales were larger in the intervention group, females in the Control group also improved significantly, shedding the light on the need and importance of pharmacist interaction in this population of patients. Future studies should allow longer time to assess the long term effects of the MMR service delivered to patients with anxiety and depression.