



Service Priorities and Programmes Electronic Presentations

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Survival analysis: one-year retrospective cohort study on patients after received 8-session nurse-led CBT group in psychiatric hospital

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Introduction

Evidences have illustrated that group-based Cognitive Behavioral Therapy (CBT) is clinically effective to diverse patients. All of the studies have focused on the clinical outcomes of CBT group but dearth of it elucidated the impact on additional psychiatric service utilization such as readmission, Accident and Emergency Department (AED) attendance due to psychiatric reason, early follow-up and especially on medication adjustment. In addition to establishing evidence on this undiscovered area, this pioneer study will offer existing psychiatric nurses insights into psychotherapeutic intervention after years of development in nurse-led CBT programme.

Objectives

To examine the benefits of nurse-led CBT programme in psychiatric general adult services.

Methodology

In 2012-14 financial years, around 8 CBT groups were conducted by a nurse certified cognitive therapist in general adult services. A total of 101 patients were approached and agreed to participate in the group-based CBT programme. Among the patients, 66 of them had participated in the programme and the rest of them did not attend. Both groups had undergone one-year follow-up retrospectively and survival analysis was applied to the time-to-event outcomes.

Result

Under Kaplan-Meier method, the survival curves for both groups were found significantly different in 'additional psychiatric service utilization' (Log-rank test: $p=0.001$). Comparing with non-CBT group, the risk of additional psychiatric service utilization was reduced by 77% in the CBT group (Cox regression: $RR=0.228$, $p<0.0001$, 95% C.I.=0.100 to 0.519). The model was adjusted by diagnosis, age, gender, community psychiatric service (CPS), psychiatric admission, AED attendance

due to psychiatric reason, drug increase, decrease and changes before intervention period. Among all additional service utilization, psychiatric readmission was analyzed individually by the same method. The survival curve of both groups were found significantly different (Log-rank test: $p=0.009$). Comparing with non-CBT group, the risk of psychiatric readmission was reduced by 97% in the CBT group (Cox regression: $RR=0.026$, $p=0.005$, 95% C.I. =0.002 to 0.331). The model was adjusted by diagnosis, age, gender, psychiatric admission, AED attendance due to psychiatric reason, drug increase, decrease and changes before intervention period. Both Cox regression models were validated by Schoenfeld residual plot and log minus log plot respectively for continuous and binary outcomes. 'Increases of psychiatric medication' was the highest frequency among additional service utilization. Logistic regression was applied to investigate the proportional different between groups. The odd of 'psychiatric medication increases' in CBT group was reduced by 87% when comparing with non-CBT group ($OR=0.129$, $p=0.003$, 95% C.I.=0.033 to 0.508). The model was adjusted by diagnosis, age, gender, community psychiatric service (CPS), psychiatric admission, AED attendance due to psychiatric reason, drug increase, decrease and changes before intervention period. Hosmer and Lemeshow test was applied for model validation ($p>0.1$). Conclusion: In the study, the 8-session nurse-led CBT group is found effective in reducing additional service utilization in psychiatric general adult services. This encouraging result provides supportive evidence for further development of group-based CBT in psychiatric nursing. It also hints towards people-centered care approach and facilitates nursing professionalization in psychiatric field.