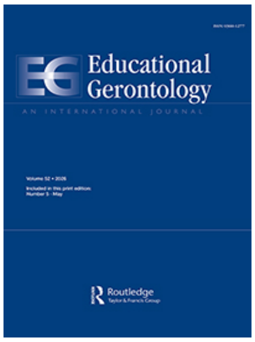


Educational Gerontology

ISSN: 0360-1277 (Print) 1521-0472 (Online) Journal homepage: www.tandfonline.com/journals/uedg20

Mealtime support for people with dementia in residential care homes: Exploring direct care workers’ perceptions, challenges, and training needs

Lígia Passos, João Tavares, Melissa Batchelor, Karina Pereira & Daniela Figueiredo

To cite this article: Lígia Passos, João Tavares, Melissa Batchelor, Karina Pereira & Daniela Figueiredo (2026) Mealtime support for people with dementia in residential care homes: Exploring direct care workers’ perceptions, challenges, and training needs, Educational Gerontology, 52:5, 444-460, DOI: 10.1080/03601277.2025.2502042

To link to this article: https://doi.org/10.1080/03601277.2025.2502042

EDUCATIONAL GERONTOLOGY
2026, VOL. 52, NO. 5, 444–460
https://doi.org/10.1080/03601277.2025.2502042

Routledge
Taylor & Francis Group

Mealtime support for people with dementia in residential care homes: Exploring direct care workers' perceptions, challenges, and training needs

Lígia Passos[a,b], João Tavares[c], Melissa Batchelor[d], Karina Pereira[e], and Daniela Figueiredo[c]

[a]RISE-Health, Department of Education and Psychology, University of Aveiro, Aveiro, Portugal; [b]Institute of Biomedical Sciences Abel Salazar, University of Porto, Porto, Portugal; [c]RISE-Health, School of Health, University of Aveiro, Aveiro, Portugal; [d]School of Nursing, George Washington University, Washington, District of Columbia, USA; [e]Faculty of Health Sciences and Nursing, Portuguese Observatory for Palliative Care (OPCP), Catholic University of Portugal, Lisboa, Portugal

ABSTRACT

Dementia's progressive impact on physical and cognitive functions often demands institutionalization, where direct care workers provide essential mealtime support for people with dementia. However, the challenges associated with mealtime assistance are complex, and direct care workers frequently lack specialized training. This study aimed to explore direct care workers' perceptions and concerns regarding mealtime difficulties of people with dementia and to identify their educational needs for improved performance in helping these people at mealtimes. A qualitative, exploratory study was conducted with 17 direct care workers from three nonprofit residential care settings. Data were collected through semi-structured interviews and analyzed using reflexive, and collaborative thematic analysis, to identify key themes related to direct care workers' experiences and educational needs. Findings highlighted the significant challenges direct care workers face, such as food refusal and behavioral issues, often intensified by limited time and lack of formal training. Direct care workers expressed a desire for practical, hands-on training tailored to dementia-related mealtime difficulties, emphasizing the importance of learning adaptive techniques to improve care quality. The results underscore the need for targeted training programs that address mealtime challenges in dementia care, considering direct care workers' current knowledge and learning preferences. Such programs could empower direct care workers, enhancing their skills and confidence, and ultimately benefiting people with dementia by promoting improved mealtime experiences and nutritional outcomes.

Introduction

Dementia is a leading cause of disability and dependency among older adults, with a global prevalence that continues to rise. As of 2021, an estimated 55 million people worldwide are living with dementia, a number expected to increase to 139 million by 2050 (World Health Organization, 2021). This progressive rise places considerable pressure on health and social care systems, particularly in residential care settings (RCS), where individuals with advanced cognitive decline require comprehensive support in performing activities of daily living, including mealtime assistance (Jung et al., 2021). Within these settings, direct care workers (DCW) form the primary workforce responsible for daily care, assuming responsibilities that ensure the residents' physical well-being, safety, and social engagement (Stone, 2012).

CONTACT Lígia Passos ligiamaria@ua.pt Department of Education and Psychology, University of Aveiro, Aveiro, Portugal

Among the essential duties of DCW, mealtime assistance stands out due to its complex interplay of physical, cognitive, and behavioral challenges (Abdelhamid et al., 2016; Keller et al., 2022). Mealtime difficulties in people with dementia are multifaceted, involving both cognitive and physical impairments that reduce their ability to eat independently (Liu et al., 2016). These difficulties not only threaten individuals' nutritional status but also impact their quality of life, emotional well-being, and social interaction (Li et al., 2021). Inadequate assistance during mealtimes can lead to poor nutrition, weight loss, and a decline in quality of life (Amella, 2002; Bunn et al., 2016; Lin et al., 2010), underscoring the importance of skilled support in this daily activity. However, despite their fundamental role, DCW typically receive limited formal training specific to dementia-related mealtime difficulties (Faraday et al., 2021; Tompkins et al., 2020).

Previous studies have suggested interventions to enhance DCW' knowledge, attitudes, and behaviors in providing mealtime assistance (C.-C. Chang et al., 2006; Chen et al., 2016). Web or app-based programs have also addressed mealtime challenges and support techniques, by offering coping strategies for mealtime behavioral issues in people with dementia, including app-based meal assistance interventions (Batchelor-Murphy et al., 2015; Jung et al., 2020).

To create an effective educational training program, it is important to investigate and address DCW' needs and expectations. Identifying their needs can prevent unnecessary time-consuming training activities and reduce costs related to unnecessary training or activities (Hannum & Hansen, 1989). Furthermore, recognizing the specific training needs for DCW in RCS can provide direction and structure to mealtime assistance programs (Jung et al., 2024).

This study aims to explore DCW' perceptions and concerns regarding mealtime difficulties of people with dementia, and to identify their educational needs for improved performance in helping these persons at mealtimes. Findings from this study may inform the development of tailored training programs, aimed at equipping DCW with practical, dementia-specific mealtime support skills to enhance care quality and residents' well-being in RCS.

Methods

Study design and ethical considerations

This is a qualitative exploratory study, conducted in three nonprofit residential care settings using semi-structured interviews conducted by a single researcher (LP). This study was part of a larger research project aiming to develop an educational intervention on mealtime support needs of people with dementia. The Consolidated Criteria for Reporting Qualitative Research (COREQ) checklist was used (Tong et al., 2007).

The study was approved by the Ethics Committee of the Health Sciences Research Unit – UICISA: E (Ref. 837/01–2022) and followed the Helsinki Declaration. Confidentiality and privacy were guaranteed by using pseudonyms for participants in all quotes and references included in this manuscript.

Participants and recruitment data collection

A purposive sample technique was used to recruit direct care workers from three RCS from the central region of Portugal. These RCS admit older people with physical or cognitive impairments, and social vulnerability, and are not institutions dedicated exclusively to the care of people with dementia. Table 1 shows some characteristics of the RCS where the interviews were conducted, all at full capacity of residents. The percentage of residents with dementia ranges from 42.5% to 67% across the three RCS, with the resident x DCW per shift ratio varying between 10 and 11.75.

To be included in the study, participants had to be aged 18 years or older, have worked for at least 3 months at the RCS, and voluntarily agreed to participate by giving written, informed consent prior to

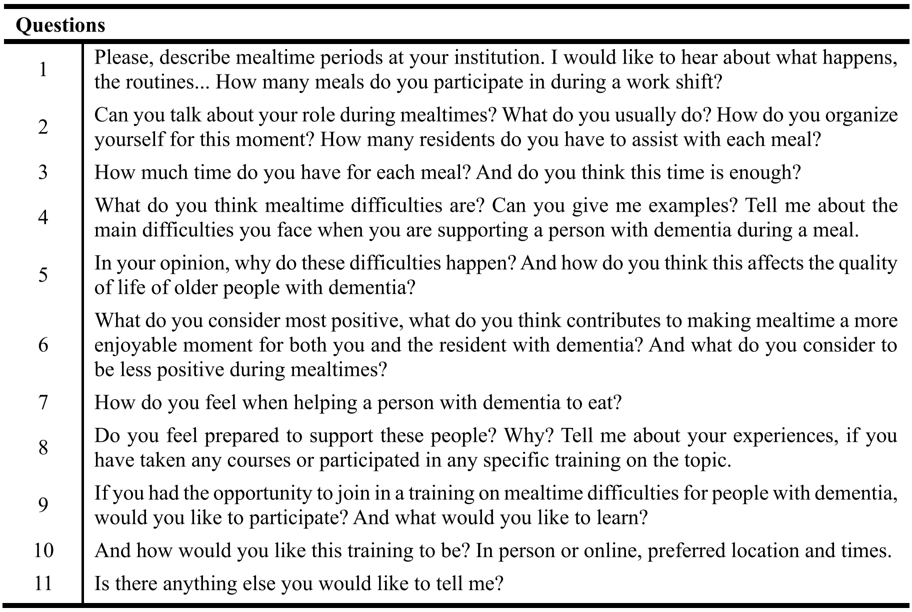
Table 1. Characteristics of the residential care settings where data were collected.

Residential care setting	1	2	3
Total resident capacity	31	47	60
Current number of residents (% of capacity)	31 (100)	47 (100)	60 (100)
Number of residents with dementia	17	20	40
% of residents with dementia	54.8	42.5	67
Total number of direct care workers	12	20	31
Number of direct care worker per work shift	3	4	6
Ratio residents x direct care worker per work shift	10.33	11.75	10

data collection. Trainees were excluded from the study. Recruitment was facilitated by the RCS technical directors who helped identify potential participants, who were then visited by a researcher who informed about the objectives and conditions of the study, assessing their willingness to participate. In cases of acceptance, the interview was scheduled at a convenient date and time for the participant, during working hours, while ensuring that there would be no short of staff during interviews.

Data collection

Face-to-face individual interviews took place in a private room within the RCS and were conducted by a researcher unfamiliar to the participants and with no connection to the RCS. A structured questionnaire was used to collect sociodemographic data (e.g., sex, age, years of formal education, time profession). The interview script (Figure 1), developed and pilot tested by researchers (LP, JT and DF), included open-ended questions design to explore DCW' routines and roles during mealtimes, their knowledge about dementia and mealtimes difficulties (causes, forms of manifestations and consequences, as well as facilitators and barriers), their perception of professional skills and feelings when helping a person with dementia to eat, and, finally, their needs and preferences for training on mealtime difficulties for people with dementia. The interviews, which lasted an average of 25.37 ± 6.12 minutes, were digitally audio-recorded with the participants' permission and transcribed verbatim.



Questions	
1	Please, describe mealtime periods at your institution. I would like to hear about what happens, the routines... How many meals do you participate in during a work shift?
2	Can you talk about your role during mealtimes? What do you usually do? How do you organize yourself for this moment? How many residents do you have to assist with each meal?
3	How much time do you have for each meal? And do you think this time is enough?
4	What do you think mealtime difficulties are? Can you give me examples? Tell me about the main difficulties you face when you are supporting a person with dementia during a meal.
5	In your opinion, why do these difficulties happen? And how do you think this affects the quality of life of older people with dementia?
6	What do you consider most positive, what do you think contributes to making mealtime a more enjoyable moment for both you and the resident with dementia? And what do you consider to be less positive during mealtimes?
7	How do you feel when helping a person with dementia to eat?
8	Do you feel prepared to support these people? Why? Tell me about your experiences, if you have taken any courses or participated in any specific training on the topic.
9	If you had the opportunity to join in a training on mealtime difficulties for people with dementia, would you like to participate? And what would you like to learn?
10	And how would you like this training to be? In person or online, preferred location and times.
11	Is there anything else you would like to tell me?

Figure 1. Interview script.

Data analysis

The transcripts were submitted to reflexive and collaborative thematic analysis by two independent researchers (LP and KP) following Braun and Clarke (2006, 2013, 2019) recommendations. The interview questions provided a framework for exploring particular aspects of participants' perspectives, but other themes were also allowed to emerge to guarantee that the open-coding contribute to generate themes that were relevant to the study goals (Byrne, 2022). Braun and Clarke (2006) recommendations for data categorization were followed, namely: familiarization of the data; generation of initial codes; reflexive thematic research; theme review; define and name; and produce the report. Each interview was transcribed verbatim, and the textual data were carefully read several times by both researchers for familiarization, with notes taken to ensure a comprehensive understanding of the entire dataset. Using a semi-inductive approach, the researchers generated an initial list of codes reflecting the main topics discussed by DCW. This initial coding allowed organizing codes into potential themes representing the core topics discussed in the interviews. After conducting independent analysis, themes and sub-themes were compared and reviewed between researchers to ensure consistency with the coded extracts and until reach a consensus. The entire research team reviewed the final themes and sub-themes, renaming them when necessary to ensure they accurately captured the dataset's distinct essence and contribution to the overall narrative. All themes/subthemes were generated by systematically combination relevant quotations. A qualitative data analysis software, webQDA, was used to facilitate the coding and organization of the interview data.

Rigor

To ensure rigor in the thematic analysis, several strategies were employed throughout the research process. Transcripts were double-checked to identify and correct any errors, thereby enhancing the accuracy of the data. Coding consistency was achieved through cross-verification, where codes were continuously compared against the original data to maintain alignment and reliability. Additionally, peer debriefing sessions between two researchers (LP and KP) were conducted regularly, allowing for critical examination of the analysis by researchers familiar with the study context. The final themes and subthemes were the result of a collaborative process of critical dialogs and discussion (Braun & Clarke, 2006), which included critical self-evaluation to ensure reflexivity (Berger, 2015). These procedures collectively contributed to the credibility and trustworthiness of the study's findings (Creswell, 2009).

Results

Participants' characteristics

Table 2 presents the participants' sociodemographic characteristics ($n = 17$ DCW). Most participants were women ($n = 16$, 94.1%) with a mean age of 48.53 ± 11.74 years old, working as DCW for an average of 9.75 ± 8.69 years. Nearly half of the participants had completed high school ($n = 8$, 47.1%) and the majority had never had specific training on mealtime difficulties of people with dementia ($n = 15$, 88.2%). All participants worked rotating 8-hour shifts, with the exception of night shifts, offering two to three meals per work shift.

Qualitative findings

The analysis of transcripts from 17 DCW revealed several insights about mealtime difficulties faced by people with dementia and the DCW' needs for training on this topic. Table 3 presents coding and categorization identified in the qualitative data analysis. Significant statements were extracted through reflexive and collaborative thematic analysis of the interview data and integrated into 5 main themes and 17 sub-themes. For confidentiality purposes, pseudonyms have been assigned to all participants whose quotes are presented in this section.

Table 2. Sociodemographic characteristics of the participants ($n = 17$).

Characteristics	
Sex, *n* (%)	
Female	16 (94.1)
Male	1 (5.9)
Marital Status *n* (%)	
Married/Union of fact	9 (53)
Single	6 (35.3)
Divorced	2 (11.7)
Education, *n* (%)	
College degree	1 (5.9)
High school	8 (47.1)
9 years of schooling	6 (35.2)
6 years	1 (5.9)
4 years	1 (5.9)
First job as DCW, *n* (%)	
No	5 (29.4)
Yes	12 (70.6)
Specific training, *n* (%)	
No	15 (88.2)
Yes	2 (11.8)
Age [years] Mean (SD) (Min-Max)	48.53 (11.74) (26–65)
Profession time [years] Mean (SD) (Min-Max)	9.75 (8.69) (0.25–32)
Time in the RCS [years] Mean (SD) (Min-Max)	8.31 (8.87) (0.25–32)

DCW: direct care workers; RCS: residential care setting; SD: standard deviation.

Table 3. Emerging themes and subthemes of the qualitative data analysis.

Themes	Sub-themes
1. Mealtime at residential care settings	Direct care workers' routine
	Time allocation for mealtime support
2. Mealtime support needs	Understanding mealtime difficulties
	Causes and contributing factors
	Impacts on health and well-being
	Techniques/strategies for mealtime support
3. Emotional responses to mealtime support	Positive experiences
	Challenges and frustrations
	Perception of self-competence
	Sources of care confidence
4. Work environment and conditions for care	Positive aspects
	Obstacles in care provision
5. Training needs and preferences for mealtime support	Identifying knowledge gaps
	Interest and willingness to participate
	Preferred training formats
	Theory-Practice Blend in Training
	Scheduling and accessibility of training

Theme 1. Mealtime at residential care settings

This theme captures participants' routines and perceptions regarding their daily experiences in providing mealtime support for residents with dementia. It highlights how DCW manage the challenges of ensuring nutritional care while creating a positive dining experience.

Sub-theme: Direct care workers' routine

The daily routine of DCW involves structured tasks focused on food provision and other essential care for residents. It typically begins with ensuring residents' hygiene. As Alice (65 yrs.) explained, *'First, we do hygiene, and then, after we finish that, we start serving meals.'* DCW guide residents to the dining room, assisting those with mobility issues. *'People who need our help, we take them ourselves and leave* *them in the dining room' (Leo, 40 yrs.)*. DCW responsibilities include organizing the dining room, disinfecting tables, and preparing utensils as stated by Sarah (50 yrs.): *'We disinfect the tables, place the plates, the utensils... we have to make sure everything is ready before the food comes from the kitchen.'*

For more independent residents, DCW provide minimal assistance to promote autonomy. However, those with physical and/or cognitive limitations require more involved support. A participant described, *'We help those who can't eat on their own, whether they're in wheelchairs or require other forms of assistance' (Rose, 48 yrs.)*. While promoting autonomy, DCW remain ready to assist when necessary: *'If we need to help, we help, but we try to create autonomy for those who are independent' (Anna, 30 yrs.)*.

Once in the dining area, DCW serve meals, ensuring the food is warm and tailored to the residents' needs. Their role extends beyond food delivery to include personalized care, such as adjusting portion sizes or cutting it into smaller portions to prevent choking. *'We try to make everything smaller, so they don't choke, and then we feed them' (Leo, 40 yrs.)*. For residents who struggle to eat independently, DCW provide direct assistance. *'When I see someone who can't eat, I always help by feeding them' (Diana, 59 yrs.)*. After the meal, DCW assist residents in cleaning up, helping them wash their hands and then return to the living room. *'After the meal, they come with us to the bathroom, wash their hands, and then return to their living room' (Leo, 40 yrs.)*.

DCW aim to maintain a sense of comfort and routine, recognizing the significance of mealtime for many residents: *'Mealtime is very important; it's one of the best moments of the day' (Rachel, 58 yrs.)*. While the routine is consistent, participants noted that each day brings variations, describing it as both predictable and ever-changing. *'The hours on the clock are the same every day, but every hour and every day are different' (Beth, 48 yrs.)*. This unpredictability adds complexity and interest to their work.

Sub-theme: Time allocation for mealtime support

This sub-theme reflects participants' perceptions of the time available to assist residents with dementia during mealtimes. Overall, DCW felt they generally had sufficient time to support residents, allowing for individualized assistance. Participants noted the flexibility in mealtime duration, while meals typically last from 20 to 60 minutes, they adjust according to residents' needs. As Anna (30 yrs.) explained, *'We take about 20 minutes for each resident, and that's usually enough for them.'* Others indicated that mealtimes could extend up to an hour and a half, depending on the resident's condition or preferences: *'It's about an hour and a half, more or less' (Olivia, 39 yrs.)*.

Despite mentions of time constraints, DCW generally agreed that no resident is left without eating due to lack of time. Alice (65 yrs.) emphasized, *'If they don't eat at first, we come back a little later to try again'*. Amelia (30 yrs.) expressed the importance of ensuring residents are properly fed, even if it means spending extra time: *'If I can't do it, another colleague will stay to finish feeding them.'* Participants highlighted the need to balance care quality with efficiency. While some residents finish meals quickly, others, particularly those with dementia, require more time and assistance: *'We sometimes need to feed them because they don't know how to use a spoon or fork anymore' (Grace, 62 yrs.)*. In such cases, DCW take extra care to avoid rushing residents, ensuring meals are provided at a comfortable pace.

Overall, participants emphasized the importance of allowing residents sufficient time to eat. Diana (59 yrs.) stated, *'Mealtimes should be extended so they can enjoy the moment without being rushed.'* Despite occasionally feeling limited on time, most participants believed that the allocated time was generally sufficient to meet residents' needs.

Theme 2. Mealtime support needs

The second theme explored the challenges DCW face in supporting residents with dementia during meals. Participants shared concerns on how to deal with the physical, cognitive, and behavioral difficulties felt by residents during mealtimes. However, their responses indicated gaps in knowledge regarding these challenges, suggesting a lack of thorough understanding of the underlying causes of such difficulties. This highlighted the need for further training and education to better equip DCW in addressing mealtime challenges in dementia care.

Sub-theme: understanding mealtime difficulties

Mealtime difficulties for residents with dementia are often linked to refusal behaviors, physical challenges, and cognitive impairments. Many participants noted behaviors such as residents closing their mouths, spitting out food, or clenching their teeth, which complicate feeding. As Rose (48 yrs.) explained, *'The biggest difficulty is when they close their mouths and refuse to eat.'*

Some residents with dementia struggle to recognize food or understand the purpose of eating. Emily (57 yrs.) mentioned, *'There are people with dementia who don't realize they need to eat'*, while others mentioned difficulties with using utensils or even recognizing that food is meant for consumption. Swallowing difficulties were also a concern, requiring DCW to be patient and attentive.

In addition to physical challenges, cognitive issues like lack of concentration during meals were noted. Leo (40 yrs.) stated, *'The biggest difficulty we encounter is maintaining their concentration during the meal,'* complicating the already delicate process of feeding residents with dementia.

Sub-theme: Causes and contributing factors

The mealtime difficulties of residents with dementia were mainly attributed to the progression of the disease and cognitive issues. Several DCW noted that the brain fails to send the necessary signals for eating, and that mental and emotional health also contribute. One participant mentioned, *'the dementia progresses, and they start clenching their teeth' (Sarah, 50 yrs.).*

Some DCW associated food refusal to factors such as unfamiliarity with the care environment, which is 'not like home,' noise and distractions in the dining area, and the presence of different people. Physical issues, such as lacking dentures, were also highlighted, along with the impact of age and the stage of dementia the resident is in. In other cases, the lack of appetite was attributed to factors that are often unclear or unidentifiable. As Rose (48 yrs.) summarized, *'sometimes there's no direct explanation, it could be because of this or that, or it might not even exist')*, suggesting that the reasons behind mealtime difficulties can be multiple and variable.

Sub-theme: impacts on health and well-being

Participants highlighted several physical and psychological consequences of mealtime difficulties for people with dementia. Many mentioned that poor nutrition leads to significant health deterioration, including weight loss, weakness, and increased vulnerability to illness, potentially resulting in more hospital visits or the need for a feeding tube. Maria (26 yrs.) noted that, *'they deteriorate faster, both physically and mentally.'*

In addition to the physical effects, emotional impacts were felt by both residents and DCW. Some DCW observed that losing the ability to eat independently could lead to a loss of self-esteem and autonomy, as stated by Anna (30 yrs): '*I think that people end up losing their autonomy. Maybe the person will end up losing their self-esteem completely.'* Participants also experienced emotional toll as they witness residents struggle, often hearing comments like, *'poor thing... he can't eat, poor thing he has more difficulty' (Sarah, 50 yrs).*

In more extreme cases, DCW noted that prolonged periods of not eating can lead to severe malnutrition and the need for tube feeding, further deteriorating residents' overall health. *'If it is a prolonged situation, you will notice that the resident will start to lose weight, and in extreme cases a nasogastric tube will have to be placed because the resident has to be fed' (Rose, 48 yrs.).*

Sub-theme: techniques/strategies for mealtime support

Participants described some approaches to assist residents with dementia during mealtimes, emphasizing patience, creativity, and individualized care. One common technique was creating a positive atmosphere. As Anna (30 yrs.) mentioned, *'The best trick that was taught to me was always try to give* *them special attention'* indicating the importance of comfort and support. Others DCW also noted the role of music and engaging interactions, like Amelia (30 yrs.) sharing, *'I arrive already playing around, because if you don't do that, it doesn't work.'* These approaches enrich the mealtime experience and foster connection and trust between DCW and residents.

Another strategy involved using practical techniques to encourage eating, especially for those with lack of appetite or physical limitations. Participants shared that they often use small but effective tricks, such as offering preferred foods first or mixing more difficult-to-eat items with more appealing options. Lucy (53 yrs.) explained: *'I put a bit of fruit puree first, and they eat. They start to open their mouth, and then we can feed them.'* This approach of combining familiar and enjoyable foods with other meal items helps avoid resistance and ensures nutritional intake.

Lastly, flexibility and persistence were emphasized as essential components of mealtime support. Many DCW noted that traditional methods sometimes fail, requiring alternative approaches, such as feeding with a syringe or leaving food available for later. Rose (48 yrs.) explained, *'Sometimes we have to leave that meal and come back later, or even skip it, so the body feels hungry and it's easier to feed them later.'* Although the use of syringe for feeding is not a good practice in dementia care, the strategy of offering the meal later ensures that the person's dignity is maintained while still addressing their nutritional needs.

Theme 3. Emotional responses to mealtime support

This theme explored the emotional experiences of DCW assisting residents with dementia during meals. Participants described a range of feelings, from rewarding moments to significant frustrations, reflecting the personal impact of working closely with individuals facing mealtime challenges and influencing their perceptions of their own skills.

Sub-theme: positive experiences

Positive feelings frequently emerged among participants when reflecting on their experiences supporting people with dementia during mealtime. Many expressed deep fulfillment and happiness, often tied to successful outcomes, such as when a resident eats. Anna (30 yrs.) noted, *'I felt satisfied because the person ate, and I was able to help them complete something they couldn't do at that moment.'* Diana (59 yrs.) confirmed this feeling of accomplishment: *'I feel good! And when they eat everything, I even feel happy, like, look, they ate it all, how great.'*

For some DCW, joy in caregiving extends beyond physical nourishment. One DCW expressed feelings of happiness when those she supports smile or laugh: *'I feel very good. I feel very happy when they talk, when they smile at you, when they joke around. It makes me feel happy.' (Olivia, 39 yrs.)*. This emotional connection fosters a sense of purpose and satisfaction that many participants value.

Participants also reflected on the importance of enjoying their work, highlighting how their passion for the job enhances their daily experience. Rose (48 yrs.) explained: *'I love my job overall, because if I didn't, I wouldn't have stayed here. I think this is a job only for those who love it.'* This love for the job, combined with a recognition of the challenges motivates many to give their best in dementia care and mealtime support.

Sub-theme: challenges and frustrations

The negative feelings expressed by DCW reveal the emotional burden of their job. Many participants felt frustration and sadness when unable to help someone eat. Rose (48 yrs.) reflected: *'It's a bit frustrating for me to know that at that moment I couldn't feed that person.'* Maria (26 yrs.) added, *'If the person doesn't eat, we feel a bit more frustrated because we know they are unwell and need to eat.'*

In addition to emotional challenges, DCW mentioned the physical and psychological strain of the job. Sarah (50 yrs.) acknowledged, *'We have to admit, it's a tiring job,'* highlighting the effects of long hours in demanding situations. Moreover, other DCW expressed disappointment when unable to achieve her caregiving goals: *'I feel a little discouraged when I can't help because I am also a human being, and I care about these people' (Anna, 30 yrs.).*

The constant worry about residents' safety increased anxiety among DCW. Diana (59 yrs.) expressed this fear, saying, *'I always have a certain anxiety, a certain fear that someone might choke.'* This concern, along with emotional fatigue and stress, contributes to a complex mix of feelings that DCW deal while providing support.

Sub-theme: perception of self-competence

DCW generally have a positive self-perception regarding their abilities to support residents with dementia. Many expressed confidence in their skills, and readiness for challenges. Ellen (57 yrs.) stated, *'I feel prepared'* while Beth (48 yrs.) affirmed: *'Always! I can do that! I like being there, talking, helping. . ..'* This feeling was echoed by several others DCW highlighting their capacity to manage their responsibilities.

Despite initial uncertainties, DCW have gained confidence over time, with some noting that their readiness has increased with experience. Amelia (30 yrs.) shared, *'Today yes, in the first weeks no, but today yes.'* highlighting her progress. Rachel (58 yrs.) remarked, *'We always have to learn; every day something new appears'* reflecting her awareness of ongoing skill.

Sub-theme: sources of care confidence

DCW' abilities to support residents with dementia derive from personal commitment, experience, and passion for their work. This preparation develops over time, as Anna (30 yrs.) noted, *'In the beginning, you break your face, but now that I know how things work everywhere, it flows.'* Such experiences build confidence and deepen their understanding of caregiving.

The significance of previous experience in shaping DCW' skills is crucial. Participants shared stories that motivated them to pursue this path, including caring for family members. Rose (48 yrs.) noted that *'the day-to-day is a school'* illustrating how practical experience enhances their expertise. This combination of passion, ongoing learning, and hands-on experience equips DCW to manage their roles effectively. As Julia (49 yrs.) stated, *'I think deep down it's because I love what I do'* indicating that personal fulfillment contributes significantly to their caregiving skills.

Theme 4. Work environment and conditions for care

This theme explored factors influencing DCW' abilities to provide mealtime support to residents with dementia. Participants identified both positive and negative aspects that affected their care, highlighting the significant role of the care environment and available resources in shaping their experiences.

Sub-theme: positive aspects

Participants emphasized the importance of a calm and pleasant mealtime experience. Alice (65 yrs.) noted that *'having a space or a little time for them to eat peacefully is essential.'* Emily (57 yrs.) added that *'good friendship among everyone [care staff]'* contributes to a positive atmosphere. Additionally, Monica (55 yrs.) highlighted the quality of the food, saying *'the atmosphere in the dining room is good, it's pleasant'* reinforcing the significance of a positive dining environment.

Strong support from management and teamwork among care staff are crucial for a positive care atmosphere. Maria (26 yrs.) mentioned effective leadership, stating, *'our director also goes to the dining room and puts his hands in the dough if it is necessary.'* Rose (48 yrs.) added the importance of collaboration, stating, *'having a good connection with the colleague we are working with is important.'* These positive factors enhance the care experience and contribute to residents′ overall well-being of the, allowing them to feel comfortable and cared for during mealtimes.

Sub-theme: obstacles in care provision

Negative aspects are frequently related to mealtime challenges and staff dynamics. A major concern is residents refusing to eat, indicating potential deeper issues. Additionally, the variability in care practices among DCW can also confuse newer employees. Amelia (30 yrs.) expressed her frustration over the lack of standardized procedures, stating, *'each one works in their own way'* which can overwhelm those who are still learning.

Participants noted that food preferences and preparation styles often don't meet residents' expectations. Maria (26 yrs.) mentioned that many residents are familiar with traditional home-cooked meals and struggle with the food provided: *'I think the problem is the type of food. I think they don't like the type of food. They are used to the traditional foods they ate at home.'* The physical environment also posed challenges. Emily (57 yrs.) mentioned COVID-19 protocols limiting dining space, which affected the overall experience: *'The lack of space in the dining room, it is very small and then due to COVID-19 we have to have fewer people at the table, and sometimes eating with 3 people is not as good as eating with 5.'*

Theme 5. Training needs and preferences for mealtime support

This theme examined participants' views on training for supporting people with dementia during mealtimes. They reflected on their received training, perceived educational needs, and interest in further professional development. Their responses underscored the importance of tailored, ongoing education to better equip DCW for their challenges.

Sub-theme: identifying knowledge gaps

This sub-theme highlighted DCW' strong desire for more comprehensive training on mealtime difficulties and dementia care. While some felt confident in their feeding skills, others emphasized the need to learn fundamental techniques to enhance care practices. Amelia (30 yrs.) stated *'the basics encompass everything'* while Lucy (53 yrs.) sought *'little tricks to encourage residents to eat.'*

Many participants recognized the individuality of each dementia case and the need for adaptable strategies. Beth (48 yrs.) expressed a desire for training tailored to specific situations, noting that *'each dementia has its case.'* Similarly, Monica (54 yrs.) described dementia as a *'dark hole,'* emphasizing the need for clarification on its varied aspects: *'I wanted to clarify more about the aspects of dementia.'*

Participants emphasized the importance of continuous learning. Sarah (50 yrs.) noted that *'we are always learning'* highlighting how exchanging ideas among colleagues leads to valuable insights: *'There are always tips that are fundamental, right? I may have an idea, someone else may have another, and these ideas together can form another beautiful idea'*. Some expressed interest in understanding residents' psychological states and behaviors related to food refusal. *'The part I liked learning the most was how to explore this part when there is a strong refusal to eat. How to get around it, even to avoid having to use a tube feeding' (Rose, 48 yrs.).*

Overall, these responses reflect a shared desire for targeted educational resources to provide care staff with practical strategies to improve mealtime experiences for residents with dementia.

Sub-theme: interest and willingness to participate

Participants expressed a strong willingness to engage in training sessions. Anna (30 yrs.) expressed enthusiasm, saying, *'Of course, of course'* while Alice (65 yrs.) added, *'Yes, why not?'* However, logistical concerns arose, with some DCW noting the need for transportation or training to be held at their workplace. Grace (62 yrs.) mentioned, *'I would accept if it were offered here.'* Timing posed challenges, as Rose (48 yrs.) explained *'Our lives are not just our working hours, so at the moment I have other things going on that take up a lot of my time and at the moment it would be impossible for me to participate in long-term training after work hours'*. Overall, there was a clear enthusiasm for further education, with participants recognizing the value of continuous learning. Leo (40 yrs.) summed it up, *'Learning is always good; we never lose anything by knowing a bit more.'*

Sub-theme: preferred training formats

Participants expressed a strong preference for in-person training. Alice (65 yrs.) stated simply, *'In-person'* and Lucy (53 yrs.) emphasized, *'I really like in-person . . . I prefer it.' Olivia* (39 yrs.) noted, *'I don't have patience to sit and watch online'* while Rose (48 yrs.) highlighted the importance of personal interaction: *'I always prefer in-person because I think the face-to-face contact, talking to each other, the interaction is important.'* Some DCW acknowledged the practicality of online training, with Amelia (30 yrs.) noting, *'Online is what is out there; it's easier for everyone.'* Nonetheless, Maria (26 yrs.) mentioned that either format would work for her, stating, *'For me, it wouldn't make any difference; if it were practical, of course, in-person would be better.'* Overall, while most favored in-person training, they recognized the convenience of online options.

Sub-theme: theory-practice blend in training

Participants highlighted the need to integrate practical and theoretical elements in training. Lucy (53 yrs.) emphasized, '*Practice! I really like practice*' indicating a preference for hands-on learning. Sarah (50 yrs.) agreed, stating, *'Practice is fundamental'*, while Olivia (39 yrs.) stressed the importance of both types of content saying, *'I think practical and theoretical'* as it reflects the complexity of real-life situations. Rose (48 yrs.) proposed an ideal training format that includes both components, stating, *'I think a mix would be ideal'* Additionally, Monica (54 yrs.) expressed, *'I like practice. I am very practical'* which aligns with others' opinions that practical training enhances their ability to implement learned concepts effectively. Overall, DCW collectively emphasized that practical training is essential for meaningful learning and successful application in their care roles.

Sub-theme: scheduling and accessibility of training

DCW expressed varying preferences regarding the timing of training sessions. Amelia (30 yrs.) stated, *'For me, it doesn't matter; it can be during or outside work hours'* indicating flexibility. In contrast, Beth (48 yrs.) emphasized the practicality of conducting training *'during the work shift'* suggesting a preference for incorporating learning into their regular duties. Overall, while some participants showed adaptability to different scheduling options, there was a clear desire for training to align with their work routines whenever possible.

Discussion

This study explored the perceptions, concerns, and challenges of DCW regarding the mealtime difficulties of people with dementia and identified their educational needs to improve performance in supporting these individuals at mealtimes. Through reflexive thematic analysis, several themes emerged that highlight the challenges and complexities of providing adequate mealtime support in RCS. The overall findings suggest that DCW have superficial knowledge about the disease and its impact on the mealtimes of people living with dementia.

As is widely known, DCW represent the major workforce in RCS playing a central role in providing essential daily care and support to older adults and people with disabilities. Their responsibilities encompass a wide range of tasks, including assisting with activities of daily living such as bathing, dressing, and eating. These professionals also contribute to maintaining a safe and nurturing environment, fostering social interaction, and promoting the overall well-being of residents (Scales & Meeks, 2021). The daily routines related by the participants revealed a structured but flexible approach to supporting residents with dementia during meals, with DCW managing both essential care tasks and individualized meal support. Participants described a series of tasks, from ensuring residents' hygiene and assisting with mobility to organizing the dining room and monitoring food intake, reflecting a conscientious effort to balance autonomy and assistance (Scales & Meeks, 2021; Scales et al., 2020).

Despite these efforts, many participants expressed concerns regarding the time available to complete these tasks, especially support with meals, reporting that while general timeframes are adequate, certain residents require extended support due to cognitive or physical impairments. It was interesting to note that participants were aware of the need for adequate time to provide quality care, since sufficient time is indeed a determining factor in the good quality of care provided to people with dementia (Egede Nissen et al., 2013; Hammar et al., 2016).

The definition of mealtimes difficulties given by participants described frequent issues such as food refusal, clenching of teeth, and a lack of recognition of food, and the reasons given for these difficulties even mention the evolution of the disease and environmental factors, but do not explore the real and more frequent causes. Although somewhat imprecise, participants' responses were, in a sense, correct; however, they lack depth in addressing the concept and its implications.

The consequences of mealtime difficulties for people with dementia may impact both the physical and emotional well-being of people with dementia. Participants noted that inadequate food intake often leads to malnutrition, weight loss, and increased vulnerability to health complications, consistent with findings from previous studies (Egan et al., 2020; Jung et al., 2020). DCW also reported using various adaptive techniques to encourage eating, such as offering preferred foods, creating a calm environment, and providing physical assistance as needed. This aligns with Faraday et al. (2021) who underscore the importance of individualized and creative strategies to address the unique mealtime needs of residents with dementia. Some participants mentioned using methods such as syringe feeding and tube feeding to address mealtime difficulties. While these approaches may occasionally be necessary in specific clinical circumstances, they are generally not considered best practices in dementia care. Evidence suggests that these methods can compromise the dignity and comfort of individuals with dementia and may increase the risk of complications, such as aspiration or discomfort (American Geriatrics Society Ethics Committee, 2014; Pessoa et al., 2021; Volkert et al., 2024). The reliance on these methods may reflect gaps in knowledge and limited access to alternative evidence-based strategies, such as person-centered feeding techniques or environmental adaptations. Participants' narratives highlighted the need for structured training in feeding techniques and environmental adjustments to foster a more supportive and effective mealtime experience while respecting the autonomy and well-being of residents with dementia.

The emotional experiences of DCW while supporting people with dementia at mealtimes reflected a combination of fulfillment and frustration, illustrating the complexity of dementia care. Many DCW expressed joy and a strong sense of purpose when residents ate well or interacted positively, feeling these moments validated their care efforts, as stated by Barbosa, Marques et al. (2016) who found that positive interactions enhance caregiver satisfaction and resilience. The emotional rewards and challenges described by participants also resonate with the framework of person-centered care. This approach not only benefits residents by promoting autonomy and dignity but also reduces DCW burnout and enhances job satisfaction by creating a more supportive and fulfilling work environment. Incorporating these principles into educational interventions could further empower DCW and strengthen their resilience in handling complex care scenarios (Barbosa et al., 2015; Barbosa, Nolan, et al., 2016; Hung & Chaudhury, 2011). However, DCW also reported frequent frustration, especially when residents resisted eating or showed significant declines. The fear of adverse events like choking heightened their stress, since repetitive exposure to challenging situations can contribute to DCW burnout (Jung et al., 2024; Klaver et al., 2021).

In terms of self-perception, DCW generally felt confident in their skills, often attributing their adaptability to previous experience and commitment. Many reported an increased sense of readiness over time, supporting prior findings that suggest practical experience builds caregivers' confidence and resilience in managing dementia care (Parveen et al., 2021; Travers et al., 2013). Although DCW feel capable in their roles, they lack formal or specialized education in dementia care, highlighting the potential benefits of a targeted training program.

The caregiving environment plays a crucial role in shaping DCW' experiences, with both positive and negative factors influencing their ability to provide effective mealtime support. Participants highlighted the importance of a calm, pleasant dining atmosphere and strong teamwork, both of which contribute to a supportive environment that fosters resident comfort and staff confidence (Chaudhury et al., 2017; Dahlke et al., 2018; Passos et al., 2024). However, DCW also reported significant barriers, such as residents' frequent refusal to eat and logistical challenges, including lack of dining space and varied practices among staff members, which can lead to inconsistency in care delivery. These barriers resonate with findings from Chaudhury et al. (2017) and Jung et al. (2024), who noted that environmental constraints and a lack of standardized practices often hinder care quality in dementia settings. Addressing these barriers through improved infrastructure and unified caregiving protocols could thus enhance both DCW performance and resident outcomes.

Participants expressed a strong desire for specific training on mealtime difficulties, emphasizing the need for practical and interactive formats. Many DCW noted that while they felt confident in their daily caregiving tasks, understanding the complexities of dementia-related feeding behaviors would enhance their effectiveness, particularly through techniques like managing food refusal and creating a positive mealtime environment. This aligns with previous studies (Hung et al., 2024; Parveen et al., 2021) which highlight that targeted, hands-on training in dementia care improves caregiver confidence and quality of care. Moreover, most DCW preferred in-person training sessions integrated with practical demonstrations, echoing prior research suggesting that experiential learning formats can significantly enhance DCW preparedness in complex care situations (Abelsson, 2017; Adewuyi et al., 2022). Expanding access to such training programs could better equip DCW to address residents' unique mealtime needs and support overall care quality.

Additionally, while existing training programs provide valuable insights (H. Chang et al., 2023; Passos et al., 2024), they often lack a comprehensive focus on practical, person-centered strategies tailored to the complex mealtime challenges specific to dementia care (Faraday et al., 2021). Furthermore, new training programs must consider the unique contexts and specific realities of each type of RCS, including variations in staff-to-resident ratios, resource availability, and cultural practices. Addressing these contextual factors is essential to ensure the relevance, feasibility, and effectiveness of training interventions (Newbould et al., 2022). Expanding access to such programs could bridge critical gaps in caregiver training and ultimately improve mealtime experiences for people with dementia.

Beyond training program design, some factors must be considered for their success. Translating knowledge into practice requires multimodal delivery, tailored approaches, relationship building, and organizational support (Phillipson et al., 2016). Barriers such as limited staff knowledge, time constraints, and heavy workloads hinder the consistent application of best practices (Lourida et al., 2017). Effective programs should address person-centered care principles, strategies for managing uncertainty during mealtimes, and creating supportive environments for residents and caregivers (Faraday et al., 2019). Incorporating these elements and overcoming organizational barriers can better equip direct care workers to handle the complexities of mealtime care in dementia.

In summary, this study underscores the complexity of mealtime support for people with dementia, revealing both the dedication of DCW and the significant challenges they face. Although participants demonstrated resilience and adaptability, much of their expertise is built on daily experience rather than formal training, leaving gaps in essential knowledge about dementia-related mealtime support needs. Positive care environments and team cohesion contribute to better support, yet barriers like time constraints and inconsistent practices restrain optimal care. Targeted training programs that address specific mealtime difficulties in dementia care – tailored to DCW' existing skills and preferred learning formats – could empower these professionals, enhancing both their confidence and the quality of care for people with dementia living in RCS.

Limitations

This study has some limitations that should be acknowledged. First, participants were recruited from three traditional residential care settings in the central region of Portugal. These facilities had relatively small capacities and limited staff, which may have influenced the findings. Smaller settings might foster closer relationships between staff and residents, potentially enhancing the personalization of care. However, they may also pose unique challenges such as increased workload and fewer resources, which could exacerbate the difficulties reported by DCW. This restricts the transferability of the findings to broader contexts or to facilities with different resident´s capacities, specializations and policies. Future studies should consider including a wider range of residential care settings to better capture the diversity of experiences in dementia care. Additionally, there is a potential response bias, as some participants may have been hesitant to express critical views about their work conditions or personal challenges, possibly resulting in an overly positive representation of their experiences.

Conclusion

This study aimed to explore DCW' perceptions, challenges, and educational needs related to supporting people with dementia during mealtimes. Findings reveal that, while DCW are dedicated to providing effective care, they face significant barriers, including unpredictable behaviors, time constraints, and a lack of formal training in dementia-specific mealtime support. DCW expressed a strong interest in learning practical techniques to manage these challenges, emphasizing a preference for hands-on, collaborative training. Designing targeted training programs that reflect the real-life experiences and needs of DCW could enhance their skills and confidence, ultimately benefiting people with dementia through improved mealtime care quality.

Acknowledgements

The authors would like to thank the technical directors of the residential care settings where the recruitment took place, and the participants for their time and availability to share their experiences with us.

Disclosure statement

No potential conflict of interest was reported by the author(s).

Funding

This work was supported by Lígia Passos's PhD grant scholarship [DFA/BD/09055/2020; https://doi.org/10.54499/2020.09055. BD] financed by FCT (Fundação para a Ciência e a Tecnologia) through FSE (Fundo Social Europeu).

ORCID

Lígia Passos http://orcid.org/0000-0002-0659-5258
João Tavares http://orcid.org/0000-0003-3027-7978
Melissa Batchelor http://orcid.org/0000-0003-4622-4547
Karina Pereira http://orcid.org/0009-0000-2807-2872
Daniela Figueiredo http://orcid.org/0000-0002-3160-7871

References

Abdelhamid, A., Bunn, D., Copley, M., Cowap, V., Dickinson, A., Gray, L., Howe, A., Killett, A., Lee, J., Li, F., Poland, F., Potter, J., Richardson, K., Smithard, D., Fox, C., & Hooper, L. (2016). Effectiveness of interventions to directly support food and drink intake in people with dementia: Systematic review and meta-analysis. *BMC Geriatrics*, *16*(1), 26. https://doi.org/10.1186/s12877-016-0196-3

Abelsson, A. (2017). Learning through simulation. *Disaster and Emergency Medicine Journal*, *2*(3), 125–128. https://doi.org/10.5603/DEMJ.2017.0027

Adewuyi, M., Morales, K., & Lindsey, A. (2022). Impact of experiential dementia care learning on knowledge, skills and attitudes of nursing students: A systematic literature review. *Nurse Education in Practice*, *62*, 103351. https://doi.org/10.1016/j.nepr.2022.103351

Amella, E. J. (2002). Resistance at mealtimes for persons with dementia. *The Journal of Nutrition, Health and Aging*, *6*(2), 117–122. https://pubmed.ncbi.nlm.nih.gov/12166364/

American Geriatrics Society Ethics Committee. (2014). American geriatrics society feeding tubes in advanced dementia position statement. *Journal of the American Geriatrics Society*, *62*(8), 1590–1593. https://doi.org/10.1111/jgs.12924

Barbosa, A., Marques, A., Sousa, L., Nolan, M., & Figueiredo, D. (2016). Effects of a psycho-educational intervention on direct care workers' communicative behaviors with residents with dementia. *Health Communication*, *31*(4), 453–459. https://doi.org/10.1080/10410236.2014.965382

Barbosa, A., Nolan, M., Sousa, L., & Figueiredo, D. (2015). Supporting direct care workers in dementia care: Effects of a psychoeducational intervention. *American Journal of Alzheimer's Disease & Other Dementiasr*, *30*(2), 130–138. https://doi.org/10.1177/1533317514550331

Barbosa, A., Nolan, M., Sousa, L., Marques, A., & Figueiredo, D. (2016). Effects of a psychoeducational intervention for direct care workers caring for people with dementia: Results from a 6-month follow-up study. *American Journal of Alzheimer's Disease & Other Dementias®*, *31*(2), 144–155. https://doi.org/10.1177/1533317515603500

Batchelor-Murphy, M., Amella, E. J., Zapka, J., Mueller, M., & Beck, C. (2015). Feasibility of a web-based dementia feeding skills training program for nursing home staff. *Geriatric Nursing*, *36*(3), 212–218. https://doi.org/10.1016/j.gerinurse.2015.02.003

Berger, R. (2015). Now I see it, now I don't: Researcher's position and reflexivity in qualitative research. *Qualitative Research*, *15*(2), 219–234. https://doi.org/10.1177/1468794112468475

Braun, V., & Clarke, V. (2006). Using thematic analysis in psychology. *Qualitative Research in Psychology*, *3*(2), 77–101. https://doi.org/10.1191/1478088706qp063oa

Braun, V., & Clarke, V. (2013). *Successful qualitative research: A practical Guide for beginners*. SAGE Publications.

Braun, V., & Clarke, V. (2019). Reflecting on reflexive thematic analysis. *Qualitative Research in Sport, Exercise and Health*, *11*(4), 589–597. https://doi.org/10.1080/2159676X.2019.1628806

Bunn, D. K., Abdelhamid, A., Copley, M., Cowap, V., Dickinson, A., Howe, A., Killett, A., Poland, F., Potter, J. F., Richardson, K., Smithard, D., Fox, C., & Hooper, L. (2016). Effectiveness of interventions to indirectly support food and drink intake in people with dementia: Eating and Drinking Well in DementiA (EDWINA) systematic review. *BMC Geriatrics*, *16*(1), 89. https://doi.org/10.1186/s12877-016-0256-8

Byrne, D. (2022). A worked example of Braun and Clarke's approach to reflexive thematic analysis. *Quality & Quantity*, *56*(3), 1391–1412. https://doi.org/10.1007/s11135-021-01182-y

Chang, C.-C., Wykle, M. L., & Madigan, E. A. (2006). The effect of a feeding skills training program for nursing assistants who feed dementia patients in Taiwanese nursing homes. *Geriatric Nursing*, *27*(4), 229–237. https://doi.org/10.1016/j.gerinurse.2006.03.007

Chang, H., Spencer, J., Ho, M., Kasa, A. S., Ataiza, C., Lambert, K., & Chang, C. (2023). Effectiveness of interventions on feeding difficulties among people with dementia: A systematic review and meta-analysis. *Australasian Journal on Ageing*, *42*(2), 280–292. https://doi.org/10.1111/ajag.13192

Chaudhury, H., Hung, L., Rust, T., & Wu, S. (2017). Do physical environmental changes make a difference? Supporting person-centered care at mealtimes in nursing homes. *Dementia (London, England)*, *16*(7), 878–896. https://doi.org/10.1177/1471301215622839

Chen, L., Li, H., Lin, R., Zheng, J., Wei, Y., Li, J., Chen, P., & Chen, H. (2016). Effects of a feeding intervention in patients with Alzheimer's disease and dysphagia. *Journal of Clinical Nursing*, *25*(5–6), 699–707. https://doi.org/10.1111/jocn.13013

Creswell, J. W. (2009). *Research design: Qualitative, quantitative, and mixed methods approaches* (3rd ed.). SAGE.

Dahlke, S., Stahlke, S., & Coatsworth-Puspoky, R. (2018). Influence of teamwork on health care workers' perceptions about care delivery and job satisfaction. *Journal of Gerontological Nursing*, *44*(4), 37–44. https://doi.org/10.3928/00989134-20180111-01

Egan, A., Andrews, C., & Lowit, A. (2020). Dysphagia and mealtime difficulties in dementia: Speech and language therapists' practices and perspectives. *International Journal of Language & Communication Disorders*, *55*(5), 777–792. https://doi.org/10.1111/1460-6984.12563

Egede Nissen, V., Jakobsen, R., Sellevold, G. S., & Sørlie, V. (2013). Time ethics for persons with dementia in care homes. *Nursing Ethics*, *20*(1), 51–60. https://doi.org/10.1177/0969733012448968

Faraday, J., Abley, C., Beyer, F., Exley, C., Moynihan, P., & Patterson, J. M. (2021). How do we provide good mealtime care for people with dementia living in care homes? A systematic review of carer-resident interactions. *Dementia (London, England)*, *20*(8), 3006–3031. https://doi.org/10.1177/14713012211002041

Faraday, J., Salis, C., & Barrett, A. (2019). Equipping nurses and care staff to manage mealtime difficulties in people with dementia: A systematic scoping review of training needs and interventions. *American Journal of Speech-Language Pathology*, *28*(2), 717–742. https://doi.org/10.1044/2018_AJSLP-18-0062

Hammar, L. M., Swall, A., & Meranius, M. S. (2016). Ethical aspects of caregivers' experience with persons with dementia at mealtimes. *Nursing Ethics*, *23*(6), 624–635. https://doi.org/10.1177/0969733015580812

Hannum, W., & Hansen, C. (1989). *Instructional systems development in large organizations*. Educational Technology.

Hung, L., & Chaudhury, H. (2011). Exploring personhood in dining experiences of residents with dementia in long-term care facilities. *Journal of Aging Studies*, *25*(1), 1–12. https://doi.org/10.1016/j.jaging.2010.08.007

Hung, L., Zhao, Y., Lam, M., Ren, H., & Wong, K. L. Y. (2024). Facilitators, barriers and impacts to implementing dementia care training for staff in long-term care settings by using fully immersive virtual reality: A scoping review protocol. *BMJ Open*, *14*(5), e083724. https://doi.org/10.1136/bmjopen-2023-083724

Jung, D., De Gagne, J. C., Lee, M., Lee, H., Lee, K., Choi, E., & Chung, J. (2020). Feasibility of a mobile meal assistance program for direct care workers in long-term care facilities in South Korea. *Clinical Interventions in Aging*, *15*, 2019–2029. https://doi.org/10.2147/CIA.S273934

Jung, D., Lee, K., De Gagne, J. C., Lee, M., Lee, H., Yoo, L., Won, S., & Choi, E. (2021). Eating difficulties among older adults with dementia in long-term care facilities: A scoping review. *International Journal of Environmental Research and Public Health*, *18*(19), 10109. https://doi.org/10.3390/ijerph181910109

Jung, D., Park, J., Choi, E., Yoo, L., Kim, K., Cho, S., & Shin, S. (2024). Educational needs of direct care workers in long-term care facilities providing mealtime assistance to older adults with dementia. *BMC Geriatrics*, *24*(1), 808. https://doi.org/10.1186/s12877-024-05368-5

Keller, H. H., Syed, S., Dakkak, H., Wu, S. A., & Volkert, D. (2022). Reimagining nutrition care and mealtimes in long-term care. *Journal of the American Medical Directors Association*, *23*(2), 253–260.e1. https://doi.org/10.1016/j.jamda.2021.12.021

Klaver, M., van den Hoofdakker, B. J., Wouters, H., de Kuijper, G., Hoekstra, P. J., & de Bildt, A. (2021). Exposure to challenging behaviours and burnout symptoms among care staff: The role of psychological resources. *Journal of Intellectual Disability Research*, *65*(2), 173–185. https://doi.org/10.1111/jir.12800

Li, Y., Zhang, X., Su, J., Li, H., Meng, X., Zhang, S., Fang, S., Wang, W., Bao, L., & Sun, J. (2021). Optimizing mealtime care for people with dementia from the perspective of formal caregivers: A systematic review of qualitative research. *International Journal of Nursing Studies*, *123*, 104046. https://doi.org/10.1016/j.ijnurstu.2021.104046

Lin, L.-C., Watson, R., & Wu, S.-C. (2010). What is associated with low food intake in older people with dementia? *Journal of Clinical Nursing*, *19*(1–2), 53–59. https://doi.org/10.1111/j.1365-2702.2009.02962.x

Liu, W., Galik, E., Boltz, M., Nahm, E.-S., Lerner, N., & Resnick, B. (2016). Factors associated with eating performance for long-term care residents with moderate-to-severe cognitive impairment. *Journal of Advanced Nursing*, *72*(2), 348–360. https://doi.org/10.1111/jan.12846

Lourida, I., Abbott, R. A., Rogers, M., Lang, I. A., Stein, K., Kent, B., & Thompson Coon, J. (2017). Dissemination and implementation research in dementia care: A systematic scoping review and evidence map. *BMC Geriatrics*, *17*(1), 147. https://doi.org/10.1186/s12877-017-0528-y

Newbould, L., Samsi, K., & Wilberforce, M. (2022). Developing effective workforce training to support the long-term care of older adults: A review of reviews. *Health & Social Care in the Community*, *30*(6), 2202–2217. https://doi.org/10.1111/hsc.13897

Parveen, S., Smith, S. J., Sass, C., Oyebode, J. R., Capstick, A., Dennison, A., & Surr, C. A. (2021). Impact of dementia education and training on health and social care staff knowledge, attitudes and confidence: A cross-sectional study. *BMJ Open*, *11*(1), e039939. https://doi.org/10.1136/bmjopen-2020-039939

Passos, L., Tavares, J., Batchelor, M., & Figueiredo, D. (2024). Interventions to address mealtime support needs in dementia: A scoping review. *PLOS ONE*, *19*(3), e0300987. https://doi.org/10.1371/journal.pone.0300987

Pessoa, A., Almeida, P., Marinho, R., Duque, S., Amaral, T. F., Pinho, J., Santos, M., Freire, E., Mendes, L., Santos, L., Marinho, A., Clara, J. G., & Correia, J. A. (2021). Alimentação na Demência Avançada: Documento de Consenso da Sociedade Portuguesa de Medicina Interna e da Associação Portuguesa de Nutrição Entérica e Parentérica. *Medicina Interna*, *27*(1), 80–88. https://doi.org/10.24950/Guidelines/Consensus/1/2020

Phillipson, L., Goodenough, B., Reis, S., & Fleming, R. (2016). Applying knowledge translation concepts and strategies in dementia care education for health professionals. *Journal of Continuing Education in the Health Professions*, *36*(1), 74–81. https://doi.org/10.1097/CEH.0000000000000028

Scales, K., Lepore, M. J., & Kaskie, B. (2020). Always essential: Valuing direct care workers in long-term care. *Public Policy & Aging Report*, *30*(4), 173–177. https://doi.org/10.1093/ppar/praa022

Scales, K., & Meeks, S. (2021). It is time to resolve the direct care workforce crisis in long-term care. *The Gerontologist*, *61*(4), 497–504. https://doi.org/10.1093/geront/gnaa116

Stone, R. (2012). The long-term care workforce: From accidental to valued profession. In D. Wolf & N. Folbre (Eds.), *Universal coverage of long-term care in the United States: Can we get there from here?* (pp. 155–178). Russel Sage Foundation.

Tompkins, C. J., Ihara, E. S., Inoue, M., Ferenz, J., & Pham, S. (2020). A web-based training program for direct care workers in long-term care communities: Providing knowledge and skills to implement a music and memory intervention. *Gerontology & Geriatrics Education*, *41*(3), 367–379. https://doi.org/10.1080/02701960.2019.1699074

Tong, A., Sainsbury, P., & Craig, J. (2007). Consolidated criteria for reporting qualitative research (COREQ): A 32-item checklist for interviews and focus groups. *International Journal for Quality in Health Care*, *19*(6), 349–357. https://doi.org/10.1093/intqhc/mzm042

Travers, C. M., Beattie, E., Martin-Khan, M., & Fielding, E. (2013). A survey of the Queensland healthcare workforce: Attitudes towards dementia care and training. *BMC Geriatrics*, *13*(1), 101. https://doi.org/10.1186/1471-2318-13-101

Volkert, D., Beck, A. M., Faxén-Irving, G., Frühwald, T., Hooper, L., Keller, H., Porter, J., Rothenberg, E., Suominen, M., Wirth, R., & Chourdakis, M. (2024). ESPEN guideline on nutrition and hydration in dementia - update 2024. *Clinical Nutrition*, *43*(6), 1599–1626. https://doi.org/10.1016/j.clnu.2024.04.039

World Health Organization. (2021). *Global status report on the public health response to dementia*. https://iris.who.int/bitstream/handle/10665/344701/9789240033245-eng.pdf?sequence=1