Farewell to Words: the Dimension of Silence in the Non-verbal Behavior during the Medical Interview

Adiós a las palabras: la dimensión del silencio en la conducta no verbal durante la entrevista médica

The actions of men are the best interpreters of their thoughts.
James Joyce

INTRODUCTION

In recent decades, perhaps partly due to the paradigm of medicine as a biological science based on clinical evidence, the central role of face-to-face communication in the process of medical care has declined.

There has been a change in the nature of the medical interview, from a culture of high communicative context to a culture of low communicative context. In the first one we are sensitive to nonverbal behaviors and to the suggestions of the near environment in order to interpret the meaning expressed by the patient, while in the second one exchanges are more explicitly verbal, with little support and confidence in what is not clearly established or implied in words and gestures.

We believe that the interview or medical relationship is a phenomenon of high intrinsic communicative context, where both knowledge and emotional exchange is its central core. Both physician and patient are experts, although the domain of their experience is naturally very different. On the one hand, physicians have skills and are experts in technical and cognitive forms emphasized during their training period, while patients are experts in their history of illness and experiences, personality and lifestyle with their values and expectations.

If we accept these premises as valid, in the first place we must necessarily include the patient's personality in our relationship, because as William Osler's aphorism states: "It is much more important to know what sort of a patient has a disease than what sort of a disease a patient has". Secondly as in all human relationships affections and emotions are important components, and finally, we should recognize that the medical relationship occurs in a context of reciprocal influences. (1)

We believe that healthcare can only be carried out with an interpersonal interaction between the two components of the interview, albeit of a special kind, where all possible exchanges take place, including both emotional and cognitive processes. And because in nonverbal behavior emotions as well as desires, moods and feelings are revealed inadvertently or even against the will, - even though sometimes, on a few occasions, they can be made conscious and expressed with words - nonverbal communication has a significant role in healthcare.

Behavior or nonverbal communication means the inclusion of a variety of communicative behaviors that do not carry a linguistic content, as for example, facial expression (such as smiling), eye contact, gestures or body movements that facilitate communication (affirmative nodding, hand gestures, leaning forward), the quality of the voice or tone of voice, quasi-verbal para-linguistic behaviors such as interruptions, intonation, pauses, indecisions or hesitations and speech errors. (2)

It is estimated that between 60% and 80% of interpersonal communication is transmitted through nonverbal behaviors. However, unfortunately, during the medical interview the emphasis is placed disproportionately on verbal interaction.

Many nonverbal behaviors are unconscious and represent a more accurate description of the patient's attitudes and emotional state, refuting some claims that do not match their conscious words.

On the other hand, nonverbal behaviors can reveal what psychiatrists call transference or countertransference feelings between patient and physician. Transference is a phenomenon by which the patient displaces or "transfers" to the physician strong emotional feelings engendered by others with whom he/she has strong bonds (parents, spouse/children). Counter-transference works similarly but here the physician "transfers" strong personal emotions to the patient (3)

Let us set some simple examples, a frown communicates disapproval whereas a smile communicates approval or agreement, and an empty or blank expression of the physician towards the patient's words conveys an affective expression of detachment, boredom or rejection of what he says. According to the nonverbal context, the interpretation of a simple verbal agreement message like "sure, it's fine" can be interpreted differently depending on whether the statement is accompanied by a frown or a smile or a blank expression.

But in the interview not only the physician perceives and emits feelings and attitudes; the interaction that occurs means that both the patient and the

physician judge each other's emotions. Moreover, patients are especially alert to the physician's nonverbal signals because diagnosis or treatment uncertainty causes anxiety in the patient and requires clarification and penetration of his physical and/or emotional experiences. He is particularly attentive to nonverbal cues, beyond the words of the physician, perhaps due to the lack of power and control over his ailment.

As it is not easy to determine precisely the degree of sensitivity or decoding of nonverbal behaviors, sometimes physician and patient judgment of each other's emotional suggestions can be either right or wrong.

THE RELEVANCE OF THE PATIENT-DIRECTED GAZE

Gaze has a special place in nonverbal communication. In Western culture gaze or eye contact has a positive value for people. The listener is expected to look at the speaker; in turn, the speaker occasionally looks at the listener to perceive whether the information is being understood; eye contact between speaker and listener is alternately established. To send and receive nonverbal information by eye contact seems necessary to recognize the feelings and emotions, worries and tensions of the health problem being presented verbally.

The importance of patient-directed gaze was demonstrated in a study of 15 general practitioners and 337 videotaped medical consultations, where the time the general practitioners gazed into the patient's face was taken and questionnaires for patient evaluation of the physician's behavior were employed. (4)

When the medical gaze was longer, the patient was inclined to talk more freely about his problems, using more time and larger shares of talking time compared to the physician, thus supplying additional information about his psychological and social problems. The consultation time was longer than when the medical gaze was shorter.

For this reason, when the amount of eye contact time is greater, the physician becomes more aware of the social context and psychological tensions closely related to the health problems of his patient.

This study has shown that simply gazing at the patient is associated with signs that allow decoding and discovering hidden feelings and emotions, even for the patient.

As expected, the medical gaze was positively related to empathy and patient satisfaction with the physician. (4)

Consequently, may disengaging from interaction and engaging in studying or writing the medical records leave the patient puzzled about whether the physician is listening or not? This situation was evaluated in 10 primary care physicians in Finland, by means of 35 videotaped initial presentations of the problem generating the consult, studying whether the physician was looking at the patient or at the medical record, and in turn, if the patient's speech was fluid or had altered its fluidity; defined by self-interruptions, followed by disturbances such as a pause, a pause filled with mumbles (as uh, uhm), or some kind of restoration (eg. a new beginning), or a continuation of interrupted speech. (5)

In more than 2/3 (78%) of patients the conversation fluency was altered when the physician was not looking at them. By contrast, in the period when the physician looked at the patient over 2/3 (77%) had a smooth unaltered conversation. This suggests that the lack of attractiveness for interaction when the physician looks away makes the presentation of the problem difficult and fitful. (6)

But when eye contact is established, who follows whom and in what lag-sequential delay?

Directed-gaze or eye contact between physicians and patients was videotaped in 110 medical encounters which were analyzed using a validated method of sequential delay, to identify the behavior of the delay in the individual passively following the other´s gaze and the timing of that sequential delay. (7)

The study showed that patients fundamentally follow the physician's gaze and concluded that the physician-initiated pattern was the main visual conduct, prior to the pattern initiated by the patient. The second finding was that in lag-sequential analysis, the patient's answer occurred within 2 seconds after the physician's initial gaze. (7)

In this study the patient's gaze tended to follow almost immediately the physician' gaze. There are several theories regarding the phenomenon of eye contact that may explain these results. For example, Senju and Johnson (8) claim that "perceived eye contact with another human face modulates certain aspects of the concurrent and/or immediately following cognitive processing", a phenomenon they defined as "eye contact effect". In addition, functional imaging studies in adults have revealed that eye contact can modulate the activity in the structures of the social brain. Therefore, they postulate a "fast track modulator" model where eye contact is initially detected by a subcortical pathway that modulates social brain activation while processing detailed sensorial accompanying information. (8)

Do human newborns come prepared with neuronal processes to detect relevant information for their development, presenting a special attention to faces that gaze directly at them?

To answer this question, an experiment was designed in 17 healthy human newborns with an average age of 3 days (range 1-5 days). A video camera was focused on the infant's face to see the movement of his eyes as he was randomly shown two adjacent pictures with the same face several times, one picture looked directly at him and in the other the eyes were diverted to the right or left (half the infants were shown the face with the gaze directed to the right and the other half with the gaze directed to the left). (9)

The newborns' gaze was more frequently oriented to the face with the direct gaze. They looked at it for

a significantly longer time (107 seconds) than at the face with the diverted gaze (64 sec). All infants looked more frequently at the face with the direct gaze and all, except two, for a longer period of time. (9)

These results show that infants prefer since birth looking at faces that attract them due to their direct gaze, and that from early life they evidence neuronal processing favoring direct gaze. This exceptional sensitivity to mutual eye contact is the major basis for the later development of social skills.

POSTURAL GESTURES OF BODY COMMUNICATION

The position and orientation of those interacting with each other is the general circumstance in which nonverbal behaviors and a group of specific postural behaviors are interpreted, related to the degree of psychological connection between the interacting individuals that may influence the interaction itself.

Proximity is a term often used to refer to a positive and involved relationship between the performers that includes suggestions such as optimal close proximity, since the quality of "*excessive*" or "*not enough*" are considered equally negative. The definition of *excessive* or *not enough* cannot be accurately delineated because there are other modifying variables such as age, gender, ethnicity and status (the ideal proximity distance would be around 120 cm).

Different researches confirm that the patient qualifies close distance interaction compared with distant interaction as indicating greater physician preference towards him. In other studies, researchers found that the most important keys for the expression of empathy, authenticity and respect were leaning forward, close distance and eye contact. (2)

Keeping an open rather than closed position of the arms (arms crossed) produces a greater empathy and warmth rating. There is also a positive association between empathic quality and mutual consistency (to share or synchronize the position between patient and physician). Nodding and smiling also builds a positive assessment of the physician and his powers of persuasion.

THE MANNER AND TONE OF VOICE OF WHAT THE PHYSICIAN SAYS CAN BE AS IMPORTANT AS WHAT HE SAYS

The spoken word in human communication, beyond its cognitive level, is positively connoted, contradicted and even embellished both by the tone and voice quality as well as by the facial expressions and body movements of the nonverbal metamessage.

The tone of voice is significant for the metamessage conveying the emotional state of the speaker, which can often be perceived albeit not understood. Certain emotional vocal expressions, such as happiness, sadness, fear, disgust, surprise and anger, are universal and even infants respond to them. It is through vocal expressiveness (*encoding*) and sensitivity to tone of voice (d*ecoding*) that subtle elements of communication, affected by emotional experience are transmitted. (10)

The tone of voice in human speech can be isolated through a process called "*content filtering*", which is defined as "a research procedure that isolates the paralinguistic channel of communication by eliminating or controlling the semantic content in the verbal or linguistic channel."(11)

In the content-filtered tone of voice sounds are muffled, as though heard through a wall; affective speech quality remains, but the semantic meaning is removed and the words are indistinguishable. Content filtering turns speech contents unintelligible, because it removes the highest and lowest frequencies, which tend to communicate consonants and vowels respectively.

It is thought that a physician, who is associated with a "*negative*" tone of voice, e.g. using a harsh or impatient quality of voice, can shoot litigious feelings in his patient when there is a bad result, while this does not happen when the physician communicates with a "positive" tone.

A study used 114 taped conversations of 57 community surgeons, more than half with a malpractice claim. Two 10-second clips were extracted in the first and last minute of the visit (228 clips, 4 per surgeon). These extracted clips were submitted to content filtering by removing the semantic meaning. Each clip was finally assessed with a 7-point scale (ranging from "*no way*" to "*extremely*") in 4 main tone of voice variables: 1) warm/professional, 2) concerned/anxious, 3) hostile, and 4) dominant. (12)

Controlling for content, ratings of higher "*dominant*" and lower "*concern/anxiety*" in their tones of voice significantly identified surgeons with previous claims compared with those who had no claims with an OR of 2.74 (95 % CI 1.16 - 6.64) for "*dominant*" and OR 0.46 (95% CI 0.21 - 1.01) for "*concern/anxiety*".

The authors conclude: "*These findings suggest that in the medical encounter, "how" a message is transmitted can be as important as "what" is said ... it underlines the power of oral communication in medical interaction*".

"*Dominance*" in the tone of voice is transmitted in a deep, strong, moderately hurried tone, with no inflection and clearly articulated speech. The expressions of dominance can convey a lack of empathy and understanding for the patient. On the other hand, concern and anxiety in his voice is often positively related to the expression of concern and empathy. (12)

Another study (13) involved 51 primary care physicians and 199 patients. Tone of voice was analyzed with filtered contents classified into 4 main components: 1) warm/supportive, 2) capable/concerned, 3) hostile/disrespectful, and 4) enthusiastic.

With tones of voice described as "*warm and supportive" or "capable and concerned", patients expressed that they had been given more "choice and/or control", were more "satisfied" with their physician's communication, felt they were given more "informa-*

tion" and had greater "trust". When the physician's voice was more "enthusiastic", the result was similar, but it was also positively associated with medication adherence.

Furthermore, the physician's "*warm and supportive*" tone of voice was positively related with their own perception of satisfaction in the medical encounter.

The most negative tone of voice (hostile and disrespectful) was associated with significant and sustained pain and patients' poorer physical health. Obviously, the physician's tone of voice reflected his satisfaction with various aspects of his experience with patients. (13)

In a second research performed in the same study, 269 interactions of 81 nurses and 271 interviews with 61 physicians were audiotaped in successive outpatient primary care visits (first the nurse and then the physician).

The tone of voice reflecting "*care concern*" in the nurse was positively and significantly correlated with patient's satisfaction rating in the "*personal manner*" and "*capacity*" of the nurse. The physician's tone of voice composed of contents filtered in a "professional manner" correlated with overall patient satisfaction.

It is interesting that the patient´s tone of voice, demonstrating that he is "care engaged" translates and expresses greater "*satisfaction and comfort of the nurse with the visit*". A significant degree of similarity was also shown between the tone of voice of the nurse and the patient. (13)

These findings contribute to the growing evidence that affective communication, expressed in the health professional tone of voice, may be essential in good health care.

It also suggests that the patient and health professionals reflect each other's experience or emotional satisfaction in their tone of voice, specially a positive relationship between warmer and more positive tone of voice and satisfaction. In turn, physicians express themselves with voices classified as more hostile in patients who have poorer physical health, greater limitations and more pain.

Moreover, the hypothesis that health professionals and their patients have emotionally reciprocal messages in their tones of voice is confirmed. Patients talk with a warmer and more involved tone when their healthcare professionals initiate or reply with that tone, and less satisfaction, involvement, respect and trust the more negative the tone of voice of their professionals is.

It is important to recognize the power of the tone of voice in the interview and consider how emotions inadvertently filter in it.

SENSITIVITY AND RESULTS WITH NONVERBAL COMMUNICATION AND BEHAVIOR

The ability to judge the emotional expressions of others is one of the aspects defining the concept of "*emotional intelligence*". Sensitivity for nonverbal communication evaluates the safe perception of emotions expressed by other people, generally known as "decoding aptitude". Also, though not often, it refers to the individual ability to transfer an emotional message.

The emotions of others may sometimes be accurately judged based on a surprisingly small amount of information; the so-called "*thin slices*" lasting less than 1 second are often investigated, but it is more common to analyze those lasting several seconds or minutes.

Women are better evaluators of non-verbal suggestions and have greater ability to transfer emotions. Thus, it is not unexpected that women physicians exhibit greater non-verbal sensitivity than their men colleagues.

After a consultation, a study asked both patients and physicians to classify their emotions in a 6 item scale, ranging from satisfied to disappointed. In addition, patients ranked their total satisfaction with the visit and quality of the communication, and physicians were asked to estimate the possible rating of their patients.

Physicians estimated that their patients experienced more negative emotions and less positive emotions than reported by patients. In addition, physicians predicted that patient "satisfaction with the visit" and "*quality of communication*" rates were substantially lower than when they were evaluated by the patients. (13)

After discarding some confounders, the only interpretation of these findings is that physicians use a measure or a group of criteria different from that of patients. But what this study expresses, without considering the possible interpretations, is that there is a breach in the consensus between physician and patient regarding what the patient is feeling and also suggests that there is still much to be done to improve it.

Although on few occasions someone may make explicit verbal reference to the quality of his/her relationship, this situation rarely occurs. More often, feelings of liking, warmth and enthusiasm are transmitted reciprocally through nonverbal behaviors as the tone of voice, facial expressions or body stance.

The study of Bensing et al. (4) mentioned above, showed that physicians who looked more often at the patient could read more effectively the emotional signals, leading them to a better understanding of his/her psychological and social anxieties. It is also possible that enhanced eye contact increases the ability to listen and thus the capacity to interpret and condense verbal and nonverbal signs of personal ailments more safely.

This is also seen in the formation of residents. A study of 59 internal medicine residents, who carried out 3 15-minute consultations with 3 standardized patients (educated laypersons to represent the disease and qualify the physicians) requiring different techniques and communicational abilities, showed that

the greatest satisfaction of patients was strongly associated with better verbal and nonverbal communication, as assessed by independent videotape observers. In the regression model, the satisfaction of the standardized patients was clearly associated (all $p < 0.0001$) with the nonverbal communication in the 3 consultations. The r2 for the models were: chest pain 0.45, advice for HIV 0.56, depression for sexual abuse 0.43. (14)

Surprisingly, in the "quality" of the encounter, aside from the nonverbal communication, the other factors played a minor role in the satisfaction of standardized patients.

How does the patient spontaneously perceive the nonverbal communication in the interaction with his general practitioner?

A study carried out in Poland, with a total of 36 interviews with patients of general practitioners elucidates this point (4 patients per every 9 physicians).

In 2 out of every 3 encounters the patient spontaneously perceived the nonverbal behavior of his physician. The most important sign was the tone of voice; for example a participant noticed that "*the doctor speaks nicely to me*", whereas another recalled that the doctor "shouted at me and it was so unpleasant". Eye contact was the second most frequently perceived nonverbal signal. A patient reported that "you can feel [the personal attention by] how someone looks into your eyes, not making any notes or writing on a computer at that time; I can see the interest." Another one stated "*You can see that the doctor is listening. Listening and looking at you*". This is followed by facial expression, when a patient says "'*she always smiles when providing patient care*" and another expresses "*You can see at once that he is moved by what I say. You can see it all over his face. That is, you say, the tiniest things seem to speak.*" Regarding the physician´s "*touch*", this is seldom perceived or described by the patient; a participant noticed that the "*doctor*

greets me ... we shake hands", whereas another complained that "*This doctor, as if he never touched a patient; not even raising his head ... No touching, nothing.*" (15)

Is empathy related to nonverbal communication? In a videotaped study of 110 brief consultations for a cold by 6 general practitioners who had not previously met the patient, the physician´s nonverbal behavior (eye contact and social touch) was coded and the participating patients completed questionnaires to measure the perception of their physician´s clinical empathy, connection and affinity.

Patient perception of greater empathy was significantly associated with medical encounter duration and also with the greater percentage of time with mutual eye contact. The eye contact effect was more marked the shorter the encounter. (16)

Sometimes, patients wish for more time to share their history with the physician and at other times they feel guilty for seeking the physician´s help when he/she seems to be in a hurry.

A correlation was found between measurement of patient "*empathy*" and physician "*affinity*" and also between the degree of physician "connection" and his/her empathy.

Do ethnic and cultural differences condition nonverbal communication and patient satisfaction?

A study in the United States examined the ability to decode nonverbal emotions by Caucasian and Southeast Asian physicians and patients based on facial expression and tone of voice, correlating them with patient satisfaction of the encounter and adherence to medical treatment. (17)

Regardless of the physician ethnic group (Caucasian or Southeast Asian), Caucasian patient´s facial expression and emotion in the tone of voice were more easily identified compared with those of Southeastern Asia. In turn, Caucasian patients were more satisfied with their physician and adhered more to medication independently of physician ethnicity.

It seems that Southeast Asian physicians working in the United States culturally have the same nonverbal behavior as their American colleagues and not that of their countries of origin.

Is patient enablement in the medical encounter conveyed only verbally, or does the nonverbal behavior also have influence?

In the analysis of 88 videotaped consultations of 3 primary care physicians in the United Kingdom verbal and nonverbal communication was evaluated and patients completed the Patient Enablement Instrument (PEI).

Consultation coded as "*patient-centered*" or "*verbally dominated by the patients*" produces greater "enablement". Obviously, behaviors and tasks associated to "*enablement*", as "*patient education*" and "*medical advice*", were performed with "relaxed hands" (implying that the physician was paying attention and not using a keyboard or writing). But, in addition, socioemotional coding as agreement, approval, laughter (both participants) and legitimization (physician) were important for "*enablement*", as well as physician characteristics of "*friendliness/warmth*" and "*empathy*". (18)

CONCLUSIONS

In recent decades, various conflicting factors must have influenced the communication between the physician and patient. On the one hand, patients have become more active participants in the interview, emphasizing patient-centered care; on the other hand, with the paradigm of evidence-based medicine, physicians have turned more towards specific tasks. How has verbal and nonverbal communication changed in the last 20 years?

An observational, cross-sectional study was conducted and repeated in 1986 and 2002, using the same methodology, with two videotaped consultation databases for hypertension, in a general practice in the

Netherlands (102 in 1986 and 108 in 2002).

No significant differences in gender or age were present between the groups of patients in the study period. Contrary to what was expected, in the most recent consultations of 2002 patients were less active, spoke significantly less, asked less questions and showed less interest or concerns. General practitioners supplied more medical information, but also less frequently expressed their concern about the patient's medical condition, and were also less involved in process-oriented behaviors and in building camaraderie (e.g. asking for opinions or clarification of the patient's words, or giving an explicit structure to the encounter). (19)

How could the unexpected decrease in the amount of patient speech be explained in the most recent consultations, if it could not be explained by the length of the visit or talk with the physician, which was similar? They conducted a careful review of the recorded consultations and noted that the main difference was in the silences due to the medical attention paid to the screen of the electronic medical record. In 1986 none of the physicians had a computer at his desk; by 2002 all of them had one, and engaged about 2 minutes to administrative work with the computer.

Unfortunately, increasingly medical interviews are more task-oriented, making fewer questions and seeking fewer interactions with patients. That may be why, in a qualitative study (20) only 4 out of 35 patients (11%) expressed all they wanted to say in the medical encounter.

Another study evaluated 189 videos recorded in two periods (1981 and 2001) in a general practice, using a 1-10 rating scale, performed by 108 similar patients, in three different dimensions: a) biomedical, b) psychological and social and c) interpersonal quality. The communicative behavior was distinguished as "task-oriented" (ask questions, provide information or advice) or "affection-oriented" (personal observations, showing concern, building agreements).

Listening, supporting and showing respect were considered equally important in both periods. Changes were identified, perceived by similar patients, concerning how physicians explained things, with an emphasis in communication focused on problems in the first period versus communication focused on solutions in the last period, but biomedical communication and construction of agreements was positively associated with consultation quality ratings only in the first period. (21)

The authors conclude that: "based on our findings we claim that general practitioners should prioritize the physician-patient relationship and put more emphasis on affective communication and factors concerning attitude".

With the incomplete information we have, there is no doubt that behavior and nonverbal communication contribute very significantly in all interpersonal communication, but unfortunately it is often a peripheral area, only rarely considered in the physician-patient interview.

When the physician is observing the patient in the medical encounter, the patient is reciprocally watching the physician. Evidence of mutual influence in the nonverbal domain suggests the existence of both a positive and negative spiral in the emotional quality of the medical encounter; there is reciprocity between the pleasure felt by the physician for the patient and the patient's satisfaction with the physician and vice versa. This encoding and decoding of nonverbal behavior plays a significant role in the reciprocal knowledge and establishment of a therapeutic alliance.

"Concern" refers to the ability of each individual (both patient and physician) to focus the attention on the interaction that is occurring between the patient and the physician here and now. If the patient clearly perceives that the physician is distracted or unconcerned in what he or she is saying, this undermines their harmonious relationship. The physician shows concern in the patient when giving undivided attention to the conversation being undertaken and further encourages additional communication with nonverbal behaviors such as eye contact and affirmative nod. (3)

There are reciprocal positive and negative emotions in every interaction between individuals. When the physician and patient are enjoying each other's company, this is shown through nonverbal behaviors such as smiling, laughing, leaning forward in their chairs and adopting symmetrical and open positions with their hands and body. In turn, when they are uncomfortable with each other, they exhibit indifference or hostility in their nonverbal behavior and create physical distance and barriers with closed positions (closed hands, crossed arms).

Sometimes there is coordination or similarity between the nonverbal behavior of the patient and the physician that could be understood as a person mirroring the other person's behavior e.g. making eye contact at the same time, returning a smile or adopting a change in position in tandem with the patient.

In short-term or intermittent relationships, as are typically those of physician and patient, we presume that pleasure for the encounter is strongly influenced by nonverbal cues. It is our opinion that the purely affective side of the physician's and patient's reactions with each other have been very neglected, compared with behaviors considered more relevant to the tasks of transmitting information or asking questions; mainly by the lack of knowledge of the high clinical value held by nonverbal behaviors.

Let us try to be as careful in our practice when we express without words as when we talk explicitly.

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