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Evaluation of nurses' changing perceptions when trained to implement a self-management programme for dual sensory impaired older adults in long-term care: a qualitative study

Lieve M Roets-Merken,[1,2] Myrra J F J Vernooij-Dassen,[1] Sytse U Zuidema,[3] Marianne K Dees,[4] Pieter G J M Hermsen,[5] Gertrudis I J M Kempen,[6] Maud J L Graff[1]

CrossMark

For numbered affiliations see end of article.

Correspondence to
Lieve M Roets-Merken;
Lieve.roets-merken@radboudumc.nl

ABSTRACT

Objectives: To gain insights into the process of nurses' changing perceptions when trained to implement a self-management programme for dual sensory impaired older adults in long-term care, and into the factors that contributed to these changes in their perceptions.

Design: Qualitative study alongside a cluster randomised controlled trial.

Setting: 17 long-term care homes spread across the Netherlands.

Participants: 34 licensed practical nurses supporting 54 dual sensory impaired older adults.

Intervention: A 5-month training programme designed to enable nurses to support the self-management of dual sensory impaired older adults in long-term care.

Primary outcomes: Nurses' perceptions on relevance and feasibility of the self-management programme collected from nurses' semistructured coaching diaries over the 5-month training and intervention period, as well as from trainers' reports.

Results: Nurses' initial negative perceptions on relevance and feasibility of the intervention changed to positive as nurses better understood the concept of autonomy. Through interactions with older adults and by self-evaluations of the effect of their behaviour, nurses discovered that their usual care conflicted with client autonomy. From that moment, nurses felt encouraged to adapt their behaviour to the older adults' autonomy needs. However, nurses' initial unfamiliarity with conversation techniques required a longer exploration period than planned. Once client autonomy was understood, nurses recommended expanding the intervention as a generic approach to all their clients, whether dual sensory impaired or not.

Conclusions: Longitudinal data collection enabled exploration of nurses' changes in perceptions when moving towards self-management support. The training programme stimulated nurses to go beyond 'protocol thinking', discovering client autonomy and exploring the need for their own behavioural adaptations. Educational

Strengths and limitations of this study

- In this study, we report how nurses change from their original aversion to client self-management and autonomy, to a more positive attitude and behaviour towards both aspects. The insights gained can be used to develop training and coaching programmes on client autonomy for those health professionals involved in aged care.
- The power of this study lies in its design: longitudinal data are collected directly from the nurses. It was therefore possible to monitor changes in nurses' perceptions over time and record the factors that influence these changes.
- This qualitative study was performed alongside a cluster randomised controlled trial on the effectiveness of a self-management programme for dual sensory impaired older adults. A limitation of the qualitative study is that we were not able to compare the results with the outcomes and perceptions of the older adults who participated in the study on effectiveness.
- Another limitation of the study was that nurses' verbatim quotes were collected by the trainers who had a vested interest in the programme's success, which may have led to more positive reporting.

programmes for practical nurses should offer more longitudinal coaching of autonomy supportive conversational skills. Intervention programming should acknowledge that change is a process rather than an event, and should include self-evaluations of professional behaviours over a period of time.

Trial registration number: NCT01217502, Post-results.

BACKGROUND

The prevalence of an age-related combination of hearing and visual impairment is

increasing rapidly among older adults in long-term care (LTC): from 12% in 2007 to 32% in 2014.[1] [2] Dual sensory impairment (DSI) endangers independent functioning[3] and social participation;[4] however, the occurrence and impact of sensory impairment are often underestimated in LTC.[5] [6]

A number of self-management interventions have been developed to improve independent functioning and social participation and to empower older individuals to address their actual personal needs, (re)using self-management strategies gained in earlier life. Although the evidence for their efficacy in older adults is mixed, self-management has been found to be an effective intervention for older adults with visual impairment.[7–9] DSI older adults, therefore, may also benefit from self-management interventions. However, there is strong evidence that service care providers' perceptions are critical to the success of self-management interventions, and that their focus is often on controlling patient behaviour rather than on collaborative client–provider partnership and client autonomy.[10–13] There is a need for a deeper understanding of the challenges and demanding learning processes associated with the implementation of nurse-supported self-management interventions.

Between 2011 and 2014, we designed and implemented a training programme for nurses to support the self-management of DSI older adults and an intervention programme, the Self-Management Programme for Dual Sensory Impaired older adults (SMP-DSI). The SMP-DSI was used in a cluster randomised controlled trial (cRCT) among nurses and DSI older adults in 30 LTC homes spread across the Netherlands. Nurses (n=34) of the intervention group (n=17 LTC homes) participated in a group training and were individually coached to introduce the SMP-DSI to the DSI older adults (n=54) they were linked with. Details of the methods of the cRCT are described elsewhere.[14] We performed a qualitative study alongside the cRCT. Since the SMP-DSI involves dialogues between nurses and older adults and appeals to nurses' novel interaction skills and attitudes, we monitored, trained and coached the nurses and asked them to keep diaries on the progress of the self-management intervention over a period of 5 months. In addition, we asked the trainers to report on the individual coaching sessions.

The aim of this qualitative study was to gain insights into the longitudinal changes in nurses' perceptions on relevance and feasibility when trained to implement the self-management intervention among dual sensory impaired older adults in LTC, and into the factors that contributed to their changes in perceptions.

METHODS
Design
The longitudinal process data for this qualitative study were taken from nurses' coaching diaries and trainers' reports collected during a 5-month training programme of the intervention group which was participating in a cRCT which compared the effectiveness of the SMP-DSI to usual care.[14] This qualitative study used the content comparison approach to analyse nurses' perceptions on the relevance and feasibility of the SMP-DSI. Nurses were asked to keep diaries on the progress of the intervention, including satisfaction and dissatisfaction with their actions when performing the SMP-DSI. Other process data, on sampling quality (recruitment, reach, retention) and intervention quality (treatment delivery, adherence), are reported and discussed in a separate publication (in preparation) in combination with the effect outcome.

Participants
The participants in this study were 34 licensed practical nurses who worked at 1 of the 17 LTC homes assigned to the intervention group of the cRCT. They were asked to support a total of 54 DSI older adults; each nurse was linked to one or two DSI older adults. Inclusion criteria for nurses were (1) at least twice-weekly direct daily care contact with the participating older adult, and (2) qualified as a licensed practical nurse, that is, a 3-year basic nursing vocational training at secondary level. In the Netherlands, licensed practical nurses in LTC participate in a nursing team of registered nurses, practical nurses and nurse assistants, representing a diversity of functions and skills. Licensed practical nurses provide the majority of the daily care in LTC, and work under supervision of a unit manager, who is often a registered nurse. Licensed practical nurses play a key role in the yearly update of the care plan, documenting the individual needs and care preferences of the older adult. Nurses were approached for participation by their local manager.

Inclusion criteria for older adults were (1) a moderate-to-severe hearing impairment of ≥40 decibel (pure-tone audiometry) and a moderate-to-severe visual impairment with a best-corrected visual acuity of <0.3 dioptre or with a visual field of <30°, measured using the criterion standards for hearing and visual impairment[15] [16] and (2) informed consent. Exclusion criteria were (1) prelingual deafness, (2) a DSI acquired before the age of 50 and (3) inability to complete interviews due to severe cognitive problems. To assess cognitive functioning, we developed a semistructured interview based on the Diagnostic and Statistical Manual of Mental Disorders (DSM) IV criteria for capacities in executive functioning: planning, organising, sequencing and abstracting.[17] The procedures for assessing DSI and cognitive problems are described in the study protocol.[14]

The intervention and training programme
The SMP-DSI was developed as a five-step interview including problem identification (step 1), collecting alternatives (step 2), choice and planning (step 3), execution (step 4) and reflection (step 5). The SMP-DSI was based on D'Zurilla and Goldfried's[18] problem

solving therapy, Holman and Lorig's[19] core self-management skills and Bakker's[20] constructive behavioural analysis, aiming to support the individual to develop feasible solutions and inviting reflection on recent successful behaviour. The theoretical background and overview of the SMP-DSI are described in the study protocol.[14] Nurses in the intervention group were trained to introduce the SMP-DSI approach when they observed that the DSI older adult had a problem or request. Table 1 (first column) reflects the key questions of the SMP-DSI. Nurses received nine training sessions that were spread over a period of 5 months, parallel to the intervention period and divided into three consecutive rounds, totalling 16.5 hours. Each round consisted of three successive sessions: (1) a 3-hour group training session, (2) 1 hour of individual coaching and (3) 1.5 hours of group supervision, with a 2–3 weeks interval between each session. Nurses were asked to practise the SMP-DSI at least once during the 2–3 weeks interval with the older adult(s) they were linked with, and to fill in an intervention and coaching diary. The group training sessions focused on the knowledge and skills required by the nurses to use the SMP-DSI. In the individual coaching sessions, the trainer invited the nurse to reflect on and evaluate her own behaviour during the interactions with the older adult when offering the SMP-DSI. In group supervision sessions, nurses shared their successes and goals. Online supplementary appendix 1 gives an overview of the training programme and the nurses' home assignments.

Five social workers, employees of a rehabilitation centre for DSI adults and specialised in supporting DSI older adults, were trained to coach the nurses. Four of the trainers started their career as a licensed practical nurse, and none had professional coaching experience prior to this trial. In preparation for their training tasks, they attended a training programme of three group sessions of 1.5 hours at the rehabilitation centre, with the aim of becoming familiar with the nurse-supported SMP-DSI and with the training programme and the individual coaching approach for the nurses. During the 5-month training and intervention period, the trainers participated in three group supervision sessions of 1.5 hours each, led by a professional coach of licensed practical nurses. Special emphasis was given to the individual coaching approach for nurses. Trainers were asked to start each individual coaching session with a question similar to the first question of the coaching diary: 'When looking back on your interview with the older adult, what are you happy about, about what you did yourself?' and to invite the nurses to reflect on their interactions with the older adult using three questions: (1) What did you observe in the older adult? (2) How did you align your behaviour? (3) What was the effect of your behaviour on the older adult? The third question could be completed by asking the nurse what she would do differently (identical to step 5 of the SMP-DSI—see table 1) and what alternative actions she could think of (identical to step 2 of the SMP-DSI). Table 1 (columns 2 and 3) lists the key questions of the coaching diary and of the individual coaching session.

Ten training groups at 10 different locations started with an average size of 4 nurses per group (range 1–7). Each training group was organised in the neighbourhood of the LTC homes of the participating nurses. Two trainers were allotted to each training group: one gave the three group training sessions, and the other conducted the individual coaching and supervision sessions.

Table 1 Key questions of the SMP-DSI, coaching diary and individual coaching session

Key questions SMP-DSI	Questions coaching diary	Questions individual coaching
Nurse asks the older adult	*Nurse fills in question 1 after practice with the older adult, and questions 2 and 3 at the end of the individual coaching session.*	*Trainer invites nurse to reflect, 'Looking back on your interview, what are you happy about?' and asks questions 1, 2 and 3, and fills in question 4 during the individual coaching session.*
Step 1. *Problem identification* Would you like to do something about it? Step 2. *Collecting alternatives* What could you do about it? Are there other options? Step 3. *Choice and planning* How do you think you will manage this? Step 4. *Execution* Step 5. *Reflection* What was the result? What are you happy about: about what you could do on your own? What would you do differently next time?	1. Looking back on your interview with the older adult: What are you happy about, about what you did yourself? What barriers did you encounter? What would you do differently next time? 2. Summary of the feedback you received. 3. What are your main learning goals for the next period?	1. What did you observe in the older adult? 2. How did you align your behaviour? 3. What was the effect of your behaviour/reaction on the older adult? Did it suit the older adult? How do you evaluate your action? 4. When the nurse reflected on her actions: 4a What facilitators did she mention? What was she happy about? 4b Which barriers did she mention/what problems did she encounter?

SMP-DSI, Self-Management Program for Dual Sensory Impaired older adults.

Longitudinal data collection

Longitudinal data from the nurses' semistructured coaching diaries were collected over the 5-month intervention and training period, and from the verbatim quotes of nurses collected by the trainer during the individual coaching sessions. The coaching diaries were developed and used as a coaching tool: nurses were asked to reflect on their behaviour and to write these reflections down in their coaching diary immediately after their interview with the older adult. At the end of each training session, nurses were asked to add their learning goals, then the diaries were copied and the copy was handed over to the trainer. In addition, the most recent diary was used at the start of the individual coaching, focusing on the first question. During and at the end of the individual coaching session, nurses were able to complete or change their notes. Trainers were asked to report nurses' verbatim quotes when they expressed either satisfaction or dissatisfaction during the individual coaching sessions. After each session, the trainers posted the coaching diaries and their own reports to the researcher.

Process outcomes and data analyses

Nurses' perceptions on relevance and feasibility of the intervention were the process outcomes analysed in this study. Prior to the analyses, an administrative assistant transcribed each handwritten coaching diary in a digital MSWord document and linked it with the corresponding verbatim quotes reported by the trainers. Each document was anonymised and provided with a code referring to the nurse. These documents were independently coded by authors LMR-M and MKD, applying the constant comparison approach based on the grounded theory and using ATLAS-ti V.7.0.92 software.[21]

First, the data were given conceptual labels (=codes) which were closely related to the text fragments; these codes were compared and discussed between the two authors until they reached consensus. They then grouped the codes referring to the same phenomenon into categories, and the categories into themes. To check their interpretations, they sent the results of the qualitative analysis to the trainers and asked for written comments.

FINDINGS
Nurses' perceptions on the relevance of the intervention

Table 2 shows nurses' perceptions on relevance of the intervention, and the evolution of these perceptions (last column in table 2). The first three columns represent the themes, categories and codes that emerged. The last column represents the distribution of nurses' perceptions spread over the nine sessions when data were collected, offering an impression of the changes in the perceptions in the course of the 5-month intervention and training period. After performing content analysis on the data of the coaching diaries and verbatim quotes of the nurses, two themes, that is, *barriers* and *facilitators*, emerged.

The two categories that emerged in the theme *barriers* were (1) *conflictive to usual care and to professional autonomy* and later on (2) *usual care was conflictive to client autonomy*. At the start, the nurses' initial perceptions were distinctly negative. They were convinced that any support to enhance autonomy of the older adults was superfluous, and that the intervention would endanger the nurses' actual responsibilities and autonomy. They believed in their competence to recognise the needs of the older adult, and emphasised that the key element of their job was to act and care for the older adult, and that there was no need to consult or interact with them. In contrast, they advised not to bother the older adult with questions.

> Nurse 4: We prevent the older adults from having problems, we protect them, that's our job, that's why I became a nurse.

> Nurse 14: Autonomy is already warranted as we ask each older adult once or twice a year what he wants, and note it down in the individual care plan.

The first barrier category *conflictive to usual care and to professional autonomy* altered when nurses started practising the SMP-DSI, and was gradually supplanted by a second barrier category *usual care was conflictive to client autonomy*. During the individual coaching sessions, when answering the three key questions, nurses became aware that they were used to providing care favouring their own autonomy rather than that of their clients, and of their habit of steering and decision-making and imposing solutions without consulting the older adult. They discovered that it was not usual for them or their colleagues to approach older adults with an open mind to their needs. In addition to these discoveries, nurses were willing to look critically at their own behaviours, and an ongoing number of learning goals aimed at changing their habits appeared. However, despite these intentions, nurses reported that it was difficult to change their behaviour. The second barrier category emerged from nurses' numerous reports of their own and their colleagues 'automatism' of taking over, which hindered the performance of the SMP-DSI, and thereby blurring their perceptions on what the intervention could offer.

> Nurse 20: I had put forward my ideas, but had forgotten to ask my client for his view on a solution.

> Nurse 28: I have been struggling with myself; I became aware that I usually focus on the problem and its solution, rather than on the needs of the older adult.

> Nurse 2: It feels odd to see that the older person makes other choices than I would have made.

> Nurse 12: When the older lady wanted to execute the plan we discussed the day before (taking her jacket with her to the dining room), my colleague wouldn't let her do so.

Table 2 Longitudinal content analysis of the perceptions of the nurses on relevance of the SMP-DSI

Themes	Categories	Codes	Course of perceptions Sessions of data collection								
			1	2	3	4	5	6	7	8	9
Barriers	Conflictive to usual care and to professional autonomy	Belief that a nurse's task is to prevent older adults from having problems	X	X							
		Belief in own competence to recognise wishes of older adults	X	X							
		Belief that autonomy of older adults is already warranted by the care plan	X	X							
		Aim to avoid bothering the older adult	X	X							
		Belief that a key element of nursing is hands-on caring, not talking or interacting	X								
	Usual care conflictive to client autonomy	Awareness of automatism of taking over		X	X	X	X	X			
		Tendency to solve problems without consulting the older adult		X	X	X	X				
		Belief that usual care does not match wishes of older adults		X	X	X	X				
		Discovery of having an open mind towards wishes and needs of older adults is not obvious		X	X	X	X				
		Awareness of automatism of imposing solutions on older adults						X	X		
		Belief that wishes and aims of older adults are not key in usual care							X	X	X
Facilitators	Interaction with older adult	Suits older adults		X	X	X	X	X	X	X	X
		Satisfaction of older adult					X	X	X	X	X
		Motivates older adults					X	X			
		Helps to reveal the individual behind the older adult							X	X	X
		Increases autonomy of older adult							X	X	X
	Innovative learning	Demands a different way of thinking	X	X	X	X	X	X			
		Encourages getting rid of 'taking over' care		X	X	X	X	X			
		Distinguishes between autonomy and independency			X	X	X	X			
		Encourages getting rid of thinking in terms of problems and solutions				X	X	X			
		Encourages behavioural change						X	X	X	X
		Encourages shared decision-making						X	X	X	X
		Useful in conflictive situations							X	X	X
	Improvement of care	Increases the understanding of the impairments of the older adult		X	X	X					
		Meets needs in daily care and practice		X	X	X	X	X	X	X	
		Beneficial for older adult					X	X	X	X	X
		Programme is broadly applicable					X	X	X	X	X
		Contributes to personalised care					X	X	X	X	X
		Increases respect for autonomy of older adult						X	X	X	X
		Improves relation with older adult						X	X	X	X
		Meaningful approach							X	X	X
		Should be included in education programme for nurses							X	X	X
		User programme will disseminate programme							X	X	X

SMP-DSI, Self-Management Program for Dual Sensory Impaired older adults.

A first facilitator category *interaction with the older adult* emerged soon after nurses had started practising the intervention, and was consolidated in the course of the intervention period. Nurses observed relief and enthusiasm in the older adults when they invited the older adults to search for and think about alternative solutions jointly.

Nurse 41: He enjoyed it when I asked 'Would you allow me to think along with you?'

Nurse 48: Mrs. X completely revived during our conversation; it gave me energy.

A second facilitator category emerged in the further course of the intervention period: *innovative learning*. From the start, nurses appreciated this different way of thinking. Gradually, they got a better understanding of what autonomy meant, and how they could support the older adults to take a sense of control of their lives.

They reported being able to see now how autonomy contrasted with independency, self-care and care, and felt encouraged by their experiences of getting better insights into what shared decision-making involved. A third facilitator category *improvement of care* emerged when nurses reported that the intervention met the needs of the older adults, and that their positive perceptions increased in the second half of the intervention period. Eventually, an unintended but widely spread opinion was reported: nurses perceived the SMP-DSI as a relevant instrument for all of their patients, whether they had sensory impairments or not.

Nurse 28: Interacting, talking and listening to each other, looking at the person, that's what autonomy support is.

Nurse 14: I saw another person, he revived. Although we did not find a solution, I saw he was happy and in control. Nurse 27: I'm going to use these steps with other residents, it helps older adults to maintain their self-esteem.

Nurse 47: The steps allow you to intensify the contact with the older adults. I also use the steps with other clients; they grow when they feel that they are empowered to take as much control of their lives as they can.

In two different homes, the first barrier category *conflictive to usual care and to professional autonomy* was stronger and lasted longer. In individual coaching sessions, three of the six nurses explained that their residents did not have any problems, as the nurses solved every possible problem for them. Interviewing older adults about their problems and alternative solutions would demonstrate that older adults had unresolved issues, and that could be interpreted by the management as proof of shortcomings of the nursing staff.

Nurse 46: If a resident wants something, then it has to happen right away, otherwise we get an official reprimand.

Nurse 52: I feel a lot of resistance towards this approach, our clients are already greatly spoiled. The principle here in the house is: your wish is our command.

Nurses' perceptions of the feasibility of the intervention

Table 3 shows nurses' perceptions on feasibility of the intervention, and the evolution of these perceptions (last column in table 3) in the course of the intervention period. Two themes emerged, that is, *barriers* and *facilitators*. Among the theme barriers, three categories emerged: (1) the intervention was perceived as *not suited for older adults*, (2) the *conversation techniques were unfamiliar* to the nurses and (3) the nurses reported being worried about a *challenging work environment*. These three barrier categories reflected nurses' beliefs that older adults were too passive and institutionalised to take part in the intervention, that having conversations with older adults was too demanding and time-consuming, and that

a huge workload, lack of planning facilities and conflicts in their team and organisation hindered interaction with the older adults.

Nurse 20: Let them rest, older adults don't think or feel so deeply.

Nurse 11: Having conversations, what a daft idea! That means endless empathic listening, and tiresome searching for the question behind the question.

Nurse 32: It's difficult to concentrate on a new approach when my team is quarreling about daily routines.

Moreover, when first introducing the intervention, nurses observed reservation and anxiety in the older adults; three older adults even panicked. Nurses succeeded in reassuring the older adults by rephrasing their first question, asking them to focus on wishes or on something they would like to change, instead of asking them to identify a problem.

Nurse 22 quotes an older adult: Why do you spend so much time on me? I remember earlier that the nurses also asked Mr. Jansen a lot of questions, and after a while he was transferred to the ward with demented people.

Nurse 47 quotes an older adult: If I complain about something, your colleagues immediately react negatively.

The second barrier category *unfamiliar with conversation techniques* emerged at the start, but the content altered during the intervention period. Nurses started with a widely reported opinion that having a conversation was identical to long-lasting empathic listening and intuitive in-depth questioning. However, in parallel with the increasing awareness of the relevance of the intervention, nurses continued to struggle with, and succeeded in making steady progress with getting acquainted with the semistructured conversational style. When practising, nurses discovered strengths and pitfalls which eventually led to their conclusion that more practice and coaching was needed.

Nurse 43: I forget to take every step; next time I'll take the list of questions with me.

In the course of the intervention period, reports on the third barrier category *challenging work environment* faded away. Gradually, facilitators came into view. The facilitator category *supportiveness of the programme and the coaching* emerged in nurses' perceptions of the simple and transparent structure of the SMP-DSI. At the end of the intervention period, nurses recommended sharing their experiences with other nurses, as a factor for creating better options to integrate the intervention in usual care.

Nurse 41: The hold that the program gives me on the conversation makes me feel free.

Table 3 Longitudinal content analysis of the perceptions of the nurses on feasibility of the SMP-DSI

Themes	Categories	Codes	1	2	3	4	5	6	7	8	9
			Course of perceptions Sessions of data collection								
Barriers	Intervention not suited for older adults	Belief that older adults are no longer used to thinking for themselves; are too old and tired	X								
		Belief that older adults are passive and institutionalised	X								
		Belief that older adults are not familiar with having conversations	X								
		Belief that autonomy support is not suited to older adults	X								
		Older adults play down their problems		X							
		Older adults feel threatened by attention of nurses		X	X	X					
		Older adults fear being seen as a troublemaker		X	X	X					
	Unfamiliar with conversation techniques	Assumption that interviewing older adults involves endless empathic listening	X	X							
		Expectation that interviewing involves in-depth questioning	X	X							
		Intervention that requires specific communication skills		X	X						
		Forget to use SMP-DSI steps when interviewing		X	X	X	X				
		Creating opportunities for older adult to deliberate requires time and mental space		X	X	X	X	X			
		Supporting older adult in thinking and deliberating requires specific skills					X	X			
		Structuring a professional conversation requires specific communicative skills					X	X			
		New knowledge and skills need more practice							X	X	X
		Not feeling confident about using programme without support of coach							X	X	X
	Challenging work environment	Huge workload	X								
		Lack of planning facilities	X	X	X						
		Conflicts in care organisation			X	X	X				
		Conflicts in team, between colleagues			X						
Facilitators	Supportiveness of SMP-DSI and training programme	SMP-DSI structure provides grip		X	X	X	X	X	X	X	
		Coaching increases insights into own functioning			X	X	X	X	X	X	X
		SMP-DSI steps and structure motivate				X	X			X	X
		Importance of coaching				X	X			X	X
		Individual coaching facilitates implementation				X				X	X
		Programme facilitates managing the conversation				X	X				
	Comfort of programme	Pleasant approach, gives energy; makes job more enjoyable							X	X	X
		Time investment is not too bad								X	X

SMP-DSI, Self-Management Program for Dual Sensory Impaired older adults.

Nurse 23: We discussed the approach at a team meeting, they should know that it suits the view of our home.

Nurse 6: A yearly update would be helpful, for us all, as steering and taking over has become such a second nature to us nurses.

Nurse 47: Why didn't they teach us this before?

DISCUSSION

This study resulted in new insights into the longitudinal changes in nurses' perceptions towards relevance and feasibility when implementing a self-management intervention for dual sensory impaired (DSI) older adults in LTC, and into the factors that contributed to their changes in perceptions. A key finding of this study is that the longitudinal evolution of nurses' perceptions stresses the need to support nurses over a period of months to facilitate and consolidate their move towards autonomy support in dialogues with the older adults. It was only during the performance of the intervention, in interaction with the older adults and in consecutive self-evaluations, that nurses started to sense what autonomy implied and what it could do for older adults.

The initial negative perceptions of the nurses on relevance changed into positive ones as they better

understood the concept of autonomy for their clients. This changed from a concept focusing on choices based on the nurses' solutions, towards a concept which stimulated the sense of control of older adults by offering support and discussing alternative solutions. The initial negative perceptions on feasibility altered when the nurses discovered the strengths of conversational techniques, but eventually nurses expressed their need for a longer learning period. An important factor contributing to the changes was the longitudinal combination of nurses' interactions with the older adults and self-evaluations, enabling nurses to recognise the conflictive effect of usual care on client autonomy and helping them explore behavioural alterations to adapt to the autonomy needs of the older adults. Eventually, the nurses noted that the intervention was relevant for all of their clients, whether they were dual sensory impaired or not.

The findings on nurses' initial negative perceptions are similar to those reported in previous studies on client autonomy, characterised by nurses' persistence on their expert caring role, feeling responsible for preventing any problems and/or discomfort in their older adults.[22] A novel finding in our study was that of the changes in nurses' perceptions. Previous research shows a contrast between the findings of nurses' positive assumptions to act in line with the choices of the older adult versus the findings of having limited involvement of older adults in decision-making.[23 24] However, to the best of our knowledge, there are no other studies that have investigated the change of nurses' perceptions when being trained and implementing an autonomy supportive of self-management intervention.

Exploring the evolution in nurses' perceptions allowed us to identify three challenging areas when expanding client autonomy in LTC: (1) the care plan, (2) nurses' interactions and conversation techniques, and (3) the role of licensed practical nurses.

First, our findings suggest that care plans might obstruct the autonomy of frail older adults. Initially, nurses expressed that client autonomy was secured by the care plan as they asked 'each older adult once or twice a year what he wants'. These perceptions reflect a consumer-driven perception of client autonomy and care planning. O'Dwyer[25] showed that residential care is often portrayed as consumer-driven, with a hotel-like service and residents as discerning consumers, and suggested that this type of care may suit assertive and independent younger older adults, but may be questioned when frail and care-dependent older adults are involved. As a consequence of nurses' perceptions that client autonomy was warranted, they perceived alignment and dialogue with the older adult in daily care as being superfluous. Illustrating this lack of alignment were the feelings of unsafety at the start of the intervention among both stakeholders: older adults covered up their problems in reaction to the unexpected and unfamiliar

attention of the nurses for their problems; and nurses held on to their to-do list derived from the yearly care plan. However, nurses' reports of the positive reactions of the DSI older adults in the course of this trial, and the increased number and variety of problems and wishes DSI older adults mentioned (described in a separate study in preparation) when compared with the problems mentioned in routine care plans, stress the need for ongoing alignment in daily care. Our findings suggest that, without alignment, nurses risk remaining unaware of the changing challenges in the older adult, and thereby are unable to support the older adults to adapt and self-manage their social health, that is, to function with fulfilment and a feeling of well-being despite chronic disabilities.[26 27]

Second, the training in interaction and communication techniques used in this study contributed to nurses' awareness and contentment with using an interview structure, that is, a tool that provides structure when discussing with older adults. The nurses in this study demonstrated that they were fully conversant with empathetic listening; however, they had not been trained in professional conversational skills like interviewing. Initially, they associated empathy negatively with endless listening and pretending to be interested, and their initial interaction and dialogues with the older adults were found to be scarce. Their unfamiliarity resulted in feelings of helplessness, which might have contributed to the steering behaviours noted in this study, as well as in several other studies,[28 29] and demonstrated the need for introducing generic autonomy supportive conversational skills among nurses.

Finally, the role of the licensed practical nurse as a member of the nursing team is a current subject of discussion in LTC.[30 31] In the Netherlands, there is a tendency to exclude practical nurses from consulting older adults, with the argument that their education level might be too low or too practical for the learning process needed. However, nurses' changing perceptions as demonstrated in this study illustrates their abilities and motivation to move forward in autonomy and self-management support. This finding should be taken into consideration when developing policies for an optimal functional diversity of nursing staff in LTC, especially regarding the role of the practical nurses.

Strengths and limitations
A strength of this study was that nurses' perceptions were collected longitudinally, from the start to the end of the intervention period. An important limitation of the study was that only one or two nurses in a team participated in the training programme, so the exchange of experiences between colleagues in a team was restricted. A second limitation was that nurses did not voluntarily present themselves for participation in the trial. After inclusion of the older adults, we asked the manager to link the older adult with an eligible nurse who was familiar with the participating older adult. This was done for

practical reasons, in spite of research findings that voluntariness of the health professional contributes to the success of the intervention.[32] Since the number of eligible licensed practical nurses per team was limited, the risk that the manager's choice would induce a selection bias was limited. Another limitation involved the data collection. Since the coaching diaries were developed and used as coaching tools, and were collected by the trainers, they might have induced a more positive reporting. There is a risk that the nurses wanted to please their trainers, and that the trainers might have wanted their coaching work to result in positive outcomes. However, the quality of the data may also have benefited from the use of coaching data, revealing a variety of barriers and facilitators experienced by the nurses under real 'field' situations. Finally, we did not interview the older adults on their perceptions of barriers and facilitators of the intervention. We avoided this for ethical reasons, as questioning could be interpreted as a check on the nurse's performance, and could compromise older adults' loyalty to their nurse.

Practical implications

This study is one of only a few that explores the changing perceptions of nurses when supporting client autonomy in LTC. For care planning, our findings suggest that policymakers in LTC should consider broadening their views on care plans, and daily alignments in daily care should be encouraged. With regard to psychosocial intervention programming, our findings indicate that generic autonomy supportive conversational techniques should be introduced to practical nurses as a first step in facilitating autonomy and self-management of older adults. Evidence-based conversation techniques such as narrative interviewing and shared decision-making may contribute to bridge the gap in nurses' competences. Furthermore, education programmes should take into account that nurses have to undergo a lengthy learning process of ongoing practice and sustained support, including interactions and self-evaluations. Eventually, increasing the range of skills and capacities of practical nurses can facilitate the development of an optimal autonomy-supportive function diversity of nursing staff in LTC.

Scientific implications

Longitudinal detection of the barriers and facilitators enabled us to follow the factors affecting nurses' perceptual change processes throughout the trial. We recommend that implementation research should more explicitly acknowledge that change is a process rather than an event, and that future process evaluations should therefore include self-evaluations of professional behaviours over a period of time. The insights gained by longitudinal process evaluation may accelerate the scope for improved implementation of psychosocial interventions in healthcare practice.

CONCLUSIONS

Longitudinal data collection enabled an exploration of nurses' changes in perceptions towards self-management and autonomy of their clients. The findings stress the need for ongoing support of nurses to facilitate and consolidate their move towards autonomy support in a dialogue with the older adults. Training programmes for nurses should focus on these topics of autonomy support by including narrative communication techniques and shared decision-making techniques. Future research needs to review the effectiveness of the changes in attitudes and behaviours in LTC on client autonomy and nurses' job satisfaction, and should include a longitudinal process evaluation.

Author affiliations
¹Radboud University Medical Center, Donders Center for Cognition, Brain & Behavior, Scientific Institute for Quality of Healthcare, Nijmegen, The Netherlands
²Kalorama Foundation, Beek-Ubbergen, The Netherlands
³University of Groningen, University Medical Center Groningen, Department of General Practice and Elderly Care Medicine, Groningen, The Netherlands
⁴Radboud University Medical Center, Radboud Institute for Health Sciences, IQ Healthcare, Nijmegen, The Netherlands
⁵Severinus Foundation, Veldhoven, The Netherlands
⁶Maastricht University, Department of Health Services Research, CAPHRI School for Public Health and Primary Care, Maastricht, The Netherlands

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