

Abstract	Methods and Procedure	Discussion
<p>Nonverbal behavior is a form of communication which involves the purposeful or subconscious use of nonverbal means to transmit thoughts and emotions, as well as form perceptions about individuals. During clinical consultations, practitioners' use of nonverbal behaviors tends to take a back seat to the standard use of purely verbal communication. Both routes of communication are effective in forming the patient-clinician relationship, but nonverbal behaviors' influence on patient perceptions of clinicians as well as on medication compliance is too great to be overlooked. The purpose of this study is to compare the extent of impact that physicians' incorporation or avoidance of touch has on the perceptions and extent of medication adherence of a 50-60-year-old subgroup. This study used 12,000 patients of a primary care clinic who were to meet with physicians regarding the same treatment plan for the same bacterial infection. The patients were randomly divided into a touch group and a control group for their consultation. The results showed that physicians' incorporation of touch during the clinical consultations positively correlated with greater patient perceptions of physician competence and concern, as well as enhanced rates of medication compliance. This led to the conclusion that nonverbal behavior, namely touch, is an effective adjunct to verbal communication that should be incorporated more often into clinical consultations to induce more favorable outcomes with 50-60 year old patients.</p>	<p>Included in this study were six general practitioners (three male and three female, of average age of 45 years), who diagnosed 12,000 patients (6,000 female, 6,000 male) aged 50 to 60 years old with bacterial pharyngitis. The patients were divided randomly into a touch group of 6,000 patients (3,000 female, 3,000 male) and a no touch control group of 6,000 patients (3,000 female, 3,000 male). The large number of patients is purposeful in that it allows a better reflection of the impending results of this age group as it pertains to patient perceptions and medication adherence. To more accurately account for average medication compliance and ratings of perception amongst genders, this study ensured the number of males and females were evenly split between the touch and control groups. The even gender mix of the physicians is an additional measure to account for gender bias, despite a previous study that found gender of the attending anesthesiologists to have minimal influence on patients' perceptions (2). The practitioners held eye contact and either incorporated or avoided 1-2 seconds of touching the patient's forearm while requesting the patient verbally promise to take two penicillin antibiotic pills each day for one week in order to prevent recurrence of the bacterial infection. Eight days later, male and female interviewers arrived at the residence of each patient to determine how many antibiotic pills remained, and also asked each participant to rate both the physician's apparent competence and level of concern for the patient. A scale of 0 to 7 was used, where 7 was the maximum score. All patients were asked to sign a consent form to be included in the experiment.</p>	<p>This study found that 50-60 year old patients were more likely to comply with medication regimens as well as perceive their practitioners to be more competent and concerned for them if the practitioners' opted to touch the patients during the clinical consultation. This study is useful in that it demonstrates how incorporation of nonverbal behaviors into standard verbal consultations can magnify patients' perceptions of clinicians' competence and concern, in addition to influencing medication compliance.</p> <p>To further understand the influence of clinicians' use of touch on the perceptions of this specific age group of patients, future research should repeat this trial in different geographical locations. Cultural differences may account for how tactile sensation is perceived. In addition to culture, how receptive a patient may be to touch depends on the duration and bodily location of touch. Whereas this study had patients recall their clinical experience eight days after the event, future studies should use different timeframes to analyze the duration of impression that touch has on patients' perceptions. In addition, medication compliance is likely influenced by the severity and duration of the prescribed treatment protocol. For instance, malignant cancers are more severe and require more exhausting chemotherapy sessions, which are also spread out over longer time periods than the one week period used in this study.</p> <p>With the protective measures implemented since the start of COVID-19 pandemic, it is imperative to note how nonverbal communication will continue to affect the interpersonal dynamics of clinical consultations. For instance, use of masks by both the clinician and the patient limits the effectiveness of facial expressions while emphasizing eye contact; social distancing will require both parties to sit further apart, which normally may convey an impression of emotional distance from one another; and of course, the use of touch is now often avoided, as it is one of the most obvious means of transmitting the deadly virus.</p> <p>Therefore, future research should seek to learn the nonverbal behaviors clinicians can use to positively enhance patients' perceptions of their clinicians, as well as other means to induce greater rates of medication compliance.</p>
<h3>Introduction</h3>	<h3>Results</h3>	<h3>Conclusion</h3>
<p>There is a growing focus on relationship-centered care, in which patient satisfaction is proportional to the emotional and social aspects of patient understanding of treatment (5). The efficacy of the healthcare consultation therefore depends on clinicians' ability to use both verbal and nonverbal communication to help patients understand recommended treatment and next steps. Despite empathetic body language being linked with an increased likelihood of patient compliance with clinical suggestions (5), employment of effective nonverbal behaviors is still not emphasized in medical contexts.</p> <p>Three forms of nonverbal communication associated with influencing patient perceptions of trust, competence, and empathy include touch, eye contact, and body language.</p> <p>By opting to briefly touch a patient's forearm while requesting the patient verbally promise to comply with a prescribed treatment regimen, practitioners wound up being perceived as more competent and concerned for the patient, in addition to enjoying higher rates of medication compliance compared with the non-touch control group (3). On the other hand, a lack of nonverbal sensitivity can sour the clinician-patient relationship and cause patient satisfaction to plummet, consequently decreasing patient appointment compliance (1). The physician who implemented consistent rather than inconsistent eye contact created a deeper sense of trust, the impression of being more caring, and had an increased probability of being referred to by their patients (4). With physician gender found to be an insignificant factor, physicians exhibiting open confident body language were perceived to be more intelligent, competent, and more often preferred to care for a family member compared to the physicians displaying closed unconfident body language (2). This study looks to prove that appropriate incorporation of touch in the clinical setting will lead to heightened patient perceptions of clinician competence and concern, as well as greater rates of medication compliance.</p>	<p>The results of this study supported the research question and showed that physicians' incorporation of touch during clinical consultations positively correlated with greater patient perceptions as well as enhanced medication compliance.</p> <p>On a scale of 0 to 7, both genders of the tactile group were more likely to rate the physician as both more competent and more concerned for the patient (6.4 and 6.6, respectively) compared to the control group who only partook in verbal interaction (6.2 and 6.0, respectively). Although none of the patients were fully adherent with the penicillin regimen (0 pills remaining of the 14 pills prescribed), overall it was found that less pills remained in the touch group (average 5.2 pills) compared with the control group (average 6.4 pills). Patient gender differences reflected that females of both groups were in general more compliant than males (average 5.4 pills left vs 6.4 for males), whereas the use of touch on males was shown to have a more significant influence on medication compliance (average 5.6 vs 7.1 pills left).</p>	<p>It was hypothesized that the added use of touch would be more effective than the use of verbal communication alone in the 50-60 year old population. This hypothesis was confirmed by the results of this study.</p> <p>The three variables measured in this study were average patient perception of clinician competence and concern, and medication compliance. Following the clinical consultation, each of these variables was measured by interviewers who visually noted the number of antibiotic pills remaining, as well as asking the patients to rate their perceptions of the clinician on a scale of 0 to 7. The results showed that clinicians' incorporation of touch did in fact prove to have a more positive on 50-60 year old patients' perceptions and compliance than did verbal communication alone. Based off this study it is recommended that practitioners employ touch and nonverbal behaviors when appropriate during clinical consultations. By doing this effectively, patients will be more satisfied and inclined to adhere with medical recommendations, due to stronger sense that the practitioner appears to be more competent and concerned for the patient.</p>



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