

# The Importance of Treatment Adherence in the Well Being of the Patient: A Brief Literature Review

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**Abstract** Treatment adherence is an essential aspect for patient faster recovery from disease stage. There are several factors associated to treatment adherence such as: gender identity, social support, income, occupation, education level, patient's personal belief and perceived necessity, discrimination-doctor patient relations, religion and healthcare system stigmas. All of them contribute in a particular way to achieve a successful health outcome. The role of the healthcare practitioner identifying those aspects is critical for adequate treatment and management of the patient.

**Keywords** Treatment adherence, Well-being, Healthcare disparities

## 1. Introduction

Adherence is a very important factor in order to achieve a successful treatment outcome. Public health researchers define adherence as the degree to which patients follow medical advice, treatment or recommendations made by healthcare providers that could influence positive outcomes [1]. Clinicians established the intake within 80 percent or more of the medication prescribed by the health provider to be in good adherence [2]. Furthermore, other investigators has described treatment adherence as the "next frontier in quality improvement" arguing the importance of patients treatment compliance in clinical prognosis [3]. On the contrary, non-adherence to treatment could have critical outcomes to patient life expectancy, thus, it is important to motivate patients to follow health professional instructions in order to maximize their well being. Medication adherence represents an inefficiency and ongoing challenge within medical care. The problem has been long recognized – indeed, the research literature contains thousands of articles on the topic [39]. The World Health Organization 2003 report, emphasize about patients failing their adherence to long-term therapies. Worldwide adherence was estimated about 50% rate [46]. A study with patients receiving hemodialysis shown that poor treatment adherence leading to hospitalizations has an effect on patient well being [47]. Current theories of health behavior at the individual and

interpersonal levels referred to as cognitive-behavioral theories. This theoretical framework that could be used to explain how patients respond to health issues and behaviors linked to treatment adherence [49].

Religious beliefs and spiritual well being, and social support could help to facilitate HIV treatment and care [48]. Social cognitive theory focuses on the concept of behavioral capability, which states that before an individual acts in a given circumstance the person needs to know what to do and how to do it [50]. This theory help us to explain the importance of the healthcare providers participation in explaining adequately diagnosis treatment and management in order to help the patient to become more compliance with treatment recommendations. It is also related with the self-efficacy model, proposed by Bandura, that established that the patient could achieve the proposed outcome trusting in the ability of perform a particular behavior. Self-efficacy is a known indicator of health behavior in patients with chronic medical conditions [51-55]. The behavioral theory of adherence is based on the operant conditioning such as reinforcement of action that leads to adherence. For example, a healthcare provider in the form of praise might give patient positive encouragement for the completion of medication, or a natural reward may occur if the patient felt healthier after following their treatment [49].

## 2. Method

The following databases were searched: PubMed, Ovid, Lilacs, ATLA religion, EBSCO, and PubCentral from National Institute of Health using appropriate search terms. The selection criteria of studies were based on the variables to be discussed, sociocultural factors, gender identity,

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education, income, social support, patients' personal beliefs, healthcare discrimination and stigmas.

### 3. Main Body

#### Factors that could Affect Treatment Adherence

Factors that could affect treatment adherence in multiple forms are described in the literature as very important since they can affect health outcomes, especially morbidity and mortality in patients [31]. Such factors include, but are not limited to, gender identity, social support, income, occupation, education level, patient's personal belief and perceived necessity, discrimination-doctor patient relations, religion and healthcare system stigmas. Follow a brief discussion of the above-mentioned factors.

#### Gender identity

The type of experiences associated with women and they're feminine or male and their masculinity as prescribed by society, could affect how they accept or denied treatment adherence. For instance, some researchers stated that women were significantly more likely than men to use one or more treatment drugs for diabetes and cardiovascular conditions [4]. They report, how particular adherence behaviors, related to gender differences could affect the outcomes of maintaining a healthy diet. For instance, women and men demonstrated, usually, equal level of adherence, although women still surpass men [6]. The hegemonic masculinity discourse remains as an important element found among Latinos in the United States and Puerto Rico, in relation to their health beliefs and their priorities looking for treatment of health conditions [45]. Gender norms in some cultures established man as decision making authority and control over household that impacts how women are controlled and expressed their fears of disclose a diagnosis and received treatment for a diseases [37]. The sex/gender relationship plays a fundamental role by determining the way in which both sexes explained and live with the diagnosis of HIV infection [42] showing inequality aspects of health. In addition, in the case of women, the gender joins other inequalities that also experience men, producing a double disadvantage from the beginning of their lives [42].

#### Social support

Social support has been described in the literature as a factor that may affect, positively and negatively, treatment adherence. For instance, family social support in the prevention of diseases is well established in multiple researches. Health conditions outcomes such as hypertension, obesity, pulmonary disease, and diabetes within many others are related to impact of social support networks such as the family or other social networks [5-8]. Stigma-related difficulties in tuberculosis (TB) treatment have been reported in literature [34, 35]. Stigma refers to a social phenomenon whereby the public has a negative view of individuals with attributes perceived by the general population as inferior,

threatening or having other negative connotations [36]. Unfortunately as part of the process unequal treatment occurs with those individuals [36]. A cross sectional study in Department of Psychiatry in University Hospital Olomouc in Czech Republic showed that patients with partnership status and lower levels of stigma showed higher levels of treatment adherence [36]. Disclosure of health information and diagnosis of conditions such as HIV/AIDS status can be avoided by women who are afraid of community –stigma and even consequence in family like getting divorce [37]. This aspect can be considering a barrier to treatment.

#### Income

Lower income may have negative impact affecting the way a patient search for healthcare access (i.e., transportation issues, cultural sensitive barriers such as language understanding) or even obtain the proper prescription. Research states that, most types of medical treatments (chemotherapy, medical interventions, and serious surgical procedures) are pretty expensive and not everybody may have access to those types of procedures affecting patients' survival [9]. It has been recognized that lower level income patients has higher mortality rates in many medical conditions than those who are more wealthy and prosperous. Researchers have found that economic disparities are related to higher mortality and morbidity pathologies [10-12]. Medication non-adherence was common among low-income, uninsured patients initiating therapy for chronic conditions [38].

Limited access to economic resources, like money, potentially affects food access and also promote inadequate nutritional intake that may impact treatment adherence [32].

#### Occupation

Patient's working hours could be a limiting factor for treatment adherence. Busy schedules can also impact patient's ability to follow a treatment plan, therapies or remembering time to take medications, going to appointments or other treatment recommendations. Demanding occupations can affect adversely treatment adherence due to the expected responsibilities (i.e. medical residents, counseling professions, police officers, and fire fighters, within others). The study found that individuals with higher job stress are less compliant to their medication schedule as measured by proportion of days covered (PDC) than those in low stress job category individuals [30]. Patients' priorities have a huge influence on treatment adherence. Missing treatment due to work related responsibilities was seen in participants of TB treatment in Papua New Guinea [32]. In areas where agricultural jobs are main ways of food production, food shortages was also another variable affecting adherence to treatment because patients are not willing to take medications without taking food due to possible side effects [33].

This is an example of how occupation and lifestyle influence treatment adherence.

### Education level

Patient's level of education accomplished can influence treatment adherence since poor understanding of the medical instructions, recommendations, or steps to follow adequate treatment does not allow successful healthcare completion with the serious and negative impact that this could have in the patient's wellbeing. Researchers found that patients' understanding related to diet after cardiac surgery is dependent on age and degree of formal education [13]. Also, it was reported that both sexes, place of residence and degree of formal education, influence on level of physical activity in general, as well as on its individual manifestations. More active are, women, younger people and those with higher formal education presenting better health outcomes. Furthermore, research found that higher level of education was associated with adequate adherence in patients' specific diets or conditions such as gluten free diet and celiac disease, respectively [14]. When patients experienced medications side effects and they are not knowledgeable about them, they may consider abandoning treatment as other people did, that's the main reason why education is an important aspect for treatment adherence success [33]. Educating patients about possible side effects of the medication is essential to assure that patient will understand what to expect from the treatment medications this is essential where low levels of education are usual in the communities.

### Patient's personal belief and perceived necessity

Investigators found that personal beliefs about medication impact both, intentional and unintentional adherence to medication, in older adults with co-morbidities. The perceived necessity and personal belief also influence treatment adherence by patients [15]. A diversity of beliefs about health, and treatment adherence has been described in addition to cultural beliefs that impact patient treatment [32].

Consequently, researchers established that if the patient thinks (perception) that there is no significant risk linked to the treatment prescribed, their treatment adherence will be higher, seeing their treatment as a beneficial one<sup>16</sup>. Also, reported findings from other research demonstrated that patients' beliefs about their medications relates, not only with perceived adherence (among subjective way to report treatment adherence), but also with a more objective measure of medication adherence calculated by pharmacy dispensing files [17]. Rosenstock's Health Belief Model proposes that an individual's beliefs about susceptibility and seriousness combine to create a perception of threat associated with a health problem [40]. Patient's personal experience and the interaction with other patients help them to gain confidence or not about the possibilities of treatment successful rate [33]. Feeling better after initiation of treatment is a reason why patients usually discontinue the treatment before complete the dosage regimen prescribed.

### Discriminatory-doctor patient relations, Stigmas and Health care system factors

Investigations have been performed to look for

associations among discrimination as healthcare disparities and their influence in treatment adherence, recognizing that stigma is an important factor that influence in patients health outcomes. A recognized researcher in his classic work defines stigma as, "...an attribute that links a person to an undesirable stereotype, leading other people to reduce the bearer from a whole and usual person" [18]. In addition, several studies have shown African American and Hispanics are more frequently reporting discrimination while receiving healthcare services when compared with Non Hispanic Whites groups [19-25]. African Americans, Hispanics, and Asians reported significantly more perceived provider discrimination and poorer health compared to non-Hispanic whites [26], thus, as result of discrimination, the greater discrimination, the poorer treatment adherence. A group of women in Malawi, receiving HIV treatment, reported disappointment with poor interactions with some healthcare providers and limited staff availability [37]. Women that were interviewed in Chile, as part of a cross sectional study; relate been suffered discrimination during their hospitalization in health centers that are not specialized in pathology of HIV/AIDS, and by their families at the beginning of the diagnosis of HIV/AIDS [42]. Furthermore, healthcare system issues, such as long waiting times in clinics and traveling long distances, also impacts negatively treatment adherence.

Positive factors linked with greater treatment adherence include: greater number of physicians involved in patient care, providing a sensitive and coordinated health care, in addition to updated trained [27]. Also, easier access to the healthcare facilities seems to be an important contributor to treatment adherence since patients are more motivated to continue with follows up appointments. Furthermore, keeping effective communications with patients (phone contact, postal mail or e-mail messages) have an impact on how to keep patient involved with reasonable patient treatment scheduled. Aspect of efficient communication between provider and patient needs to be emphasized. Patient understanding of their health condition and treatment protocol will increase patient satisfaction and treatment adherence to successful achievement. Higher perceived quality of provider-patient communication in patients with Type 2 Diabetes Mellitus was associated with improved self-management, adherence to diabetes care and greater well-being, perceived personal control, self-efficacy, and less diabetes distress [41].

### Religion

Researchers defined religion as a systemic group of behaviors and practice that adopt a group of persons and provide guideline that help subjects to understand the universe and the relations they have with them [28, 29]. Religious beliefs and restrictions are factors that could influence treatment adherence. Traditional beliefs and practices, including witchcraft and sorcery were identified as influential factors in treatment on TB patients in Papua New Guinea [33]. Patients who have limited knowledge of

diseases' manifestations can judge diseases as a result of witchcraft and sorcery and that can cause a delay of looking for treatment. Centering on religion could be a facilitator factor in treatment adherence [33]. Practicing religious dogmas or rituals, having faith in God and be compliance with treatment medications was seen as a way to get better for many patients [33]. Spiritual orientation was shown to play an important role in the recovery from addiction, and to improve adherence in patients with this condition. Furthermore, better treatment adherence was observed in more religious patients diagnosed with depression [44]. Praying at least once a day was significantly associated to treatment adherence in HIV patients [43]. On the other hand, limited evidence of links was found between churches and TB treatment [33]. Church leaders can be useful in terms of promoting education and performing screening initiatives in communities to become treatment supporters [33].

Normative patterns in religion such as drug usage restrictions, hygienic measures, diet promotion and restraints, and sexuality behaviors may affect therapeutic adherence approaches. For instance, dietary restrictions followed by Jews and Adventists, among others religious groups, could affect treatment adherence in a way that medications could become affected by dietary ingestion (i.e. ingestion of green vegetables that could affect anti-platelet treatment, lipid concentration in stomach that could affect medication absorption fiber ingestion that can affect medication excretion).

## 4. Conclusions

Sociocultural factors provide an environment in which treatment adherence may promote or be a hardship to achieve positive health outcomes. Treatment adherence will contribute to patient wellness and longer life expectancy. Understanding and awareness of beliefs, religious, and educational aspects are key factors on treatment adherence. The involvement of family members, church leaders and other personnel as supportive tool may be beneficial for individuals who lack of other means to comply with their treatment. Healthcare practitioners need to identify those aspects affecting treatment adherence before considering changes or other treatment modality options; and when needed, make the appropriate referral to other interdisciplinary professionals that will help the patient to obtain resources that finally improve patient care and health adherence in order to improve practical and beneficial clinical results. It is important to identify strategies that allow us as providers address properly those issues and barriers that limit adherence to treatment. In addition providers have to look for alternatives available to offer support to patients in their treatment process. Strategies that can benefit the patient may include: repetition of instructions given to the patient to make sure he/she understands it, give time to the patient to explain when to take medications and how. The provider should communicate clearly with the patient using

terminology that is easy to understand and not medical jargon. Clear written material and instruction can help the older patient that can easily forget treatment instructions and how to take medications [39].

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