Exploring Physicians' Verbal and Nonverbal Responses to Cues/Concerns: Learning from Incongruent Communication

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Highlights

- VR-CoDES and NDEPT are used to code verbal and nonverbal emotional communication
- Consultations 'Congruent' and 'Incongruent' in verbal and nonverbal aspects are identified
- One type of 'Incongruent' consultation occurs when patients' needs are hard to meet
- Patients' perceptions of 'Incongruent' consultations may depend on their needs

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Abstract

Objectives

Explore physicians' verbal and nonverbal responses to cues/concerns in consultations with older-patients.

Methods

Two teams independently coded a sample of Norwegian consultations (n=24) on verbal and nonverbal dimensions of communication using VR-CoDES and NDEPT instruments. Consultations exploring older-patients' verbal emotional expressions were labeled 'Acknowledging of patients' emotional expressions', and 'Distancing from patients' emotional expressions.' Based on type and extent of nonverbal expressiveness, consultations were labeled 'Affective' and 'Prescriptive.' Congruency of verbal and nonverbal communication was assessed and categorized into four types. Incongruent consultations were qualitatively analyzed.

Results

Types 1 and 2 consultations were described as 'Congruent,' i.e. both verbal and nonverbal behaviors facilitate or inhibit emotional expressions. Types 3 and 4 were considered 'Incongruent,' i.e. verbal inhibits, but nonverbal facilitates emotional expressions or vice versa. Type 3 incongruent encounters occurred most often when it was challenging to meet patients' needs.

Conclusions

Frequently physicians' display incongruent behavior in challenging situations. Older patients' may perceive this as either alleviating or increasing distress, depending on their needs.

Practice Implications

Type 3 consultations may shed light on reasons for physicians' incongruent behavior; therefore, independent measurement and analyses of verbal and nonverbal communication are recommended. Older-patients' perceptions of incongruent communication should be further explored.

Word count

200.

Keywords: Cues/Concerns, Physician Responses, VR-CoDES, Nonverbal communication, NDEPT

1.0 Introduction

With the rapid growth of the older population, person-centered care (PCC) has become a priority around the globe [1-3]. Older-patients often present with complex healthcare needs, visual and hearing challenges, and/or cognitive impairments. As such, they present challenges on several fronts for providers trying to offer PCC. PCC itself is a complex multidimensional concept [4], with many definitions [5], aiming to develop a "comprehensive picture of the patient" [6]. A recent conceptualization of PCC emphasizes two simultaneous needs of patients: 1) to "know and understand" ("What is the problem?" and "How can it be taken care of") and 2), to "feel known and understood" (seeking socio-emotional support) [7]. These needs expressed in clinical consultations often manifest as emotional expressions in the form of cues or concerns, implying their importance to patients. The Verona Coding Definitions of Cues and Concerns (VR-CoDES), developed to identify these moments [8], has been validated to capture patients perspectives in consultations [9]. Cues are defined as "verbal or nonverbal hints which suggest an underlying unpleasant emotion that would need clarification from health provider;" and, Concerns constitute "a clear and unambiguous expression of an unpleasant current or recent emotion"[10].

A number of recent studies have focused on examining the verbal aspects of providers' responses (PR) to patients' cues/concerns and their need for feeling understood [11-13]. Sundler et al. [14] showed focusing on instrumental tasks in home-care settings made patients' disclosures of emotional expressions more challenging. Hafskjold et al. [15] found that expressions of worries captured many aspects of what is known to challenge successful aging and suggested that allowing nurse-assistants time for psychosocial talk would improve quality of life in homecare settings; (see also, Street et. al. 2009 [16]). These studies [11-15] underscore the increasing

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importance of examining providers' verbal responses, especially to older-patients' cues/concerns.

On the other hand, the importance of nonverbal behavior for expressing socio-emotional aspects in clinical communication has been emphasized by many researchers [17-26]. In a recent systematic review of nonverbal expressions of empathy in cross-cultural clinical settings, Lorie et al. [27] found that "nonverbal communication plays a significant role in fostering trusting provider-patient relationships and is critical to high quality care." Other studies have focused on specific nonverbal dimensions and shown eye contact and social touch to be significantly related to patient perceptions of clinical empathy [28]. Further, Gorawara-Bhat et al [29, 30] showed the salience of "looking" and "listening" in patient-centered communication, and highlighted the need for studying the conjoint unfolding of both verbal and nonverbal aspects—"looking," "listening" (nonverbal) and "talking" (verbal)—of communication [31].

From older-patients' perspectives, <u>both</u> verbal and nonverbal behaviors are imperative for understanding the gestalt of cues/concerns and providers' responses to them. To the best of our knowledge, the *processes* of simultaneous unfolding of verbal and nonverbal behaviors over the duration of consultations have yet to be fully explored. The present study explores how physicians and older-patients (> 65 years) communicate through verbal and nonverbal channels simultaneously. The point of departure for the present research is to understand the processes and conditions under which patient emotions, expressed through both verbal and nonverbal cues/concerns, elicit different types of verbal and nonverbal physician responses.

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This study is part of an international project to promote the quality of healthcare communication with home-dwelling older-people in Norway, Sweden and The Netherlands to be more person-centered [32]. Specifically, the aims are to:

- 1) Identify emergent cues/concerns and physicians' verbal and nonverbal responses to them
- 2) Overlay and describe physicians' verbal and nonverbal communication to assess consultations
- 3) Analyze qualitatively specific consultations and their implications

2. Methods

2.1. Overview

This secondary analysis of videotaped clinic and in-patient encounters in a large Norwegian teaching hospital highlights verbal and nonverbal aspects, and the ways in which they conflate to constitute the totality of communication. Two research teams independently coded verbal and nonverbal dimensions (henceforth Verbal and Nonverbal teams). The Verbal team (LH and HE) are native Norwegian speakers (also the spoken language of physicians and older-patients). The Nonverbal team (RGB and Assistant) did not speak, nor understand the Norwegian language; thus there was a natural blinding of the Nonverbal team to verbal content, with the added advantage of coding tone of voice without muting videotape sound [33]. The primary emphasis was on analyzing physicians' responses to patient emotions, whether these were expressed verbally or nonverbally.

The major steps that evolved over the duration of the project included:

1. Videotapes were reviewed (using NVivo 10.0) [34], dedicated physical exam and/or procedure(s) excluded, and 'sections' comprising only the interaction between physician and patient identified (Nonverbal team)

- 2. For identified 'sections,' verbal cues/concerns and physicians' responses were coded using VR-CoDES [8, 10] (Verbal team)
- 3. For identified 'sections,' nonverbal dimensions invoked by physician and patient were coded using NDEPT [29, 30] (Nonverbal team)
- 4. Qualitative summary evaluations of verbal and nonverbal codings for each consultation were overlaid to identify congruent and incongruent consultations (Verbal and Nonverbal teams)
- 5. Qualitative thematic analysis was conducted for incongruent consultations (Verbal and Nonverbal team)

2.2. Description of Sample

The original data, comprising 380 video-recorded consultations, were collected in 2007- 2008 as part of a randomized controlled trial of a communication skills training course [35]. Of these, 89 were categorized as older-patient/physician encounters (Figure 1), out of which 26 were suitable for analyzing both verbal and nonverbal dimensions, based on selection criteria that both physician and patient are visible in videotape. Two tapes with no verbal cues were discarded, reducing the sample size to N = 24, and comprising 12 in-patient and 12 clinic visits. The types of consultations varied from routine e.g. abdominal pain, to complex cases such as stroke and post-surgery visits.

2.3. Instruments and Coding of Consultations

Two coding instruments were used: VR-CoDES for verbal and, NDEPT (<u>N</u>onverbal <u>D</u>imensions in <u>D</u>octor <u>E</u>lder-<u>P</u>atient <u>T</u>ransactions) for nonverbal aspects. VR-CoDES is effective in capturing verbal aspects, and NDEPT is designed for accessing the nonverbal climate of clinical communication. Combining the use of both allowed us to achieve a fuller picture of the totality of communication.

2.3.1. Verbal Coding

VR-CoDES [8, 10] was used to code older-patients' verbal emotional distress expressed as cues/concerns, and ensuing PR (using Noldus Observer XT, version 12.5 [36]). Table 1 lists three types of data collection: A: Types of verbal cues/concerns; B: Types of coding categories; and, C: Types of physicians' responses. Specifically, older-patients' cues/concerns were coded as one of seven mutually exhaustive categories of Cue 'a' to 'g' [37]. Physicians' responses were coded in a 2-step process to determine if PR: 1) referred explicitly (or non-explicitly) to cues/concerns and, 2) performed the function of "Providing" (or "Reducing") space for patients' emotional expressions. Nonverbal dimensions were coded according to the VR-CoDES Manual in how they supplement PR (p3). The appropriate PR classification was chosen from 17 distinct coding categories [37].

2.3.2. Nonverbal Coding

The modified NDEPT tool [30] was used to code (using NVivo 10.0) two types of nonverbal dimensions for tracking the emotional climate of physician-patient interaction: 1) Kinesic and 2) Dynamic. Dynamic attributes of the physical context (e.g. interaction distance) help establish the spatial configuration within which Kinesic attributes, emanating from physician (e.g. eye contact) manifest in the consultation. The specific attributes coded and their descriptions are listed in Table 2. Each consultation was coded by two coders and disagreements were settled through iterative coding until consensus was reached.

2.3.3. Overlaying of Verbal and Nonverbal Codings

Independent verbal and nonverbal codings provided categorical data along two dimensions of communication:

Verbal Cues/Concerns and Physician Responses of "Providing" and "Reducing space" Nonverbally high or low "Kinesic" and "Dynamic" dimensions

These two were overlaid as shown in Figure 2. Nonverbal Kinesic dimensions were plotted (in NVivo) for duration of consultation and Dynamic attributes were noted. Next, verbal coding of cues/concerns and PR was plotted. The concurrence visually demonstrates the verbal and nonverbal dimensions and junctures at which they occur in the consultation. The rectangular boxes above the timeline represent verbal PR. Nonverbal Kinesic dimensions are shown by horizontal stripes in different colors when they occur, facilitating visualization of nonverbal dimensions invoked in a consultation. The box below the horizontal stripes describes the co-occurrence of verbal and nonverbal codings. Closely occurring PR (verbal and nonverbal) were grouped into a constellation and defined as a 'segment' for purposes of analysis. The time duration of 'segments' was extended slightly beyond PR occurrence to capture the context of segment. Figure 2 presents 3 segments represented by vertical yellow bands showing "Direct" and "Indirect" eye contact (EC), and 'lean forward' as salient Kinesic nonverbal attributes. Dynamic dimensions include comfortable 'interaction distance,' direct 'angle of interaction,' and no 'height difference' and 'physical barrier' between physician and older-patient.

2.4. Evaluative Summaries of Physicians' Verbal and Nonverbal Communication

2.4.1. Evaluative Summary of Physicians' Verbal Communication

Following VR-CoDES, we conducted verbal coding and identified the numbers of emergent cues/concerns and PR. A consultation could include several types of cues/concerns, and

consequently PR could also vary from "Provide" to "Reduce space" for emotional expressions, and therefore we evaluated all responses and their overall function in each consultation. When physicians used mainly "Providing space" codes as responses to patients cues/concerns (frequently "explicit," e.g. "explicit content acknowledging" and "exploration" [EPCAc and EPCEx]), and only sometimes "Reducing space" codes (non-explicit "ignoring" and explicit "information/advice" [NRIg and ERIa], we labeled such consultations as "Acknowledging of older-patients' emotional expressions," in short "Acknowledging." On the other hand, when physicians used mainly "Reducing space" codes, (frequently "Ignoring" [NRIg]), and only sometimes unspecific "Providing space" codes as "back-channeling" [NPBC]), we labeled these consultations as "Distancing from older-patient emotional expressions," in short, "Distancing."

2.4.2. Evaluative Summary of Physicians' Nonverbal Communication

While Kinesic and Dynamic attributes varied over duration of consultation, only dominant aspects of each were used in the analysis. A summary evaluation of Kinesic and Dynamic attributes entailed a 3-step process: 1) Each consultation was rated as "High," "Medium," or "Low" separately on Kinesic and Dynamic dimensions. 2) Kinesic and Dynamic together were rated as "High," "Medium," or "Low" based on extent to which nonverbal expressiveness was responsive to older-patients' emotional expressions. "High" classification was characterized by nonverbal expressiveness going beyond expected norms, e.g. physician guiding patient's walker into exam room; "Medium" classification demonstrated routine nonverbal expressiveness; and "Low" classification showed a dearth of nonverbal expressiveness. 3) Consultations classified as "High" and "Medium" were collapsed and classified as 'Affective,' since differences between the two entailed type of consultation (regular or follow-up) and time spent in interaction, and not

quality of nonverbal expressiveness. "Low" visits, e.g., when physician "talks down" (literally and figuratively) to patient who is lying-down, was classified as 'Prescriptive.'

2.5. Verbal and Nonverbal Congruent and Incongruent Consultations

Evaluations of verbal communication as 'Acknowledging' or 'Distancing' and nonverbal as 'Affective' or 'Prescriptive' were used to label and distribute the consultations into four types. To better understand the dynamics and functions of incongruence in our sample, we conducted detailed qualitative analyses of 'incongruent' consultations focusing on how physicians' verbal and nonverbal behaviors evolved.

3. Results

3.1. Demographics Characteristics

Demographic data (Table 3) indicate two-thirds of patients were male; and their age ranged from 65 to over 85 years, with the majority in the 75 - 84 age range. Physicians were equally split between male and female, and mainly in the 31- 40 age range. Major specialties represented were Neurology and Cardiology. Most consultations were dyadic, with an average duration of 18:55 minutes.

3.2. Verbal Dimensions

Table 1 indicates physicians initiated about twice the cues/concerns compared to patients (65% versus 35%), and, PR were more often "Providing" compared to "Reducing" space (59% versus 41%). 'Cue b' was the most frequently initiated type (60%); 'Cue a' was second (19%);

followed by 'Cue other' (10%), and 'Cue c' (4%) at the tail-end. Most often, PR were nonexplicit rather than explicit (63% versus 37%).

3.3. Nonverbal dimensions: Kinesic and Dynamic Attributes

Eye contact was the most frequently occurring Kinesic attribute among both physicians and older-patients. On average, Direct EC made by physicians and older-patients with each other was 83% and 86%, and Indirect EC was 17% and 14% respectively. Average EC was calculated as percent time duration spent making EC relative to duration of interaction between the two (minus any dedicated physical exam, procedure(s), phone calls etc.), across all consultations. Table 4 lists other Kinesic attributes and number of consultations they occurred in. Also listed are number of consultations where Dynamic attributes were assessed as conducive in facilitating or inhibiting of disclosures in the consultation.

3.4. Overlaying Physicians' Verbal and Nonverbal Communication

Summary evaluations of verbal communication as "Acknowledging," "Distancing," and nonverbal behaviors as "Affective" and "Prescriptive," resulted in four possible combinations of consultations; Figure 3 presents a visualization of their clustering. While communication is dynamic over duration of consultation, dominant verbal and nonverbal behaviors were used in locating a consultation in one of four quadrants in Figure 3.

 Types 1 displayed verbally 'Acknowledging' and nonverbally 'Affective' behaviors and were classified as 'congruent;' they have the potential to facilitate patients' emotional disclosures.

- Types 2 showed verbally 'Distancing' and nonverbally 'Prescriptive' behaviors, and were also classified as 'congruent;' they are likely to inhibit older-patients from making disclosures of emotional expressions.
- 3) Types 3 exhibit verbally 'Distancing' and nonverbally 'Affective' behaviors; they are classified as 'incongruent,' e.g. physicians' verbal communication is 'Distancing,' while nonverbal demonstrates socio-emotional support towards older-patients. This type presents a challenge to decipher from older-patients' perspective.
- Type 4 (1 in sample) indicates physician was verbally 'Acknowledging,' and nonverbally 'Prescriptive,' i.e. maintained a higher eye-level than patient throughout consultation (physician standing, patient lying down), also classified as 'incongruent.' This type may amplify the power differential between physician and older-patient.

The frequency of each type is shown in Figure 3. Overall, the evidence indicate that PR primarily included verbally 'Acknowledging' and nonverbally 'Affective' behaviors, and less often comprised 'Distancing' and 'Prescriptive' behaviors.

 Table 5 presents examples from the four types of consultations. The Appendix presents a

 detailed analysis of selected examples depicting four types of consultations (INSERT LINK)

FOR APPENDIX HERE).

3.4.1. Incongruent Consultations – Qualitative Analysis

Several studies have expounded on the advantages and functions of incongruence (conflict) [38-40], and their potential for understanding the nature and characteristics of entities at such times.

Therefore, to better understand the dynamics and functions of incongruence in our sample, we examined these types in detail.

Further, qualitative analysis of eight Type 3 incongruent consultations provided us with details of the sequence in which the cues/concerns emerged and how physicians responded to them. They showed a common pattern of PR along verbal and nonverbal aspects. The verbal sequence in all these consultations entailed:

- 1) Patient or physician initiated cues/concerns about patients' medical issue
- 2) Physician suggested solution (Information/advice)
- 3) Patient expressed disagreement with suggestion
- 4) Physician suggested benefits, alternative course of action etc. (Information/advice, Ignoring)

Although PR addressed cues/concerns about understanding the medical issue at hand, their

verbally 'Distancing' communication increased the asymmetrical relationship with patient.

However, along with the above 'Distancing' communication, physicians displayed one/more of

the following nonverbal behaviors in the same consultation:

closer interaction distance
 forward lean
 sustained EC
 direct orientation (perpendicular or diagonal)
 touch
 smiles

4.0 Discussion and Conclusions

4.1. Discussion

The following sections discuss ways in which congruent and incongruent communication

unfolds in consultations, and how older-patients may perceive such communication.

4.1.1. 'Congruent' Consultations

In the most commonly occurring Type 1 consultations, physicians' verbal and nonverbal behaviors were congruent (Figure 3). This is consistent with the theory that human behavior often unfolds as cognitively consistent along the thought-attitude-behavior continuum [41-43]. In these 'congruent' consultations, physicians verbally 'Acknowledge' patients' emotional expressions, and complement them with nonverbally 'Affective' behaviors, maintaining "consistency," and facilitating further disclosures of their emotional expressions. Type 2 consultations ('distancing' and 'prescriptive') also unfold as cognitively consistent; but they may inhibit potential disclosure of patients' emotional expressions. Future research should examine patients' perspective on such cases.

4.1.2. 'Incongruent' Consultations and Person-centered Communication?

Type 3 incongruent consultations potentially present a challenge for older-patients' to decipher (see Section 3.4.1.), because they may be perceived in one of two diverse ways.

On the one hand, when physicians focus more on the technical aspects of providing knowledge, information/advise, and less on socio-emotional support for the patient, consultations are likely to be perceived as non-responsive to older-patients' emotional expressions. Other studies highlight the salience of the verbal aspect of communication. Sundler et al. [44] show that when older home-dwelling persons views were in conflict with Nurse Assistants, verbal communication between them was challenging. Salience may differ depending on type of verbal or nonverbal expression invoked and on specific patients' needs. For instance, Hall and Mast show that verbal information contributed the most to accuracy in relation to inferring 'thoughts,' and visual/nonverbal cues contributed most when inferring 'feelings' of simulated persons [45].

On the other hand, when physicians extend the "Affective" stance through use of specific nonverbal behaviors such as sustained eye contact, closer interaction distance, forward lean, touch and smiles, all invoked in tandem, they support older-patients socio-emotional needs of "need to be known and understood." These specific nonverbal behaviors have been shown to communicate "liking" and "responsiveness" in other settings [46]. For example, Beier describes the potential impact of nonverbal behaviors:

"when we send out listening or caring cues that allow people to feel deeply understood, they respond quite differently than if we had sent out cues that are seen to be controlling" [47]. Further, as Finset [48] suggests nonverbal dimensions can be more salient than words in representing emotional expressions. Along similar lines, nonverbal behaviors in incongruent consultations may be efficacious in serving two major social functions: 1) alleviating the power differential and, 2) build the relationship between physician and patient.

Since the present study focused only on analyzing the "observed" –auditory and visual—aspects of verbal and nonverbal communication in the 24 videotaped consultations, it is speculative whether verbal or nonverbal aspects of incongruent communication carry more weight for older-patients. As suggested by Del Piccolo [6], patients may "vary widely in their communication needs and preferences." For example, for older-adults, especially those with hearing, vision, cognitive impairments and/or end-of-life issues, the salience of nonverbal over verbal may be more relevant [29, 30]. Also, as suggested by Gulbrandsen et al. [49] patients who face a "fundamental uncertainty, state of vulnerability, and lack of power....(may) call for greater

attention to the emotional and relational dimensions of care," i.e. their 'need to be known' as persons with hope (or fear) is greater than their 'need to know' their disease. In such consultations older patients may rely more on PR that are 'Affective,' even when the verbal is 'Distancing.' In contrast, for patients who prefer to handle distress by acquiring information and suppressing emotions to stay in control, verbally 'Distancing' behavior may be perceived more favorably. Thus depending on individual factors, older-patients may perceive incongruent PR either as 'Affective' or 'Distancing.'

4.1.3. Lessons Learned from Incongruent Communication

The analyses of the verbal and nonverbal aspects of communication, along with investigators' disagreements on these, have highlighted the complexity and challenges of understanding how these two aspects interact. We surmise that congruent consultations that are verbally 'Acknowledging' of emotional expressions and nonverbally 'Affective,' are supportive of the patient and the relationship. In contrast, incongruent consultations constituting verbally 'Distancing' and nonverbally 'Affective' communication are less clear and depend on individual persons' circumstances and preferences on how they perceive them. Some challenges and limitations include:

- a) Since this study involved researchers watching videotapes of physician olderpatient consultations, and was not a participant-observer study, inferences made may be different from those actually made by participants
- b) The relative weight of congruent 'Acknowledging'/'Affective' communication and the duration over which these may be salient for patients was not evaluated

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- c) 'Acknowledging' or 'Distancing,' 'Affective' or 'Prescriptive' labels are used for simplifying the analysis. In actuality, consultations may include more than one of the labeled behaviors, and challenging to assess their salience for specific patients
- d) Physicians' "inner conflicts" are likely to have surfaced in the handling of incongruent communication; they are not elaborated in this study, since they could not be "observed" as part of the communication in the 24 consultations

It is generally assumed that empathic responses are helpful for patients [22, 25, 50, 51]; hence such behavior is also considered an important aspect of person-centered care (Type 1 Consultation) [2, 4, 7]. However, 'affective' nonverbal communication incongruent with verbally 'Distancing' content (Type 3 consultation) constitute inherently challenging situations, and may not always lead to the intended result -- patient feeling 'known and understood.'

Based on the above analyses, we suggest two strands are salient in understanding the gestalt of communication between older-patient and physician: 'processes,' and methodology of measuring these 'processes.'

The major *processes* that unfold in response to emotional cues/concerns relate to <u>both</u> verbal and nonverbal behaviors that unfold in a stream, intertwining both clinical and social aspects, and not as discrete verbal utterances and nonverbal behaviors; rather, both are used interchangeably as echoed earlier by Engel:

"Information being obtained in one mode may not be accessible in the other but may be clarified, elaborated, verified, or refuted by access to the other mode, sometimes simultaneously" [19]. Thus, the nonverbal behaviors of physicians, in all 24 consultations analyzed in this study, especially incongruent consultations, manifested beyond supplementing the verbal aspects of communication. They added independent information that was coded sometimes as serving social functions of balancing power and building the physician older-patient relationship (supporting patients' need to be known'), and at other instances as hampering their expression for seeking clarity on cognitive information (thwarting patients' 'need to know'). Based on our findings, we propose that nonverbal behaviors are better thought of as an independent channel alongside the verbal channel of communication that have the potential to tilt their perception as either 'Affective' or 'Prescriptive,' depending on individual patients' preferences and circumstances. This means that analyzing both verbal and nonverbal behaviors could help physicians improve their communication skills by encouraging reflection on possible reasons for incongruent communication, and their consequences. Therefore, we suggest that both verbal and nonverbal behaviors should be measured and analyzed to understand communication. How older-patients' perceive these types of communication may help physicians be adequately responsive to their specific cues/concerns.

4.1.5. Strengths and Limitations

The strength of this study lies in the international collaboration that enabled a) natural blinding of the nonverbal team to verbal content of consultations, thus preventing bias, and b) analysis of nonverbal behavior without muting sound This study has limitations attributable to any secondary data analysis [52, 53]. Further, having access to older-patients' post-consultation experiences could shed light on how physicians may use combinations of verbal/nonverbal aspects to better address their emotional cues/concerns.

4.2. Conclusions

Based on our findings, we propose there are three salient factors in how physicians negotiate the

two basic needs —'to know' and 'be known'— of older-patients:

- 1) Verbal and Nonverbal behaviors <u>both</u> are core elements at the heart of physician/older-patient communication, inseparable and synchronous; when used incongruently they may have unintended implications for patients.
- 2) Incongruence in verbal and nonverbal communication occurred in one third of consultations (8 of 24), especially when it seems difficult for physicians' to relate to patients' emotional needs to satisfy their preferences.
- 3) Nonverbal 'Affective' communication can be invoked to enhance social functions of balancing asymmetry and building relations with older-patients; however, when incongruent with their verbal responses, physicians may need to explore their internal reasons for such.

4.3. Practice Implications

1. Older-patients' perceptions of congruent and incongruent consultations need to be explored.

2. Using Verbal and Nonverbal Scales to assess clinical communication has methodological

implications: a) used singly, they are inadequate for capturing the gestalt of communication; b)

used in combination, they are efficacious in congruent consultations, but inadequate for

deciphering person-centeredness in incongruent consultations; c) Supplementing them with

qualitative analysis may be necessary to gauge PCC in such consultations.

3. In teaching of physicians, incongruent consultations may be salient for reflecting on reasons that lead to the discrepancy.

"I confirm all patient/personal identifiers have been removed or disguised so the patient/person(s) described are not identifiable and cannot be identified through the details of the story."

Conflicts of Interest:

None

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References

[1] Edvardsson D, Innes A. Measuring person-centered care: a critical comparative review of published tools. Gerontologist. 2010;50:834-46.

[2] Epstein RM, Street RL. The values and value of patient-centered care. The Annals of Family Medicine. 2011;9:100-3.

[3] Dow B, Fearn M, Haralambous B, Tinney J, Hill K, Gibson S. Development and initial testing of the person-centred health care for older adults survey. International Psychogeriatrics. 2013;25:1065-76.

[4] McCance T, McCormack B, Dewing J. An exploration of person-centredness in practice. The Online Journal in Nursing. 2011;16.2.

[5] Entwistle VA, Watt IS. Treating patients as persons: a capabilities approach to support delivery of person-centered care. The American Journal of Bioethics. 2013;13:29-39.

[6] Del Piccolo L. VR-CoDES and patient-centeredness: the intersection points between a measure and a concept. Patient Educ Couns. 2017.

[7] van Vliet LM, Epstein AS. Current state of the art and science of patient-clinician communication in progressive disease: patients' need to know and need to feel known. J Clin Oncol. 2014;32:3474-8.

[8] Zimmermann C, Del Piccolo L, Bensing J, Bergvik S, De Haes H, Eide H, et al. Coding patient emotional cues and concerns in medical consultations: the Verona coding definitions of emotional sequences (VR-CoDES). Patient Educ Couns. 2011;82:141-8.

[9] Eide H, Eide T, Rustoen T, Finset A. Patient validation of cues and concerns identified according to Verona coding definitions of emotional sequences (VR-CoDES): a video- and interview-based approach. Patient Educ Couns. 2011;82:156-162.

[10] Del Piccolo L, De Haes H, Heaven C, Jansen J, Verheul W, Bensing J, et al. Development of the Verona coding definitions of emotional sequences to code health providers' responses (VR-CoDES-P) to patient cues and concerns. Patient Educ Couns. 2011;82:149-55.

[11] Del Piccolo L, Pietrolongo E, Radice D, Tortorella C, Confalonieri P, Pugliatti M, et al.Patient expression of emotions and neurologist responses in first multiple sclerosis consultations.PloS One. 2015;10:e0127734.

[12] Zhou Y, Humphris G, Ghazali N, Friderichs S, Grosset D, Rogers SN. How head and neck consultants manage patients' emotional distress during cancer follow-up consultations: a multilevel study. European Archives of Oto-Rhino-Laryngology. 2015;272:2473-81.

[13] Hafskjold L, Sundling V, van Dulmen S, Eide H. The use of supportive communication when responding to older people's emotional distress in home care – An observational study.BMC Nursing. 2017;16:24.

[14] Sundler AJ, Höglander J, Eklund JH, Eide H, Holmström IK. Older persons' expressions of emotional cues and concerns during home care visits. Application of the Verona coding definitions of emotional sequences (VR-CoDES) in home care. Patient Educ Couns. 2017;100:276-82.

[15] Hafskjold L, Eide T, Holmström IK, Sundling V, van Dulmen S, Eide H. Older persons' worries expressed during home care visits: Exploring the content of cues and concerns identified by the Verona coding definitions of emotional sequences. Patient Educ Couns. 2016;99:1955-63.

[16] Street RL, Makoul G, Arora NK, Epstein RM. How does communication heal? Pathways linking clinician–patient communication to health outcomes. Patient Educ Couns. 2009;74:295-301.

[17] Kraft-Todd, G. T., Reinero, D. A., Kelley, J. M., Heberlein, A. S., Baer, L., & Riess, H. Empathic nonverbal behavior increases ratings of both warmth and competence in a medical context. PloS one. 2017;12(5):e0177758.

[18] DiMatteo MR, Hays RD, Prince LM. Relationship of physicians' nonverbal communication skill to patient satisfaction, appointment noncompliance, and physician workload. Health Psychol. 1986;5:581-94.

[19] Engel GL. How much longer must medicine's science be bound by a seventeenth century world view? Psychother Psychosom. 1992;57:3-16.

[20] Bensing JM, Kerssens JJ, van der Pasch M. Patient-directed gaze as a tool for discovering and handling psychosocial problems in general practice. J Nonverbal Behav. 1995;19:223-42.

[21] Bensing J, Schreurs K, Rijk AD. The role of the general practitioner's affective behaviour in medical encounters. Psychology Health. 1996;11:825-38.

[22] Ambady N, Koo J, Rosenthal R, Winograd CH. Physical therapists' nonverbal communication predicts geriatric patients' health outcomes. Psychol Aging. 2002;17:443.

[23] Heath C. Demonstrative suffering: the gestural (re) embodiment of symptoms. J Commun.2002;52:597-616.

[24] Roter DL, Frankel RM, Hall JA, Sluyter D. The expression of emotion through nonverbal behavior in medical visits. J Gen Intern Med. 2006;21:S28-S34.

[25] Mast MS. On the importance of nonverbal communication in the physician–patient interaction. Patient Educ Couns. 2007;67:315-8.

[26] Li HZ, Bensing J, Verheul W, van Dulmen A. Patient anxiety in the medical encounter: a study of verbal and nonverbal communication in general practice. Health Education.2008;108:373-83.

[27] Lorié Á, Reinero DA, Phillips M, Zhang L, Riess H. Culture and nonverbal expressions of empathy in clinical settings: A systematic review. Patient Educ Couns. 2016;100:411-24.

[28] Montague E, Chen P-y, Xu J, Chewning B, Barrett B. Nonverbal interpersonal interactions in clinical encounters and patient perceptions of empathy. J Participat Med. 2013;5:e33.

[29] Gorawara-Bhat R, Cook MA, Sachs GA. Nonverbal communication in doctor–elderly patient transactions (NDEPT): Development of a tool. Patient Educ Couns. 2007;66:223-34.

[30] Gorawara-Bhat R, Cook MA. Eye contact in patient-centered communication. Patient Educ Couns. 2011;82:442-7.

[31] Gorawara-Bhat R, Dethmers DL, Cook MA. Physician eye contact and elder patient perceptions of understanding and adherence. Patient Educ Couns. 2013;92:375-80.

[32] Hafskjold L, Sundler AJ, Holmström IK, Sundling V, van Dulmen S, Eide H. A crosssectional study on person-centred communication in the care of older people: the COMHOME study protocol. BMJ open. 2015;5:e007864.

[33] Bavelas JB, Chovil N. Visible acts of meaning: An integrated message model of language in face-to-face dialogue. J Lang Soc Psychol. 2000;19:163-94.

[34] NVivo Qualitative Data Analysis Software: QSR International Pty. Ltd.; 2012.

[35] Jensen BF, Gulbrandsen P, Dahl FA, Krupat E, Frankel RM, Finset A. Effectiveness of a short course in clinical communication skills for hospital doctors: results of a crossover randomized controlled trial (ISRCTN22153332). Patient Educ Couns. 2011;84:163-9.

[36] Noldus LP, Trienes RJ, Hendriksen AH, Jansen H, Jansen RG. The Observer Video-Pro: New software for the collection, management, and presentation of time-structured data from videotapes and digital media files. Behav Res Meth Ins C. 2000;32:197-206.

[37] Del Piccolo L, Finset A, Zimmermann C. Verona coding definitions of emotional sequences (VR-CoDES). Cues and Concerns Manual; 2009. European Association for Communication in Healthcare (EACH). 2009.

[38] Coleman JS. Community conflict: Free Pr; 1957.

[39] Coser LA. The functions of social conflict: Routledge; 1956.

[40] Rubin D. Transcript of "Brief But Spectacular Series" Interview with Hari Sreenivasan. In: NewsHour P, editor. Brief But Spectacular 2016.

[41] iResearchNet. Cognitive Consistency. Psychol.

[42] Simon D, Snow CJ, Read SJ. The redux of cognitive consistency theories: evidence judgments by constraint satisfaction. J Pers Soc Psychol. 2004;86:814.

[43] Rosenberg MJ, Abelson RP. An analysis of cognitive balancing. Attitude organization and change: An analysis of consistency among attitude components. 1960;3:112-63.

[44] Sundler AJ, Eide H, Dulmen S, Holmström IK. Communicative challenges in the home care of older persons–a qualitative exploration. J Adv Nurs. 2016;72:2435-44.

[45] Hall JA, Schmid Mast M. Sources of accuracy in the empathic accuracy paradigm. Emotion.2007;7.

[46] Mehrabian A. A semantic space for nonverbal behavior. J Consult Clin Psychol. 1970;35:248-57. [47] E.G. B. Nonverbal communication: How we send emotional messages. Psychol Today 1974;11:54-6.

[48] Gulbrandsen P, Clayman ML, Beach MC, Han PK, Boss EF, Ofstad EH, et al. Shared decision-making as an existential journey: Aiming for restored autonomous capacity. Patient Educ Couns. 2016;99:1505-10.

[49] Bylund CL, Makoul G. Examining empathy in medical encounters: an observational study using the empathic communication coding system. Health Commun. 2005;18:123-40.

[50] Pincus T, Holt N, Vogel S, Underwood M, Savage R, Walsh DA, et al. Cognitive and affective reassurance and patient outcomes in primary care: a systematic review. Pain. 2013;154:2407-16.

[51] Cheng HG, Phillips MR. Secondary analysis of existing data: opportunities and implementation. Shanghai Arch Psychiatry. 2014;26:371-5.

[52] Gobo G. Sampling, representativeness and generalizability 2004;435.

Table 1: Verbal Cues/Concerns, Coding Categories and Physicians Responses to Cues/Concerns, N=24

| | А: Т | ypes of Cues and Con | icerns |
|-----------------------------------|--|----------------------|--|
| Types | Definitions* | Total Number (%) | Examples |
| C/C elicited by Provider (HPE) | All patient expressions coded as cues or concerns which are coherently and logically connected with the previous health provider turn | 102(65) | Doctor: " <i>How you feel</i> ?" Patient: " <i>yes, it's fine, kind of, but eh</i> " (coughing) (HPE cue a) |
| C/C elicited by Patient (PE). | All patient expressions coded as cues or concerns that are introduced by the patient without being solicited by the health provider. | 54(35) | Doctor sums up the patient's blood test results and states that the patient can go home. Body language and tone of voice indicates that the Doctor is finished with this topic. Patient: "Yes, and then when I get home, what about my blood percentage then?" (PE cue b) |
| | B: Types | of Coding Categories | (Cue a - g) |
| Cue a | Vague or unspecified words to describe the emotion | 29 (19) | Doctor: " <i>How you feel</i> ?" Patient: " <i>yes, it's fine, kind of, but eh</i> " (coughing). |
| Cue b | Verbal hints to hidden concerns, expressions of uncertainties and hope (unusual description of symptoms, profanities, metaphors, ambiguous words, double negatives, exclamations) | 93 (60) | Patient: "Soon I will, soon I will be in a mood to just delegate all the responsibilities" |
| Cue c | Words/phrases emphasizing psychological or cognitive correlates of unpleasant emotional states | 7 (4) | Doctor: (You feel) queasy yes, did you eat less than you usually do? Patient: "I cannot eat any less than I do (laughing detected) I have not eaten" |
| Cue other | Cue d: Neutral words/phrases standing out of the narrative background Cue e: A patient elicited repetition of a previous neutral expression Cue f: Non-verbal expressions Cue g: Clear expressions of negative emotions that occurred in the past (more than a month ago) | 15 (10) | Cue d: Doctors give general information about a condition. Patient: <i>"This doesn't apply to me this then"</i> Cue e: Patient: <i>"It's still hope"</i> (expressed in a neutral tone two times, coded the second time) Cue f: Patient sighing or crying in response to Doctor's questions or comments Cue g: Patient explaining how, many years ago, an aging parent needed help from home care to manage medication (the patient is now in similar situation): <i>"but, sure, we were very worried if something should happen to him"</i> |

| Concern | Clear verbalization of an unpleasant emotional state; the emotion is stated, the emotion is current or recent, the issue's importance may be stated | 12 (8) | Patient: What is most worrying is that eh I actually cannot leave her because of her nerves (referring to mental state of next of kin) |
|-------------------------------|--|----------------|---|
| Total C/C | | 156 | |
| | C: Types of | Physicians Res | ponses (PR) |
| Explicit Provide space | The response explicitly refers back to the cue/concern (maintains wording or key elements) and has the function of allowing further cue/concern disclosure by the patient | 28 (18) | Patient: " <i>Am I doing well</i> ?" (Cue a) Doctor: " <i>Yes, you are doing well, you see</i> " (Tone of voice indicates Provide space, explicit, acknowledging, EPCAc) |
| Explicit Reduce space | The response explicitly refers back to the cue/concern (maintains wording or key elements) and reduces the room for or closes down for further cue/concern disclosure by the patient | 30 (19) | Patient: "I don't know how much longer this can continue" (Cue b: referring to strength to continue to taking care of spouse) Doctor: "But then, then they have to act on it then, you know, if the strength to continue ends" (Tone of voice indicates Reduce space, explicit, information advice, ERIA) |
| Non-explicit Provide space | The response do(es) not explicitly refer back to the cue/concern and has the function of allowing further cue/concern disclosure by the patient | 64 (41) | Patient: "yes, but that's something I don't want" (Cue b) Doctor: "no, no, okay" (Provide space, non-explicit, acknowledging, NPAc) |
| Non-explicit Reduce space | The response do not explicitly refer back to the cue/concern and reduces the room for or closes down for further cue/concern disclosure by the patient | 34 (22) | Patient: Oh, dear me (Cue b) Doctor: "It (the infection) has declined, so all of your infection-tests have been good. And you are doing better" (Reduce space, non- explicit, information-advice, NRIa) |
| Total Provide space | | 92 (59) | |
| Total Reduce space | racted from VR-codes manual: | 64 (41) | |

*Definitions: Extracted from VR-codes manual:

Del Piccolo, L., et al. (2008). Consensus definition of cues and concerns expressed by patients in medical consultations - Manual 2008. European Association for Communication in Healthcare, Verona Network on Sequence Analysis: 1-13.

Del Piccolo, L., et al. (2009). Coding of Health Provider Talk Related to Cues and Concerns - Manual for VR-CoDES. European Association for Communication in Healthcare, Verona Network on Sequence Analysis: 1-17.]

Interrater reliability-Cohen's Kappa = 0.67 for patients' C/C (N = 7; C/C n = 58); 0.65 for PR (N = 5; n = 28).

| | Kinesic Attributes | Description | | | |
|----|--|---|--|--|--|
| 1. | Eye Contact | a) Direct EC: when physician/patient looks directly into eyes/face and sustains gaze vis-à-vis other b) Indirect EC: when physician/patient are engaged in some activity pertaining to patient medical situation while interacting with each other. | | | |
| 2. | Gestures | a) Pointing gestures: used by physicians as a tool for pointingb) Explaining gestures: used by physicians to elaborate or explain the verbal content of communication | | | |
| 3. | Touch | a) Instrumental touch: used by physicians as a functional tool for assessing patientsb) Affective touch: used by physicians to convey empathy to patients, e.g. squeezing hand, arm, and/or pat on shoulder | | | |
| 4. | Smiles | Used mainly as part of greeting in beginning and towards close of visit | | | |
| 5. | Lean Forward/Backward | Signaled physician attentiveness vis-à-vis patient; sometimes, when physician leaned forward, patient leaned backwards to offer space and accommodate physician and vice versa. | | | |
| 6. | Modifying Environment | Physicians sometimes modified environmental context to facilitate interaction vis-à- vis patient. (e.g. physician moves their chair to face and interact with patientt) | | | |
| 7. | Helping Behavior | Physicians sometimes extended 'Helping Behaviors' towards their patients during encounters (e.g. helping patient with steering walker and making transition into chair) | | | |
| | Dynamic Attributes | Description | | | |
| 1. | Interaction Distance between Physician and Patient | Shoulder-to-shoulder shortest distance between physician and patient during major part of visit, i.e. opening, middle (history taking and post physical exam) and closing phases of encounter | | | |
| 2. | Vertical Height Difference | Vertical difference in eye level between physician and patient during major part of visit | | | |
| 3. | Physical Barrier(s) between Physician and Patient | Any external physical accoutrementthat may be existing or modified during the encounterthat blocks the interaction distance between physician and patient during major part of visit | | | |
| 4. | Angle of Interaction between Physician and Patient | Angle of interaction: operationalized as angle b/w an imaginary axis extended from location of physician and shortest interaction distance b/w physician and patient during major part of interaction. Two major types of interaction angles invoked: a) Perpendicular: physician and patient facing each other at a perpendicular angle during major part of the interaction b) Diagonal: physician and patient facing each other at an angle in the encounter | | | |

| Patients | | Number |
|--------------------------------------|----------------------|--------|
| 1. Gender | Male | 15 |
| | Female | 9 |
| | Temale | 5 |
| 2. Age | 65 - 74 | 8 |
| | 75 - 84 | 13 |
| | 85 + | 3 |
| Physicians | | |
| 1. Gender | Male | 12 |
| | Female | 12 |
| | | |
| 2. Age | 31 - 40 | 12 |
| | 41 - 50 | 5 |
| | 51 + | 7 |
| Encounters | | |
| 1. Specialty | Neurology | 6 |
| | Cardiology | 4 |
| | Gastrosurgery | 2 |
| | Infectious Diseases | 2 |
| | Nephrology | 2 |
| | Respiratory Diseases | 2 |
| | ENT | 1 |
| | Endocrinology | 1 |
| | Gynecology | 1 |
| | Hematology | 1 |
| | Urology | 1 |
| | Vascular Surgery | 1 |
| 2. Consultation Type | Clinic | 12 |
| | In-patient | 12 |
| 3. Patients accompanied by Relatives | Dyadic encounters | 20 |
| | Triadic encounters | 4 |
| 4. Duration of Encounter | < 15 minutes | 10 |
| | > 15 < 30 minutes | 12 |
| | > 30 < 45 minutes | 1 |
| | 45 + minutes | 1 |

| | Physicians | Patients | | |
|---|----------------------------------|--------------------------------|--|--|
| 1. Kinesic Attributes | # of videotapes (Avg. EC %) | | | |
| Eye Contact (EC) Direct (Avg. %) | 23 (83%) | 21 (86%) | | |
| EC - Indirect (Avg. %) | 1 (17%) | 3 (14%) | | |
| Gestures | 24 | 24 | | |
| Smiles | 22 | 22 | | |
| Lean forward/backward | 13 | 5 | | |
| Modifies Environment | 13 | - | | |
| Touch | 8 | - | | |
| Helping Behavior | 6 | - | | |
| | Facilitating of Communication | Inhibiting of Communication | | |
| 2. Dynamic Attributes of Interaction Context | # of videotapes | | | |
| Interaction Distance (Comfortable/Uncomfortable) | 22 | 2 | | |
| Angle of Interaction (Perpendicular or Diagonal) | 24 | 0 | | |
| Height Difference b/w eye level of physician and patient (Yes/No) | 22 | 2 | | |
| Barrier b/w physician and patient (e.g. desk between) (Yes/No) | 15 | 9 | | |

Table 4: Distribution of Nonverbal Dimensions for Physicians and Patients, N=24

| Туре | Patient med problem | Verbal Coding | NV Coding | Nature of communication | Dr. and Pt perspectives of med problems | Verbal behavior | NV behavior |
|------|---|--|---|---|---|-------------------------------|----------------|
| 1 | Liver cancer/ Lack of treatment options | 2 Pt:like I'm sitting, and negotiate, over my life (HPE cue B) Dr.: yesyes (NPAc – Acknowledges) Pt: it's onlyto get an assessment of how this (cancer) progresses; but I understand because you do not know Dr.: Yes yes Pt: no one knows this (situation) here being like that sheep farmer (Dr.) who releases the sheep (Pt) up in the mountains in the summer (HPE cue B) Dr.:and do not know how many he gets back in | EC direct and sustained Lean forward Gestures to explain Tone of voice – low | 4 Existential: Acknowledgement of Pt's emotional state | 5 Pt acknowledges his terminal diagnosis, wishes to continue to talk to Dr. Dr. acquiesces to request, makes appointment for CT. | 6 Acknowledging Emotion | 7 Affective |
| 2 | Chronic Fibrillation: Consultation on meds/ machines to manage | fall (because some are likely to be eaten by wolves[do not survive the cancer]) (EPAAc-Acknowledges) Pt: sleep quality has not improved it's a bother to have that breathing stuffthere are several who have given up, I have gotten used to it (HPE cue B) Dr.: But you notice you're a little more tiredless tired in the daytime? (NRIg - Ignores) Pt: P: I am a little less tired in the daytime the BP it has not helpedstill 150/80 (HPE cue B) Dr.: yes-yes (irritatingly) (NRIg - Ignores) | - EC indirect Orientation- slightly facing away from Pt | Biomedical: Understanding, explaining surprise positive test results of no atrial fibrillation | Dr. reveals surprise from test results no atrial fibrillation. Pt agrees his symptoms have improved | Distancing from emotion | Prescriptive |
| 3 | Hospitalized w Pneumonia | Dr.:but you get good care and such with Homecare, and you will not be alone Pt: Yes, but they have so much to do you know (HPE cue B) Dr.: Yes, but they will look after you, and they can visit you up to 6 times a day (ERIa – Info/Advise) Pt:they can? (wiping tears) | sits on Pt bed forward lean sustained EC closer interaction distance | Lifestyle: Info/advice on advantages of Homecare | Pt requests NH room on D/C. Dr advises NH room not available on short notice; can prescribe Homecare services instead | Distancing from emotion | Affective |

Table 5: Verbal and Nonverbal Behaviors in Consultations

| | | Dr.: Oh yes, they canyouno sorrows in advance Pt:I'll try (HPE cue B) Dr.: true, keep your head up, suddenly, you get a room (NRIa – Info/Advice). Pt: yes, thank you(wiping tears) | same eye level as Pt orientation: direct touch: comforting | | | | |
|---|---|---|--|---|---|--------------------------|--------------|
| 4 | Liver failure caused by excess analgesic meds | Pt: But, I will continue to use the pain patch? Dr.: yes, you should continue with that Pt:but, uh, I (am in pain) that's no pain pill that takes away (pain), it just soothes the pain(my) pain isn't gone (HPE cue B) Dr.: No (NPBc - Back Channels) Pt: So it isn't gone (HPE cue B) we struggle to treat the arm more than what has already been done.(ERIa – Info/Advise) Pt: yesbut it's not just my arm, you know, it's everything together (PE cue B) Dr.: yes (NPAc - Acknowledges) | sustained EC Eye level height difference between Dr. and Pt one hand holding chart, other hand in pocket | Biomedical: Info/advice on disadvantages of analgesic meds | Pt requests additional pain meds, Dr hesitant to prescribe | Acknowledging emotion | Prescriptive |

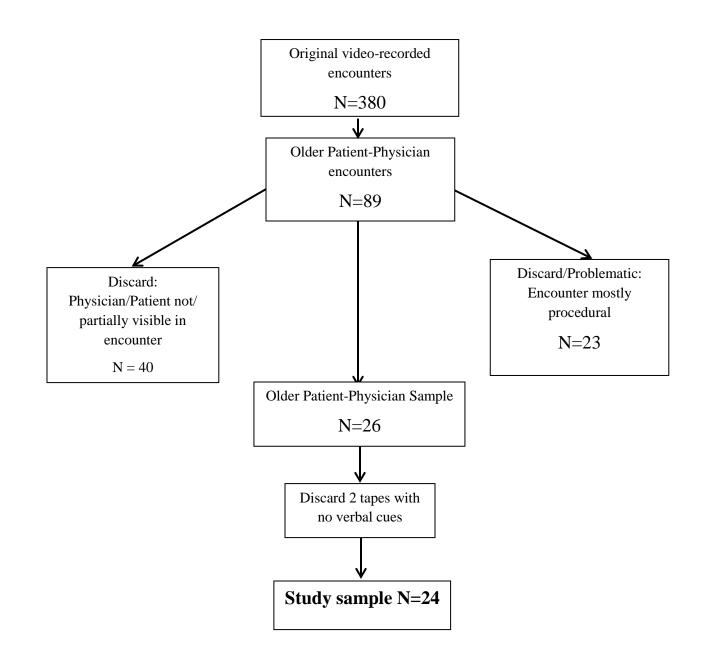


Figure 1: Study Sample Selection from Communication Skills Training Video Dataset

Figure 2

Example X



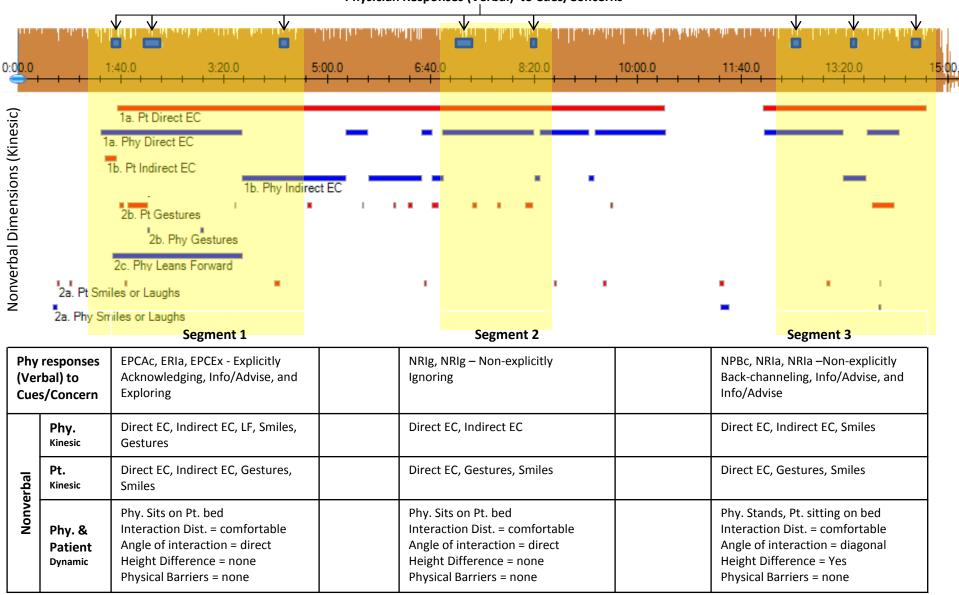
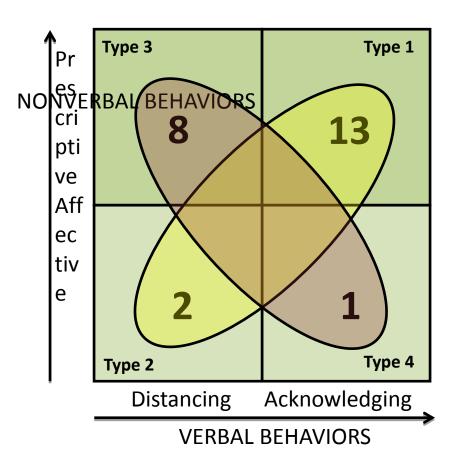


Figure 2: Overlay of Verbal & Nonverbal Codings in a Typical Older-patient Physician Consultation



Congruent Consultations =13 + 2 = 15 (Acknowledging & Affective = 13; Distancing & Prescriptive = 2) Incongruent Consultations = 8 + 1 = 9 (Distancing & Affective = 8; Acknowledging & Prescriptive = 1)

Figure 3: Distribution of Congruent & Incongruent Consultations, N = 24

Appendix

Illustrative Examples of Congruent and Incongruent Encounters

In the four cases below – Type 1, Type 2, Type 3 and Type 4 Examples from Figure 3 and Table 5 -- the verbal conversations between Doctor (Dr) and Patient (Pt) are depicted in black script, and nonverbal actions in red script. Verbal communication in all examples is verbatim (translation from Norwegian); however, it has been condensed to illustrate the thread of verbal utterances and nonverbal expressions. Verbal and nonverbal coding in the four examples below is underlined.

Type 1 Example: Congruent (Verbally 'Acknowledging' and Nonverbally 'Affective')

In a clinical exam room of an academic hospital, seated diagonally across from each other, a female physician maintains <u>sustained eye contact (EC)</u> with an older male patient, who quietly stares down towards the floor. The patient has just been given a diagnosis of terminal cancer by the physician. The mood is quiet and somber, their ensuing dialog occurs in a <u>low tone of voice</u>. He asks if the doctor can do any follow-up tests, because as he speculates, he may develop additional symptoms in the future. Initially, the doctor explains the futility of doing so, but eventually agrees on a CT scan upon considering the emotional burden the patient displays both verbally and nonverbally.

Pt: looking at floor, no EC, diagonal orientation vis-à-vis Dr

Pt: how are you going to follow up this here (pointing to his chest), if it's spread and how fast it is, or how slowly it is then?

Dr: No, blood test will not really show anything [shakes her head from side to side]. I [deep sigh] must say, I think that [breathes heavily] sh...sh...should we (even) follow anything [shakes her head from side to side] in particular? (She doesn't think his cancer should be followed up anymore, and asks the patient about this).

Dr: head tilted, listening intently, sustained EC

Pt: laughs, no EC, looking towards floor (as in a reflective mode)

Pt: Yes, you, eh.... eh, you can understand it, like I'm sitting, eh...eh and negotiate, as they call it, over my life.... (HPE [Health Provider elicited], cue b) Dr: yes...yes (Non-explicit, provide space, acknowledge, [NPAc]) Dr: long pause > 3 sec

Pt: eh....eh, it's only that I'm a little interested in (leans back and looks out into the room, as in a reflective mode) to get an assessment of how this (cancer) progresses; but I understand of course, that you are not able to provide any assessment.... because you do not know (sustained EC towards Dr) Dr: Yes... yes

Pt: no one know..... this here (my cancer) being like that sheep farmer you know.... who releases the sheep up in the mountains in the summer.... (<u>HPE, cue b</u>)

Dr: picks up on Pt initiated metaphor and completes it

Dr:and do not know how many he gets back (in the fall, because some are likely to be eaten by wolves in the wild) (<u>Explicit, provide space, content</u> acknowledge, [EPCAc])

Pt: ...no...

Dr: ...no, no (inhaling deeply, and changing her position to accommodate Pt's request) no, that is what I think we can (gesturing with right hand), I can... I shall discuss with them, we shall take another CT, it's fine.....so we can get a curve on how fast it (the cancer) grows along here (makes explaining gestures on the desk in view of Pt)

The episode illustrates physician's verbal 'Acknowledging' of patient's anxiety and a nonverbal 'Affective' stance displaying direct EC, along with other nonverbal dimensions (direct orientation, no height difference, explaining gestures, empathic smiles and reflective silences). The patient maintains sustained Direct or Indirect EC, alongside a silent, reflective attitude about his prognosis. The physician's dominant –'Acknowledging' and 'Affective' behaviors prevalent throughout encounter, were 'Congruent' with each other.

Type 2 Example: Congruent (Verbally 'Distancing' and Nonverbally 'Prescriptive')

In a clinical exam room, a male physician in a white coat is studying a patient's chart on his computer screen situated on a desk in a corner of the room. Seated diagonally across from him is a male patient dressed in street clothes gazing quietly and intently around the exam room, and taking his cues from the physician. The consultation proceeds with the biomedical discussion at the fore, only at the initiation of the physician, and totally bereft of any socio-emotional aspects. The physician has announced that he thought the patient had chronic fibrillation--and was positively surprised to find that his heartbeat was normal. The conversation continues:

Dr:it's just nice that you are satisfied with (coming here for your healthcare).... Dr: no eye contact with Pt., writing prescription for Pt. at his desk. Pt: I would say.... I got a form (at Clinic entrance) now (today) before coming in here, and I ticked that I felt safe...... I put full (gesturing a circle to denote total satisfaction with physician) Pt: talking, laughing heartily, direct EC with Dr., diagonal orientation vis-à-vis Dr, gesturing. Dr: ...then you have to promise to give a really good grade.... Dr: continues to write at desk, no EC Pt:thus it was... I was a little tense.... (PE [patient elicited], concern) but I feel safe (with you).... Pt: smiles, direct EC, continues diagonal orientation vis-a-vis Dr. Dr:yes (based on tone of voice interpreted as non-explicit, reduce space, ignore, [NRIg]) Dr: Moves rolling chair to face Pt directly, direct orientation, sustained EC, close interaction distance, gestures (explaining)

Pt: Sustained EC with Dr, smiles, listens intently to Dr instructions.

The encounter illustrates verbally 'Distancing' and nonverbally 'Prescriptive' congruent. Interestingly in this case, when the patient tells the Dr. that he "feels safe" with the doctor, i.e. "trusts" the doctor, the Dr takes the cue, and invokes nonverbal dimensions of direct orientation, closer interaction distance, sustained EC for the reminder of the interaction.

Type 3 Example: Incongruent (Verbally 'Distancing' and Nonverbally 'Affective')

Female patient requests female physician to apply for a Nursing Home (NH) room for her upon her discharge from Hospital. Physician informs/advises her of difficulty in procuring room in short time period.

Excerpt opens with Pt lying on back in bed, head of bed raised, looking up into Dr eves (EC) Dr: Right? And that's what we talked about, that sometimes it's very long waiting time (to get room in NH) Dr Sitting on Pt bed, leaning forward, EC with Pt Pt : yeah? Pt: Contd. Pt lying on back in bed, head of bed raised, looking up into Dr eyes (EC)Dr: uh, so then the question is whether you need to go home in the meanwhile.... Pt : Yes, uff, uff (HPE, cue b) Pt laughs softly, tears begin to flow; drops one hand on abdomen in gesture of helplessness Dr: Yes, but we cannot take sorrows in advance (Non-explicit, reduce space, information/advice, [NRIa]) Dr holds Pt hands to comfort her Pt : yes.... Dr: But you get good care and such with homecare and you are not alone Dr: sitting on Pt bed, directly facing Pt, leaning forward, looking into Pt eyes (EC), holding Pt hand—sustained, while Pt chart is placed on adjoining side table Pt : Yes, but they have much to do, you know (HPE, Cue b) Pt: Looking into Dr eyes (as if pleading) Dr: Yes, but they will look after you and they can visit up to 6 times a day (Explicit, reduce space, information/advice, [ERIa]) Dr: sitting on Pt bed ...stroking Pt hands to comfort her, continued. posture and EC with Pt as described above. Pt : they can? Pt: Sustained EC Dr: oh yes, they can Dr: Contd. posture and EC with Pt Pt: Yes, that's fine... Pt: Sustained EC. Dr: but you, no sorrows in advance.

Dr: Continued. <u>posture and looking into Pt eyes</u>, <u>sustained EC</u> Pt: yes....I 'll try (<u>HPE</u>, <u>Cue b</u>) Pt: <u>EC</u>, <u>wiping tears</u> Dr: true, keep your head up; suddenly you get a room (<u>Non-explicit</u>, <u>reduce space</u>, <u>information/advice</u>, [<u>NRIa</u>]) Dr: <u>smiles at Pt.</u>, <u>holds her hand</u>, <u>continued Posture</u>, <u>looking into Pt eyes</u>, <u>sustained EC</u>, <u>pats Pt on shoulder</u> as she gets ready to leave

The encounter illustrates verbally 'Distancing' behavior In contrast, her nonverbal behavior is 'Affective'-- sitting on patient's bed, holding her hand, offering comforting touch when patient weeps, all while leaning forward, with sustained EC at same level as patient, encouraging her with pat on shoulder, squeezing her hand when ready to leave.

Type 4 Example: Incongruent (Verbally 'Acknowledging' and Nonverbally 'Prescriptive')

Male physician stands with legs planted slightly apart, at bedside of female patient, turning pages and looking through patient's chart that is placed on patient's bedside table. The patient is lying down in the bed; her body covered with a quilt. She is looking up at the doctor with sustained eye contact, requesting for additional pain medication for her "terrible pain."

Dr:but as I understand from you, you are feeling better, eh, you are getting on your feet, andso that is very good...

Dr: <u>Standing at Pt bedside (height difference between Physician and Pt- Physician looking down on Pt)</u>, <u>occasional brief EC with Pt</u>. chart on bedside table...

Pt: yes... but I'm in terrible pain... (PE, cue b)

Pt: sustained eye contact with Dr., one hand on forehead (as a sign of despair)

Dr.: yes (<u>Non-explicit</u>, provide space, back-channel [NPBc])

Dr: <u>continues standing at bedside</u>, both <u>legs spread slightly apart</u>, puts <u>both hands</u> <u>into his back pants pockets</u>, and focuses on looking into patient chart, <u>no eye</u> <u>contact with Pt</u>.

Pt: ...and that is what I'm fighting with them about...about painkillers (PE, cue b)

Pt.: continues to look upwards into Dr. eyes, with one hand on forehead

Dr. mmm... (Non-explicit, provide space, back-channel [NPBc])

Dr: continues in same position, <u>no eye contact</u> with Pt.

Pt: ...yes, flight or fight... I'm in terrible pain...I have taken pain killers for many, many years, so eh... not it's like they say, that the liver has hit the wall, to put it like that.... (HPE, Cue b)

Pt: continues with <u>sustained EC</u> into Dr eyes

Dr:yes, that was what I mentioned last time when you were with us (when patient was hospitalized)

Dr: continues browsing through Pt. chart

Pt: I have.... (The Dr continues his response without noticing that the patient tries to speak).

Dr.: That's it, especially... Parac (pain medication) can hurt the liver (<u>Explicit</u>, reduce space, information/advice, [ERIa])

Dr: continues with same stance towards Pt.
Pt: yes, I have....
Pt: continues looking upwards at Dr.
Dr: ...and that's what I think...something like Pinex Forte and Paralgin Forte (two strong pain killers) it contains in addition to Codeine, strong pain killers, it contains Paracet (prescription drug)
Dr: no EC, hands in back pockets, legs apart, looking down at Pt. chart

The encounter was verbally 'Acknowledging' since the physician used back-channeling and offered information/advice on adverse effects of pain medications. In contrast, the physician's nonverbal behavior was assessed 'Prescriptive' given his stance: standing with legs slightly apart, both hands in back pockets and "looking down at patient,"

Each of the 4 Types of Consultations depict how verbal and nonverbal communication independently can be responsive to older-patients' emotional cues/concerns. Physicians' verbal and nonverbal behaviors in Types 1 and 2 act in congruence, i.e. when verbal facilitates, nonverbal also facilitates further disclosure of older-patients' emotional expressions (Type1); and, when verbal inhibits, nonverbal also inhibits further disclosure (Type 2). In contrast, in Types 3 and 4, verbal and nonverbal behaviors manifest as incongruent in the consultation. For instance, in Type 3, verbal communication towards older-patients' is coded 'Distancing;' and nonverbal is 'Affective' making the consultation 'Incongruent,' and a challenge for patients' to decipher. We propose the 'Affective' stance of the physician may allow for the consultation to be perceived by patients' as either supporting (or not) of their socio-emotional needs (need to be known and understood), and will likely depend on individual patients' conditions and preferences (e.g. older-patients with physicial impairments may perceive the affective dimensions to a greater extent than younger healthier patients). Likewise in Type 4 incongruent consultations, physician invokes nonverbal to display power/status differential vis-à-vis olderpatient (while verbal is 'Acknowledging').