

# Medication Compliance Among Diabetic Patients

# ARE THEY COMPLIANT?

Kamarul Zaman S, Suraiya SM, Md Sabtuah MR, Nor Haryati AS, Nurfarhana H, Norbaidurah I  
 Institute for Health Behavioural Research, Ministry of Health Malaysia  
 (NMRR-14-1067-20253)

## Introduction

- Diabetes Mellitus is a chronic medical condition and can lead to many complications like heart diseases, stroke, kidney failure, blindness and limb amputations (Gunggu,2016).
- Compliance to medication is important to avoid health-related complications of diabetes and financial effects on patients as a result of emergency treatment (Ho PM et al. 2009).
- New health education materials have been developed for low literacy diabetic patients by using simple language and graphics to aid medication compliance.
- Pre and post intervention studies were conducted to determine the effectiveness of new health education material on medication compliance among low literacy diabetic patients.

## Intervention Package : Health education material



Flipchart



Take Home Message

## Methodology

- Research design** Intervention Study
- Population sample** All registered diabetics patients at clinics/ hospitals
- Sample** All diabetics patients who attended diabetic clinic
- Sampling method** Convenience sampling
- Study Period** January 2015 until December 2016
- Study Locations** 5 states : 9 Health Clinics and 3 Hospitals
- Study Instruments** Questionnaire :
  - Newest Vital Sign ( NVS): Health literacy assessment
  - Diabetic Knowledge
  - Morisky Medication Adherence Scale (MMAS-8)

Diabetic patients were screened for literacy level. Only those who recorded with "limited likely" literacy levels were selected in this study.

## Results

### Sociodemographic

- 96 patients involved
- Mean age; 52.3 years
- 60.4% female, 36.9% male
- 49.0% patients have diabetes less than 4 years

### Health Literacy Level Assessment

- Limited likely (0-1) - 93.1%
- Limited possible (2-3) - 4.8%
- Adequate (4-6) - 2.1%

## Knowledge on Medication (High)

There is an significant improvement in knowledge on medication at post intervention ( $p < 0.001$ )

PRE	POST
45.8%	69.8%

## Medication Knowledge by Gender

PRE	POST	PRE	POST
18.4%	63.2%	58.6%	62.1%
MALE		FEMALE	
High Knowledge		High Knowledge	

## Non Compliance To Medication

PRE	POST
93.8%	91.8%

There is slight reduction on non compliance to medication, but it is not statistically significant.

## Conclusions

- Interventions have indeed increased the knowledge on medication but there has not been significant improvement in compliance to medication post intervention.
- Diabetic educators must apply innovative strategies and approaches to educate low-literacy diabetic patients to ensure the message conveyed effectively. This will in turn translate into better medication compliance.

## References

- Al-Qazaz, H. K., Hassali, M. A., Shafie, A. A., Sulaiman, S. A., Sundram, S., & Morisky, D. E. (2010). The eight-item Morisky Medication Adherence Scale MMAS: translation and validation of the Malaysian version. *Diabetes research and clinical practice*, 90(2), 216-221.
- Gunggu, A., Thon, C. C., & Whye Lian, C. (2016). Predictors of Diabetes Self-Management among Type 2 Diabetes Patients. *Journal of Diabetes Research*, 2016.
- Ho, P. M., Bryson, C. L., & Rumsfeld, J. S. (2009). Medication adherence. *Circulation*, 119(23), 3028-3035.
- Norrafizah, J., Asiah, M. N., Suraiya, S. M., Zawaha, H. I., Normawati, A., Farid, B. M., & Nasir, A. M. (2016). Assessment of Health Literacy among People in a Rural Area in Malaysia Using Newest Vital Signs Assessment. *British Journal of Education, Society & Behavioural Science*.16(2): 1-7.

We would like to express our gratitude to the Director-General of Health, Ministry of Health Malaysia for allowing this presentation. We would also like to express appreciation for all the support from all parties that have contributed in this study.