

**ASSESSMENT OF MEDICATION ADHERENCE AMONG HYPERTENSIVE PATIENTS
INALHUSSEIN HOSPITAL/ RMS USING HILL BONE MEDICATION ADHERENCE
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ABSTRACT

In Arab countries around 30% of adults were approximately had hypertension,^[1] a study performed in Jordan by Alefan et al revealed that nearly 95% has an awareness on hypertension but 77% of patients were non compliant with a healthy lifestyle,^[2] Hill bone medication adherence scale HB_MAS instrument is used frequently to do adherence measurements. A study performed using the Korean version of HB_MAS revealed that it could be used easily to screen patients adherence on medications.^[3] In Jordan a study performed in 2018 found that although one third of Jordanian adults had hypertension, significant increase in the awareness toward hypertension among Jordanian men and women was observed.^[1] This quantitative study was conducted in Jordan, at royal medical service in Alhussein hospital. And it's divided into two phases due to corona crises; Demographical data of patients was evaluated and included the following criteria: sex, age, education, income status, marital status and employment. A total of 200 patients were identified, most of them were females (63%), and the rest were males (37%). Majority of patients were with the age above 50 years (60.7%), those with 40-49 years were (26.4%) and 12.9% with the age of 30-39 years. Keeping attention to last question (How often do you miss taking your high blood pressure pills when you are careless?) 72.8 % of our patient answered none of the time and 26.5% answered some of the time. This question may give us a hint that's our patients have somehow enough awareness and knowledge toward their medication adherence. Future studies should be performed to further investigate the reason behind non adherent behaviors and to find the required answers. Many intervention should be implemented to increase adherence to antihypertensive medications among Jordanian patients.

INTRODUCTION

Non controlling blood pressure definitely will fortify the risk for cardiovascular diseases, and adherence to medications of course is considered the most important factor in resolving this problem.^[4] Measuring the adherence of medications is a vital part for the management of high values of blood pressure.^[3]

Adherence or compliance usually used interchangeably, with the preference to use adherence term. Medication adherence defined as to which extent patient take his medication according to prescriber instructions.^[4]

World widely the prevalence of high blood pressure in adult 18 years and over was approximately 22% in 2014 with a highest prevalence in Africa (30%) and lowest rate in USA (18%).^[2] A world wide study revealed that the prevalence of hypertension could be increased by 7.2 % from 2013 estimate by 2030.^[1] Lifestyle modification can be used initially as a treatment for hypertension, like weight loss, sodium restriction in diet, smoking cessation and physical activity.^[2]

In Arab countries around 30% of adults were approximately had hypertension,^[1] a study performed in Jordan by Alefan *et al* revealed that nearly 95% has an awareness on hypertension but 77% of patients were non compliant with a healthy lifestyle.^[2]

Hypertension is considered a world widely a prevalent disease combined with low controlling rates.^[5] And this is so important in hypertensive patients because elevated values are considered modifiable risk for cardio and cerebrovascular diseases, also kidney and eye diseases.^[2]

HB_MAS instrument is used frequently to do adherence measurements.^[3] A study performed among Korean American highlighted that intentional non adherence is prevalent (53.8%) among middle aged ones and intervention is needed to increase patient's knowledge.^[4]

Another study performed using the Korean version of HB_MAS revealed that it could be used easily to screen patients adherence on medications.^[3]

There are numerous methods to study the behavior of

medications taking, the most accurate and direct one but on the other side its complex is the biological one. Those that measures either urine or blood concentration of drugs. But as overall there is a no gold instrument to monitor patient medication adherence.^[7]

In Jordan a study performed in 2018 found that although one third of Jordanian adults had hypertension, significant increase in the awareness toward hypertension among Jordanian men and women.^[1]

A study in middle eastern population found that 55.9% of patients were had an adherence toward their antihypertension medications,^[7] but more condensed intervention should be implemented to raise this rate.^[8]

A review study performed on developing countries, prevalence of adherence was around 53% among hypertensive populations. This result was combined by many reasons: low income, medication cost, using herbal medication, socioeconomic and cultural status.^[9]

Another study performed in Jordanian tertiary health facility located in Amman revealed that adherence rates to anti hypertension medications were high and 55% of the patients with high readings owed the cause to healthcare providers.^[8]

METHOD

This quantitative study was conducted in Jordan, royal medical service Alhussein hospital. And it's divided into two phases due to corona crises, performed from (10/2020 to 5/2021).

Demographical data of patients was evaluated and included the following criteria: sex, age, education, income status, marital status and employment.

Hill bone medication adherence scale was used in this study, this scale was developed by the national institute of health (NIH), and provide a simplified method for assessing patient adherence.

The scale has nine questions, and the answers are selected from the followings (all of the time, most of the time, some of the time, none of the time)

RESULTS AND DISCUSSION

A total of 200 patients were identified, most of them were females (63%), and the rest were males (37%). Majority of patients were with the age above 50 years (60.7%), those with 40-49 years were (26.4%) and 12.9% with the age of 30-39 years as shown in the table below:

Sex	Male 37%	Female 63%
Marital status	Married 72.8%	Others 27.2%
Education	Bachelor degree and higher	36.4%
	Diploma degree	27.2%
	Other	36.4%
Income status	Difficult	3.7%
	Medium	78.4%
	Comfortable	17.9%
Occupational status	Employed	49.4%
	unemployed	50.6%
Age	30-39	12.9%
	40-49	26.4%
	>50	60.7%

Regarding to the marital status, 72.8% of patients were married. Considering the educational level 36.4% having bachelor degree and higher.

Most of the patients 78.4% had medium income status, while 3.7% had a difficult one. 50.6% of the patients were employed and 49.4% were not.

Descriptive statistics were used to analyze this study. Considering the first question (how often do you forget to take your high blood pressure medicine?) the answers mainly ranged from 45.6% answered some of the time, 50% answered all the time.

And this result may give us a guidance of an accepted level of adherence.

For the second question (how often do you decide not to take your high blood pressure medicine?), the majority of answers 61.1% were none of the time, and this result may correlated with medium income status 78.4% and the current educational level.

Regarding the third question (How often do you forget to get prescriptions filled?), most of answers ranged from 40.1% some of the time, and 58% answered none of the time. We think the result could be correlated directly with the employment and income status of our patients that is figured in the table below:

NO.	Item	All of the time	Most of the time	Some of the time	None of the time
1	How often do you forget to take your high blood pressure medicine?	0%	4.4%	45.6%	50%
2	How often do you decide not to take your high blood pressure medicine?	1%	2.7%	35.2%	61.1%
3	How often do you forget to get prescriptions filled?	0%	1.9%	40.1%	58%
4	How often do you run out of high blood pressure pills?	0%	1.8%	41.4%	56.8%
5	How often do you skip your high blood pressure medicine before you goto the doctor?	0%	2.5%	40.1%	57.4%
6	How often do you miss taking your high blood pressure pills when youfeel better?	0%	4.7%	37.3%	58%
7	How often do you miss taking your high blood pressure pills when you feel sick?	3%	3.8%	24.7%	6.5%
8	How often do you take someone else's high blood pressure pills?	0%	0%	23.6%	76.4%
9	How often do you miss taking your blood pressure pills when you are careless?	0%	0%	26.5%	72.8%

Considering the 7th question (How often do you miss taking your high blood pressure pills when youfeel sick?) 68.5% answered none of the time, 24.7% answered some of the time. In our opinion this may correlated with the marital status (72.8% were married).

Keeping attention to last question (How often do you miss taking your high blood pressure pills when you are careless?) 72.8 % of our patient answered none of the time and 26.5% answered some of the some of the time. This question may give us a hint that's our patients have somehow enough awarenessand knowledge.

CONCLUSION

Almost most of our patients were adherent to their antihypertensive medication. Many factors affecting this behavior like age, economic status and marital status and educational status. Future studies should be performed to further investigate the reason behind non adherent behaviors and to find the answers. Many interventions should be implemented to increase adherence to antihypertensive medications among Jordanian patients.

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