

5. (JMH) Sulistyo Andarmoyo_Compliance Type 2 Diabetes Mellitus Patients

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ISLAMIC SPIRITUAL GUIDELINES (An Alternative Model to Improve Treatment Compliance with Type 2 Diabetes Mellitus Patients)

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Abstract

Medication adherence has an important role in therapeutic management in Type 2 Diabetes Mellitus patients. Patient's non-compliance with medication is often linked due to psychological factors, such as depression, anxiety, and eating disorders. One effort to improve medication adherence is the awareness of patients about health problems and this can be done by giving Islamic Spiritual Guidance, which is a treatment or healing of psychological disorders that are carried out systematically based on the concepts of the Qur'an and As-Sunnah. Islamic Spiritual Guidance is proven to be effective in influencing the handling of psychological disorders in patients and is believed to also be able to enforce medication adherence in patients with type 2 diabetes mellitus. Spiritual therapy is very influential to build a sense of self-acceptance so that patients will be obedient in following the advice of health workers, one of which is being obedient in undergoing medication.

Keywords: Islamic spiritual guidance, compliance, type 2 diabetes mellitus

Introduction

Diabetes Mellitus (DM) is a chronic disease that does not cause death directly but can be fatal if management is inappropriate (Kocurek, 2009). Inappropriate management of DM makes the patient's blood glucose difficult to control so that it can increase the patient's therapeutic costs and lead to various complications, such as diabetic neuropathy, diabetic nephropathy, stroke, blindness, and diabetic ulcers that affect the quality of life of DM patients (Salas *et al.*, 2009).

One factor that plays a role in the failure of controlling blood glucose in DM patients is patient adherence to treatment (Supparatiporn, 2005). Non-compliance with DM treatment at this time is still a significant problem in the management of DM. Some studies report that the level of adherence of people with type 1 DM ranges between 70-83% while type 2 DM is around 64-78%. The level of adherence of patients with type 2 DM which is lower than type 1 DM can be caused by therapeutic regimens which are generally more complex and involve multiple medications, as well as drug side effects that arise during treatment (Delamater, 2006). In addition to factors related to medication, socioeconomic status, level of education, and low knowledge and depression experienced by patients are also associated with low adherence and high levels of morbidity in DM patients (Delamater, 2006; Kocurek, 2009). The behavior of forgetting to take medication is also one of the causes of non-compliance in patients, especially geriatric patients (Selzman, 1995).

The instrument that can be used to determine patient compliance with drug use is the *Morisky's Medication Adherence Scale (MMAS) -8* questionnaire and *refill*; drug to see the timeliness of the controls. The purpose of using both methods is to overcome the weaknesses of each method.

Barriers to adherence to treatment therapy include the complexity of the regimen (the number of drugs received by patients and the frequency of drug use) and the failure of patients to understand the importance of compliance, which will increase due to poor doctor communication (Aronson, 2007). Dailey *et al.* (2001) stated that patients who received single therapy (one type of drug) had better short-term and long-term adherence than those who received dual therapy. There is evidence that adherence is higher with one drug than two drugs (Sheechan, 2003).

Claxton *et al.* (2001) found adherence to be inversely related to the frequency of dosing. High levels of adherence are reported by patients who have a small dose frequency (once a day) compared to those with a frequent dose frequency (three times a day) (WHO, 2003). Adherence was significantly higher among patients using drugs with a once-daily dosing schedule compared to a three times dose a day or more frequently (Bosworth, 2010).

The Discussion

A. Compliance

1. Definition of adherence

Compliance is the level of patient behavior that is directed towards the instructions or directions given in the form of whatever therapy is determined, whether diet, exercise, treatment or keeping a doctor's appointment (Stanley, 2007). Adherence to treatment is defined as the extent to which the patient's behavior is in accordance with instructions given by medical personnel regarding the disease and its treatment. The level of adherence for each patient is usually described as a percentage of the number of drugs taken each day and time of taking the drug in a certain period of time (Osterberg & Terrence, 2005).

Some health care providers use the term compliance rather than adherence. Conformity is defined as the extent to which a person's behavior coincides with medical advice. *Non compliance* then basically means that the patient does not comply with the advice of a healthcare provider. Patient mismatches are influenced by personal qualities of the patient, such as forgetfulness, lack of will or discipline, or low level of education. Compliance (*adherence*) is defined as an attitude of active, voluntary collaborative involvement of patients receiving behavioral to produce *therapy outcomes*. The concept of compliance is a choice in setting goals, planning care, and implementing regimens (Delamater, 2006).

According to the WHO (2003), *adherence is defined* as the level of a person's behavior in carrying out treatment, following a diet, and / or implementing lifestyle changes, in accordance with recommendations that have been agreed with health care providers. While *compliance* is the level of a person's behavior in carrying out treatment in accordance with the instructions or commands given by health workers. Here the patient plays a passive role

in the treatment process, following the doctor's orders and the therapeutic plan is not based on the *therapeutic alliance* or agreement between the patient and the doctor, so the use of this term is not so well-liked.

Compliance (*adherence*) is defined as following the instructions that have been given. This involves consumer choice and not judgmental, not as *compliance* which demanding patients passive. Non-compliance with therapy includes delaying prescription taking, not taking prescribed drugs, not complying with doses, and reducing the frequency of drug use (Bosworth, 2010). According to George and Shalansky (2007), *adherence* also influences patients' perceptions of the obstacles of *adherence* and the importance of making lifestyle changes to adjust to the recommended therapeutic regimen.

Another term for compliance is *concordance*. *Concordance* itself is not a synonym of *compliance* or *adherence*. *Concordance* is not a patient's behavior in using the drug, but is more based on the interaction between doctor and patient. This is based on the idea that consultation between doctor and patient is a balanced negotiation. Doctors must respect the rights of patients to decide whether or not to take the prescribed drugs (Bell *et al.*, 2007). Bell *et al.* (2007) states that the goal of *concordance* is the formation of therapeutic relationships between doctors and patients. *Concordance* is associated with *patient-centered care*. *Non-concordance* can occur if the relationship is not formed and therefore is a failure of the interaction (Bell *et al.*, 2007).

2. Factors that influence adherence

Patient compliance in treatment can be influenced by various factors. Factors that can affect patient compliance in treatment include (Osterberg & Terrence, 2005; Delamater, 2006; Kozurek, 2009):

1) Demographic factors

Demographic factors, such as ethnicity, low socio-economic status, and low education level are associated with low adherence to treatment.

2) Psychological factors

Psychological factors are also associated with adherence to treatment regimens. Trust in treatment can improve adherence. While psychological factors, such as depression, anxiety, and eating disorders experienced by patients associated with non-compliance.

3) Social factors

The relationship between family members and the community also plays an important role in the management of diabetes. Research shows that patients with low levels of problems or conflicts and patients who have support and have good communication between their families or communities tend to have better levels of adherence. Social support can also reduce feelings of depression or stress on patients with diabetes management.

4) Factors related to illness and medication

Chronic illnesses suffered by patients, complex drug regimens, and drug side effects that occur in patients can increase non-compliance with patients. Research in diabetic patients shows higher adherence in patients with simple treatment regimens compared with complex treatment regimens.

5) Factors related to health workers

Low communication and lack of time owned by health workers, such as doctors causes information to be lacking so that patients do not understand the importance of treatment. Limitations of other health workers, such as pharmacists, the time and expertise possessed by pharmacists also affect the patient's understanding of the use of drugs so that they tend to increase patient's non-compliance.

3. Measurement Method of Compliance

As a behavior, patient compliance aspects in taking drugs can be known from the method used to measure it. The level of adherence to treatment can be measured through two methods, namely (Osterberg & Terrence, 2005):

1) Direct Methods

Measurement of compliance through direct methods can be done in several ways, such as measuring the concentration of drugs or metabolites of drugs in the blood or urine, measuring or detecting internal biology. This method is generally expensive, burdensome health workers, and vulnerable to patient rejection.

2) Indirect method

Measurement of compliance through indirect methods can be done by asking patients about drug use, using a questionnaire, assessing the patient's clinical response, calculating the number of pills consumed, and calculating the rate of taking drugs prescription.

Table 1. Patient Compliance Measurement Method (Horne, 2006)

Method	Strengths	Weaknesses
Direct Methods		
Direct observations	The most accurate	Patients can hide the pill in the mouth, then throw it, less practical for routine use
Measuring metabolic rate in the body	Objective	Variations in metabolism can make impression wrong, expensive
Measuring biological aspects in blood	Objective, in clinical terms, can be used to measure placebo	Requires expensive quantitative calculations
Indirect Method		
Questionnaire to patient / patient self-reporting	Simple, inexpensive, most widely used in clinical settings	Very likely to occur errors, in time between visits can occur distortion
Number of pills / drugs consumed	Objective, quantitative and easy to do	Data can be easily distorted by patients
<i>Rate of repurchase prescription (continuity)</i>	Objective, easy to collect data	Less equivalent to drug-taking behavior, requires closed pharmacy system
<i>Assessment of a patient's clinical response</i>	Simple, generally easy to use	Other factors besides treatment cannot be controlled

Monitoring Electronic	Very accurate, easily quantified results, medication pattern can be known	Expensive
Measuring physiological features (eg heartbeat)	Often easy to performed	Physiological features may not be apparent for certain reasons
Patient's diaries	Help correct low memory	Very easily influenced by the patient's condition
Questionnaire to those who are the closest to the patient	Simple, objective	Distortion occurs

4. Morisky's Medication Adherence Scale (MMAS-8)

Morisky *et al.* develop MMAS to determine patient compliance in the form of a questionnaire. MMAS was first applied to determine *compliance* in hypertensive patients in pre and post *interviews*. Morisky *et al.* published the latest version in 2008, MMAS-8 with a higher reliability of 0.83 and a higher sensitivity and specificity.

Morisky specifically made a scale to measure compliance in taking a drug called the *Morisky Medication Adherence Scale* (MMAS), with eight items containing statements indicating the frequency of forgetfulness in taking medication, deliberate stopping taking medication without the knowledge of the doctor, the ability to control himself to keep taking medicine (Morisky & Muntner, 2009).

MMAS-8 consists of eight as follows:

- a) Do you sometimes forget to take your high BP-pills?
- b) Over the past 2 weeks, were there any days that you didn't take high-BP medication?
- c) Have you ever cut back or stopped taking your medication without telling your doctor because you felt worse when you took it?
- d) When you travel or leave home do you sometimes forget to bring your drug?
- e) Did you take your high-BP medication yesterday?
- f) When you feel that your BP is under control, do you sometimes stop taking your medication?
- g) Taking medication everyday is a real inconvenience for some people. Do you ever feel hassled about sticking to your BP medication plan?
- h) How often do you have difficulty remembering to take your BP medication?

The MMAS-8 questionnaire is a validated assessment tool from WHO and is often used to assess treatment compliance of patients with chronic diseases, such as diabetes mellitus. MMAS-8 contains eight questions about drug use with yes and no answers. A high MMAS-8 value indicates a low level of patient adherence to treatment (Krapek, 2004; Coppel *et al.*, 2008).

5. Pharmacy Refill

This method can measure compliance by looking at the date when a drug was taken. Dates can be obtained from pharmacies or other drug service providers. In this method the patient is

declared to have missed treatment when taking the drug does not comply with the specified date (Machtinger & Bangsberg, 2006). How quickly to redeem prescriptions / take drugs for the next treatment period is an accurate measurement for the overall level of compliance in a closed pharmaceutical system (Steiner & Prochazka, 1997).

B. Islamic Spiritual Guidance

1. The Definition of Islamic Spiritual Guidance

According to Salim (2005: 1) Islamic spiritual guidance to patients is an activity in which there is a process of spiritual guidance and coaching to patients in the hospital as an effort to perfect medical endeavors with spiritual endeavors. The guidance process that has been carried out by spiritual personnel works as an effort to provide calmness and coolness of the heart with encouragement and motivation to remain patient, trust, and always carry out obligations as servants of God.

2. The Foundation of Islamic Spiritual Guidance

Normatively the Qur'an and Hadith are the foundations for Islamic spiritual guidance. The Qur'an and the hadith can be termed as the ideal and conceptual foundation of spiritual guidance. From the Qur'an and hadiths, ideas, goals and concepts (understanding, intrinsic meaning) of spiritual guidance are sourced (Musnamar, 1992: 6).

3. The Purpose of Islamic Spiritual Guidance

The objectives of Islamic spiritual guidance are: 1) Building awareness of the sufferers so that they can understand and accept the trials they are suffering with sincerity. 2) Participating in solving and alleviating mental problems that are being suffered. 3) Providing understanding and guidance of sufferers in carrying out daily obligations that are done within the limits of their abilities. 4) Carrying out care and treatment based on religious guidance. 5) Demonstrating good behavior and speech in accordance with medical ethics and religious guidance (Pratiknya and Sofro, 1985: 261).

4. The Function of Islamic Spiritual Guidance

The function of Islamic spiritual guidance is as follows: 1) *Preventive* function, which is to maintain or prevent problems for themselves; 2) *Curative* function or corrective, which is to help individuals solve problems that are being faced or experienced; 3) *Preservative* function, which is to help individuals avoid situations which had created problems previously (containing problems) which have now been solved not go bad again (causing problems again); 4) *Developmental* function, namely helping individuals maintain and develop situations and conditions that have been good in order to stay good or become better, so that there will not be any possibility for problems to emerge again (Musnamar (1992: 34).

6. Islamic Spiritual Guidance Method

Islamic spiritual guidance method according to Salim (2012: 22) is as follows: 1) Direct method; the method used by the mentor by direct or oral means. This direct method includes delivery by *face to face* and mass, for example: direct visits to patients and recitals / lectures. 2) The indirect method, the method that the supervisor uses indirectly. This method includes

writing for example: religious symbols, moral messages, books and brochures of Islamic spiritual guidance, and audio media, for example: the strains of the holy verses of the Koran, songs with Islamic nuances, recitation / religious lectures, healing prayers, and prayers.

Summary

Currently adherence to DM treatment is still a major problem in the management of DM. The level of adherence of type 2 DM patients is still low compared to type 1 caused by the therapeutic regimen which is generally more complex and involving multiple medications, as well as drug side effects that arise during treatment. Compliance with medication and taking medication in people with DM have a very important role in controlling blood sugar. One of the efforts to increase adherence to DM patients is Islamic spiritual guidance which aims to make patients aware of understanding and accepting the trials that are being suffered with sincerity and confidence for healing.

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