



Enhancing medication adherence in hypertension and diabetes mellitus patients by Tzuchi community volunteers' affective interventions.

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Introduction

In 2003, the World Health Organization declared that non-adherence to medication regimen was a major public health concern, particularly among patients with chronic diseases. Efforts to assist patient's adherent to medications might improve the outcomes.

There are many causes for non-adherence, such problems with the regimen, poor instructions, poor memory, poor provider-patient relationship, and patients' disagreement with the need for treatment or inability to pay for it.

In Taiwan, hospital pharmacists generally use 3 major methods to promote adherence. (1)technical (using of tools such as pillboxes) , (2)educational (teaching knowledge related to medical condition and medication regimen, and (3)behavioral (modifying the behaviors through telephone call or self-report). These methods are unlikely to succeed if patients are not willing to cooperation with pharmacists.

The most important method to improve adherence is **affective** (addressing patients' emotional needs and social support systems). However, it's very difficult for hospital pharmacist to provide this service for outpatients.

Therefore, we utilized the unique community volunteer culture of Tzuchi foundation. These volunteers were instructed by hospital pharmacists. They then walked into the communities around the hospital and improved patients' adherence through monthly periodic care.

Method

This is a descriptive study. The data we collected was taken pills which were recorded by Tzuchi community volunteers.(table 1).

Table 1. Pill Counts Record

Name :		Supervisor(volunteer) :		
Medication :				
Instruction :		times/day,	tablet(capsule)/times	
Visit times	Visit date	Dispensing date	Quantity	Residual quantity on visit date
1				
2				
3				
4				
5				
6				

Analysis

1.Adherence : if a person is prescribed an antihypertensive agent with one tablet per day for 30 days but he/ she takes only 16 tablets, his/ her adherence rate is 53.3% (16/30).

2.Effective record :

① ≥ 2 weeks and 2 times record.

② Medication, dispensing date, quantity, instruction, visit date, and residual quantity on visit date were completed recorded.

3.Analysis method :

① nonparametric method(sample size < 30).

② Wilcoxon Signed Rank Test

Results

After 2 months follow, 62 patients were record, but only 26 were completed recorded. The effective record rate was 41.9%(figure1), and the medications they used were identified in figure 2.

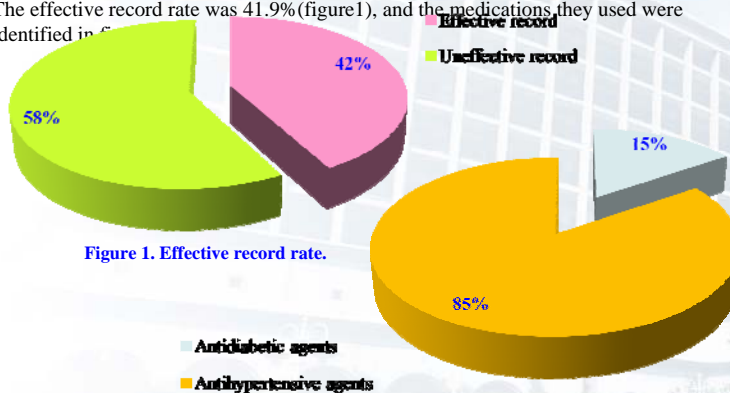
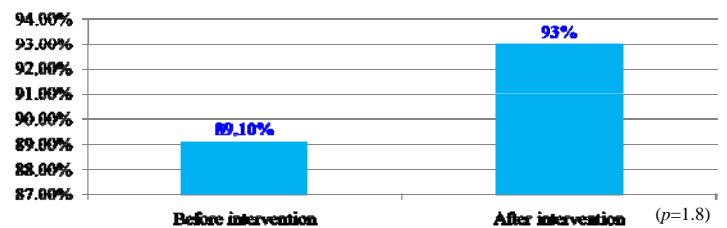
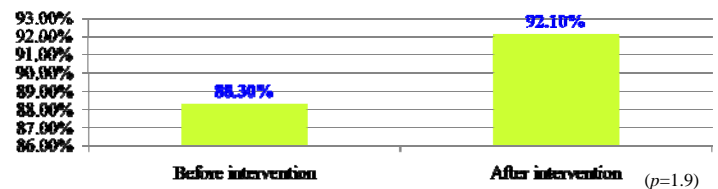
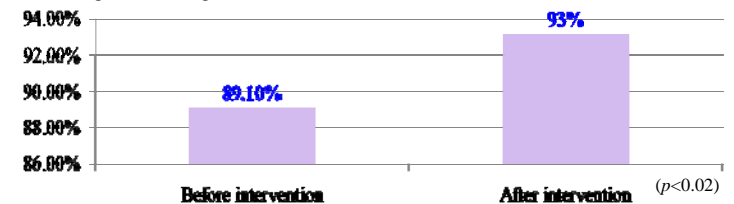


Figure 2. Medication types of total intervention case.

This study describes a practical and efficient method for patients' adherence improvement. Under the care and urge of Tzuchi community volunteers, the average adherence of patients was higher than before (figure 3).



The average adherence of patients using antidiabetic agents and antihypertensive agents were in figure 4 and figure 5.



Limited

- 1.The study prior(2 months) was to short to collect enough data.
- 2.The sample size(n=26, effective record) of the study was to small.
- 3.The community populace are not willing to coordinate to record.
- 4.The visit time of supervisors(volunteers) has not unified, every month records one time has not been able to achieve records above 2 times.
- 5.The supervisors(volunteers) has not understood the record flow completely.

Conclusion

Several systematic reviews of adherence interventions provide an overview of the effects of various intervention strategies. The majority of interventions that were associated with improvements in adherence also demonstrated improvements in clinical outcomes. The most effective interventions strategies is combined use technical, educational, behavioral, and affective interventions.

Based on the literature, affective interventions significantly improved adherence by intensive counseling and concerning. Encouraging patients can improve their ability to follow a long-term medication regimen.

By Tzuchi community volunteer's care , the average adherence of patients was higher than before.

There are more than 40,000 Tzuchi volunteer in Taiwan who are well-organized for decades. Although the average adherence of patients in our study was not significant increase, but we believed that patients' drug adherent rate will increase with the cooperation of hospital pharmacists and Tzuchi community volunteers. The therapy outcome of patients' will improve too.

Reference

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