

## The Dynamic Basis of Patient's Adherence and Compliance in Clinical Practice

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### Abstract

Adherence and compliance to treatment are significant and primary determinant of success in clinical practice and medication. Nonadherence or the failure of compliance represents a serious problem to patients and health organization. Dynamic foundation of patient's personality such as conflict and anxiety play an important role on nonadherence behavior. This article aimed to explore 1- The concepts of adherence, compliance and conflict, 2- the connection between conflict and nonadherence 3- the procedures we can use to improve the adherence in medical practice.

### Introduction

At first glance, the dynamical perspective would seem to be wholly irrelevant to psychological processes, let alone to the social foundations of human idiosyncrasies and proclivities comprising an individual's personality. Dynamical systems, after all, were initially developed to model the behavior of physical phenomena in the natural world. Human experience is inherently dynamic. Even in the absence of external influence, an individual's mental state and predisposition for action can take on a variety of different forms as he or she reflects on experiences or imagines those yet to take place. Indeed, the potential for internally generated or "intrinsic" dynamics was accorded a prominent role in early treatments of personal and interpersonal processes.

The evidence from this and previous reviews is that no adherence to appropriately prescribed medicines is a global health problem in clinical practice. The challenges for a research in medication adherence are similar to those for other health-related behaviors such as smoking cessation, exercise and diet: how to influence and change behavior [1].

Nonadherence, the extent to which patients fail to take medications and/or to follow treatment recommendations as prescribed by their health care providers, is a major public health concern. Nonadherence affects patient safety, increases health care costs, and contributes to global problems such as antibiotic resistance [2]. Adherence in general clinical practice (real-worldadher-once) is variable, with partial adherence (eg, forgetting to take a daily dose of aspirin or stopping antibiotics after a few days) occurring more often than complete nonadherence (eg, never filling a prescription). Non-adherence in real-world settings can exceed 50% in some populations, and this situation can pertain to no medication treatment recommendations such as monitoring blood glucose or exercising regularly [3,4].

### The concepts

#### Compliance and adherence

Improving adherence is a key factor in improving patient safety and quality of care tailored to patients' needs<sup>5</sup>, in reducing unused and improperly used medications, increasing the effectiveness and cost-effectiveness of healthcare, and so improving the financial sustainability of European health systems [5]. Increasing the effectiveness of adherence interventions may have a greater impact on the health of the population than any improvement in specific medical treatment. Nonadherence prevents patients from gaining access to the best treatment, and this may be particularly problematic in chronic medical conditions.

Adherence is an important issue when it comes to antibiotics. This is because misuse

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of antibiotics leads to the emergence of resistance. In addition to reducing inappropriate prescribing and use of antibiotics, it is important that patients take their prescribed antibiotics correctly: with the correct dosage, dose intervals and duration of treatment. Improper use of antibiotics includes taking them for the wrong reason for example for cold and flu, which are normally caused by viruses against which antibiotics are not effective; using someone else's "leftover" antibiotics; stopping antibiotics early; taking a lower dose; or taking the drug less frequently than directed [6].

Adherence as defined by [3], "the degree to which the person's behavior corresponds with the agreed recommendations from a health care provider", it implies a more active role: collaboration with the physician with no place for blame; self-motivated decision to adhere to the advice; a tacit self-regulation of illness and treatment. Patient acceptance is based on trust.

Compliance implies passivity, following demands and direction. Patient beliefs are not interacting in this process or are seen as an obstacle to treatment. Non-compliant patients are seen as rebellious, incompetent or a nuisance, as challenging the "status quo" of the doctor-patient relationship. Patient acceptance is based on the doctors' status.

**Compliance:** Until relatively recently the most common term for following treatment instruction was "compliance" that may be defined as "The extent to which that patient's behavior matches the prescriber's recommendation". The term used commonly in medical and pharmaceutical literature, and it has been criticized because it has negative connotation in terms of the clinicians-patient relationship. It seems to denote a relationship in which the role of the clinician is to decide on the appropriate treatment and issue the relevant instructions, whereas the role of the patient is to passively follow the doctor's orders. Noncompliance may be interpreted as patient incompetence in being unable to follow the instruction, or worse as deviant behavior [1].

Though the terms adherence and compliance are synonymously used adherence differs from compliance. Compliance is the extent to which a patient's behavior matches the prescriber's advice. Compliance implies patient obedience to the physician's authority, whereas adherence signifies that the patient and physician collaborate to improve the patient's health by integrating the physician's medical opinion and the patient's lifestyle, values and preferences for care [7].

Lately the concept of concordance has evolved from a narrower view, emphasizing an agreement between the clinician and the patient, which takes into account each other's perspective on medication taking, to a broader process consisting of open discussions with the patient regarding medication-taking, imparting information and supporting patients on long-term medication. It is a process, which entertains patients' views on medication taking, and acknowledges that patients' views have to be respected even if they make choices, which appear to be in conflict with the clinician's view [8].

Concordance is a relatively recent term. Its definition has changed over time from one, which focused on the consultation process, in which doctor and patient agree therapeutic decisions that incorporate their respective views, to a wider concept, which stretches from prescribing communication to patient support in

medicine taking. Concordance is sometimes used, incorrectly, as a synonym for adherence. It can be seen that these terms are related but different. Two issues underpin this:

First, whether patients should take their medicines or not depends on whether the prescribing was appropriate, we do not want to promote patients taking inappropriate medicines. Hence, all terms refer back in varying degrees to the act of prescribing.

Second, all these Terms involve varying normative agendas – understandings of what is good and right about prescribing and medicine taking [9].

### Psychological conflict and nonadherence

Poor adherence to treatment is a problem of great importance and striking magnitude[10]. Psychological factors have been also associated with an increased likelihood of medication non-adherence [11]. Psychological aspects, such as anxiety, depression and perceived stress, are shown to have an inverse correlation with health improvement of patients in clinical practice. It can be inferred that the social network is a health protection factor with regards to treatment and quality of life in this population [12].

Depression is commonly associated with the presence of negative beliefs regarding the disease and feelings of hopelessness that impair the person's motivation to take care of his health and undermine confidence in his ability to cope with the demands of treatment. Manifestations of anxiety can occur in specific ways, such as the fear of having infected partners and/or children; the apprehension towards disclosure of the diagnosis and fear of implicit and explicit rejection; changes in the therapeutic regimen due to failure or intolerance [11,13].

The concept of conflict is multidimensional; it envelops a family of forms. We select one depending on our analytical purposes and practical problem. On the other hand, much of the substance of conflict falls under the domain of social psychology, and previous research has made great progress in understanding the processes that underlie intergroup relations. Several high-status researchers have argued for the necessity of social psychological research to augment and inform other theories of violent conflict, mainly those used by political scientists and International Relations analysts [14]. The collection of articles in this Special Edition illustrate some of the ways in which social psychologists can research conflict outside the laboratory.

*Conflict* has been defined as a process that begins when an individual or group perceives

differences and opposition between itself and another individual or group about interests and resources, beliefs, values, or practices that matter to them [15]. Self-conflict is a thing that always happen in human beings. Feel confidentless, feel having multiple personalities, or even feel something abnormal in their self. This process view dates back to the original work by[16], who differentiated between latent and manifest conflict. Latent conflict includes perceived and felt conflict, and refers to within-person or within-group states. Manifest conflict, in contrast, includes constructive negotiations as well as outbursts of violence, and thus refers to between-person or between-group dynamics.

Psychological conflict in human characterter is one of kind of conflict that usually find in a novel literary. According to the

encyclopedia Britannica, conflict, in psychology, the arousal of two or more strong motives that cannot be solved together. As well as a youth who experience a conflict between two desired satisfactions that has to choose between two attractive and practicable careers, may lead him to some vacillation. Psychological conflict is a man struggling against himself, his conscience, his guilty, or simply trying to decide what he is going to do [17].

Psychological Conflict is the emotional and cognitive case that is "the individual manifesting inconsistency between tow (or more) of drives or interests /desires that should be satisfied but it cannot be satisfied/solved together, so he/she can choice or select between them" [18].

### Types of psychological conflict

The three components of conflict behavior are emotional (Affect), cognitive (thought) and practice (action/behaving). The emotional component includes the tension, distress, fear, anger, surprise. The cognitive component includes the individuals thought, beliefs, memorizing, information -processing. The behavioral components includes the first reaction (approach/avoidance). The third one (behavioral elements) is the most significant in clinical practice and researching from the perspective of behaviorism because represent the manifesting and observable phenomena/variable (conscious conflicts). In addition, the Unconscious's Conflicts are the cases that the individual unaware the drives and desires[19]. According to this viewpoint, we can see the following type of psychological conflicts:

Conscious conflicts (manifested)-behaviorism trend

- Approach-Approach (++)conflicts lead to: adherence-adherence.
- Approach-Avoidance (+-) conflicts lead to adherence-nonadherence.
- Avoidance-Avoidance (--) conflicts lead to nonadherence-nonadherence
- Multiple Approach-Approach (++++) conflicts lead to multiple adherence-adherence

Unconscious's Conflicts (latent) - analytical trend.

- Conflicts between the Id components or drives
- Conflict between the Ego and id components.
- Conflicts between super ego components.

The anxiety is the most important emotional response relating to conflict. Anxiety would seem to be as:

- -Emotional response
- -Unpleasant
- -Directed toward the future.

Included by bodily disturbance, "the construction of chest" especially. On the other hand, conflicts and anxiety stimulate patients to use defense mechanisms such as: rationalization, projection, avoidance, negativism, regression, displacement, denial, and reaction formation during medication and clinical

settings [18]. We can see that , the conflicts, anxiety and defense mechanisms represent the most significant and dynamic components of nonadherence in clients.

Conflict can occur between physicians and patients, physicians and families, physicians and nurses, and physicians and physicians. Conflict occurs on a continuum, ranging from minor disagreements and differences of opinion, to personality clashes, to blatant hostility including physical confrontations. In addition to the level of intensity, conflict can be categorized according to duration: acute, sub-acute, chronic, and interminable [20].

### Conflict resolution, adherence and compliance

Patient medication non adherence is a major medical problem globally. There are many inter related reasons for the same. Though patient education is the key to improving compliance, use of compliance aids, proper motivation and support is also shown to increase medication adherence [7].

Conflict underlies many interpersonal interactions and group decisions. Several characteristics of the healthcare environment make it especially susceptible to frequent and potentially intense conflict. Working closely in this setting are a number of highly educated and experienced professionals, optimally all sharing one goal—patient care—but each having a distinct role and responsibility. These individuals bring their unique educational background and differing perspectives to their clinical duties [21].

At first, it is very significant to describe the reasons for non-adherence, as the following:

- lack of or poor of information given to patients (e.g. regarding treatment choices and their relative benefits/risks, the clarity of communication, evidence-base and source of information)
- the impact of treatment on daily life, (burdensome, painful, big social impact)
- factors related to the disease (although severity of disease is not necessarily correlated with higher adherence)
- adverse effects (desire to manage/reduce physical, psychological, emotional side-effects)
- complexity of the treatment, such as many different medications (polypharmacy)
- patients' beliefs (about medicines generally and about the treatment specifically, for example when there is no visible benefit from taking the medicine)
- health system-related factors (e.g. lack of care integration) or
- healthcare team-related factors (e.g. lack of data sharing, poor communication)
- access considerations (e.g. lack of reimbursement, co-payments, medicine shortages)
- physical or mental incapacity or emotional issues, e.g. depression.

Social isolation or lack of support network [9,20]. We grouped

the literature on adherence into four core themes: explaining patient behavior: patient-provider interactions; societal policy and practice; and interventions. These are underpinned by complex notions of the various, and sometimes conflicting, things we consider 'good' about prescribing and medicine taking. We pause to explore these issues in between the policy and intervention themes. Medicine-taking needs to be understood as a variable behavior, which occurs within, and is influenced by, external, environmental factors including interactions with healthcare providers and by the wider context of societal-policies and practice. Theme four spans these domains as interventions to facilitate optimum medicine taking can be targeted at one or more of these domains [1,22]. Interventions should be tailored to meet the needs of patients taking account of the particular perceptual (beliefs and preferences) and practical (capacity and resources) factors influencing intentional and unintentional no adherence for that individual.

Conflict can be resolved when: 1-conditions where there is strong evidence supporting the benefits of medication, above other treatment options and over doing nothing. 2- Treatments where there is strong evidence that high level of adherence are essential to ensure efficacy or prevent problems such as the emergence of treatment-resistance.

Thoroughly assess the immediacy and severity of the risk associated with lack of treatment, delay in treatment, or alternative treatments, and the net benefit of treatment Prepare your report:

- Avoid the use of medical jargon
- Organize and summarize main issues
- Describe the patient's disease process, medical findings, recommended treatment plan, and health risks and benefits of treatment
- Explain patient's progress and level of adherence to the recommended plan
- Report on what accommodations and efforts have been made to address barriers to adherence
- State imminent or future risk to the patient without recommended treatment [23,24].

Recognize that nonadherence is common and that most patients are nonadherent sometimes. Routinely assess adherence in a nonjudgmental way whenever you prescribe, dispense and review medicines [20]. Any interventions to support adherence should be considered on a case-by-case basis and should address the concerns and needs of individual patients.

- If a patient is not taking their medicines, discuss with them whether this is because of beliefs and concerns or problems about the medicines (intentional nonadherence) or because of practical problems (unintentional nonadherence)
- Be aware that although adherence can be improved, no specific intervention can be recommended for all patients. Tailor any intervention to increase adherence to the specific difficulties with adherence the patient is experiencing.

- Find out what form of support the patient would prefer to increase their adherence to medicines. Together, you and your patient should consider options for support.
- Address any beliefs and concerns that patients have that result in reduced adherence.

**In sum**, Nonadherence is often a hidden problem. Many patients are reluctant to express doubts and concerns about medicines because they fear that it will displease the healthcare professional. We need better methods for overcoming this problem and promoting honest and open discussions about medicines and adherence [25]. The adherence results from a balance between the perception of the need to take medication and concerns about their adverse effects. Improve adherence to medication is a highly effective strategy for better health outcomes, thereby obtaining better benefits in quality of life, than to invest in new medicines [21].

Health care professionals should identify practically possible strategies to improve medication adherence within the limits of their practice eventually enhancing therapeutic outcome [6]. It should be a multidisciplinary approach that needs to be carried out with the support of all those who are involved in medication use.

There is correlation between task conflict and relationship conflict on the one hand, and team performance on the other hand [26]. Conflict may have positive consequences under very specific circumstances, and we need to detect those circumstances in new research in clinical practice specially. Clinicians should be interested and focused on the dynamic foundation of patient's behavior and personality.

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