Shift from compliance to therapeutic adherence in the health care of patients with chronic diseases. A theoretical analytical study

الانتقال من الامتثال إلى الالتزام العلاجي في الرعاية الصحية للمرضى المصابين بالأمراض المزمنة- دراسة تحليلية نظرية

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- **Abstract:** For centuries, the Biomedical Model has contributed to improving the health of populations. Its success in increasing longevity was considerable, as evidenced by the decline in infectious diseases, which have given way to chronic diseases. These diseases are related to lifestyles and require long-term treatment, and this is where the biomedical model finds its limits. The current analysis demonstrates the contribution of health psychology to the evolution of patient care. Previously, compliance to treatment was viewed passively (following medical instructions). Now, it has been replaced by adherence to treatment, whereby the patient becomes an active participant in the implementation of his medical treatment. During this evolution, new concepts emerged, and others were added to clarify how to achieve and maintain treatment adherence. The challenge of modern medicine is to work on the behaviors of populations at risk or affected by chronic diseases. Health Psychology helps us to understand health-related behaviors. This analytical study focuses on one aspect of health behaviors: therapeutic compliance and adherence, which highlight the doctor-patient relationship. Poor compliance with long-term treatments for chronic diseases often leads to complications related to the development of various pathologies due to non-compliance with medical prescriptions. Therapeutic compliance is supposed to aim to improve the patient's health. But it turned out that patients do not meet all the expectations of the medical prescriber. Our interest is to identify the issue of therapeutic observance. In this context, several notions are often used to designate the same practice, i.e., following medical prescriptions, such as observance or compliance, which is the least used, adherence, which is the most used, concordance, persistence, and empowerment. Each notion refers to a semantic point of view; our objective is to present these concepts and thus clarify the determinants of the health behavior that is therapeutic adherence.

- **Keywords:** therapeutic compliance- adherence to treatment - chronic disease

- **الملخص:** على مدى قرون، ساهم النموذج البيو- الطبي في تحسين صحة السكان وكان نجاحه في زيادة متوسط العمر ملحوظًا، كما يتضح من انخفاض الأمراض المعدية التي حلت محلها الأمراض المزمنة. ترتبط هذه الأمراض

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بأنماط الحياة وتتطلب علاجًا طويل الأمد، وهنا تكمن حدود النموذج البيو- الطبي. يُظهر التحليل الحالي مساهمة علم النفس الصحي في تطور الرعاية الطبية للمرضى. في السابق، كان يُنظر إلى الامتثال للعلاج على أنه سلبي (اتباع الأوامر الطبية). أما الآن، تم استبداله بالالتزام بالعلاج، بحيث أصبح المريض مشاركًا فاعلًا في تنفيذ علاجه الطبي. وخلال هذا التطور، ظهرت مفاهيم جديدة، وأُضيفت مفاهيم أخرى لتوضيح كيفية تحقيق الالتزام بالعلاج ونجاحه. يتمثل تحدي الطب الحديث في دراسة سلوكيات السكان المعرضين لخطر الأمراض المزمنة أو المتأثرين بها. وهذا يتطلب استخدام علم النفس الصحي، الذي يساعدنا على فهم السلوكيات المتعلقة بالصحة. تركز هذه الدراسة التحليلية على جانب واحد من السلوكيات الصحية الامتثال للعلاج والالتزام به، مما يُبرز العلاقة بين الطبيب والمريض. غالبًا ما يؤدي ضعف الامتثال للعلاجات طويلة الأمد للأمراض المزمنة إلى مضاعفات مرتبطة بتطور أمراض مختلفة بسبب عدم الامتثال للتعليمات الطبية. من المفترض أن يهدف الامتثال العلاجي إلى تحسين صحة المريض. ولكن اتضح أن المرضى لا يلبون جميع توقعات الطبيب. ينصب اهتمامنا على تحديد مسألة الالتزام بالعلاج. في هذا السياق، تُستخدم مفاهيم متعددة للدلالة على الممارسة نفسها، أي اتباع التعليمات الطبية، مثل الامتثال، وهو الأقل استخدامًا، والالتزام، وهو الأكثر استخدامًا، والتوافق، والمثابرة، والتمكين. يشير كل مفهوم إلى وجهة نظر دلالية، وهدفنا هو عرض هذه المفاهيم، وبالتالي توضيح محددات السلوك الصحي المتمثل في الالتزام العلاجي.

- **الكلمات المفتاحية** :امتثال للعلاج - التزام بالعلاج - مرض مزمن.

- **Introduction:**

The biomedical model has governed health care for several centuries. Discoveries in this field have contributed to significantly increasing population longevity and the decline in infectious diseases, giving way to non-communicable diseases such as cardiovascular diseases, diabetes, cancers.... These diseases are related to lifestyles: diets, sedentary lifestyles, smoking... that, in the long term, permanently degrade the health of populations. These diseases require long-term treatment. Hence the challenge of modern medicine is to work on the behaviors of populations at risk or affected by these health problems. Here, the biomedical model finds its limits and necessitates recourse to other disciplines such as the social sciences. It is in this context that health psychology has developed, which aims to improve the regulation of health-related behaviors. Health psychology has proposed explanatory models of health behaviors and their possible modifications to promote health and prevent diseases, and to support chronically ill people in order to avoid probable complications through self-regulation of behaviors.

In the case of chronic diseases, good therapeutic adherence is becoming a public health objective: numerous studies (Berg et al., 1993; Stuart et al., 2015; van Boven et al., 2014) have shown that failure to follow medical prescriptions has negative consequences on patients' health and also increases costs for the healthcare system (cited by Oudin Doglioni, 2021).

Chronic illness (Do & Bissières, 2018) is a long-term condition that results significant changes in the person's lifestyle. To help patient to be as independent as possible in the face of the new demands imposed by the illness, it's crucial to support him/her in learning about the disease and its treatment to encourage his/her involvement in his care.

Chronic diseases requiring long-term medical treatment are often subject to complications related to the progression of various pathologies due to failure to comply with medical prescriptions. Research has been conducted to identify the challenges of therapeutic compliance to reduce morbidity and mortality factors.

The problem of therapeutic observance, probably as old as the history of medicine, is related to the doctor-patient relationship, within a framework that grants the doctor the authority to prescribe treatment and impose certain behaviors that imply behaviors to be followed. From diagnosis to treatment prescription, the doctor expects obedience from the patient. Didn't Hippocrates according to Bizouard and Jungers (2014) already say: "Patients often lie when they say they take their medication?"(p. 13).

This health behavior, which is therapeutic observance/compliance, is supposed to aim at improving the patient's health, curing him/her or supporting him/her in palliative care, and preventing diseases. But it turned out that patients do not meet all the expectations of the medical prescriber. Therefore, non- observance constitutes a permanent and complex problem, particularly for chronically ill patients, preventing them from having access to better treatment.

The World Health Organization [WHO] published (Sabatè, 2003) in its report "Adherence to Long-Term Therapies. Evidence for Action" findings on treatment

observance, with emphasis on poor observance to long-term treatments for chronic diseases, which is a growing problem worldwide. In a study conducted by the WHO, a number of rigorous evaluations analyzed established that in developed countries, the proportion of chronic patients complying with their treatment was only 50%. While it is much lower in developing countries. For example, in China, Gambia, and Seychelles, only 27%, 43%, and 51%, respectively, patients follow the treatment regimen prescribed to them for high blood pressure. In the United States, only 51% of patients treated for hypertension adhere to treatment. Similar trends have been observed for other conditions such as depression (40 to 70%), in Australia, only 43% of patients follow their asthma treatment. Observance/compliance varies between 37 and 83% in HIV/AIDS treatment. The success of therapies depends primarily on observance to treatment. Dr. Derek Yach, Executive Director of non-communicable diseases and mental health, states that insufficient observance is the main reason why patients do not fully benefit from their medications. It leads to medical and psychosocial complications, reduces patients' quality of life, increases the likelihood of developing drug resistance, and wastes resources. Altogether, these direct consequences prevent health systems worldwide from achieving their health goals. As a result, the problem of observance will only increase as the global burden of chronic diseases grows.

According to Haynes, McDonald, Garg & Montague (cited by Horne, Weinman, Barber, Elliott & Morgan, 2005) "Increasing the effectiveness of adherence interventions can have a much greater impact on population health than any improvement in specific medical treatments".

Urquhart (cited by Vermeire, Hearnshaw, Van Royen & Denekens, 2001) pointed out that observance to treatment constitutes a vital link between process and outcomes in medical care.

Early work on observance led by Brian Haynes and David Sackett (cited by Vermeire et al, 2001) identified the parameters of non-compliance by focusing on understanding, measuring and solving this public health problem. Thus, more than 200

variables were studied up to 1975 but no variable was determined as a consistent predictor of compliance, whether socio-economic or pathology-related (Haynes, Taylor & Sackett, 1979; Haynes, McKibbon, Kanani, Brouwers & Oliver, 1997; Donovan & Blake, 1992; Donovan, 1995; Steiner & Vetter, 1994; Marinker, 1997).

Understanding why, how, to what extent, and with what consequences, patients do not comply with the prescriptions attached to their treatment is an old problem that has been constantly revisited for the past thirty years by psychology and the sociology of medicine, but also by observations and reminders of critical reasoning in medical anthropology or psychoanalysis (Corraze, 1992; Fainzang, 1997; Myers & Midence, 1998 Breton, 2000) as cited by Morin(2001).

Several terms are often used synonymously to refer to the same practice, following medical prescriptions, such as observance, compliance, adherence, concordance, persistence and empowerment. Each concept refers to a semantic point of view; our objective is to present the different definitions given to each term and thus to specify the determinants of the health behavior which is therapeutic observance.

1- From compliance to therapeutic adherence years of research:

Since the 1970s, Anglo-Saxon authors have introduced into the literature the notion of "compliance" meaning consent and obedience of the patient and implying the authority of the doctor, translated into French by the term observance which has been replaced by the term adherence emphasizing the voluntary involvement of the patient in the choice of the proposed treatment.

As Le Helloco-Moy (2016) (cited by Do & Bissières, 2018) points out, research on compliance has existed since the 1970s with thousands of articles published on this topic. This question also remains a concern for health professionals who wish to improve this observance to improve the health of patients and limit potentially serious complications.

David Sackett (cited by Vermeire , Hearnshaw , Van Royen & Denekens, 2001) became interested in observance “compliance” around 1972, highlighting the case of

hypertension, where unpredictable or disappointing treatment responses were likely due to poor observance. The literature refers to a few research articles; between 1961 and 1974, only 245 articles were published on this issue. In 1974, "The McMaster Workshop/Symposium" on the therapeutic compliance was held, leading to a book on compliance and compliance research.

According to Tarquinio & Tarquinio (2007), the increase in the number of effective treatments has drawn attention to the problem of non- observance. Long-term therapies seem to be the most affected by this problem. At the end of the 1970s, it was clear that the determinants of observance were complex and poorly understood.

Fischer and Tarquinio (2014) cited that nearly 8,000 articles, mostly in English, were published on this topic before 1990 and approximately 4,000 over the last ten years. It thus appears that more than 80% of patients suffering from chronic diseases do not correctly follow the treatment allowing them to achieve the optimal benefit of the therapy. Non- observance often results in a longer duration of illness (in 10 to 20% of cases), an increase in sick leave (in 5 to 10% of cases), an increase in the frequency of visits to the doctor or specialist (in 5 to 10% of cases) and an increase in the length of hospital stays (on average by one to three days).

What are the determinants and implications of therapeutic observance/compliance? This question deserves to be clarified and the answer is introduced in the different definitions of observance proposed during the evolution of the semantics relating to this health behavior and which are presented as follows.

2- Concepts related to therapeutic adherence:

2-1- Observance "Compliance":

In French literature two terms are used: compliance and observance without there being any terminological difference between the two terms, observance is in fact, the translation of the English term "compliance". Haynes (as cited by Stockwell Morris & Schulz, 1992) defined "compliance" as the extent to which a person's behavior (in

terms of taking medications, diet monitoring or lifestyle changes) coincides with medical or health advice.

In medicine, compliance refers to "obedience linked to trust, the greater or lesser rigor with which the patient complies with the doctor's prescription" (Burner, 1990 as cited by Bonin, 2012), it refers to the patient taking the treatment in a passive acceptance which responds to consent.

Compliance in terms of medication outcomes determines the number of doses missed or taken incorrectly and which may thus compromise the therapeutic outcome (Vermeire, Hearnshaw, Van Royen & Denekens, 2001).

Health compliance as defined by Scheen & Giet (2010) is compliance with rules developed consensually by health professionals and following their prescription.

Compliance (Nordt, 2019) is the health behavior observed by the patient. It is the act of following the treatment. This is the "observable, objectifiable, and measurable" part.

This notion refers to the idea of submission of a passive patient who must obey medical prescribers without taking into account his affective and cognitive dimension.

The use of the concept of compliance seems controversial, because if it implies total respect for medical recommendations, this supposes that the patient has an attitude of obedience towards the caregiver who exercises authority over him/her. Moreover, compliance refers according to Horne, Weinman, Barber, Elliott & Morgan (2005) to an aspect of moral and psychological intimidation.

The strict definition of compliance refers to the rigor with which the patient follows medical prescriptions. It refers to submission or "total obedience" where only coercion guarantees the success of the prescription. Therefore, the bad patient is the one who does not want to take their treatment or respect the established rules.

On the contrary of compliance, non-compliance refers to a patient not following treatment recommendations. This refusal can be perceived as a challenge to

medical authority (Bourbeau & Bartlett, 2008) and is easily dismissed as irresponsible or unconscious.

Non-observance is the failure or refusal to comply and may involve disobedience and lack of concordance between patient behaviors and medical recommendations (Moreau & Queneau, 2005).

According to this definition, the patient alone is responsible for his/her choice between submission and disobedience. His free will is not taken into account and any behavior that deviates from this definition can be described as non- compliance. However, an individual cannot be forced to comply with medical advice without ever questioning it.

There are no perfectly compliant or no-compliant patients because the patient's behavior will depend on his/her situation, the nature of his/her illness, his/her level of understanding of the illness, and the patient's understanding of his/her illness and/or treatment. As an evolving and dynamic process, compliance is neither acquired for the healthcare professional nor definitive for the patient (Tarquinio & Tarquinio, 2007).

It is on this observation of excessive passivity of the patient that other authors have proposed to complete the definitions of observance/ compliance. Thus, Burner evolved the meaning of compliance in the 90s by proposing to add the concept of trust and cooperation by "obedience linked to trust" (Burner, 1990). Trust, based on good communication between a health professional and a user will influence compliance, we speak of a therapeutic alliance.

To overcome these controversies, health researchers currently prefer to use the term adherence rather than compliance, which implies voluntary involvement of the patient in the management of their illness, the improvement of their quality of life in order to limit possible pathological complications and thus reduce health costs.

2-2- Therapeutic adherence:

In the 1990s, a new concept appeared in international literature (Bros, 2019). This is the Anglo-Saxon term "adherence" (Vrijens et al., 2012), from the verb "adher", that is to say "to adhere", "to join" (p.66).

The WHO defines "adherence" as "the extent to which a person's behavior-taking medication, following a diet, and/or executing lifestyle changes- corresponds with agreed recommendations from a health care provider" (WHO, 2003). Note that the definition is virtually the same as that of "compliance". The description s²uggests a more active role for the patient in his/her treatment (Bourbeau & Bartlett, 2008).

The use of the term adhesion is more accepted and assumes the integration of the broader notions of concordance, cooperation and partnership (Vermeire, Hearnshaw, Van Royen, & Denekens, 2001).

Adherence, as defined by the members of the Royal Pharmaceutical Society working group in Great Britain, is: "The extent to which the patient's behavior meets the doctor's recommendations". This term has been adopted by the majority as an alternative to observance or compliance, with the aim of emphasizing the fact that the patient is free to decide whether or not to adhere to the doctor's recommendations. Failure to adhere should not be a reason to blame the patient. From compliance, therefore, develops the concept of adherence, which emphasizes the need for agreements between the doctor and the patient (Rob Horne, John Weinman, Nick Barber, Rachel Elliott, Myfanwy Morgan, 2005).

According to the Sabatè report (2003), therapeutic adherence consists of adopting all the treatment actions that reflect certain types of behavior: seeking medical care, following prescriptions, taking medication appropriately, vaccination, attending follow-up appointments, modifying behaviors such as personal hygiene, self-management of asthma or diabetes, smoking, contraception, risky sexual behaviors, unhealthy diet and insufficient physical activity, in other words, adopting healthy behaviors.

Therefore, adherence to treatment as indicated by Scheen & Giet (2010) is composite and includes at least three essential aspects:

- adherence to medical follow-up in general, i.e. the patient's ability to attend appointments for prescription and treatment monitoring; it is often considered a predictive factor of the other two components;
- adherence to hygiene and dietary rules, which plays a major role in the management of chronic pathologies;
- adherence to drug treatment which is the best studied.

Therapeutic adherence is just another facet of compliance, and which is associated, according to Lamouroux, Magnan & Vervloet (2005), with the will and the responsibility taken by the individual to manage his/her illness. It refers to the attitude and motivation of the patient to follow his/her treatment. Therefore, adherence is the least measurable characteristic of therapeutic adherence and thus reflects a relationship between medical and social factors of which the patient is considered as a stakeholder in his treatment. He/she must "adhere" to his therapy and not only "submit" to its prescription.

The therapeutic adherence model developed by Stanton (cited by Ogden, 2008) suggests that the patient's beliefs were important in addition to the role of locus of control and perceived social support and the disruption of lifestyle that adherence causes. Therefore, adherence assumes an interaction between health professionals and the patient and gives importance to communication that aims at adaptation with the disease.

Adherence can also be summed up as a relationship between "what the patient does in an accepted manner" and "what the doctor says while trying to convince". Faced with a still medically-centric use of the term adherence or therapeutic adherence, the notion of concordance or therapeutic alliance has developed (Baudran Boga, 2009).

Adherence is the attitudinal dimension of therapeutic observance (Lamouroux et al., 2005), it's referring to the factors that can influence compliance behavior. Adherence therefore refers to intrinsic factors such as attitudes and motivation. The terms adherence and compliance are not synonymous but inseparable from each other.

2.3- Concordance

The concordance is a relatively new term, mainly used in the United Kingdom (UK). Its definition has changed over time and reflects the evolution of the concept of compliance and where the doctor and patient agree on treatment decisions and integrate their respective perspectives, this broader concept extends to patient communication and support in medicine (Rob Horne, John Weinman, Nick Barber, Rachel Elliott, Myfanwy Morgan, 2005).

According to Bissell, May, & Noyce (2004) the term expresses the "therapeutic alliance" that exists between the patient and health professionals. Dialogue is privileged and this offers a contrast with the paternalistic vision of "compliance" which suggests the patient's passivity in the face of his treatment.

Concordance is sometimes mistakenly used as a synonym of compliance. These terms may be considered similar but are different.

Marinker, Blenkinsopp, Bond et al (as cited by Cushing & Metcalfe, 2007) defined concordance as a negotiated agreement between the patient and healthcare professionals that respects the patient's beliefs and wishes about whether, when, and how to take their medication, and (in which) the priority of the patient's decision has been recognized.

The major advantage of the concordance approach is that the doctor is encouraged to consider the patient's views, and decisions will be open. The patient also knows that his/her views are respected, as are any subsequent difficulties. Being fully committed to the concept of concordance means taking responsibility for information

and opinions and respecting the patient's autonomy in decision-making rather than deciding for him/her.

According to Treharne, Lyons, Hale et al (2006) and Aronson (2007), the caregiver will modulate his treatment offer while respecting the patient's beliefs, fears, constraints and wishes by actively involving him/her in the decision and by building with him/her the solution to his difficulties. The two partners therefore gradually build a therapeutic relationship, an alliance on the ways of integrating the illness and the treatments into the patient's life, of adapting to "live with it".

Baudran Boga (2009) indicates that therapeutic adherence becomes, from this perspective, a project in which the patient and the caregiver engage reciprocally, in order to achieve their jointly set goal. The patient still remains "the final decision-maker" regarding whether or not to follow the established plan. Therapeutic adherence considered from the perspective of a therapeutic alliance can be synthesized in the form of a relationship between "what the patient does" and "what the patient and the doctor have decided after negotiation without imposition".

If concordance is about establishing agreement and harmony, in which the patient is considered a decision-maker and a cornerstone of professional empathy, then compliance means respecting the medical prescription in theory, while concordance means the practice and ethical goal of treatment. From this perspective, compliance is the extent to which an individual chooses a behavior that coincides with a clinical prescription; concordance for the patient is considered a choice.

2- 4- Empowerment :

Following the announcement of a chronic illness, the patient experiences a feeling of loss of control over his life, a rupture of identity that will trigger the empowerment process which is determined by a set of factors including self-determination, self-efficacy, security and identity coherence that the patient must mobilize with the help of health professionals through therapeutic education. This

process consists of mastering health by leading the patient to a new way of living, to be the same but differently.

The caregiver, according to Deccache (cited by Baudrant-Boga, 2009) will seek, depending on the stages of empowerment to be developed:

- Knowledge and skills necessary for the patient to be able to make choices,
- Psychosocial skills necessary for the patient to be able to implement the chosen therapeutic strategies.

Ultimately, the caregiver will support the patient, positioned at the heart of their own development and an active participant in their learning. The patient's therapeutic adherence, from this perspective, is defined as "the reflection of decisions that the patient makes primarily by and for himself".

According to Gibson (cited by Aujoulat, 2007), it is now common to hear that therapeutic education aims at empowerment of the patient, that is, the process by which a patient increases his/her ability to identify and satisfy his/her needs, solve his/her problems and mobilize his/her resources, so as to have the feeling of control over his/her own life.

One of the primary objectives of therapeutic education is to strengthen the capacity for self-care or self-management in patients with chronic illnesses, i.e. their ability to treat themselves, through "appropriate" decisions, actions and behaviors outside of consultation and/or hospitalization times.

2- 5- Persistence

The concept of "persistence" according to Bros (2019) emerged later, in the 2000s (Vrijens et al., 2012). This concept focuses particularly on care behaviors in the context of chronic illnesses whose treatments are palliative.

The concept of persistence refers according to Cramer, Roy, Burell et al (2008) and Cottina, Lorgisa, Gudjoncika et al (2012) to the duration of taking a medication and can be assessed by the average duration between the initiation and the stopping of treatment.

Persistence precedes compliance, which is considered the ultimate goal of medical prescriptions in terms of treatment doses and advice from healthcare providers, while respecting the patient's free choice by encouraging the most appropriate adherence and empowerment.

3- Theoretical models explaining therapeutic adherence

Currently, therapeutic adherence is a priority for public health. This interest is part of the modern challenge facing countries for promoting health behaviors. It was necessary to determine the degree to which a patient complies with all medical recommendations. This is primarily related to his/her own behavior. Indeed, since the last century, behaviors have gradually emerged as the leading cause of mortality, ahead of infectious diseases. They are partly responsible for many chronic diseases, such as cardiovascular disease, certain cancers, etc. Thus, in matters of health, it is now known that the individual, to a certain extent, has the ability to influence his/her well-being.

Health psychology has developed around various theoretical orientations that can be grouped into two sets (Fischer, 2005; Fischer & Tarquino, 2014, Chapter 2): behavioral-oriented theories and theories based on beliefs and emotions, known as sociocognitive theories. Leventhal's model, based on the representation of illness, appears to be a synthesis of these two major trends. Patients' representation of illness is a set of personal and subjective knowledge, which is not necessarily scientific, but possesses an internal logic and rationality for patients, and which guides the patient's adaptation to his/her state of health (p.76), cited by Oudin Doglioni (2021).

Researchers have attempted to explain individual differences in the adoption of health behaviors. The level of adherence reflects the positive or negative beliefs. A patient may have about his/her treatment, which is predictive of therapeutic adherence. To account for this complexity, health psychology models have been developed to explain and predict the adoption of health behaviors.

Many models have mainly aimed to highlight the determinants of the intention to adopt a behavior. Among these models, the Health Belief Model (Rosenstock, 1974),

the Theory of Reasoned Action (Fishbein and Ajzen, 1975) and the Theory of Planned Behavior (Ajzen, 1985), and Social Cognitive Theory (Bandura, 1977, Bandura, 2003). But these models failed to explain why some individuals transformed their intentions into actions while others did not. Then Godin (1996), Fishbein (2000), Leventhal et al (2003) proposed so-called "integrative" models to take into account all the variables involved in the previous models.

The model developed in 1980 by Howard Leventhal, Daniel Meyer, and David R. Nerenz, known as the Common-Sense Model of Self-Regulation of Health and Illness (CSM), was designed to describe the dynamic interactions between variables controlling health behaviors in response to current or future health threats.

The CSM allows us to understand adherence or compliance and, consequently, all kinds of self-reported or objectively observed health outcomes. The CSM has heuristic value for describing transitions in health behaviors i.e., the movement from non-adherence to compliance and vice versa, although few researchers have addressed the details of transition processes (Leventhal et al., 2016) as cited by (Oudin Doglioni, 2021, p.82).

Leventhal and colleagues (as cited by Oudin Doglioni, 2021) developed a model based on problem-solving approaches, suggesting that illness, symptoms, or diagnosis are managed in the same way as any other problem (Ogden, 2014). The illness representation approach begins with the patient's personal experience of their illness, that is, their image of their physical condition (Weinman & Petrie, 1997). These illness representations are defined as "the implicit commonsense beliefs about their illness" (Ogden, 2014, p. 247) and refer to patients' health literacy about their condition, that is, the knowledge acquired by the patient through their personal experience of the illness, information provided by others, or their own learning. Then, the construction of the representation develops in parallel, both from a cognitive and emotional point of view. The level of adherence refers to the degree of fit between the medical prescription and

the patient's behavior. However, following a treatment cannot be reduced to behavior, since it involves cognitive or emotional dimensions that modulate it (p.83).

The heart of Leventhal's model is the representation patients have of their illness. Based on this representation, they will adopt coping strategies that will lead to behavior, the outcome of which will be reevaluated to modify the representation.

Maes and Gebhardt (2000) (cited by Muller & Spitz, 2007) explain in their Health Behavior Goal Model (HBGM), based on theories of self-regulation of behavior, that "all human behavior is directed by a goal. This goal is an internal representation of a desired or undesired state." In the health field, goals are often set for and not by the patient. This representation is simply the first stage of goal regulation and constitutes in itself the intention of a behavior. This makes it difficult to integrate external health behavior into the patient's personal goal structure. Also, Maes and Gebhardt, and Muller & Spitz (2007) show that the motivation to pursue the health goal may be influenced by various variables such as self-efficacy, perceived control, social influence, benefits and costs of the behavior and the revision process.

From this perspective, the authors of the HBGM will integrate two essential ideas for the study of behavioral changes that are lacking in the previously cited explanatory models:

- Human beings simultaneously pursue a multitude of goals that belong to a complex structure of personal goals;
- The process of regulating a goal is a dynamic process consisting of numerous interacting phases.

In the HBGM (Muller & Spitz, 2007) the regulation of a health goal is understood from the perspective of various phases during which the motivation for the health goal may vary. For Austin and Vancouver (1996), once a goal is defined, the person enters into a goal planning process and determines the best strategy to adopt to achieve their goal. It is only in a second phase that they test this strategy in a phase of active pursuit of the goal. During this phase, it is likely that they will encounter obstacles

that will force them to revise either the goal they have set or the strategy used. If the person manages to resolve or circumvent the obstacles encountered, he/she will then be able to achieve his/her goal.

However, in health matters, the question of maintaining behavior is often raised since the goal is more of a permanent state than a one-off (for example, quitting smoking must continue throughout life). If the person is unable to overcome the obstacles encountered, it is likely that he/she will end up abandoning his/her goal (Carver and Scheier, 1998).

In the HBGM, many variables will affect the motivation associated with goal pursuit at all stages of the behavior regulation process. These include self-efficacy, perceived control, social influence, and the perceived benefits and costs of behavior (Spitz, 2003). Furthermore, emotions act upstream and downstream of goal pursuit and are both the cause and consequence of behavior. For Maes and Gebhardt (2000), they have two functions: they provide energy for the actions necessary to achieve desired states (energizing function) and provide evaluative information regarding interactions with the environment (regulatory function).

Finally, a variable of motivational regulation integrated into the HBGM is related to the revision process essential for achieving the goal. Maes and Karoly (2005) note that research studying the role of feedback has led to the conclusion that interventions based on this technique are effective in changing behavior. Thus, a person actively seeking evaluative information on the regulation of their goal would be more likely to achieve it.

By applying what HBGM proposes to the field of Therapeutic compliance, HBGM and the concepts derived from theories on self-regulation seem relevant to address the transition from the intention of behaviors of Therapeutic observance to the effective adoption of these behaviors.

Various factors such as: Environmental factors and socioeconomic status can have a positive as well as negative effect on the patient's participation in this therapeutic adherence process.

4- Conclusion:

Currently, the concept of compliance is no longer associated solely with an act of submission and obedience, but is considered a free choice in decision-making and care processes. Compliance is considered a space for confrontation between medical requirements, including medication prescriptions, intake and duration, as well as associated lifestyle habits, in addition to the patient's resources that he/she will develop, according to his/her will and disposition to adapt to his situation as a patient.

The patient is therefore considered an actor in his health behaviors; he/she is far from being passive in the face of his illness after the diagnosis. He/she try to understand what is happening to him/her and then adopt coping strategies in the face of the illness. As part of therapeutic education, healthcare professionals help the patient to adopt health behaviors in the context of his environment.

Therapeutic compliance is considered a process linked to the contingencies of the moment based on the perceived quality of life, influenced by cognitive, emotional, social and behavioral factors that interact with each other.

The current trend favors the term adherence to compliance or compliance to emphasize the notion of free choice and the concordance of the sick person. This vision is part of a new paradigm of care where patients and health professionals are seen as partners who collaborate to establish the treatment plan. The patient participates in therapeutic decisions, including whether or not to start drug therapy.

The current vision of health is part of an empowerment approach that considers the sick person as an actor who participates with health professionals in order to adapt to his new situation. These professionals intervene to strengthen their potential in terms of self-efficacy and adjustment strategies, self-esteem, and improvement of quality of life in order to achieve therapeutic objectives. This approach

helps the patient, on the one hand, to benefit from all the therapeutic benefits and, on the other hand, to reduce health costs.

So, from compliance to therapeutic adherence is summarized a development of research in the health field that was purely medical. Other concepts have developed, those that fall within the field of health psychology, including concordance and empowerment, in order to promote health behaviors among chronically ill people to highlight the main role of these people in the autonomy of managing their lives and their illnesses.

To do this, it seems important to consider the different theoretical models that have been developed by researchers to analyze the behavior of therapeutic adherence. These models, which are of Anglo-Saxon origin, present a range of parameters from traditional models of health psychology. This topic will be the subject of a future analytical study that will allow us to better understand the process of therapeutic adherence.

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