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To cite this article: Maziar Yazdanpanah, Charlotta Plejert, Christina Samuelsson & Gunilla Jansson (2019) An interactional perspective on sound prolongation in multilingual encounters in residential care, Clinical Linguistics & Phonetics, 33:12, 1103-1124, DOI: 10.1080/02699206.2019.1584914

To link to this article: https://doi.org/10.1080/02699206.2019.1584914

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Published online: 06 Aug 2019.

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An interactional perspective on sound prolongation in multilingual encounters in residential care

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ABSTRACT
Elderspeak refers to adapting one’s language to a perceived language decline of an older interlocutor. Earlier studies have explored different features of elderspeak; some of these studies attribute positive outcomes to using elderspeak that facilitates communication, but other studies consider elderspeak a negative way of communicating that should be avoided. The aim of this study is to investigate a largely unexplored feature of elderspeak, namely sound prolongation in a multilingual context. There are five participants in this study: three carers and two care recipients in a residential care unit. The carers and care recipients have limited access to a shared spoken language. The data consist of video- and audio recordings of interaction between the participants. The recordings have been transcribed and analysed in accordance with Conversation Analytical methodology. The analysis shows that the carers use sound prolongation as part of their interactional repertoire in order to manage situations of distress. We conclude that in some distressful situations carers’ use of sound prolongation may help mitigating the care recipient’s emotional concerns since the source of agitations has been addressed properly. In other situations, the use of sound prolongation may lead to an escalation in distress, if the source of agitation is not addressed adequately. Our results bring to the fore that an interactional practice, such as the use of sound prolongation in the context of expressed distress must be interpreted in relation to the complexity of each and every situation participants find themselves in, their level of understanding, and the task/activity at hand.

Introduction

Speech adaptations toward older people is often referred to as elderspeak (Caporael, Lukasewski, & Culbertson, 1983; Hummert & Ryan, 1996; Mackie, 2018; Samuelsson, Adolfssson, & Persson, 2013; Savundranayagam & Ryan, 2008; Williams, Boyle, Herman, Coleman, & Hummert, 2012; Williams & Herman, 2011; Williams, Kemper, & Hummert, 2003). On the basis of previous research in the field, Samuelsson et al. (2013) provide an overview of five domains of elderspeak. They categorize adaptations of talk directed to older people concerning prosody, semantics, grammar, pragmatics, and speech (Samuelsson et al., 2013). Each of these domains consists of a number of characteristics; for example, the domain of prosody includes fundamental frequency, intonation, stress,
loudness, and speech rate (Samuelsson et al., 2013). Samuelsson et al. (2013) also provide a description for each characteristic of elderspeak. For example, speech rate, in the domain of prosody of elderspeak, is described as slow and with longer pauses. As will be demonstrated in the present study, the characteristics of speech rate may also be affected by another factor, which we call sound prolongation. Defining sound prolongation in our data, we perceptually identified some prolonged sound segments in participants’ utterances. Then, the length of the identified sound segment, with respect to time, was measured by the software Praat. In our study, the carers’ practice of sound prolongation is used as an interactional resource in order to manage care recipients, who express that they are distressed in multilingual encounters in which the participants have limited access to a shared spoken language.

Earlier studies show that the most frequently exhibited agitated behaviours are resistiveness to care (RTC), repetitious verbal behaviour (RVB), requests for attention, complaining and cursing (Cohen, Marx, & Rosenthal, 1989). In addition, providing care for older adults living with dementia can sometimes become even more complicated by behaviours such as agitated complaining, physical aggression, verbal and vocal outbursts, and withdrawal that disrupt personal care activities, for example, bathing (Williams & Herman, 2011; see also Hoeffler, Rader, McKenzie, Lavelle, & Stewart, 1997; Miller, 1997). If we want to understand what aspects of interaction facilitate the management of, for example, RTC, complaining, and expressions of distress in care recipients in situations where there are limitations in shared spoken language resources between carer and care recipients, further attention must be paid to details of interaction, such as sound prolongation, conventionally associated with elderspeak. It should be noted that there are, of course, other interactional resources than spoken ones (gesture, facial expression, gaze, etc.) that participants rely on when negotiating understanding. In the analytical part of this article, we will pay attention also to these aspects of interaction when relevant, particularly since these resources are used in concert with vocal means. However, we do pay particular attention to sound prolongation with a light on its relation to the notion of elderspeak.

**Aim**

This paper aims at investigating carers’ use of sound prolongation as one feature of elderspeak in responses to residents’ RTCs and signs of distress, such as complaints, in multilingual encounters in Swedish residential care. The study is guided by the following research questions:

1. How do carers use sound prolongation in responses to RTCs and signs of distress, such as complaints in multilingual encounters in residential care?
2. What is accomplished by the carers’ use of sound prolongation in responses to RTCs and signs of distress?

Although Plejert et al. (2014) have addressed vowel prolongation, we use the term sound prolongation to avoid any exclusion of other sound segments in our analysis.
Literature review

Before the analysis, we will review literature on concepts of relevance for our aim and research questions. Williams and Herman (2011) show cases where communication behaviours, conventionally associated with baby talk, when carers use them to address elderly residents with dementia, may convey the message of incompetence and invoke a situation of patronizing communication described as elderspeak. These communication behaviours are including, but not limited to, terms of endearment and pronoun substitutions, as well as specific non-verbal communication means, such as tapping an older person’s head, arm or shoulder. Importantly, in Williams, Herman, Gajewski, and Wilson (2009), residents with dementia were twice as likely to exhibit RTC when carers used elderspeak compared to normal communication. According to Williams et al. (2009) carers’ use of elderspeak seems to reinforce RTCs. However, another study suggests that features of elderspeak are considered more appropriate when residents suffer from dementia (Marsden & Holmes, 2014; see also Caporael, 1981; Caporael et al., 1983; Caporael & Culbertson, 1986). The findings of Caporael (1981) are based on the judgment of college student judges rather than the care recipients’ perspectives. Furthermore, in Caporael (1981) the college students rated a kind of talk, having similar characteristics as baby talk as less irritating and more comforting than talk without baby-talk features when used to address older care recipients. Among the positive features of elderspeak identified, Marsden & Holmes (2014, p. 18) refer to a high mean fundamental frequency, a wide frequency range, terms of endearment and diminutives, use of first names, frequent interruptions of the residents by the carers, and imperatives. For example, imperatives may occur in relationships of maximum solidarity as well as in contexts where one person has acknowledged power over another (Marsden & Holmes, 2014; see also Holmes, 1995; Holmes & Stubbe, 2003). However, Marsden and Holmes (2014) present data that put emphasis on the affiliative dimension of this kind of discourse and did not find any patronizing dimensions in speech, such as the use of first names when comparing interaction involving residents without cognitive decline with that involving residents with limited cognitive communicative abilities. Finally, they argue that using mitigated directives, endearments, small talk and humour are not interpreted as patronizing. Rather, they are a means for establishing solidarity and contributing to building strong, warm relationships between carers and care recipients (Marsden & Holmes, 2014). It should be kept in mind, however, that Marsden and Holmes’ study is based on monolingual data, in which participants presumably understand each other and the context, more easily than in cases of limited shared spoken resources. In addition, an aspect often forgotten is the activities that participants are engaged in, and how they may influence how a certain way of speaking is perceived. We will return to this issue later, in relation to our own analyses.

Exploring the relationships between implicit messages communicated by nursing staff and residents’ RTC, Williams and Herman (2011) report that agitated behaviours may indicate RTC. They suggest that an influencing factor in the frequency of RTC can be the relation between RTC and an emotional tone imbalance in various dimensions of care (nurturing, caring, warmth, and support), respect (polite, affirming, respectful, and patronizing), and control (dominating, controlling, bossy, and
directive) as one aspect of communication in elderspeak (Williams & Herman, 2011). The data in Williams and Herman (2011) comes from video recorded interaction in monolingual and ethnoculturally homogeneous settings between nursing staff and residents with dementia during bathing. Williams and Herman (2011) rely on the observation of ‘ naïve raters’ who code and rate the emotional tone of implicit staff communication in the videos. Implicit communication is defined as conveyed by measures of underlying messages of care, respect, and control (Williams, 2006). For example, although none of the explicit features such as imperatives and endearments are present in implicit patronizing, the speaker of implicit patronizing manipulates the social personae s/he presents to the recipient (Coupland, 1984).

Demonstrations of RTC has also been acknowledged as a challenge in multilingual encounters between carers and older persons (with dementia symptoms) in residential care in Sweden (Plejert, Jansson, & Yazdanpanah, 2014). Being difficult already in monolingual settings, attending to RTC in multilingual circumstances may be even more complicated because participants’ establishment of mutual understanding is compromised by a shortage of shared spoken language resources. Plejert et al. (2014) explored different response practices conducted by the carers to attend to repetitious verbal behaviour and RTC. They found that in the face of tensions, the carers used seven different response practices: soothing talk, instrumental talk, minimal responses, explicit expressions of understanding, mitigating talk, questions, and appraisal. Under the category of soothing talk, Plejert et al. (2014) noticed that the carers sometimes produced expressions with prolonged vowels and falling intonation when they met the resident’s resistance in conducting care tasks, often also addressing the resident by her name. This type of responses with vowel prolongations could be associated with a type of nurturing discourse which may put carers into a parental role and the residents in a dependent role, thus the same features and dependencies that have been discussed in relation to elderspeak (Plejert et al., 2014; see also Alden & Cohen, 2015; Grainger, 1993). Despite the fact that talk with features of elderspeak may be used with the best of intentions by those who employ it (for example, in terms of soothing a person in distress), it can be perceived very differently by those who receive it, ranging from positively to negatively (it can, for example, be perceived as a point in a spectrum that has patronizing and nurturing as its extreme points). Despite the fact that some work has been carried out on the role of elderspeak and its features and functions, there is a dearth in research that narrow in on its potential occurrence in multilingual encounters. In addition, very few studies have addressed, in detail, specific features that potentially constitute an instance of talk as patronizing, or, as something else, such as nurturing talk.

Data

Our data are collected from two different residential homes. Three recorded episodes of interaction were selected for the purpose of this study. The first episode is a 32.26 min long

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2Naïve raters were blinded to the goals of the research study, and they were asked to complete a 5-point scale for 12 items. The 12 descriptors represented three theoretical dimensions of emotional tone; caring (nurturance, caring, warmth, and support), respect (polite, affirming, respectful, and patronizing), and control (dominating, controlling, bossy, and directive) (Williams & Herman, 2011).
audio recording of interaction between a resident, and a carer. The second episode is a 12.34 min long video recording of interaction between the resident and two carers. The third video recording is a 02.30 min long piece of interaction between a resident and a carer. The carers encounter agitated residents; in one case, in the shape of RTC, and in the other, a complaint about the performance of a member of staff in the care home. The carers in different contexts use sound prolongation as an interactional resource in order to mitigate these tense situations.

Participants

In the first episode, there are two participants interacting in the resident’s apartment. In the second episode, there are three participants interacting in the resident’s apartment. For the sake of ethical issues and abiding with anonymity of the participants, we do not use their real names. Participants were informed about the project and its purpose. They also gave their written and oral consent to partake in the study, prior to data collection. The pseudo-name for the resident is Akram (A) and the two carers in the second episode, are called Ghasna (G) and Tab (T). Akram is a bilingual older woman with Iranian background in her eighties. She has been affected by a stroke before coming to the residential home. It seems that Akram’s second language (some degree of Swedish) has been negatively affected by the stroke, and it is also the case that she may potentially have dementia. Ghasna and Tab are bilingual carers with Tigrinya as their first language, a member of the Semitic language group. They speak Swedish as a second language in the residential home.

In the third episode, two participants are present in the resident’s apartment. The resident, Rasool (R) is an older man with Iranian background in his mid-eighties. He has been affected by a stroke and after the data collection for this study, he was diagnosed with dementia. Claudia (C) is a carer with a Swedish background. She has been working temporarily as a substitute during the summer vacation when the residential home experiences a shortage of labour.

Methodology

For the purpose of this study, we have transcribed and analysed the conversations between participants, and analyses are informed by conversation analysis (CA) methodology. The fundamental assumption of CA is that ordinary talk is a highly organized, socially ordered phenomenon (Hutchby & Wooffitt, 2008). In CA, talk and publicly observable, external behaviours are referred to as interaction (Linell, 2009). There are different types of software to assist in the practical details of transcribing and analysing interaction. For the purpose of this study, the software Praat version 6.0.33 has been used when transcribing interaction and for measuring certain acoustic features of the participants’ speech (Boersma & Weenink, 2017). The transcriptions have been translated from Swedish and Farsi into English. In approaching our data, by means of CA, we have taken an emic standpoint. This means that we study, in detail, the actions that the participants perform as the interaction emerges and progresses (Hutchby & Wooffitt, 2008). The key principle of CA is the next turn proof procedure, which facilitates taking the emic standpoint (Hutchby & Wooffitt, 2008).
Procedure

Acoustic measurements of the participants' speech in addition to CA contribute to the analysis of this study. Although CA is already equipped with some tools for annotating certain prosodic features, such as pausing, loudness, pitch, and sound stretching, it has certain limitations. In fact, the degree of detail of the transcription will affect how the analysis can be done. They also help to construct the local context. The software Praat was used to measure the acoustic parameters of mean $f_0$ and $f_0$ range, and for producing pitch contours. As the first step, the residents' lowest pitch was determined as the baseline pitch within their respective $f_0$ range (Walker, 2013). Akram's and Rasool's baseline pitches are, respectively, measured at 149 Hz and 101 Hz. Regarding the measurements, we consider only those utterances that are free of extra background noise or overlapping with the speech of other parties. Trying to establish a criterion in relation to each resident's pitch range, we chose examples from each resident's utterances from other episodes of interaction, rather than those that were used in the analyses, to determine their baseline pitches in their respective pitch ranges. In the second step, we chose 44 and 34 pieces of the residents' utterances, respectively, from the episodes that are the source of the data for our article. Then, using the software Praat we measured the mean fundamental frequency for each of the utterances. Finally, the prosodic measurements were inserted in Microsoft Excel and the results were two scatter charts for each resident. The medians$^3$ of the charts are relatively equal to midline pitch in the residents' utterances. Thus, we chose 180 Hz and 215 Hz as midline pitch within the residents' $f_0$ range for Akram and Rasool, respectively. In this way, we could determine when the talk produced was high in the speaker's pitch range.

Corpus

In the data, there were 20 occurrences of sound prolongations in responses to RTC or complaints. Sound prolongation was initially detected impressionistically and then it was defined through displaying measurements of the length of each phoneme. Analyses revealed that they were either followed by further escalation of the residents' affect, or by the tense situation being mitigated. On this basis, we divided the occurrences into two categories. Table 1 displays this division. It also displays each occurrence, which has been transcribed, and forms a corpus of numbered excerpts. The first 12 excerpts display sequences in which the resident, Akram displays misalignment towards a carer's task. Furthermore, carers' sound prolongation is responded to with an escalation in Akram's affective stance. In the second category of the occurrences, we found eight examples that show how the residents' misalignment and complaint are mitigated after the carer's use of sound prolongation.

Results

In the results, four excerpts from the corpus are used as representative examples of the two categories of sound prolongation occurring in relation to situations in which the participants display signs of affiliation (See Table 1). Excerpts 1 and 2 display sequences where

$^3$Although mean and median display small differences, median is preferred to mean, because the median is less likely to be skewed by small number of very high pitch; hence it is closer to the concept of midline pitch.
the resident, Akram displays misalignment as a response to the carers’ sound prolongation, leading to an escalation of her affective stance, and further RTC. This is followed by excerpts 3 and 4 that show how the carer’s sound prolongation seem to contribute to the mitigation of a tense situation when the resident Rasool is posing a complaint.

**Sound prolongation and misalignment**

In the first section of the analysis, we analyse examples when sound prolongation in combination with a range of other multimodal resources is followed by a further escalation of the residents’ affect.

**Excerpt 1**

This excerpt occurs after almost 3 min from the beginning of a 12 min 34 s long video recording of the interaction. Since the excerpt gives only a glimpse of the whole context, some ethnographic information might be of importance to the reader. The carers Tab and Ghasna try to prepare the resident, Akram for her morning hygiene. Akram holds a resisting stance toward the carers from the beginning; in other words, Akram’s wish would be calling off the carers’ activity for that day, as she says in Farsi to the carers to just leave her alone. However, Ghasna, one of the carers, insists in Swedish that they just want to help Akram. In this context, multilingualism is an involving factor that should not be underestimated: although Tab and Ghasna have learned a few Farsi utterances, most of the times they do not understand Akram’s utterances in Farsi, whereas, Akram sometimes displays an understanding of Tab’s and Ghasna’s Swedish utterances. This specific multilingual context creates a complex situation. For example, the carers do not understand Akram’s account of her resistance, when she says that she does not need the carers because they go to her whenever they do not find any other job to keep themselves busy. In contrast, the resident Akram understands Ghasna’s Swedish utterance when Ghasna says that the carers just want to help Akram. Although Akram responds in Farsi that she does not need any help of the carers, the carers understand her rejection presumably by her embodied behaviour. Thus, one can see that the wished-for response for the resident Akram and the carers’ wished-for response goes against each other.

**Table 1.** The table displays the two identified categories of mitigation and escalation of residents’ affect after carers’ use of sound prolongation. In addition, the name and the length of the three episodes that are the sources for the corpus are presented, and the number of the examples found.

<table>
<thead>
<tr>
<th>Episode</th>
<th>Length</th>
<th>Escalation after sound prolongation</th>
<th>Mitigation after sound prolongation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Audio recording</td>
<td>00.32.26</td>
<td>1</td>
<td>15</td>
</tr>
<tr>
<td>Akram 101011</td>
<td></td>
<td>2</td>
<td>16</td>
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<tr>
<td></td>
<td></td>
<td>5</td>
<td>17</td>
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<td>6</td>
<td>18</td>
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<td>11</td>
<td></td>
</tr>
<tr>
<td>Video recording</td>
<td>00.12.34</td>
<td>12</td>
<td>3</td>
</tr>
<tr>
<td>Akram 110112</td>
<td></td>
<td>13</td>
<td>4</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14</td>
<td></td>
</tr>
<tr>
<td>Video recording Rasool</td>
<td>00.02.30</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
While the resident, Akram rejects any help from the carers, Tab restarts the conversation with a greeting in Farsi (see the appendix for transcription conventions). The turns of particular interest are marked with boldface.

The carers display that they are aware of the resident Akram’s agitation; however, they still try to make her compliant toward the task. Apparently, Ghasna views their projected action as an offer to help Akram, whereas Akram views the carers’ projected action as a request for performing an activity that the carers are required to perform in accordance with the regulations of the institution. In addition, from Akram’s perspective, the carers’ request is packaged as an offer. In other words, from the resident Akram’s perspective, the carers are not the benefactors of the action, however, they dress up their action with an altruistic lamination and hence display themselves as benefactors. Furthermore, from Akram’s perspective, repeating the request by the carers for doing the same activity may imply an attempt to control her, which itself can be a constituting element of patronizing (Hummert & Ryan, 1996). However, the carers cannot address the resident’s perspective because they do not have access to the viewpoint taken by her on their actions, due to a limitation of access to the content of her utterances. These utterances are exchanged about a minute prior to excerpt 1. In excerpt 1, it seems that Tab and Ghasna try to evoke a pair of greeting exchanges that in Goffman’s (1971) terms could be interpreted as a ‘remedial interchange’ (Goffman, 1971, p.183–184). Deploying greetings in the middle of the interaction (lines 1,3,5,7), the carers anticipate the second pair part that is their preferred ritual response from the resident, Akram. In this way, the carers’ remedial actions seem to be a strategy to soften Akram’s resisting stance and hence restarting the flow of the interaction and thereafter resuming the task. From the carers’ perspective,
Akram does not seem to be willing to provide the preferred response. Instead, Akram responds differently towards the carers Tab and Ghasna; while she stays silent in response to Tab’s greeting (line 6), she overlaps agitatedly with Ghasna’s greeting, displaying her misalignment (line 8). Although Ghasna repeats Tab’s words (line 5), there is an evident difference in the carers’ articulation of the greetings. Unlike Tab, Ghasna prolongs the near-open near-front unrounded vowel /æ/ twice (line 7). Ghasna, first, extends the first /æ/ in Akram, then she prolongs the second /æ/ of Akram’s name (line 7). In addition, Ghasna prolongs the sound segment /m/ both in ‘salam’ and in ‘akram’ (line 7). The prosodic analysis indicates that Ghasna’s utterance is almost 0.8 s longer than Tab’s (Figure 1a,b).

The resident, Akram’s indignation after Ghasna’s repeating Tab’s utterance with sound prolongation is indicated with a marked shift in mean $f_0$, which is measured to 279 Hz at line 9 (See Figure 2). This is evidently higher than Akram’s median, 180 Hz, and her baseline pitch, 149 Hz.

If the carers’ remedial actions succeeded, they would receive the preferred second pair part of the remedial exchange from the resident, Akram. In addition, Akram’s response with a higher mean $f_0$ in line 9 indicates that their remedial activity fails (Figure 2). The carer, Ghasna, however, follows up the remedial action by saying, ‘are you okey akram’ (line 10). Akram repeats her resisting stance toward the whole activity (line 11).

![Figure 1.](image)

Figure 1. (a) Difference between the lengths of Tab’s and Ghasna’s utterances. There are 3 lines of translation of utterances. Line 1 represents the translation of Tab’s utterances. Line 2 represents the translation of Ghasna’s utterances. Finally, line 3 represents the translation of the start of Akram’s utterances. The numbers in the parentheses display the length of the utterances. While the length of Tab’s utterance is (0.6) s, the total length of Ghasna’s utterance is (1.37) s. (b) Comparing the lengths of each phoneme in the original utterances of Tab and Ghasna. While the upper textgrid shows the length of each phoneme in Tab’s utterance, the lower textgrid displays the length of each phoneme in Ghasna’s utterance. Comparing the length of each phoneme Tab’s utterance (upper) to its counterpart phoneme in Ghasna’s utterance (lower), one can say that Ghasna mostly prolongs sound segments in her utterance. The longest instances of prolongation happen in Ghasna’s utterance in the second and the third /æ/ and the first and the second /m/.
not only repeats her stance, but she also reinforces it by responding with even a higher mean f₀ measured to 293 Hz, which is higher than the mean f₀ of her first opposition at line 9 (Figure 3). The carer, Ghasna’s utterance displays a similar pattern of sound prolongation as before (lines 3 and 7) in Akram’s name when she articulates the near-open near-front unrounded vowel /æ/ in line 10 (Figure 4).

While Ghasna speaks in excerpt 1, she stands very close to the resident, Akram’s bed. However, due to the angle of the camera, we cannot make any observations whether Ghasna is touching Akram or not. Such bodily actions may of course also affect the resident’s perception of what is taking place, adding to her agitated stance, alongside their
The use of sound prolongation in repeating the previous utterance, and addressing Akram by her name.

By comparing the utterances in lines 5, 7 and 10, it can be observed how Akram raises the mean $f_0$ of her utterance to reinforce her resistance when she is addressed with a phoneme in her name being prolonged. In this respect, it may be considered a case of elderspeak (De Bot & Makoni, 2005). Ryan, Giles, Bartolucci, and Henwood (1986) consider elderspeak as an over-accommodation of some linguistic features such as high pitch, decreasing speech rate, lilting intonation pattern or simplification to older individuals that can be received as stigmatizing actions by the older recipients. Their findings suggest that although many older recipients of elderspeak find it demeaning and patronizing, there are many other situations where older recipients, despite their despising of it, just tolerate elderspeak (Ryan et al., 1986). As an example of tolerance for elderspeak, they maintain that an older individual is likely to accept elderspeak when s/he construes the carer to be altruistically inclined (Ryan et al., 1986). Facing the resident, Akram’s RTC, Ghasna tries to achieve Akram’s compliance by repeated greetings, insisting on doing the activity through taking an altruistic stance and supporting that stance by using sound prolongation for adapting to the perceived situation. However, Akram’s reinforced agitation (lines 8, 9, 11), and her resistance prior to excerpt 1, indicate that she does not accept Ghasna’s altruistic stance for insisting on doing the activity through using sound prolongation and mentioning her name. In this way, the repeated greetings and the use of sound prolongation particularly for addressing Akram may be considered as elderspeak in the sense of patronizing talk that is not accepted by Akram.

**Excerpt 2**

Excerpt 2 is the immediate continuation of the activity of preparing resident Akram for her morning hygiene presented in Excerpt 1. The carers continue with their job, at the same time trying to convince the resident Akram to comply with the task. Akram still does not show alignment with the task at hand. Instead, she begins shouting.

01 A: faghat das az [sar e man ]
    just hand from [head of me]
    just leave me alone
02 T: [lyssna ak ]ram lyssna lyssna lugn lugn
    [listen ak ]ram listen calm down calm down
03 T: “alhamdullelah (0.7) alhamdullelah” (218Hz)
    thanks to god (0.7) thanks to god (218Hz)
04 A: chera dast az sar e man v (256Hz) [ ar nemidarid ]
    why hand from head of me o(256 Hz)[ff not ing take you]
    why do not you leave me alone?
05 G: ([ A:L])
06 G: [HAM:DULLllelahh (254Hz)]
    [ANK:S TO god (254 Hz)]
07 A: [ALHAMDULLA NADARE:::] (395Hz)
    THANKS TO GOD NOT HAS
    THERE IS NO:::.THANKS TO GOD (395Hz) (shouting)
The resident, Akram, reluctantly responds to the carer’s aligning request and insistently demands the carers to leave her alone (line 1). Despite Akram’s demonstrated reluctance, Tab directs Akram to be calm, then Tab says ‘thanks to god’ without any noticeable acoustic features (lines 2,3). Tab leaves a pause before she repeats ‘thanks to god’, a second time (line 3). However, resident Akram does not provide a preferred response to ‘thanks to god’. It is also reasonable to argue that ‘thanks to god’, from Tab’s perspective, is expected from Akram to be repeated as a preferred response to Ghasna’s following up of the greeting that was initiated earlier (Excerpt 1, line 10). However, the resident resists agitatedly against the directive and asks why they do not leave her alone (line 4). It is reported in the literature that directives are means of controlling another person and hence establishing patronizing talk that results in certain asymmetries between participants (Ervin-Tripp, 1976). While Akram is displaying being non-compliant, the carer Ghasna overlaps with Akram by repeating the preferred response, ‘thanks to god’ (lines 5, 6). Akram does not align with the repeated directive and begins shouting ‘there is no thanks to god’ with the highest mean $f_0$, of her utterances, measured to 395 Hz (line 7 and Figure 5). Although Ghasna just repeats Tab’s utterance (line 2), the resident, Akram’s response to Ghasna is more agitated (line 3), which is observable in Akram’s mean fundamental frequency (Figure 5). Although Ghasna repeats Tab’s utterance, it is longer than Tab’s, due to the sound prolongation (Figure 6(a,b)).

It should be noted that in both excerpts 1 and 2, there is a repetition of an action, i.e. addressing Akram with a speech that contains sound prolongations. Apart from features potentially perceived as patronizing to Akram, the repetition of the action per se might be frustrating to her.

**Summary of analyses of sound prolongation and misalignment**

In excerpts 1 and 2, different factors appear to be involved in the escalation of the resident, Akram’s agitation. We must not forget that here it is the task of morning hygiene that Akram obviously does not comply with, in spite of the carers’ various attempts. On the one hand, Akram resists the task, positioning herself against it, misaligning with the carers. On the other
hand, through persisting in performing the task, the carers position themselves pro-task and misalign with Akram. Williams and Herman (2011) maintain that some communication behaviours used by carers to address older persons may be associated with ‘baby-talk’, including a mismanaged convergence of prosodic features (Ryan et al., 1986) conveying incompetence, and potentially perceived as patronizing. In a similar vein, the carers’ greetings, directives, and actions in the above circumstance are perceived as imposing, patronizing, and belittling from Akram’s perspective; thus, as elderspeak. This may explain Akram’s frustration. Another obstacle is the shortage of a shared spoken language between participants. Similar to the findings of Plejert et al. (2014), it can be observed how the carers appear not to be able to attend to the more precise nature of the resident’s resistance in terms of understanding the details of her speech. Therefore, they resort to the few resources they have for trying to mitigate the tense situation, such as sound prolongation. However, rather than having a soothing effect, these attempts backfire.

Figure 6. (a) Comparing the length of Tab’s utterance with Ghasna’s. Ghasna’s articulating the utterance ‘thanks to god’ is 1.0 s long, however, Tab articulates the same utterance in 0.6s. (b) Comparing the lengths of each phoneme in the original utterances of Tab and Ghasna. The higher spectrogram shows the length of each phoneme in Tab’s utterance, and the lower spectrogram displays the length of each phoneme in Ghasna’s utterance. Comparing the length of each phoneme in Tab’s utterance (left) to its counterpart phoneme in Ghasna’s utterance (right), we can say that Ghasna prolongs some sound segments in her utterance. The longest instances of prolongation happen in Ghasna’s utterance in the first /æ/ and /m/. Ghasna’s utterance is totally 1.0 long, while Tab’s utterance is 0.6.
**Sound prolongation and alignment**

In the second section of the analysis, our focus is on sequences in which the carer’s utterances using sound prolongation appears to contribute to the mitigation of the tense situation. In these examples, the sound prolongation in the carer’s response to the resident’s agitation aligns prosodically with a markedly raised pitch in the resident’s contribution.

**Excerpt 3**

Excerpts 3 and 4 are parts of an episode where the resident Rasool, after taking a shower with the assistance of a carer called Andy, finds out that Andy has removed the footplate from Rasool’s wheelchair. In addition, Andy has left without putting the footplate back. The resident becomes agitated and calls for help through the ringing bell. Shortly after hearing the bell, another carer, Claudia, enters the room to help the resident. She notices the source of Rasool’s complaints and reinstalls the footplate on the wheelchair. However, Rasool carries on with his complaint, which includes Andy’s conduct in regard to the footplate. The lines marked in boldface are particularly the focus of the analysis.

```plaintext
01 R: TA UMAD AVAI KE UMAD ino ((smacks on his thigh.))
    AS SOON AS CAME HE FIRST THAT CAME HE IT ((smacks on his thigh.))
    AS SOON AS HE ARRIVED FIRST it ((smacks on his thigh.))

02 R: (mikane) mindaze door= ((252 Hz))
    removing he throwing he ((252 Hz))
    he removes and throws away ((252 Hz))

03 C: =m::: (begins shaking her head, at the same time protruding her lips.)

04 (0.7)

05 R: [[dast]]
    [(hand)]

06 C: [.t .t ]

(0.6)

07 R: chan martabam gof andy(0.4)inaro dast nazar((176 Hz))
    several times also said andy(0.4)them touch not do((176 Hz))
    several times i said that andy(0.4)don’t touch them((176 Hz))
```

Rasool begins addressing Claudia with his story about Andy’s behaviour. Andy is not in the room at the moment (lines 1, 2). Rasool says that as soon as Andy enters the room, as the first thing, he removes the footplate and throws it away (lines 1, 2). The mean pitch of Rasool’s utterance is 252 Hz, which is higher than his baseline and median (Figure 7). The loudness of Rasool’s voice (line 1) as well as his high pitch (lines 1, 2) signal Rasool’s distress.

Claudia’s response is a prolongation of ‘m:::’ accompanied by some gestures including shaking her head and protruding her lips (line 3). Plejert et al. (2014) show how carers use minimal responses, including ‘mm’ in multilingual encounters, irrespective of them being a display of actual understanding or not. Used as signs of active listenership in response to expressions of distress and complaints, they may be perceived as dispreferred from the perspective of the person complaining (Plejert et al., 2014, p. 12). However, in the above example, Claudia’s minimal response (line 3), in combination with other embodied resources, seem to be successful in managing Rasool’s distress. Although Rasool continues
with his complaining, his pitch falls to 176 Hz (line 8) (Figure 8), which is lower than his median, which is 215 Hz.

It can be observed that Claudia evaluates the act of removing the footplate negatively (line 3). While she positions herself against the act of removing the footplate, she aligns herself with Rasool by means of a range of interrelated embodied and verbal resources, clearly visible and audible to Rasool. After overlapping with Claudia’s clicks, displaying disapproval of removing the footplate (line 6), Rasool’s pitch drops to 176 Hz and he says that he has reminded Andy several times that he should refrain from removing the footplate (line 8). Claudia’s clicks can be considered a continuation of her negative evaluation of removing the footplate (line 6).

Although Claudia and Rasool have limited access to a shared spoken language, Rasool gets his message through, and Claudia appears to understand the basic source of the trouble. More importantly, she manages to provide a response that is treated as satisfactory to Rasool. While she puckers her lips, she shakes her index finger in the air from side to side indicating her rebuke of removing the footplate. Despite overlapping Rasool’s cut-off utterance (line 5) with her clicks (line 6), Rasool’s pitch drops to 176 Hz (line 8). Rasool’s explanation of the source of his complaint with a lower pitch may indicate mitigation (line 8). Jansson, Wadensjö, and Plejert (2017) highlight the importance of carers’ abilities in managing complaints in multilingual encounters that involve

Figure 7. Complaining agitatedly with high pitch. Rasool’s mean fundamental frequency is 252 Hz when he begins complaining about Andy.

Figure 8. mitigation of the situation. Rasool’s mean fundamental frequency falls to 176 Hz after Claudia’s multimodal response that is accompanied by sound prolongation.
participants who do not share a common language and display a range of means by which this can be achieved. Claudia’s verbal and embodied attempts, including sound prolongation, are examples of successfully managing a potential escalation of a resident’s agitation, despite limitations in shared spoken resources.

**Excerpt 4**

Although Claudia displays alignment with Rasool’s agitated stance, Rasool continues to complain about Andy for some time. This is shown in excerpt 4, below.

01 R: KHU BABA::: (A::) INE ((245 Hz))
WELL DUDE (LOOK:) THIS IS IT ((grabs his thigh with his left hand from below and raises it, then drops it))
02 C: ja[         ::::          ]
03 R: [ chikaresh konam ]
   [what shall I do with it]
04 C: a::
05 R: xo ino gozashtan bara( ) xo ino gozashtan baraynke
   well they put it here for ()well they put it here for
06 R: age yewaxt nare pa( ) bezare (bexabe) ((153 Hz))
   if it does not go foo( )lay it (rest it)

While Rasool lifts his thigh with his hand, he explains the situation of his disabled leg with a rather high pitch that is measured to 245 Hz (Line 1).

Figure 9 shows that Rasool’s highest pitch is when he says, ‘this is it’, with reference to the disability of his leg (Figure 9). Claudia responds (line 2), displaying her alignment with his account with a prolonged ‘ja’ (yes). At that point, Rasool overlaps with her and says ‘what shall I do with it’ (line 3). Although much of Claudia’s sound prolongation fades out in this overlap (line 4), she stretches the sound quite a bit after the overlap (Figure 10).

Rasool explains why it is important for him to have the footplate installed on his wheelchair (lines 5, 6). He says that he needs to rest his feet on it. His pitch is measured at 153 Hz, which is below his median of 215 Hz (Figure 11).

![Figure 9](image_url)

**Figure 9.** Rasool’s pitch at the beginning of the excerpt. Rasool’s mean fundamental frequency is 245 Hz when he mentions to the situation of his disabled leg.
Claudia evaluates Rasool’s complaining positively by ratifying his contribution (lines 2, 4). Thus, she takes herself a supporting position vis-à-vis Rasool’s emphasis on his disabled leg, and at the same time, she aligns herself with him, despite not understanding the very details of his single words but drawing also from his body movements. In response, Rasool’s pitch drops from 245 to 153 Hz presumably as he perceives Claudia’s response, including her gestures and sound prolongation, affiliative. The mean of Rasool’s pitch when he says ‘INE’ (this is it) referring to his paralysed leg (line 1) is almost 400 Hz (Figure 9). At the same time, he raises his leg using his hand. These actions seem sufficient for Claudia to display her alignment (Figure 10). Finally, Rasool’s explaining the function of the footplate with a lower pitch may indicate that the situation has been mitigated (lines 5, 6).

Summary of analyses of sound prolongation and alignment

In excerpts 3 and 4, we have analysed instances of interaction in which a carer uses sound prolongation as a resource, together with embodied means (like protruding her lips), to display her alignment with a resident’s complaint. These ways of demonstrating an aligning stance, despite limitations in the participants’ shared spoken resources, appear to mitigate the resident’s level of affect.
Concluding discussion

The findings of this study indicate that carers use sound prolongation as an interactional resource when they face residents’ distress in multilingual encounters, where participants are not matched concerning language. In our data, the residents as recipients of elements of talk produced with sound prolongation appear to assign different meanings to the use of the prolonging feature. This, in turn, seems to be dependent upon the activities at hand. In this respect, not only Ochs’ (1996) observation in regard to a variable usage of a linguistic index from one situation to another is verified, but it is demonstrated how using a linguistic resource, namely sound prolongation in the context of multilingual older people’s care, contributes to different outcomes from one person to another, and differences in the activities in which the interlocutors are engaged. This, in turn, is interesting in terms of participants’ demonstrable perceptions of the actions and activities at hand. What we have observed, may be summarized as follows:

(1) In the case of the resident Akram, from her perspective, as displayed by her RTC, there appears to be a mismatch between her wishes and the activities and actions carried out by the carers. The carers’ actions as manifested through their utterances, but not by their embodied conduct, indicate that they are altruistically inclined, trying to make Akram compliant with the task at hand, and using sound prolongation as a resource to signal an empathetic stance, perhaps also since the lack of language understanding makes prosody one out of few resources that the carers can draw upon in order to address Akram and her expressed distress (See Pleijert et al., 2014). However, as observed from Akram’s responses, she appears to perceive the carers’ attempts as imposing. Ghasna tries to display her altruistic stance (Sorjonen & Peräkylä, 2012), first through saying to Akram that ‘we just want to help you’, and secondly by trying to establish a remedial interchange (Goffman, 1971) by initiating remedial actions in collaboration with Tab. Ghasna uses sound prolongation in repeating Tab’s greeting and pursues a greeting in response, which would be a preferred second pair part in the establishment of this remedial interchange. Had this succeeded, it might have worked as a restart of the activity of hygiene. In sum, there seems to be a mismatch between interlocutors in several respects, not only at the micro-level of single turns and their responses, but also in interlocutors’ engagement in shared activities, where Ghasna and Tab are involved in one, and resident Akram in another.

(2) In the case of Rasool, from his perspective, Claudia’s actions are matched with his complaint in the sense that they address his distress over the recurrent action by Andy of removing the footplate of the wheelchair. Claudia’s response to Rasool’s agitation includes first, paying attention to Rasool’s complaining, and recognizing the source of the problem, secondly solving the problem, and finally addressing Rasool’s emotion by displaying affiliation in numerous ways. Her affiliation is established by taking an embodied stance against Andy’s conduct and using sound prolongation as a resource to display her affiliation. In other words, although there is a linguistic mismatch between the two participants, and many of the details of Rasool’s utterances are incomprehensible to Claudia, both Rasool and Claudia
are engaged in, and orient towards a common activity, that of aligning themselves against the removal of Rasool’s footplate.

In contrast to Marsden and Holmes (2014), who report on the appropriateness of using features of elderspeak, including using first names and imperatives, our findings, through relying on real-life observation of residents’ interaction with carers in a multilingual setting, suggest that rather than drawing a determined and pre-established conclusion about what interactional resources to be used when and how, it is of great importance to pay attention to responses that signal the effects of an utterance and/or action as perceived by the recipient, in the multitude of activities that need to be carried out within older people’s care. As we demonstrated, in one case, using imperatives and greetings, and producing the resident’s first name with a sound prolongation was not comforting, but was responded to by further RTC, indicating that the resident perceived the actions as imposing and/or controlling. This is similar to the findings by Williams et al. (2009), in the sense that carers’ use of elderspeak seemed to reinforce RTCs. In terms of Rasool and Claudia, however, the claims by Marsden and Holmes (2014) of elderspeak features functioning in a nurturing way is supported, since the sound prolongation, in combination with certain embodied conduct, such as facial expressions, protruding lips, gaze and body-posture by Claudia, emphasized that she was aligning with Rasool, despite limitations in understanding the exact details of what Rasool was saying. Thus, features that have traditionally been associated with the term ‘elderspeak’ may or may not be a comforting interactional practice in multilingual (or monolingual) situations where carers and care recipients do not have access to many common resources in order to establish affiliation. This diversity is in itself an interesting aspect of our findings and can be related to the methodology used for the purpose of this study. Although previous studies on elderspeak, such as Hummert and Ryan (1996), address diverse messages embedded in similar types of talk, a novelty of our study is that we display differences in orientations by participants, highlighting their perceptions as observably demonstrated through their talk and actions, based on real-time, turn-by-turn conduct, possible by means of CA. Our results indicate that further CA-based studies on other features of elderspeak, or of how forms of address in an interaction between interlocutors in older people’s care, may inform and improve care practices, grounded in the interlocutors’ own perspectives. Rather than basing recommendations for how to communicate with older people, and older people with cognitive decline in multilingual as well as monolingual circumstances, on pre-designed, theoretical models and ideas of best practice concerning communication, our study stresses that interaction is a complex business. Awareness of details in the care recipients’ responses, also to initiatives made with the best of intentions, such as the greetings by Tab and Gashna, may help carers to more quickly try to alter their methods of handling troublesome situations, such as expressions of distress, or RTC.

Acknowledgments

We are grateful for the participation of the staff and the residents in the included residential homes.
Funding

This work was supported by the Stiftelsen Solstickan [2017]; Vetenskapsrådet [2013-2020].

Statement of interest

The authors declare no conflict of interest. This work was funded by the Swedish Research Council and Solstickan.

References


**Appendix: Transcript conventions**

120 Numbers in the head of each line indicate the number of that line. For example, the number in the left margin indicates the line number 120.

[ ] Two left brackets bridging two lines, one above the other one, indicate the place of overlap onset between two different speakers.

] Two right brackets bridging two lines, one above the other one, indicate the place of overlap terminating between two different speakers.

= Equal signs come in pairs, one in the end of a line and the other one in the start of the next line, indicate the second speaker follows the first one without discernible silence.

(0.5) Numbers in parenthesis indicate the length of silence in tenths of seconds. For example the number in left margin indicates 5/10 s of silence.

(.) A dot in parenthesis indicates very short silence which is less than 2/10 of a second.

:: Colons are used to indicate the prolongation or stretching of the sound just preceding them. The more colons, the longer the stretching is.

(0.5) - A hyphen after a word or in the middle of a word indicates cut-off or self-interruption.

Words Upper case is used to indicate some form stress or emphasis on the part of the word.

∞ When there are two degree signs, the talk between them is markedly softer than the surrounding talk.

(() Double parentheses are used to indicate transcriber’s description of events.
(Word) When an utterance is in parentheses, it indicates uncertainty on the transcriber’s part; it cannot be heard clearly, but represents a likely possibility.

() Empty parentheses indicate something is being said, but no hearing could be achieved.

↑ Indicates rising intonation.

hh Hearable aspiration is shown where it occurs in the talk by the letter (h), the more h’s the more aspirations.