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Physician eye contact and elder patient perceptions of understanding and adherence☆

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ABSTRACT

Objective: To Examine physician eye contact (EC), patient understanding and adherence.
Methods: Secondary analysis of National Institute of Aging videotapes ($N = 52$) of physician–elder patients in two visit types: (1) routine ($n = 20$); (2) anxiety-provoking ($n = 32$) was conducted. Self-reports of understanding and adherence were used. History-taking segments were qualitatively and quantitatively analyzed for relationships between EC, understanding and adherence.
Results: Qualitative analysis showed: (1) two salient EC elements – frequency, type (brief or sustained) – and verbal synchronicity were commonly invoked; (2) conjoint unfolding of three communication elements – "looking, listening and talking" – may be salient for patient outcomes; (3) despite differing EC patterns in routine and anxiety provoking visits, statistical analyses showed patient understanding and adherence ratings were similar in the sample population comprising two visit types; no significant correlations between EC elements and understanding and adherence were found.
Conclusions: Salience of EC for patient-centered communication is shown in prior research. Present findings broaden the significance of EC by including verbal synchronicity. Methodological limitations may account for no significant correlations between EC and patient outcomes.
Practice implications: Using suggested framework for operationalizing EC elements, including verbally synchronous communication, may facilitate patient-centeredness and have positive implications for patient understanding and adherence.

1. Introduction

Physician eye contact (EC) has been shown to be one of the most salient dimensions of nonverbal communication in physician–elder patient interaction [1]. At the heart of this communication is the conceptualization of the patient as an "experiencing individual" [2,3]. And, since EC embodies mainly the affiliative aspect of communication [3], it is also salient for patient-centered communication [4]. However, EC patterns appear to differ by type of interactional visit. For instance, EC in routine and anxiety-provoking visits varies in distinct ways: patients' seek out the physicians' gaze in routine visits; in contrast, physicians' seek the patients' gaze in anxiety-provoking interactions [4]. These earlier studies in understanding the nature and characteristics of EC in physician–elder patient communication provide an invaluable background for gaining insights into the implications of EC for elder patient outcomes.

It is well-established that the most problematic patient outcomes for the effective management of chronic and other diseases stem from lack of patient understanding [5,6], and non-adherence [7,8]. For instance, low health literacy is rampant in the older adult population – an estimated two-thirds of older adults are unable to understand the information given to them about their prescription medications, and 80% have difficulty using documents such as forms or charts [9]. A lack of understanding can lead to non-adherence [10]. More importantly, physicians' poor communication increases the risk of non-adherence by 19% [11] whereas physicians' affective communication is correlated with high adherence [12–14].

A number of nonverbal dimensions of physician–patient communication has been shown to be significant for patient outcomes including understanding and adherence. For example, nonverbal attributes of the clinical environment, such as close physical proximity were associated with increased patient understanding [15]. And, ratings of affect in physicians' voice tone were associated with patients' medication adherence [8].

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Further, judges' ratings of the quality of psychosocial care in medical visits were guided mainly by general practitioners' "nonverbal affective behavior", operationalized by amount of eye contact, which had the strongest predictive power out of nine other communication variables [16]. And, nonverbal behavior embodies affective communication [17], the most salient aspect of which, as mentioned above, is EC [1]. The relationship between EC and patient understanding and adherence is an area rife for in-depth exploration. To our knowledge, there is no prior research in EC and patient outcomes, especially for elderly patients with their unique needs, challenges (including co-morbidities) and expectations [18]. The present study is an attempt to elucidate questions such as: Is physician EC meaningful for particularly problematic patient outcomes such as understanding and adherence? If so, what are the ways in which EC comes to be related to patient understanding and/or adherence?

2. Methods

2.1. Sample and methodology

The present study is a secondary data analysis of 52 National Institute of Aging (NIA) archived videotapes of physician and elder patient visits. The original study includes details of sampling strategy, response rates etc. and can be found elsewhere [19]. For the present research, two types of clinical visits were studied: (1) routine interactions ($N = 20$) e.g. common flu, abdominal pain, and, (2) anxiety-provoking interactions ($N = 32$), e.g. cancer, depression, behavioral issues, and acute medical visits. Two researchers (MAC and RGB; former was PI on original study), independently viewed a sample of tapes ($N = 100$) from the original database comprising 489 tapes and observed patients' verbal and nonverbal cues to identify words that could potentially cause anxiety in this patient population. They jointly arrived at consensus on the following key terms to search the NIA database: prostate, PSA, mammogram, referral, surgery, cancer, screening, depression, exercise, weight, smoking and diet; a subset of anxiety-provoking tapes ($N = 58$) were identified. Of these, 26 were discarded for various reasons (e.g. gaze of physician and/or patient not visible on tape, dysfunctional and/or encrypted tape, companion visit) and the remaining subset of tapes ($N = 32$) used in the present study.

As elucidated elsewhere [4], the history taking segments of videotaped visits (for both routine and anxiety provoking visits) were reviewed for measuring physician EC in this study. The rationale is that the history taking segments comprise more of 'patient-initiated' and less of 'doctor-initiated' utterances, making them the most opportune segments to study verbal and nonverbal communication between elder patients and physicians.

2.2. Coding eye contact

NVivo Qualitative Software 9.0 was used for time-stamping history taking segments and for coding tapes for physician and elder patient verbal and nonverbal dimensions in history taking segments. The routine visit tapes ($N = 20$) were time stamped for 'start' and 'end' times by the senior coder (RGB). For the anxiety provoking visit tapes ($N = 32$), initially three tapes were time stamped by two coders (RGB and DD) independently; results were identical. Having established reliability between coders, the remaining 29 tapes were time stamped by one coder (DD).

2.3. Extracting thematic codes for eye contact

Two coders independently reviewed 25% of the anxiety provoking tapes (8 of 32) to gather the most frequently invoked ways in which physicians and patients 'talked' and 'looked' at each other in medical visits. Subsequently on comparing codes, they found their codes to be fairly similar; minor discrepancies were resolved through consensus meetings and agreement reached on how to code physician–elder patient verbal and nonverbal interactions. These jointly decided codes are explicated in Table 1 and were used to code all 52 tapes on eye contact and verbal communication.

Table 1
Coding videotaped interactions in physician–elder patient visits ($N = 52$).

(A) Codes for physician "looking" and "talking" (nonverbal and verbal communication).	(1) Physician looking and not talking. (2) Physician looking and talking. (3) Physician not looking and talking. (4) Physician not looking and no responsive talking.
(B) Codes for patient "looking" and "talking" (nonverbal and verbal communication).	(1) Patient looking and not talking. (2) Patient looking and talking. (3) Patient not looking and talking. (4) Patient not looking and no responsive talking.

2.4. Measuring patient 'understanding' and 'adherence'

The present study used data on understanding and adherence collected for the original study at two-week post visit. The questions used for these interviews are listed in Table 2 [19]. Patient understanding was measured through two primary questions asked of patients over the phone; the questions were scored on a 4-point scale, with 1 denoting 'high' and 4 indicating 'low' understanding (see Table 2). Patient adherence was gauged through one question item with a 4-point response scale, again 1 indicating 'high' and 4 denoting 'poor' adherence (Table 2).

3. Results

Selected demographic characteristics of physicians ($N = 24$) and elderly-patients ($N = 52$) are presented in Table 3. Physicians are mostly Caucasian with an average age of 52 (range 34–82). Patients are also mostly Caucasian with an average age of 74 (range 65–91).

Patient outcomes, operationalized in this study as understanding and adherence, are extracted from patient self-reports and are summarized in Table 4. They are fairly similar in routine and

Table 2
Questions to gauge patient 'understanding' and 'adherence'.

Q#	Patient understanding
1	How well did you understand what the doctor told you about the problem(s) or condition(s)? 1 = understood everything the Dr. said about the problem(s) or condition(s) 2 = understood almost everything the Dr. said about the problem(s) or condition(s) 3 = understood some, but not most of what the Dr. said about the problem or condition(s) 4 = did not understand anything the Dr. said about the problem(s) or condition(s)
2	How well did you understand what the Dr. told you to do for the problem(s) or condition(s)? 1 = understood everything the Dr. said to do 2 = understood almost everything the Dr. said to do 3 = understood some, but not most of what the Dr. said to do 4 = did not understand anything the Dr. said to do
	Patient adherence
3	How well have you been able to do what the Dr. said to do? 1 = did everything the Dr. said to do. 2 = did almost everything the Dr. said to do. 3 = did some, but not most of what the Dr. said to do. 4 = did not do anything the Dr. said to do.