

Analyzing client statements to identify affective and cognitive resistance to new health information

Abstract

A content analysis method is described which is applied to patient statements to help identify types of resistance or opposition felt or thought after receiving new health information or lifestyle change instructions. The classification of statements into affective and cognitive speech acts is applicable to any health issue with single cases or with groups. The client statements are collected from spontaneous oral exchanges or from prompted written responses. A classification scheme is suggested involving a dynamic matrix of two behavioral domains and three intensity levels of resistance. Keeping track of such classified lists over cumulative sessions with a patient can help health professionals keep better track of the causes of non-adherence and provides specific interventions which may counteract or modify resistive negative speech acts in the patient's future statements. To illustrate the speech acts analysis technique data from respondents are reported with specific examples for each of the speech act categories.

Keywords: speech acts, noncompliance, health information, lifestyle change, affective, cognitive, discourse analysis, diet

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Introduction

Non-compliance to health instructions often implies some degree of client resistance to change. This resistance is undoubtedly both cognitive (“*I don't actually need this*”) and affective (“*I hate taking medications*”). Health professionals can gain a better understanding of their clients' resistance by examining the content of their verbal reactions given in oral or written self-reports. This paper presents a method for categorizing statements made by individuals when prompted to state their view on some health issue or procedure. The presence of affective resistance is revealed by unwillingness to receive information, holding on to misconceptions, or avoiding contact. Cognitive resistance is inferred from faulty explanations or the elaboration of negative fantasies.

Psychotherapists deal with client resistance as a dynamic component of growth and change. “Tactical resistances” are defined as “psychic operations and behaviors” that serve to avoid information about the self; “strategic resistances” are regressive behaviors by which a person seeks “fulfillment of childhood choices or fantasies”.¹ Resistance is “a reaction that enables an individual to avoid frustration and anxiety, and to rely on established, repetitive modes of gaining satisfaction”.² Viewed in this light, resistance to compliance to health care instructions is an expression of a relationship problem between client and health care professional. Helping the client become aware of the presence of these resistances in oneself is an important aspect of the health care process.

Resistive behaviors known to counselors and therapists include the following:

- i. withholding information;
- ii. attempting to thwart the therapist;
- iii. denying cooperation;
- iv. avoiding to collaborate;
- v. having to be forced to repeat;

- vi. not wanting to recognize responsibility for one's actions;
- vii. rejecting new information;
- viii. avoiding inner pain from confronting facts or facing the consequences of one's actions;
- ix. forgetting details.

The forms of resistance in health and lifestyle behaviors need to be examined. Though people may want relief from symptoms, they may not want to give up anything familiar and spontaneously oppose whatever threatens the continuation of their habits and style of life.

Patient non-adherence or non-compliance has been a major problem for health professionals for decades.³ Non-conformance to treatment plans acts to decelerate progress achieved in illness control. According to one review of the early literature on non-compliance behavior, the challenge that has faced health professionals is to “provide relevant information, feedback, and explanations that will maximize the impact and personalization of an unexpected and unwelcome message”.⁴ Health information is often an unwelcome message that triggers a basic antagonism between service provider and client. The health message may be unwanted because it can arouse unpleasant sensations of dissonance and fear.

Health information may be perceived as a demand to change lifestyle habits and can threaten to remove cherished delights and comfortable surrounds. Yet health information may contain many promises of relief from discomfort, of new vitality, and of a long life. Thus there could be a two-fold reaction to the health provider's message or instruction. One is “the teachable moment,” when the message triggers a desire to change one's lifestyle habits.⁴ The other may be the arousal of intra-psychic defense mechanisms of resistance such as avoidance, rationalization, and denial.

Affective and cognitive speech acts

In order to manage patient resistance to treatments it may be useful to distinguish between two types of resistance involving the two psychological domains of human behavior, namely, affective and cog-

nitive. It may be beneficial to manage a client's affective resistance and cognitive resistance differently. In order to distinguish them one can collect or note the statements or verbalizations of patients when talking with the health care providers or when commenting on health care instructions. These statements can then be categorized on the basis of stated criteria. Statements labeled affective resistance can be addressed one way while statements labeled cognitive resistance another way. By labeling a client's statements and collating them into two lists the health care provider receives a more stable and reliable indication of the type and strength of the resistance. Relying on the health care provider's impression and memory during one or more exchanges may not offer sufficiently detailed data needed to address the specific features of the resistance.

In a review of the literature on behavioral strategies for reducing non-compliance, Ley⁵ calls for research into the conditions under which an increase in patients' understanding produces greater compliance. Cochran⁶ found that non-compliance is a predictable outcome when attitudes and beliefs are present which inhibit intentions to comply with a prescribed regimen. Social psychologists have reported that self-focused attention increases self-awareness.⁷ Gatchel and Baum⁸ list a person's health theories as one of the significant determinants of compliance. Patients can be asked about their health theories, either in spontaneous oral exchanges or in writing. The content of the responses provides an index of the affective and cognitive speech acts generated by the patient's health theory or belief.

The analysis of verbalizations as an index to the speaker's affective states and cognitive operations has a long tradition in functional and behavioral psychology.⁹⁻¹⁴ The field of applied psycholinguistics encompasses clinical applications of verbal analyses.¹⁵ Ericsson and Simon¹⁶ describe methods for diagramming thought sequences reconstructed from tape recordings of thoughts verbalized aloud made during problem solving tasks. The connection between what is verbalized or stated out loud and what is thought and felt privately is especially visible with children before they learn to make their thinking silent. This was noted by Vygotsky¹⁷ when he studied the control function or verbalizations that children speak out loud when playing alone. This connection was confirmed later in the expanding work on "self-regulatory sentences" for behavior self-modification.¹⁸⁻²¹ It is evident from this research that collecting and collating the statements people make in specific situations and activities can be usefully analyzed to provide information about the person's cognitive reasoning process and affective motivational and feeling states.

Problem solving behavior is a primary use of language or inner speech. We talk to ourselves in order to make sense of our surrounds. Exposure to new information entails a reaction to it. This reaction is dual, including an affective component relating to emotions, feelings, and intentions, and a cognitive component relating to thoughts, beliefs, and perceptions. Both components have been defined behaviorally by some investigators.^{22,23} In an early review of the literature on health compliance behavior, Heiby and Carlson²⁴ organized the many factors into four basic interacting components. Inspection of their model shows the importance of both affective components ("intentions" and "attitudes") and cognitive components ("beliefs" and "perceptions") in determining adequate adherence levels to medical recommendations.

From this it can be seen that client statements and reaction comments to health care providers contain extractable information of the cognitive and affective resistance issues the clients are experiencing when given health information. Affective and cognitive speech acts

were collected from tape recordings of motorists made while driving a car,²⁵ and from students doing library research.²⁶

Searle²⁷ and Austin²⁸ have initiated analytical methods for investigating the units of "speech acts" in oral and written statements. Speech acts are verbalizations or statements that are recognizable by others as an ongoing real time communicative act rather than merely a description of something current or past. For instance, the statement by someone in a discussion, "*I'm for doing that*" is recognized by the others as expressing an agreement, which is a speech act. Similarly, saying to a health care provider "*I'm not comfortable wearing that*" is a speech act that expresses feeling discomfort when complying with a health care directive, and this is an indication of the presence of affective resistance. Further, if the client says "*I thought that's good for you!*" when defending a personal habit, the speech act reveals cognitive resistance that is due to misconception or health misinformation.

Labov & Fanshel²⁹ chart the course of psychotherapy through speech act analysis of transcripts produced during the successful treatment of a bulimic patient. They take speech acts to be normative verbal responses to a common social stimulus. For example, a question is posed through some appropriate stimulus such as asking for something, or making a quizzical gesture, and some response is given, such as an answer, a shrug, or the act of ignoring it. Asking, answering, ignoring, denying, or being suspicious are common speech acts in everyday language exchanges. Speech acts can be private (mental) or public (sensorimotor). Speech act analysis of client self-reports and comments give indication of inner (mental) speech acts that can be analyzed by investigators and categorized, as is done here.

Self-observation confirms that people spontaneously produce private mental speech acts as a response to the personal implications of new health related information. For example, a person may look at a weight chart in a magazine article and think, "*Oh, no, according to this I am classified as obese! They're exaggerating. Where do they take these figures from!*" This sequence of speech acts, which can also be said out loud or written down, contains both affective (motivational) responses and cognitive (rational) responses. In this example, the speech act "*Oh, no*" may be labeled affective resistance to new health information while inspecting a health chart. The affective speech act appears to indicate rejection of the information due to felt threat. The statement "*Where do they take these figures from*" is a related affective speech act of denying and distrusting. The statement "*They're exaggerating*" is a cognitive speech act that indicates reinterpreting or reclassifying the health information so that it may be rejected.

Three levels of resistance

Kelman³⁰ describes three levels of conforming behavior differing in maturity or depth of acquisition. The lowest is mere *obedience to authority* and requires external monitoring to maintain it. The second level is *conformity by identification* and depends on the individual seeing the compliant behavior as relevant to self and peer group. The third and most mature level depends on *internalizing* the new behavior and incorporating it into one's affective motivational or intentional system. At this internalized stage, the new behavior is done from one's own initiative and in the absence of external monitoring. These three theoretical levels of conforming behavior were applied to help distinguish between three levels of resistance identifiable in client statements. It was reasoned that resistance is a form of non-conforming so that the two may share similar levels of internalization. It was assumed that the more an affective speech act is internalized by a client the more intense the resistance and consequently the more problematic for the self-change to be implemented.

In the attempt to manage patient resistance to lifestyle changes it may be useful to organize the cumulative speech acts of an individual. Besides the labeling of speech acts as affective or cognitive, the health care provider may want to assess the intensity of the resistance now and over time. The matrix shown below as Table 1 may help in this assessment task. The matrix specifies the three intensity levels of affective and cognitive resistance to new health information and lifestyle changes.

Happily, in constructing such records for selected cases the health information provider does not need to learn a new technique for speech act analysis. All adult speakers of the language have the ability to recognize speech acts and to categorize their intensity as part of typical everyday social interactions.³¹

The 3x2 matrix is 'dynamic,' in that each of the six zones is defined by the intersection of the marginal definitions for domains and levels. Users of the scheme can therefore adapt the labeling of each zone to their own health issue. Such an adaptation may be seen in Jakobovits & Nahl-Jakobovits²⁶ in the area of overcoming maladjustment in library user behavior.

The illustrations of speech acts provided here came from written reactions handed in by 15 third year male and female college students following a 20-minute lecture they heard given by a visiting colonic therapist who provided information on colonic hydrotherapy. The reactions were given to the suggestion at the end of the lecture that they might want to avail themselves of such a therapy for health reasons. Students handed in their comments anonymously. A total of 43 items were obtained. The responses were then individually categorized and assigned a zone according to the matrix in Table 1.

Level 1 resistance (ignorance): This is a relatively external form of resistance to health information and signals rejection of authority or authoritativeness of the information. Affective ignorance (zone "A1") manifests itself behaviorally and in speech acts as showing disinterest or acting overcautiously (non-adaptively). For example, one person's reaction to the colonic irrigation lecture was the following speech act: "This treatment is not for me. It is not vastly known. I've never heard of it." This sequence of speech acts indicates the person's felt resistance, which appears in speech act form as showing disinterest or as attempting to distance self from the topic. Another individual manifested this level of affective resistance with the statement "I'm satisfied with my present health, thank you." This speech act expresses satisfaction with the status quo and rejection of the suggestion for a change.

Cognitive ignorance (zone "C1") is a speech act characterized by showing inadequate knowledge or showing superficial reasoning. An example is the following sequence of speech acts in a statement written by one of the students who heard the colonic lecture: "I don't think it's likely cognitive resistance that I would have it done because for one thing I don't have time cognitive resistance, and because I think it's kind of gross" affective resistance. Or this from another individual: "It doesn't seem to be extremely important to maintain health" (cognitive resistance).

Level 2 resistance (misconception): This is a more internalized form of resistance than mere ignorance and non-compliance to authority. Misconception is confirmed ignorance and thus more difficult to manage and overcome. It involves social conformity and belonging to a lifestyle peer group. Affective misconception (zone "A2") is embedded in speech acts that indicate fear or suspicion in its many varieties. For example, "I wouldn't trust anyone without a license to probe wi-

thin me. It could be dangerous." Or, "The experience would seem to be a very stressful and shameful one" (affective resistance).

Cognitive misconception (zone "C2") is embedded in a biased focus or in unrealistic, uninformed expectations. For example, "I might do it if it was prescribed by a doctor and it wouldn't cost anything and it wouldn't hurt at all. But I don't think I would." Or, "There must be a reason why this is not used by doctors or hospitals cognitive resistance. Besides, it's disgusting and must be extremely painful" affective resistance.

Level 3 resistance (opposition): This is the most internalized form of resistance to health information and involves the feeling of outrage and condemnation of the information. Affective opposition (zone "A3") takes the form of complete rejection and total avoidance. For example, "I'd rather die of colon cancer because I can't stand pain and bad smells." Or, "Only crazy people would do such a disgusting thing or people who get off on that sort of thing."

Cognitive opposition (zone "C3") takes the form of dogmatic reasoning and negative fantasies or dramatizations. For example, "I wouldn't go to someone to get this sort of therapy because I feel I won't ever need it. It's embarrassing to bend over and let a doctor or (please!) a nurse see your kaka. It might smell bad." Or, "Not a chance. I can't stand needles or long tubes going in any part of my body. And if see the black stuff coming out I'll probably barf."

Note that speech acts do not overlap with sentence boundaries. Individuals differed with respect to the amount they wrote and how they expressed themselves. More than one speech act may occur in a long response as indicated in some of the examples given above. As a further example, consider the following statement that contains three speech acts: "It is artificial, unnatural, and probably dangerous (zone A2). I'm perfectly healthy. If I needed it, my doctor would have told me (zone C1). Anyway, why do something that sounds utterly uncomfortable" (zone C3). The total number of negative speech acts expressed by an individual or group can be interpreted as an indication of the intensity of resistive behavior. The distribution of negative speech acts within the zones of the matrix is an indication of the locus of resistance, or its dynamic quality, and consequently how they need to be managed.

The health professional can use the matrix in Table 1 to assess the area of patient resistance with a view to planning interventions designed to counteract fallacious elements in a patient's health beliefs. Affective and cognitive interventions can be initiated to fit the level of the resistance, such as:

1. providing reassurance for over cautiousness (zone A1)
2. giving detailed information or rationales to counteract faulty reasoning (C1)
3. helping to develop trust with suspicious reactions (A2)
4. providing explanations to shift a biased focus (C2)
5. providing hope for success to weaken rejection (A3)
6. providing expertise opinion to overcome dogmatic beliefs (C3).

Once identified by zone, resistance to information can be counteracted in verbal or written exchanges with the client, either individually or in a group. Negative or resistive speech acts can be neutralized and transformed by means of exposure to speech acts from positive models of health professionals or other the statements made by more receptive clients. This kind of transformation can be seen in the

following statement by a student in a report written some time after the lecture on colonic hydrotherapy: “When I first heard about it, my first reaction was gross! A1 I didn’t have enough information to validate these feelings C1. However, after learning the facts, I was surprised to find myself a little more open to this health technique +A2. My first reaction was ‘No ways’, because it was something new to me and it scared me A2.”

The zones defined in Table 1 are here indicated. This statement contains various affective and cognitive speech acts. There is evidence for the presence of level 2 affective resistance (A2): “My first reaction was gross!” and then its transformation into a positive speech act: “I was surprised to find myself a little more open” (+A2). A similar change is evident in another student’s response, “I personally do not feel comfortable about it yet, but if it grows in popularity, I might try it.” When the affect is transformed from resistance to acceptance it may be useful to label them with the +sign. Transformation into positive speech acts at the three levels may be labeled from ignorance to knowledge (level 1), from misconception to valid reasoning (level 2), and from opposition to acceptance (level 3).

Despite the limited and unsystematic data collected in this study a few sub-varieties of resistance emerged in each of the six zones of the matrix as listed below. Future research needs to determine to what extent these items are representative of different types of samples and health care issues. The next Section presents a similar classification of resistance zones in different lifestyle area involving a diet change.

1. Zone A1: Affective Ignorance
 - a. Expressing dissociation or disinterest
 - b. Displaying excessive or unusual cautiousness
 - c. Announcing unwillingness to become involved
2. Zone A2: Affective Misconception
 - a. Making a simple, unaccounted rejection
 - b. Stating a negative attitude
 - c. Indicating that one is fearful or anxious
 - d. Showing embarrassment or shame at the idea
 - e. Maintaining disbelief (being hard to convince)
 - f. Experiencing weakened resolve (agreeing and appearing to comply, then not doing so)
 - g. Displaying suspicion or a lack of trust
3. Zone A3: Affective Opposition
 1. Insisting on absolute refusal or avoidance under any circumstance
 2. Confirming opposition or prejudice to the idea
 3. Condemning the practice
 4. Ridiculing, mocking, showing disdain or scorn
4. Zone C1: Cognitive Ignorance
 1. Engaging in superficial reasoning
 2. Making excuses or non-sequiturs
 3. Deciding against it on the basis of inadequate knowledge

5. Zone C2: Cognitive Misconception
 - I. Bringing up contradictory arguments
 - II. Emphasizing expectations that are unrealistic or unlikely
 - III. Defending unsupported or unexamined negative assumptions
 - IV. Ignoring parts and selecting biased consideration of facts
6. Zone C3: Cognitive Opposition
 - i. Setting up impossible or unrealistic preconditions
 - ii. Making up inhibitory dramatizations or fantasies
 - iii. Engaging in dogmatic reasoning or closed-mindedness
7. Diet Change Self Report

In order to illustrate how the matrix in Table 1 can be used in another area the following data are presented from the statements written by an individual attempting to adopt new vegetarian eating habits. She was a female college student aged 24 who was involved in a field project on one’s diet change. For two weeks she made brief diary notes on her thoughts and feelings about her food behavior.

At the end of the first week the individual decided to try to improve her diet by renewing her commitment to herself to eat balanced meals and her philosophy to stay away from consuming meat products, which she considered less healthy than a plant based diet. In the baseline period, she produced 35 negative speech acts and 17 positive. In the intervention period there were 10 negative and 51 positive speech acts. This pattern indicates that the intervention was accompanied by a decrease in thoughts and feelings of resistance to better food behavior, and an increase in statements that support the commitment (Chi Square=36, df=1, p<.01).

The categorization of negative statements yielded 14 affective and 21 cognitive speech acts during the baseline period, and after the intervention there were 4 affective and 6 cognitive speech acts. Clearly, there was a decrease in both affective and cognitive resistance accompanying the diet change commitment (Chi Square=16, df=1, p<.01).

It may be useful to present the sub-categories generated by these data. It will be noted that they are different in specific content than those generated by the colonic therapy information discussed earlier in Table 1, but in general content they belong to the same major category. In other words, the domain by level matrix in Table 1 remains fixed as to its psychological mechanism in each zone, but adapts its specific content to each health and lifestyle area. Table 2 illustrates how the matrix can be adapted to a new health care situation.

The entries in Table 2 are based on the categorized list of entries presented in the Appendix.

Further research

The collection and classification of people’s speech acts when they attempt to deal with health problems or lifestyle change issues can give health care professionals and researchers a closer and more objective look at the proximal causes of inadequate adherence to instructions and treatment plans. Patient education and guidance can become more effective by targeting individualized interventions designed to weaken old habits of thinking. These interventions can counteract health mis-information, and can strengthen inner responses that are congruent with the philosophy and attitudes of the health care worker or authority.

Table 1 Affective and Cognitive Speech Acts for Assessing Resistance to Change

Levels of Resistance	Domains of Behavior	
	Affective Resistance	Cognitive Resistance
1	Zone A1	Zone C1
Ignorance	**expressing disinterest	**reasoning superficially
	**acting overcautiously	**relying on inadequate knowledge
2	Zone A2	Zone C2
Misconception	**expressing fear	**maintaining a biased focus
	**expressing suspicion	**maintaining unrealistic expectations
3	Zone A3	Zone C3
Opposition	**expressing rejection	**holding on to dogmatic reasoning
	**expressing avoidance	**constructing negative fantasies or dramatizations

Table 2 Affective and Cognitive Speech Acts in an Individual's Diet Change Diary

Levels of Resistance	Domains of Behavior	
	Affective Resistance	Cognitive Resistance
1	Zone A1	Zone C1
Ignorance	**showing vulnerability to being tempted	**engaging in self-serving reasoning
	**eating without being hungry	**not planning adequately
		**justifying harmful practice
2	Zone A2	Zone C2
Misconception	**showing fear of being hungry	**engaging in erroneous reasoning
		** unrealistic beliefs
3	Zone A3	Zone C3
Opposition	**compulsion to clean the plate	**ruminating with food thoughts
	**disregarding a diet rule	**confirming a cherished false idea or excuse
	**imagining still being hungry	**elaborating speculations about one's cravings
	allowing dietary transgressions	**pretending others are responsible for one's food behavior
	**feeling resentment of restrictions	

Research is needed to explore the reliability of the categorizations as one tackles speech acts in various health or sickness situations. Also, certain cultural lifestyles and economic conditions can interact negatively with health behaviors. Poor physical and mental health conditions may be generationally inherited within entire sub-populations or communities. Because of the complexity of interrelationships among the social forces that contribute to decline in health, we need to examine non-compliant behavior in sufficient psychological depth to highlight its affective and cognitive reaches within each individual's unique behavioral style. As argued by Hollis et al.,⁴ "personalizing" health instructions may overcome the resistance to health information that lies deep within an individual's unique behavioral style.

Further development of the speech acts analysis is needed to specify the psychological dynamics of positive speech acts and how these emerge transformed from the initial negative ones. As well, further work is needed to explore the sub-varieties of speech acts within each zone in Tables 1 & 2. Finally, it was noted that some of the speech acts that were encountered in the self-reports seem to refer to sensorimotor behaviors rather than affective and cognitive and these should be included in future studies. All three domains of behavior may be influential in determining the outcome of self-change attempts.

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Conflicts of interest

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