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Towards Enhanced Emotional Interactions with Older Persons: Findings from a Nursing Intervention in Home Health Care

CHARLOTTE VEENVLIET MSc^A, HILDE EIDE PhD^B, MARTIJN A DE LANGE PhD^C, AND SANDRA VAN DULMEN PhD^{A,B,D}

a NIVEL (Netherlands Institute for Health Services Research), Utrecht, The Netherlands
b Faculty of Health Sciences, University College of Southeast Norway, Drammen, Norway
c Department of Social and Cultural Psychology, Radboud University, Nijmegen, The Netherlands
d Department of Primary and Community Care, Radboud University Medical Center, Nijmegen, The Netherlands

ABSTRACT

Background. Living at home with a physical condition that requires assistance places high emotional burden on older persons that needs to be attended to by nurses. However, nurses in home health care have previously been found to communicate primarily in an instrumental way. This increases the risk that emotional concerns are being overlooked or not responded to in an appropriate way.

Objectives. The aim of the study was to enhance emotional interactions with older clients in home health care, through individual feedback intervention developed for involved nurses.

Methods. Ten nurses/nurse assistants participated in this exploratory pre-post test study. They were asked to audiotape visits with older persons (65+) before and after an audio-feedback intervention. Older clients' implicit and explicit expressions of emotional concerns as well as nurses' responses to these expressions were rated with the Verona Coding Definition of Emotional Sequences (VR-CoDES). The nurses were given feedback based on the audio-recordings and the observations and were asked to reflect on the audio-feedback intervention.

Results. The nurses valued the audio-feedback. Overall, 201 cues and 35 concerns were expressed during 58 recorded visits. At post-intervention, 29% of identified cues and concerns were nurse-initiated. At pre-intervention it was 18.8% (NS). Nurses provided space in 73.7% of their responses. During shorter visits nurses tended to provide less space ($p=.06$). After the intervention,

20.9% of the cues and concerns were ignored; before the intervention this was 25% (NS).

Conclusions. Receiving feedback was taken in very well by the nurses working in home health care and the feedback intervention seemed to enhance emotional interactions in home health care with older persons. Probably due to the low power of the study, the differences between pre- and post-intervention measurements were not statistically significant. Studies with larger samples should be useful.

INTRODUCTION

Worldwide, the number of older people aged 65 years and over is increasing considerably. In 2010, an estimated eight percent of the world's population was aged 65 or older. By 2050, this is expected to increase to 16 percent [1]. In the Netherlands, the number of older people will increase from 2.9 million in 2014 to 4.7 million in 2041 [2]. This global phenomenon is not only caused by declines in number of births but also by improvements in longevity. With fewer children entering the population and people living longer, older people are making up an increasing share of the total population [1].

This growing number of older people will challenge national infrastructures, particularly health systems [1].

Many health policies are therefore aimed at 'aging-in-place'. Aging-in-place is defined as remaining living in the community as long as possible, rather than in residential care [3]. Older people prefer to age in place, because in this way they maintain their independence, autonomy and connection to social networks, including friends and family [4, 5]. Besides, having people remain in their homes for as long as possible also avoids the costly option of institutional care [6].

The promotion of aging-in-place places great demands on home health care, because clients confined to their homes by illness and disability will rely more on it. Home health care offers a range of services, including skilled nursing care, occupational therapy, physical therapy and assistance for clients in their own residence [7]. Such coordinated services may prevent, delay or be a substitute for temporary or long-term institutional care [8]. Home health care is therefore an important component of today's health care system.

Living at home with a physical condition that requires assistance places high emotional and psychological burden on older persons [7]. There is a strong association between the number of concerns clients experience and psychological distress [9]. Concerns should therefore be picked up and responded to appropriately. However, it has been found that nurses in home health care communicate primarily in an instrumental way, thereby largely ignoring clients' emotional concerns [10]. An explanation for ignoring concerns might be that many people do not express their concerns in an explicit way but more often as a cue to an underlying emotional state that requires attention [11]. This engenders the risk that concerns remain undetected or not responded to in an appropriate way. However, the more or less explicit expressions of worries or emotional needs may not only refer to uncertainties or anxiety about people's medical conditions, but may also be a sign of current life events, social problems or existential issues.

As nurses' attention to emotional concerns should become part of routine home health care, interventions to help nurses learn to detect clients' emotional cues and concerns is posited to be helpful.

Aims

The aim of this study was to develop a feedback intervention to increase nurses' communication skills and ability to detect emotional burden in the home health care setting. The effectiveness of this feedback intervention, called ZORG (Dutch for CARE), was tested in an exploratory study using the following research question: Does the feedback intervention ZORG improve nurses' recognition of and responses to older people's concerns?

We expected that with trained nurses, clients would express their emotions more often as explicit concerns and nurses will ignore patients' emotional concerns less often, will provide more space to talk about emotions and will initiate such talking more often.

METHODS

Design

Nurses/nurse assistants working in home health care participated in this exploratory pre-post test study. They were asked to audiotape visits with older persons (65+) before and after an audio-feedback intervention called ZORG and to reflect on their experiences with this audio-feedback.

Participants

Ten female nurses/nurse assistants working in home health care participated in this exploratory pre-post-test study. They were recruited via home health care organizations and through messages on social media (LinkedIn and Twitter). All nurses agreed to audio-record two series of at least three home care visits - pre and post intervention, respectively - with older clients and to participate in an audio-feedback conversation. After having received oral and written information about the study, these nurses received an audio-recording device to record the visits. This device was attached to the upper arm and nurses were asked to start recording when entering an older client's home and to stop recording when they left the house. They were also asked to fill in a questionnaire which asked about their subjective evaluation of their own communication. This questionnaire was completed after recording the first series of audio-recordings and before receiving the intervention. After recording the second series of visits they were also asked to fill in a questionnaire which contained an open question about their experiences with the feedback intervention.

A client was eligible for the study if he or she received care at home and was aged 65 and over. The clients received care like assistance with personal care (washing/dressing), getting their appropriate medication and caring for their wounds. The clients were recruited by the nurses themselves. Prior to making the audiotapes the clients were asked to sign an informed consent form. This consent clearly indicated that the data will be anonymised, will be safely stored and that the results can never be traced back to individual persons and will never be listened to in public.

Data collection

Intervention: Feedback intervention ZORG [CARE]

The intervention consists of an individual feedback conversation with a nurse working in home health care and is called ZORG, the Dutch word for ‘care’ as well as ‘concern’. The individual letters of the word ZORG stand (in Dutch) for: see what’s going on, discover the underlying problems, respond attentively and expand further.

This intervention provides nurses opportunities to become more aware of their current way of communicating, including their responses to an older client’s hint to underlying emotional worries. The letters of the word ZORG were used as help to make nurses more aware of the existence of cues and concerns in communicating with older people. The individual feedback conversations were carried out in January and February 2015.

Procedure

In the individual feedback conversation the researcher firstly asked whether the nurse had received feedback about their communication with older clients before and asked about her expectations of this feedback. Then, the researcher spoke about the intention not to criticize someone, but to give new insights in their functioning as a nurse. The actual feedback consisted of three steps:

Step 1: First part of the conversation – Increasing knowledge

The first part of the conversation aimed to increase nurses’ knowledge about under-treatment of mental health problems in older people. Different causes, like stereotypes people have about older people, were discussed. The nurse was also asked to tell more about her own opinion about the possible causes of under-treatment of mental health problems. This step is meant to create more awareness about the potential emotional burden older people might have. In the first part the nurse also became familiar with the concept of ZORG and its different components.

Step 2: Second part of the conversation – Reflective practice

The second part consisted of creating more awareness by listening back to examples of nurse’s own audio-recordings made in the first series of visits, using reflective practice. Reflective practice is a conscious, dynamic process of thinking, analysing and learning about experiences that will provide new insights into people themselves and their functioning in practice [12]. By use of reflective practice nurses reflected on these examples and their actual functioning, thereby stimulated by the researcher. This reflection was based on ZORG. In reflection every step is discussed and reflected by the nurse herself. After that, the researcher asked for her opinion about reflecting on her own audio-recorded visits.

Step 3: Last part of the conversation – Goal setting

In the last part the nurse was asked to describe a specific goal for herself. This goal should be formulated in terms of an implementation intention (“Next time I visit a client, I will...”). The nurse received a leaflet which explains ZORG, they were asked to record a series of post-intervention audio-recordings and to fill in a questionnaire. Their opinion about the feedback session was also asked. Finally, as a grateful thanking and stimulation for making additional audio-recordings, they received a voucher worth twenty euros.

Coding nurse-client communication

In total, 58 audio-recordings were made by the nurses, 29 in the first session (pre-test) and 29 in the second session (post-test). The intention for this study was to get three audio-recordings in the first session and three audio-recordings in the second session. However, two nurses did not complete the whole study. One nurse had two

audio-recordings in the pre-test and another nurse had two audio-recordings in the post-test. As some nurses recorded more than three visits, for this study an independent researcher randomly chose 3 recordings of the pre-test and 3 recordings of the post-test. The observations of these recordings were done blindly, i.e. without knowing whether a particular recording was made in the pre- or the post-intervention phase of the study.

VR-CoDES

All recorded visits were coded using a validated framework for the detection of clients' emotional utterances [13]. These emotional utterances were coded as a cue or a concern using the Verona Coding Definitions of Emotional Sequences (VR-CODES-CC) [11]. A cue is defined as 'a verbal or non-verbal hint which suggests an underlying unpleasant emotion that lacks clarity', while a concern is defined as 'a clear and unambiguous expression of an unpleasant current or recent emotion that is explicitly verbalized with or without a stated issue of importance' [11]. After observing, these cues and concerns were also coded as to whether they were initiated by the nurse or by the older client. Three sumscores were computed and used as dependent variables in the statistical analyses: 1) The total sum of cues and concerns before and after the ZORG intervention, 2) Separate sumscores of cues and concerns and 3) Sumscores of nurse – or patients initiated cues and concerns.

The responses of the nurses on expressed cues and concerns by clients were also coded, using the VR-CoDES-P [14]. Only immediate responses to cues and concerns were coded, which refer to the first verbal reaction after a cue or a concern. In conformity with the coding protocol, responses were coded in terms of two conceptual multi-layered factors; 'explicitness' and 'space provision' for further disclosure of the cue or concern, see figure 1. First a response was coded as being 'explicit' or 'non-explicit'. To be coded as explicit, a response should include either a specific or an explicit reference to the words in the preceding cue or concern, or be very clear in that it unambiguously refers to the stated cue or concern. A non-explicit response is any response which does not specifically or explicitly mention either the content or the emotion of the cue or concern or is ambiguous. After that, the explicit or non-explicit response was coded as 'providing space' or 'reducing space'. Providing space refers to any response that actively or passively invites or allows the client to say more about their cue/concern or worry. The response is rated as reducing space for further disclosure when a nurse, for example, ignores the cue or concern or offers any other behaviour which reduces the opportunity for the client to say more about the cue or concern [14]. Two sumscores were computed and used as dependent variables in the statistical analyses: 1) Sumscores of explicit or non-explicit responses and 2) Sumscores of providing space and reducing space before and after the ZORG intervention.

VR-CoDES has been used before to rate cues, concerns and responses in consultations with psychiatrists [15], dentists [16,17], nurses in oncology [18 - 21], nurses in pediatric oncology [22], physicians in primary care [23, 24] and medical students [25]. All the studies reported a moderate to good inter-rater reliability. The VR-CoDES coding scheme was incorporated into Observer software [26] to rate recorded visits directly from audio- recordings.

[FIGURE 1]

Data analysis

The effects of the feedback conversation were measured by comparing the blinded and random order observations of the audio-recordings at pre- and post-test using SPSS 21.0. Firstly, frequency tables were made to describe the demographic characteristics of the nurses. After that we conducted bivariate tests to assess whether there were significant differences between the pre- and post-test. To account for the variation between the nurses, we used multilevel models to determine whether there was a predictive relation with the fixed variables and the dependent variables (multilevel Poisson regression analyses for count variables). The multilevel models consisted of the audio-recorded care moments nested within the nurse working in home health care.

Inter-rater reliability

All recorded home visits were coded by one observer (CV). Ten percent (n=6) of the consultations were coded by a second observer (EG) independently. Reliability was tested using the intra-class correlation coefficient (ICC). The mean intraclass correlation of patients' expressed cues and concerns was 0.96. The mean intraclass correlation of the nurses' responses was 0.89 (range 0.52 – 1.00). This inter-rater reliability of the VR-CoDES-CC and VR-CoDES-P between the two observers was found to be satisfactory to good [27].

RESULTS

Characteristics of the nurses

Ten female nurses working in home health care participated in this study (see table 1). Most of them (80%) were aged 40 years and over. Half of the nurses worked 10 years or more in home health care. Most of the nurses (70%) had received a communication course before. Each nurse visited on average 9 clients a day (range 3 – 12 clients). The mean duration of the recorded visits was 29.5 minutes (range 1.5 – 92 minutes).

Expression of cues and concerns

In 45 of the 58 audio recorded visits (78%), cues or concerns were identified. 7 out of the 13 visits with no identified cue or concerns (54%) were short (<30 minutes). In only one longer visit (>45 minutes) no cues or concerns were identified. A total of 236 cues and concerns were expressed (see Table 2). Clients expressed on average 3.5 cues and 0.6 concerns per visit. When comparing the expressed cues and concerns between the pre- and post-test, we found that the percentage of expressed concerns was higher in the post-test (17.7% versus 11.6%), but this did not differ significantly (p=.38).

[TABLE 1]

[TABLE 2]

[TABLE 3]

Nurses' reflections on the audio-feedback intervention ZORG

Receiving feedback was taken in very well by the nurses working in home health care. Many nurses said that they had not received any individual feedback before. Most of the time they received feedback in group sessions in which they talked with other nurses about their clients. Some remarks from nurses about their experiences with receiving feedback follow: "It is nice to get feedback, especially because you are always working on your own" and "I think it's very useful to get feedback about my way of communicating. I can only learn from it".

None of the nurses had ever listened back to their visits with clients. When asked about their opinion with the feedback intervention ZORG, they all said it was an eye-opener for them to listen to examples of their own audio-recordings using reflective practice together with ZORG. Some said: "The feedback intervention ZORG is very useful. It confirms my ideas about where I spend my time on in daily practice. I think it is a real asset for all home health care nurses and caregivers in general" and "I think it is good to reflect on my own communication with older clients: what are my strengths and where can I learn from? This is especially true for the home health care setting, in which you have to rely on yourself. Every nurse in home health care should be offered such an intervention". Another nurse mentioned: "I am very satisfied with the feedback intervention ZORG. This intervention provides a concrete format on how to communicate about psychological issues". Two nurses especially mentioned that ZORG influenced their sense of awareness: "I makes me become more aware of myself" and "Through this feedback intervention, I have learned about opportunities to go deeper into issues or questions mentioned by my clients. By listening back to my own recordings, I have become more aware of my clients' questions and I recognize the opportunities to response to these." Other nurses mentioned: "ZORG has given me valuable information about the whole care process with my clients and about my own skills" and "It is really practical and helps you to be alert on what is really going on in your clients and to elaborate on that".

Effectiveness of the feedback intervention ZORG

Providing and reducing space by a nurse

The majority of responses consisted of providing space by a nurse. In total 174 of the responses given by a nurse (73.7%) provided space to a client. Most of the responses were non-explicit (N=133) and a lot of these responses (N=60) were minimal prompts or words to encourage the client for further disclosure (Back channel, e.g. "Yes..", "Hmm"). Other frequently used responses to provide space for a client were acknowledging the mentioned cue or concern (N=32) or explicitly exploring the emotional affect (N=31). When comparing the pre- and post-test nurses provided space in 76.6% of their responses at post-intervention and in 71.4% pre-intervention responses (NS). When looking at predictive factors, it turns out that there is an almost significant predictive relation between the average time a nurse is with a client and the number of providing space responses. During longer visits nurses tended to provide more space ($p=.06$), see table 3.

In total 62 responses given by a nurse reduced space to a client's expressions. Most of these responses (N=54) ignored the cue or concern. Other used responses were shutting down a cue or concern (N=6), giving an info advice (N=1) or switching the frame of reference of the cue or concern (N=1). When comparing the pre- and post-test, nurses ignored fewer cues and concerns in the post-test (20.9%) compared to the pre-test (25.0%) (NS). When looking at the predictive factors, it turns out that there is a significant predictive relationship between the average time a nurse visits a client and responding to a cue or concern by ignoring it. During shorter visits (<30 minutes) nurses ignored less cues and concerns ($p=.03$) (see Table 3).

Initiating cues and concerns

Most of the cues and concerns (75.8%) were initiated by the older client. In total 57 cues and concerns (24.2%) were initiated by a nurse. The percentage of the nurse-initiated cues and concerns was higher in the post-test (18.8% versus 29.0%, NS). When looking at the predictive factors, it turns out that there is no significant relationship between the predictive factors and the number of nurse-initiated cues and concerns ($p>.05$)

DISCUSSION

The aim of this study was not only to describe and give more insight into the communication of emotional issues between nurses and older clients in home health care, but mostly to explore the effects from the pilot study of the feedback intervention ZORG. The nurses' reflections on the intervention and the systematic observations of nurses' verbal behavior, provided interesting results.

Nurses' reflections on the intervention indicate that receiving feedback was taken in very well by the nurses working in home health care. Most nurses never received any individual feedback about their practical and communication skills. Our study indicates that the nurses do value receiving individual feedback as part of the intervention ZORG. Receiving personal feedback based on their own recordings helped them to become more aware of their actual functioning and about what the older clients tell them and about how they can respond (more) properly. Such enhanced awareness is precisely what reflective practice is meant to achieve [12]. So in this study reflective practice can be understood as a self-reflection tool through which nurses become more aware of their actual performance by listening back to the examples of recorded situations and express their own thoughts and observations. When specifically looking at the effects of the feedback intervention ZORG, findings indicate that the examined communication patterns changed in the desired direction from pre- to post intervention, although most of these findings were non-significant. The findings of this explorative feedback intervention need to be clarified.

Firstly, in the observed visits clients showed on average more cues in comparison with concerns to express their emotional underlying feelings. This is in line with earlier research. People do seldom express their (emotional) feelings explicitly, instead they give implicit signs to underlying (emotional) concerns [11]. Although, when comparing the results before and after the feedback intervention, it turns out that after the intervention the older clients do express their feelings more explicitly. They express proportionally more concerns after the nurse participated in the feedback intervention. This result should be interpreted with caution due to the fact that the encounters were characterized by heterogeneity, meaning that different clients were involved before and after the feedback intervention and different types

of care were When looking at initiating a cue or a concern, it turns out that most of the expressed cues and concerns were initiated by a client. A quarter of the expressed cues and concerns were initiated by a nurse. This is an interesting observation. This result indicates that in most cases the nurse does not facilitate the expression of a cue or a concern by an older client. A possible explanation is the increased workload in home health care due to the promotion of aging in place and restructuring health care [28]. Nurses have to fulfill a lot of (medical) tasks and this might possibly lead to less attention for a client and initiating a cue or concern for them. Nonetheless, when looking at the results before and after the feedback intervention, it turns out that these results could be interpreted as an effect in the desired direction (NS). After receiving the feedback intervention nurses initiated more talk about cues and concerns. Nurses might be more aware of the existence of emotional cues and concerns by older clients and initiate such a talk more often.

Another positive finding is that in the observed visits nurses mainly responded by providing space to an older client. Most of the time, nurses give the older clients the opportunity to tell more about the expressed cue or concern. Also, when looking at differences between before and after receiving the feedback intervention, nurses provide more space after receiving the intervention, although not significantly more. We may call these results positive, not only because this behavior leads to benefits for an older client (e.g. more space to talk about their emotional burden), but also because getting to know clients and providing space to them helps nurses to interpret concerns, anticipate clients' needs and adds to job satisfaction [29]. It should, however, be taken into account that most responses were non-explicitly back channeling the client's mentioned cue or concern (e.g. "Hmm", "Yes"). In that way a nurse might provide space while not fully being aware of the existence of a cue or concern. They could either have been listening with full attention to an older client, but also have been listening to a client while doing their (medical) tasks and in that manner have been responding with minimal prompts or words.

This may also be of importance when looking at the duration of a visit. During longer visits nurses in home health care provided more space to talk about a cue or concern. A possible explanation might be the actual time a nurse has with a client. A nurse in home health care will provide more space to talk about emotional issues when they have more time for a client. Here, it should also be taken into account that most of the responses were not explicitly related to the mentioned cue or concern. They provided more space, but it remains unclear whether they paid full attention to the expressed cue or concern or to other issues while taking care of the older client. Although nurses provided more space during longer visits, they ignored less cues and concerns in the shorter ones. This is an interesting finding and a possible explanation might be the focus of attention from the nurse to the older client. Nurses routinely engage in multiple tasks, switching their attention from one client to another under cognitive load and frequent interruptions [30]. It is already known that humans have limited attentional resources, which results in poorer performance of two or more tasks as compared with performance of either one of the tasks [31]. This might explain why nurses in shorter visits ignored less cues and concerns. In longer visits nurses possibly have to cope with older clients with more complexity in care and they have to perform a lot of (medical) tasks. In shorter visits a nurse might have to cope with not so many (complex) tasks and will possibly be more selective and/or attentive to emotional issues.

LIMITATIONS

Our study showed that it is feasible to let nurses and nurse assistants record their own busy home health visits on audio for research purposes; the audio-recordings were of good quality and the older clients did not object to the recordings. Conclusions on the effects of the feedback intervention should be interpreted with caution because not many significant results were found and therefore, due to limitations in research methods and study design, the evidence is not strong enough as a proof. A possible explanation can be found in the low power of this study. Due to the small sample size of audio-recordings (N=58) we were limited in detecting significant effects.

Another limitation is not having a control group within this study; a group not receiving the feedback intervention ZORG. Therefore, we cannot firmly conclude that the positive differences in pre- and posttest can be attributed to the feedback intervention.

Additionally, due to the low number of nurses within this study (N=10) it was difficult to look at differences between nurses and nurse assistants. Further research is needed to look at the possible differences in these various existing functions.

CONCLUSIONS

This study examined in an exploratory pre-post test pilot study the effects of the feedback intervention ZORG. We addressed one main research question ('does the feedback intervention ZORG improve nurses' recognition of and responses to older people's concerns?').

After conducting this study we can conclude that nurses working in home health care are very positive about receiving feedback. Reflection on their communicative functioning might help them to become more aware of their actual functioning. The feedback intervention ZORG seems to enhance emotional interactions in home health care with older people, but not in a significant way. After receiving the feedback intervention, nurses ignored patients' emotional concerns less often, provided more space to talk about emotions and initiated such a talk more often. A thorough exploration of the working mechanisms behind this intervention might be useful. Further research is needed to replicate these interesting findings in a more significant way using a randomized controlled design and larger samples.

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The authors declare no conflicts of interest concerning this paper.

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TABLES AND FIGURE

Figure 1. Categories of responses as described in the VR-CoDES-P [14]

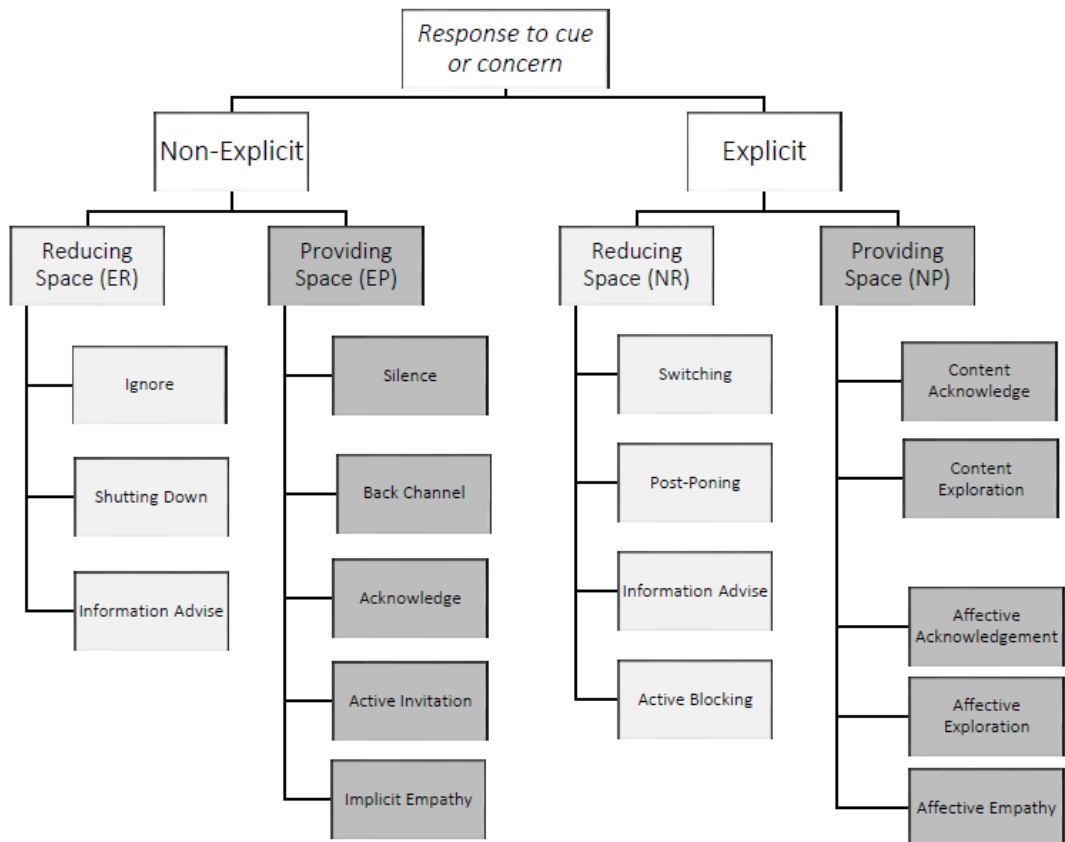


Table 1. Demographic characteristics nurses working in home health care.

Nurses		
Gender	Female	10
	Male	0
Age	20-30 years	2
	31-40 years	0
	41-50 years	4
	50+ years	4
Function	Care assistance B	0
	Care assistance C/D	0
	Care assistance IG	4
	Nurse MBO	2
	Nurse HBO	3
	In training	1
Other function	0	
Working	Between 1 and 2 years	3
	Between 5 and 10 years	2
	10 years or more	5
Communication course	Yes	7
	No	3

Table 2. Frequencies of expressed cues, concerns and total amount of cues and concerns (N).

Amount of cues and concerns pre- and posttest		
Pre-test (N=112)	Cues	99 (88.4%)
	Concerns	13 (11.6%)
Post-test (N=124)	Cues	102 (82.3%)
	Concerns	22 (17.7%)

Table 3. Proportion of providing space to clients' expressions and ignoring less cues and concerns during a visit.

Visits (N=58)	Providing space (N=174)	Ignoring less (N=54)
Short (<30 minutes), N=11	10 (0.9)	1 (0.1)
Medium (30-45 minutes), N=36	114 (3.2)	35 (0.8)
Long (> 45 minutes), N=11	50 (4.5)	18 (1.6)