Common Reasons for Drug Non-Compliance in Patients who are Attending Health Care Center, Makkah, KSA, 2021

Sadiya Hussein Estanboliy¹, Emad Abbas Felemban²,Khaled Odeh Al-Matani³, Abdullah BuraykMabruk alyuobi³, Mohammed Ahmed Abdel Rahim Al-Ansari⁴, Meshalhameed Al harbi⁵, Hatem Hassan Ahmed Hammouda⁴, WALEED Dakhil Allah Al-Hazmi⁴, Maha abdullahfallath⁶, AnghamSiraj Kinsara⁷

¹Pharmacy technician, Health center Al-zahir, Saudi Arabia.

²Medical laboratory technician, Kakia PHC, Saudi Arabia.

³ Nursing Technician, Public health department. Makkah, Saudi Arabia.

⁴Nursing technician, IbnSina Hospital in Hadda, Saudi Arabia.

⁵Infectious Disease control Directorate at Executive Directorate of preventive Medicin, Saudi Arabia.

⁶Social worker, Mental health hospital (Taif), Saudi Arabia.

⁷Laboratory technician, Primary healthcare center (alHindawiya), Saudi Arabia.

ABSTRACT:

Background: Compliance is defined as the practice of obeying rules or requests made by people in authority. Many factors contribute to noncompliance with drugs. Aim :To investigate the reasons of drug noncompliance among patients who are attending health care center, Makkah. Study setting: This study was conducted at health care center, Makkah. Study design: This is a cross sectional study. Study population: The study population consisted of Saudi out patients aged 20-70 years attending to health care center, Makkah (100 patients). Self-administered questionnaire will be given to all participants. Those who have trouble reading or writing the questionnaire, will be filled by the interviewer. Results: The highest proportion of participants reported that hey not complied with medication as no signs and symptoms present (50%), insufficient knowledge about medications (40%), presence of depression, and sense of unusualness (22%). Regarding medication factors, too much medication (16%) and improper timing are the highly reported factors (19%). Recommendations: Counseling about the importance of drug compliance should be initiated by the health care team in each patient visit

Introduction

To address the issue of therapeutic non-compliance, it is of first and foremost importance to have a clear and acceptable definition of compliance. Compliance is defined as the practice of obeying rules or requests made by people in authority. In healthcare, the most commonly used definition of compliance is "patient's behaviors (in terms of taking medication, following diets, or executing life style changes) coincide with healthcare providers' recommendations for health and medical advice". (Kshirsagar e al., 2000; Chisholm et al., 2000) Thus, therapeutic non-compliance occurs when an individual's health-seeking or maintenance behavior lacks congruence with the recommendations as prescribed by a healthcare provider. Other similar terms have been used instead of compliance, and the meaning is more or less identical. For example, the term adherence is often used interchangeably with compliance. Adherence is defined as the ability and willingness to abide by a prescribed therapeutic regimen.(Chironda et al., 2016; Mawar et al., 2012)

Recently, the term "concordance" is also suggested to be used. Compared with "compliance", the term concordance makes the patient the decision-maker in the process and denotes patients-prescribers agreement and harmony. (Yu ZL et al., 2012). Before we can formulate strategies to tackle the issue of therapeutic non-compliance, we need to assess the clinical and other implications of therapeutic non-compliance.From the perspective of healthcare providers, therapeutic compliance is a major clinical issue for two reasons. (Jaggarajamma et al., 2007).

Firstly, non-compliance could have a major effect on treatment outcomes and direct clinical consequences. Non-compliance is directly associated with poor treatment outcomes in patients with diabetes, epilepsy, AIDS (acquired immunodeficiency syndrome), asthma, tuberculosis, hypertension, and organ transplants. For example, in hypertensive patients, poor compliance with therapy is the most important reason for poorly controlled blood pressure, thus increasing the risk of stroke, myocardial infarction, and renal impairment markedly.(SJ O'Boyle et al., 2000).

Additionally, besides direct financial impact, therapeutic non-compliance would have indirect cost implications due to the loss of productivity, without even mentioning the substantial negative effect on patient's quality of life (IBRAHIM et al., 2011).Furthermore, as a result of undetected or unreported therapeutic non-compliance, physicians may change the regimen, which may increase the cost or complexity of the treatment, thus further increasing the burden on the healthcare system.(Touchette et al., 2008).

However, in order to formulate effective strategies to contain the problem of noncompliance, there is a need to systematically review the factors that contribute to noncompliance. An understanding of the predictive value of these factors on non-compliance would also contribute positively to the overall planning of any disease management program.(Touchette et al., 2008; Rubin et al., 2005)

Compliance to medical therapy is a complex and dynamic behavioral process that is strongly influenced by the patient; his/her support environment, practices of health care providers, and the characteristics of care delivery systems.(Vlasnik et al., 2005). As many as 200 factors have been hypothesized to influence compliance and these factors can be classified as either intentional or unintentional. Intentional non-compliance is associated with motivation and patients' beliefs about taking medications. Conversely, unintentional non-compliance is related to patients' understanding of instructions or their ability to take their medication. There may be an overlap between these categories (e.g., people who have a low perceived necessity for their medication may see it as less salient and may be more likely to forget to take their medications). (Joho et al., 2012; Billups et al., 2000)

Many factors can affect general poor compliance such as: misunderstanding of prescribed instructions, frequent changes to drug regimens, multiple health care providers prescribing medications, limited faith in the medications, forgetfulness, physical difficulties limiting access to or use of medication, limited education about the illness or the need for medication, few symptoms, chronic illness, a complicated regimen, polypharmacy (use of multiple medications for the treatment of a patient's medical conditions), cost of drugs, and real or perceived adverse drug reactions (El-Shamaa et al., 2013; Gaude ., 2011; Nazir et al., 2008; Krousel-Wood et al., 2004; Kaveh et al., 2001).

Although the benefits of treating chronic conditions such as diabetes mellitus, hypertension and dyslipidemia are clear, many patients fail to adhere to regimens repeatedly. Patient compliance to medication shown to slow the progression of their disease's course, reduces the development of complications, or prevents morbidity and mortality. For example, uncontrolled hyperglycemia and continued high blood pressure due to medication non-compliance can be very dangerous, and can be one important reason for progression diseases and increase in mortality and morbidity rates. In addition, many studies worldwide consistently show non-compliance with drugs as a common cause of hospital admission with a range of 5.5 - 11.4% (Treharn., 2005; Johnson et al., 2005).

Due to lack of data about patients' compliance and possible effect of compliance on control of their chronic diseases, this study is investigating the reasons of drug noncompliance and suggests solutions to increase level of adherence to treatment.

Rational

Medication non-compliance is an ignored health problem in developing countries, which have an alarming average of less than 50% of patients complying with medication instructions. Such non-compliance is considered a major challenge to effective management of most chronic diseases such as diabetes mellitus, hypertension, and dyslipidemia.

Aim of the study

To investigate the reasons of drug noncompliance among patients who are attending health care center, Makkah.

Study setting:

This study was conducted athealth care center, Makkah

Study design:

This is a cross sectional study.

Study population:

The study population consisted of Saudi out patients aged 20-70 years attendingto health care center, Makkah (100 patients).

Inclusion criteria:

- Out patients aged 20-70 years
- Able and willing to participate in the study.
- Take some sort of prescribed medications.

Sampling method:

Convenience sampling technique was used

Data collection method:

Self-administered questionnaire will be given to all participants. those who have trouble reading or writing the questionnaire, will be filled by the interviewer.

Questionnaire:

An Arabic self-administered questionnaire was used. It consisted of three sections. The first section is on the sociodemographic and presence of chronic disease, and present medication history (e.g.,age and education level). The second section will cover common reasons of drug noncompliance (patient, medication, health care related factors). The third section addresses the possible suggestion to increase the patient level of adherence and compliance with medications.

Questionnaire validity:

The investigator distributed the Questionnaire to three consultants of different specialties (family medicine, community medicine, and pharmacology) who have enough experience and interest in the subject and some amendments were done, accordingly.

Pilot study:

A pilot study was done on 10 Saudi patients who meet the study's eligibility criteria. The pilot study will mainly help examine both the instrument's content validity and construct validity issues, alongside with other needed information, as follows: a) test the understanding of the patient of the instruments' questions, undergo necessary changes and modifications, accordingly, b) select the relevant variables suitable for the statistical methods to be used. Test-retest reliability assessment was performed (e.g., assuring high correlation coefficient measurement) (0.878).

Ethical consideration:

- Necessary approval was taken.
- Consent was obtained from each participant to voluntarily participate in the study.
- Data was treated confidentially and will be used only for the purpose of research.

Data analysis:

Data was collected and verified, variables coded and then entered to a MS program with adequate backup. Descriptive statistics, e.g., number, proportions, cumulative proportions, mean and standard deviation, etc. will be displayed, as appropriate. Analytically, parametric techniques, e.g., t-test and ANOVA, will be attempted, as applicable, especially analyzing normally distributed variables. Otherwise, non-parametric alternatives, e.g., Man Whitney *U*

test and ANOVA or χ^2 test of independence, would be used, as necessary. The Statistical Package for Social Sciences (SPSS) software for MS- version-20 will be used for the analysis. All tests will be conducted at level of significance α =0.05; results with *p*-values<0.05 will be considered "statistically significant."

Results:

Table 1:biosociodemographic characteristics:

This table showed that the highest proportion of participants are aged 45 and more (80%), females (59%), university education (60%), occupied (75%) with enough income (88%), suffer from DM (39%), hypertension (33%), heart disease (30%), for less than five years (55%), taken 1-3 types of drugs (60%), in a form of pills, and (62%) of them adhering to drugs.

Variables	Percent	
Age:		
Less than 45 years	20%	
45 years and more	80 %	
Sex:		
Male	41%	
Female	59%	
Education:		
Illiterate	9%	
Primary secondary	11%	
Secondary	20%	
University	60%	
Occupation:		
Yes	75%	
House wife	25%	
Income		
Low	12%	
Enough	88%	
Presence of chronic disease		
No	9%	

Heart disease	30%	
Hypertension	35%	
DM	39%	
Liver disease	20%	
Renal disease	19%	
Cancer	15%	
Immune disease	6%	
Blood diseases	6%	
Duration:		
Less than 5 years	55%	
6-10 years	15%	
More than 10	30%	
Number of drugs per day		
1-3 types	60%	
4-6 types	30%	
More than 6	10%	
Form of medications		
Pills	60%	
Injection	40%	
Patches	10%	
Are you adhering to drugs		
Yes	62%	
No	38%	

Table II:

Factors associated with drug compliance:

The highest proportion of participants reported that hey not complied with medication as no signs and symptoms present (50%),insufficient knowledge about medications (40%), presence of depression, and sense of unusualness (22%). Regarding medication factors, too much medication (16%) and improper timing are the highly reported factors (19%).

Factors	percent	
Patient related factors:		
Low income	15%	
Presence of sensory impairment	13%	
Weak memory	13%	
• No signs and symptoms present	50%	
Insufficient knowledge about medications	40%	
• Depression, sense of unusualness	22%	
• No progress.	19%	
• No social or peer support.	15%	
• I don't trust the doctor.	3%	
Medication related factors:		
• Too much medication.	16%	
• Several side effects.	10%	
• Too long time.	5%	
Complexity of medication.	9%	
• Improper timing.	19%	
• Not available.	2%	
Health care related factors		
Negative physician attitude.	3%	
• Less availability of health centers.	2%	

Discussion:

The success of the therapeutic drug depends strictly on the patient's compliance, that is, on the correspondence of patient's behavior when using the medicines, with the medical recommendations. The lack of fulfillment to the drug treatment can culminate with several adverse effects and deterioration (Castro et al., 2009).

This study results showed that more than one third of participants not adhered to drugs due to no signs and symptoms present, insufficient knowledge about medications, presence of depression, and sense of unusualness. Regarding medication factors, too much medication and improper timing are the highly reported factors.

This results goes in line withChironda, G., & Bhengu (2016) who reported that Non adherence remains a major obstacle in the effective management of CKD population. There is need for collaborative approach to devise measures that eliminate relevant contributing factors to non-adherence in CKD patients.

Moreover, his results was in harmonious with Jaggarajamma et al (2007) who concluded that relieving of the main signs and symptoms, lack of knowledge and counseling about the medication; in addition to lack of support and presence of medication related factors contributes to noncompliance.

Furthermore, Ibrahim et al., 2011 found that most patients have more than one chronic disease . More than three quarters of participants do not control one or more of their diseases. Also high percentage of participants was on polypharmacy regimen (mean number of drug used. The most prominent complication related to chronic diseases that participants suffered from is cardiovascular diseases. Forgetfulness is the main reason for non-intentional non-compliance , while polypharmacy was considered the main causes for intentional non-compliance . The current study revealed that there is significant association between patients' young age, having family member with chronic disease, having complications and good compliance. Also, there is a statistically significant association between good compliance and better achievement of chronic diseases control. It was also found that level of education and number of chronic diseases has no correlation with compliance.

Conclusion:

This study results showed that more than one third of participants not adhered to drugs due to no signs and symptoms present, insufficient knowledge about medications, presence of depression, and sense of unusualness. Regarding medication factors, too much medication and improper timing are the highly reported factors. Counseling about the importance of drug compliance should be initiated by the health care team in each patient visit

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