

WHAT THIS STUDY SHOWS

➤ Socio-demography factors (ethnicity, alcohol consumption, smoking, household income), disease insight and type of Pharmacy Home Care Services (PHCS) were found to be significantly associated with medication management at home.

➤ Full-time PHCS showed more benefits in regards to patients’ home medication management which could further attribute to their medication adherence as well.

INTRODUCTION

A national survey on the use of medication by Malaysian consumers in 2015 reported that despite extensive use of pharmaceuticals, 17.0% had no knowledge on proper medication storage.<sup>1</sup> While non-adherence to medication, polypharmacy and inappropriate prescribing has always been a concern in regards to treatment outcomes, it is now recognised that there are broader range of drug-related problems that need to be addressed. These include poor home medication management. Good home medication management is important to ensure that drugs maintain their potency, avoid mix-ups, prevent overdosing and most importantly reduce wastage.<sup>2</sup>

OBJECTIVES

➤ To identify home medication management issues and its associated factors among psychiatric patients under the PHCS.

➤ To identify the association between poor storage and lack of medication administration schedule with (i) socio-demographic factors, (ii) disease insight and (iv) type of PHCS.

METHODOLOGY

➤ Multicentre cross-sectional study conducted from October 2019 until June 2020 in six government hospitals in the state of Perak, Malaysia.

➤ Information from PHCS-6 form (PHCS Protocol 2<sup>nd</sup> ed. 2019) was extracted into a data collection form developed by the investigators.

➤ Proportional random sampling was used with a minimum sample size of 169.

➤ Poor medication storage and lack of medication administration schedule were selected for multiple logistic regression analysis.

➤ All statistical analyses were conducted using IBM SPSS Version 20.0 (IBM Corp., Armonk, NY).

➤ Statistical significant results were reported for p values less than 0.05.

CONCLUSION

➤ Although findings indicate certain socio-demography factors and type of PHCS are significantly associated with home medication management, the effect of socio-demographic factors on patients’ home medication management is rather difficult to explain due to limited studies available and confounding variables.

➤ Nevertheless, findings shed light on the benefits of full-time PHCS and good disease insight towards patients’ home medication management.

➤ Thus, with improved implementation of PHCS as well as thorough patient education by pharmacists, home medication management among psychiatric patients may perhaps be improved.

REFERENCES

1. Pharmaceutical Services Division Ministry of Health Malaysia. A National Survey on the Use of Medicines (NSUM) by Malaysian Consumers. 2015

2. Mirelles CM: Unused and expired medicines: a national pandemic. Symbiosis J Ecol Sustain Med 2007, 4(2) :40-41

RESULTS

➤ A total of 205 home visits were conducted for randomly selected patients during the study.

➤ Median age of patients was 45 years (*IQR*= 38-56).

➤ Out of the total number of patients, 54.6% (n=112) were under part-time PHCS and 45.4% (n=93) were under full-time PHCS.

Table 1: Demographic characteristics of study patients (N=205)

Characteristics (N=205)		n	%
Gender	Male	102	49.8
	Female	103	50.2
Ethnicity	Malay	118	57.6
	Chinese	60	29.3
	Indian	19	9.3
	Others	8	3.9
Education	No education	29	14.1
	Primary school	42	20.5
	Secondary school	120	58.5
	Tertiary education	14	6.8
Household Income	B40	181	88.3
	M40	24	11.7
	T20	0	0.0
Smoking	Yes	72	35.1
	No	133	64.9
Alcohol intake	Yes	10	4.9
	No	195	95.1
Insight	Good	157	76.6
	Poor	48	23.4

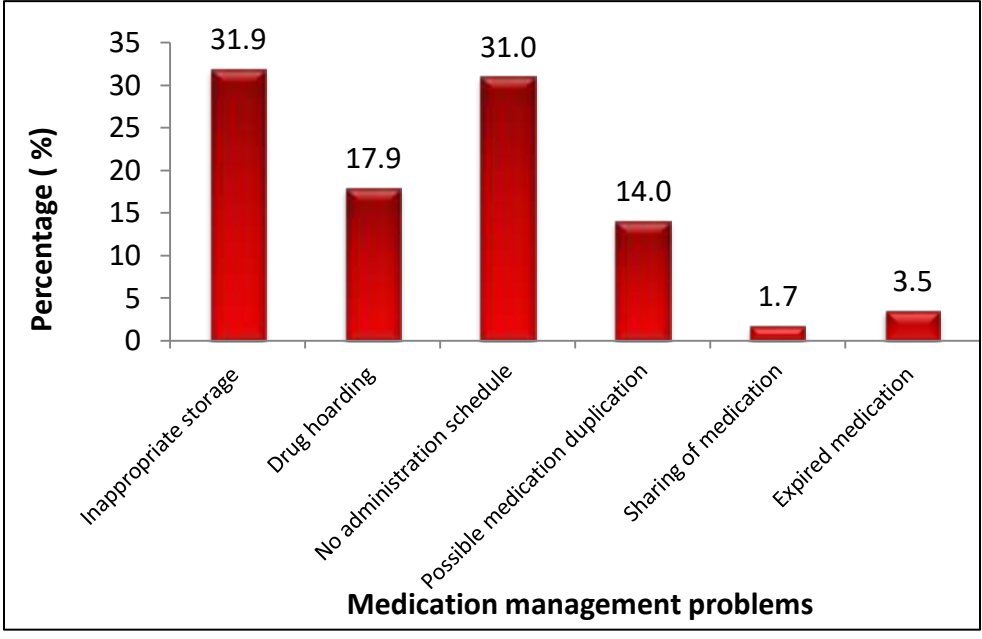


Figure 1: Frequency of home medication management problems identified during home visits by category

➤ Inappropriate medication storage was significantly associated with low income [AOR=4.34 (95%CI 1.17:15.98), p=0.027], alcohol consumption [AOR=14.26 (95%CI 1.82:111.38), p=0.011], poor insight [AOR=2.34 (95%CI 1.08:5.06), p=0.030] and part-time HCPS [AOR=2.60 (95%CI 1.20:5.67), p=0.016].

➤ Lack of administration schedule was significantly associated with low income [AOR=6.90 (95%CI 1.46:32.48), p=0.014], smoking [AOR=2.43 (95%CI 1.20:4.92), p=0.013], poor insight [AOR=5.32 (95%CI 2.45:11.56), p<0.05] and part-time HCPS [AOR=2.96 (95%CI 1.42:6.15), p=0.004].

Table 2: The logistic regression of factors associated with poor storage of medications at home (N=205)

Variables <sup>#</sup>		Multivariate Analysis			
		Adjusted OR	(95% CI OR)	Wald’s $\chi^2$ (df)	p-value
Ethnicity				6.27 (3)	0.099
	Chinese	1.38	(0.62, 3.06)	0.64 (1)	0.423
	Indian	0.16	(0.03, 0.84)	4.65 (1)	<b>0.031*</b>
	Others	1.34	(0.23, 7.67)	0.11 (1)	0.738
	Malay	1.00			
Household Income	B40	4.34	(1.17, 15.98)	4.87 (1)	<b>0.027*</b>
	M40	1.00			
Alcohol intake	Yes	14.26	(1.82, 111.38)	6.42 (1)	<b>0.011*</b>
	No	1.00			
Insight	Poor	2.34	(1.08, 5.06)	4.72 (1)	<b>0.030*</b>
	Good	1.00			
HCPS	Part-time	2.60	(1.20, 5.67)	5.85 (1)	<b>0.016*</b>
	Full-time	1.00			

<sup>#</sup>All socio-demography data, number of medication and type of Home Care Pharmacy Services (HCPS) were included as variables for regression analysis and only eight variables were selected in the final model.

\*p-value below 0.05 is considered statistically significant.

Table 3: The logistic regression of factors associated with lack of administration schedule at home (N=205)

Variables <sup>#</sup>		Multivariate Analysis			
		Adjusted OR	(95% CI OR)	Wald’s $\chi^2$ (df)	p-value
Household Income	B40	6.90	(1.46, 32.48)	5.98 (1)	<b>0.014*</b>
	M40	1.00			
Smoking	Yes	2.43	(1.20, 4.92)	6.12 (1)	<b>0.013*</b>
	No	1.00			
Insight	Poor	5.32	(2.45, 11.56)	17.85 (1)	<b>p&lt;0.05*</b>
	Good	1.00			
HCPS	Part-time	2.96	(1.42, 6.15)	8.51 (1)	<b>0.004*</b>
	Full-time	1.00			

<sup>#</sup>All socio-demography data, number of medication and type of Home Care Pharmacy Services (HCPS) were included as variables for regression analysis and only five variables were selected in the final model.

\*p-value below 0.05 is considered statistically significant.