

## EMPIRICAL RESEARCH MIXED METHODS OPEN ACCESS

# Digital Life Stories Within Residential Aged Care Settings: Implications for Staff Knowledge and Person-Centred Care Practices

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## ABSTRACT

**Aims:** First, to investigate residential aged care staff's knowledge and understanding of residents after viewing their digital life story. Second, to examine the stability of this knowledge and understanding. Third, to explore staff's self-reported care practices following digital life story viewing.

**Background:** Australian aged care quality standards include person-centred care practices, although opportunity for residents' identity expression can be limited by the facility environment. Staff cannot implement such practices without first understanding residents' history, preferences, and values.

**Design:** The study used a convergent mixed methods design.

**Methods:** Residential aged care staff ( $n = 61$ ) viewed a resident's digital life story and completed a measure of their knowledge and understanding of the resident at pre-test, post-test, and follow-up. At post-test and follow-up, staff were also asked to indicate if viewing the story had improved their interactions and care practices with the resident and to describe changes in their practice. Pre-test, post-test and follow-up scores of the measure were compared using a repeated measures analysis of variance with post hoc comparisons. Qualitative responses were analysed using thematic analysis.

**Results:** Scores at post-test and follow-up were significantly higher than at pre-test, showing a stable improvement in knowledge and understanding of residents. Staff responses indicated their knowledge and understanding of residents' life story enhanced their care towards the residents.

**Conclusion:** Watching digital life stories was associated with stable improvements in staff's knowledge of residents, with staff feeling better equipped to personalise care practices.

**Impact on Clinical Practice:** Digital life stories about aged-care residents may support staff's improved knowledge and understanding of their care-recipients. With such understanding, staff are more equipped to implement person-centred care practices by Australian aged care quality standards.

**Reporting Method:** The study adhered to guidelines for Revised Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0).

**Patient or Public Contribution:** No patient or public contribution.

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## Summary

- What does this paper contribute to the clinical community?
  - Digital life stories about residential aged care residents are a promising tool for improving staff members' knowledge and understanding of the resident care-recipients up to 1-month after viewing.
  - Digital life stories about aged care residents have the potential to improve implementation of person-centred care practices among staff members by equipping them with improved knowledge and understanding of the depicted resident's identity.

## 1 | Introduction

By 2030, nearly one in six people in the world, or 1.4 billion people, will be over 60 years old (World Health Organization 2022). Currently, in Australia, 16.7% of the population, or 4.5 million people, are aged 65 years and over, with this number expected to increase to 21% by 2066 (Australian Institute of Health and Welfare 2023b; Department of Health and Aged Care 2023).

Consistent with this growth, the demand for places within residential aged care services has become significant, increasing from 189,761 in 2013 to over 230,000 places in 2023 (Department of Health and Aged Care 2013, 2023). Residential aged care facilities (RACFs) comprise institutional settings that are designed to deliver long-term or respite care to residents who are unable to maintain independent living within the community (Australian Institute of Health and Welfare 2023a). These facilities provide a spectrum of care levels spanning from fundamental everyday living assistance to highly specialised care for individuals experiencing cognitive impairment (Department of Health and Aged Care, 2023).

The prevalence of cognitive impairment among residents is high, with almost half of all individuals residing in Australian RACFs living with dementia (Harrison et al. 2019). Moreover, over 50% of residents are diagnosed with other mental health conditions (Amare et al. 2020), of which 40% experience significant levels of depression (Amare et al. 2020) and 19% experience an anxiety disorder (Creighton et al. 2018). Additionally, research suggests the average prevalence of moderate and severe loneliness among residents to be 61% and 35%, respectively (Gardiner et al., (2020).

In an attempt to improve the well-being and quality of life of residents, Australian RACF staff have been encouraged to tailor care practices to the needs, preferences and values of the individual, that is, a person-centred model of care (Brownie and Nancarrow 2013; Seah et al. 2022). These practices aim to uphold residents' humanity, autonomy, respect for their dignity and involvement in decision-making that directly affects them (Pakkonen et al. 2023). This person-centred framework of care has been found to lead to reductions in resident loneliness and depressive symptomology (Bergman-Evans 2006; Brownie and Nancarrow 2013). Residents report that such identity-affirming aspects of care are central to their vision of a 'good life' (Bowers et al. 2009) in supported living environments (Minney and Ranzijn 2016).

While such care practices are encouraged, they remain aspirational given there are limited opportunities for staff to develop knowledge about the residents, to appreciate their life histories, or to understand what aspects of care are important for validating the identity of the resident (Håkansson Eklund et al. 2019; Seah et al. 2022). There are a lack of opportunities for residents to express their identities in an institutional environment (Paddock et al. 2019). The reduction in personal space for possessions, alterations to established routines and spiritual practices, decreased social interactions within familiar networks, and limited exposure to external social symbols and cues collectively contribute to this challenge (Gautam et al. 2019, 2021; Paddock et al. 2019). Furthermore, time constraints and low English language proficiency of staff can limit their ability to engage in personal conversations with residents that would otherwise serve to build a deep rapport (Mavromaras et al. 2017; Walker and Paliadelis 2016). Specifically, interactions between staff and residents are frequently confined to brief, task-oriented exchanges instead of in-depth exploration of residents' personal identities (Oppert et al. 2018; Paddock et al. 2019; Walker and Paliadelis 2016). Combined, these environmental factors and limited interactions mean that it is difficult for staff to deeply understand the individual needs, values and preferences of residents (Haunch et al. 2021; Pakkonen et al. 2023; Walker and Paliadelis 2016).

Recognising the pivotal role of identity in person-centred care practices, there is a pressing need to devise methods that enhance staff awareness of residents' identities. In doing so, such methods need to take into consideration the barriers that otherwise inhibit this understanding and the negative implications they have for the delivery of person-centred care (McCabe et al. 2009; Oppert et al. 2018).

One increasingly prominent method adopted in healthcare settings and residential aged care is the use of storytelling to explore older adults' identities (Dellkvist et al. 2024; Dennerstein et al. 2018; Rios Rincon et al. 2022; Stargatt et al. 2022). Through storytelling, older adults can effectively convey their core values, interests, and beliefs through a narrative of their personal history. At an interpersonal level, storytelling has been associated with fostering therapeutic relationships, building rapport, and promoting trust between care recipients and professionals (Rios Rincon et al. 2022). A notable study by Eritz et al. (2016) found that when nursing staff read the life stories of residents living with dementia, they reported a better appreciation for their personhood, interests, and life experiences. Similarly, Dennerstein et al. (2018) found that written life stories improved staff's historical knowledge of residents above that of reading residents' medical records. However, challenges persist with written life stories as they may demand high English language proficiency from the reader and increased time for comprehension (Mavromaras et al. 2017). Given advances in user-friendly media production, other digital formats of storytelling have been investigated for use within residential aged-care settings (Chang et al. 2023; Stargatt et al. 2022).

A novel approach explored by Bhar et al. (2021) involved the sharing of residents' digital life stories with RACF staff to enhance their knowledge and understanding of the residents in their care. Distinguished from written life stories, this method

incorporated narration, photographs, video footage, music, and sound elements to create emotionally immersive learning experiences to facilitate staff acquisition of knowledge about residents. These digital narratives were presented in the form of short movies and were co-created with residents to encapsulate a focused portrayal of their achievements, interests, values, and significant life moments that contribute to their self-image (Bhar et al. 2021). Bhar et al. (2021) found that watching digital life stories was associated with an improvement in self-reported knowledge and understanding of staff regarding the residents in their care, including their life history, preferences, values, priorities, and motivations behind their behaviours.

However, the study was limited as it only examined changes in perceptions immediately before and after watching the stories. Further, it did not examine if staff changed their care practices due to watching the stories. Hence, what is yet to be explored is whether improvements in knowledge about residents from watching their digital life stories are stable over time and are associated with more personalised care practices.

The current study had three aims. First, to investigate residential aged care staff's knowledge and understanding of residents after viewing their digital life story. Second, to examine the stability of this knowledge and understanding. Third, to explore staff's self-reported care practices following digital life story viewing. Consistent with Bhar et al. (2021), we anticipated that after viewing a digital life story of a care recipient, staff's self-reported knowledge and understanding of the resident would be significantly higher at post-test. Similarly, we anticipated this improved level of understanding would be maintained at 1-month follow-up.

## 2 | Method

### 2.1 | Design

Our study utilised a convergent mixed methods design with repeated measures at three distinct time points: pre-test, post-test, and a 1-month follow-up. Employing a convergent mixed methods methodology, we integrated quantitative measures (surveys) for statistical analysis and qualitative methods (open-ended questions) to capture nuanced staff experiences. The study adhered to guidelines for Revised Standards for Quality Improvement Reporting Excellence (SQUIRE 2.0) (see Appendix S1) (Ogrinc et al. 2015).

### 2.2 | Participants

The study sample consisted of 61 RACF staff members recruited from 14 facilities in Melbourne, Australia. Staff were eligible to participate if they were (a) at least 18 years old, (b) employed at the RACF, (c) provided direct care to the resident featured in the story, (d) able to answer questionnaires written in English, and (e) were not agency staff temporarily engaged at the facility. Table 1 presents the sociodemographic information for the sample. Staff had a diverse age range, from 18 to 71 years ( $M = 44.00$ ,  $SD = 14.77$ ). On average, staff worked at

**TABLE 1** | Sociodemographic characteristics of participants ( $n = 61$ ).

|                                                                           | <i>n</i> | %     |
|---------------------------------------------------------------------------|----------|-------|
| Sex                                                                       |          |       |
| Female                                                                    | 55       | 90.16 |
| Male                                                                      | 6        | 9.84  |
| Age (years)                                                               |          |       |
| 18–27                                                                     | 12       | 19.67 |
| 28–37                                                                     | 11       | 18.03 |
| 38–47                                                                     | 12       | 19.67 |
| 48–57                                                                     | 16       | 26.23 |
| 58–67                                                                     | 7        | 11.48 |
| 68–77                                                                     | 3        | 4.92  |
| RACF job position                                                         |          |       |
| Lifestyle team members                                                    | 26       | 42.62 |
| Personal care workers                                                     | 12       | 19.67 |
| Nurses (registered or enrolled)                                           | 9        | 14.75 |
| Allied health practitioners (physiotherapists or occupational therapists) | 2        | 3.28  |
| Clinical care manager                                                     |          | 3.28  |
| Administrative staff member                                               | 22       | 3.28  |
| Other (e.g., cleaning staff or laundry staff)                             | 8        | 13.11 |
| Country of birth                                                          |          |       |
| Australia                                                                 | 22       | 36.07 |
| India                                                                     | 7        | 11.48 |
| Nepal                                                                     | 7        | 11.48 |
| United Kingdom                                                            | 5        | 8.20  |
| Philippines                                                               | 3        | 4.92  |
| New Zealand                                                               | 2        | 3.28  |
| South Korea                                                               | 2        | 3.2   |
| Sri Lanka                                                                 | 2        | 3.28  |
| Bangladesh                                                                | 1        | 1.64  |
| Chile                                                                     | 1        | 1.64  |
| China                                                                     | 1        | 1.64  |
| Egypt                                                                     | 1        | 1.64  |
| Fiji                                                                      | 1        | 1.64  |
| Georgia                                                                   | 1        | 1.64  |
| Japan                                                                     | 1        | 1.64  |
| Saudi Arabia                                                              | 1        | 1.64  |
| Venezuela                                                                 | 1        | 1.64  |
| Vietnam                                                                   | 1        | 1.64  |
| Prefer not to say                                                         | 1        | 1.64  |

their respective RACF for almost 5 years ( $M = 4.68$ ,  $SD = 4.44$ ). Most of the sample (42.6%) held a position within the RACF lifestyle team. Primary responsibilities for lifestyle teams in Australian RACFs include developing, delivering and monitoring individual and group recreational activities and complementary therapies.

## 2.3 | Measures

The Knowledge of Resident Scale (KRS) developed by Bhar et al., (2021) was used to assess the staff members' knowledge and understanding of the residents. Staff were asked to indicate on eight items how well they understood a specific resident's history, background, and values. The name of the resident to be rated was provided to the staff completing the KRS. Items on the KRS included "How well do you know the values that are important for (resident's name)?" and "How well do you know why (resident's name) behaves in certain ways?". RACF staff rated how well they know the resident or certain aspects of the residents on items using a 5-point Likert scale (0 = *not at all*, 4 = *extremely*). A total score for the KRS was calculated by summing item ratings, where a higher total score indicated a higher level of knowledge and understanding about a specific resident. Cronbach's alpha for the scale items was  $\alpha = 0.92$ , indicating excellent internal reliability.

The KRS also included five supplementary items at post-test and 1-month follow-up. The first supplementary item asked staff to report their perception of whether watching the digital life story changed their view of the resident (scored as a positive change, negative change, or no change). The second, third and fourth supplementary items asked if the digital life stories could improve or had improved their care practices towards the resident (scored as yes, no, or unsure). Fifth, staff were also provided an opportunity to elaborate further on their responses to care-practice items (open-ended response). Specifically, staff were asked: "Please describe how your relationship, interaction or work with the resident has changed in the past month?"

Five demographic questions were also included in the survey to collect basic information about staff participants, including their age, gender, designation at the RACF, how long they had been employed at the facility (in years and months) and country of birth.

## 2.4 | Procedure

### 2.4.1 | Digital Life Story Development

Student volunteers from across the Melbourne metropolitan region were engaged through university advertisements inviting them to participate in a digital life storytelling program with older adults in RACFs. Volunteers' involvement included weekly training sessions to develop reminiscence and communication skills, with ongoing support provided throughout the 6-month program. Each volunteer was matched with an older adult partner based on the student's proximity to an RACF and the

program coordinator's judgement of potential compatibility. To participate in the program, residents were to be socially isolated or deemed in need of a befriender (as determined by RACF staff referrers), be able to communicate in English and not exhibit signs of cognitive impairment such that it could impede their ability to engage in reminiscing and meaningful conversation throughout volunteer visits. The lifestyle coordinators at each RACF nominated residents. Volunteers were required to visit their residents every week over 6 months in 2023 to co-produce a digital life story with them.

Initial questions were used as prompts for discussion to form the basis of the digital life story, for example: "How would you like to be known to others? What would you like to share with others about your life? What has been important to you in your life?". Volunteers then used information provided by residents throughout their visitation to develop a script (voiceover narration) and combined photographs and music to produce a 3–4-min digital life story in video editing software. Each story aimed to centre around a theme that illustrated the unique characteristics and values most important to the residents' personal identity. For instance, themes included the value of resilience in overcoming hardship, the importance placed on time spent with family and a passion for travel. Informed consent was obtained from each resident to show their digital life story to members of staff within their respective facility. Twenty-one residents participated in the digital life story program, and 19, across 15 RACFs, provided consent for their digital life story to be used in the study.

### 2.4.2 | Staff Recruitment

Volunteer coordinators at the RACFs informed staff about the opportunity to participate in the study and obtained their consent to share their contact details with the research team for their involvement. The research team sent staff an email or phone text message with a link to a plain language information sheet about the study, consent form and baseline survey. Staff had 2 weeks to complete the survey, followed by a reminder message indicating they had a further 6 days to complete the survey before they would be excluded from participation. Of the 117 staff contacted to participate in the study, 61 provided their consent and completed the first survey.

### 2.4.3 | Intervention

Staff members were matched to digital life stories based on the criterion that they provided direct care to the resident depicted in the digital life story, as reported by management staff at the RACF. The initial survey asked staff to complete a pre-test KRS regarding a resident featured in the story. Staff were then asked to watch the digital life story of the resident and, immediately following, completed a post-test KRS, including the five supplementary questions. Upon completion, staff were informed they would be contacted in a month to complete a follow-up survey. At follow-up, staff were sent a KRS for completion again with the five supplementary questions.

## 2.4.4 | Ethics

The study was granted ethics approval by the Swinburne University Human Research Ethics Committee (SHR Project: 20236824-16146). To ensure participants consent was adequately informed, participants were provided a general outline of what their participation in each step of the study would involve. Furthermore, the plan language information sheet detailed the potential risks and benefits of study participation and support options available to participants throughout the study. Participants were informed their participation was voluntary and could cease at their discretion. Confidentiality was upheld by ensuring only the researchers had access to participant information and study data, and it was stored in compliance with Swinburne University of Technology research data management guidelines. Staff were informed that none of their responses would be shared with their management team and their participation would not impact their relationship with their workplace or the university. Staff who completed the pre-test, post-test, and follow-up survey were provided with a movie voucher valued at \$59 as a token of appreciation for their participation in the study. Residents or their nominated staff or family members received a copy of their digital life story after the study.

## 2.5 | Data Analysis

Quantitative data were analysed with descriptive and parametric inferential statistical analyses. Data were analysed using the statistical software Jamovi version 2.3.28. A repeated measures ANOVA was used to compare the KRS mean scores across pre-test, post-test, and follow-up time points. Following omnibus significance, post hoc comparisons between time points were examined using paired-sample *t*-tests. The Bonferroni correction was employed to account for multiple comparisons.

Qualitative data from the fifth supplementary question on the KRS were summarised using thematic analysis (Braun and Clarke 2013). Responses were coded by two researchers (KA & AB). Firstly, all potential codes were generated, and then discussions were held to compare all codes and generate into the main themes with reference to their salience to the research question (Clarke and Braun 2013). Triangulation was achieved by comparing the qualitative and quantitative responses and the use of two coders. In addition, an audit of coding and themes was conducted by a third researcher who confirmed the main themes (Tracy and Hinrichs 2017).

## 3 | Results

### 3.1 | Quantitative Results

Of the 61 participants, 16 did not complete the pre-test, post-test or 1-month follow-up KRS items and hence were excluded from the quantitative analysis. A power analysis was undertaken to determine the adequacy of the remaining sample size of 45 participants to detect significant within-person differences for a repeated measures Analysis of Variance (ANOVA). Assuming a moderate to strong effect size at a power level of 80% and a type

1 error rate of 5% (Faul et al. 2009), the analysis determined a sample size of 28 participants was required to detect a significant effect. It was therefore determined the sample size of 45 participants was sufficient.

The repeated measures ANOVA indicated that KRS mean scores across time points were non-equivalent, with a moderate effect size  $F(2) = 19.53$ ,  $p < 0.001$ ,  $\eta^2 = 0.11$ . Post hoc results showed that the mean score of the KRS was significantly higher at post-test ( $M = 23.09$ ,  $SD = 5.49$ ) than pre-test ( $M = 19.67$ ,  $SD = 4.93$ ),  $t(44) = -4.43$ ,  $p < 0.001$ , Cohen's  $d = -0.66$ . Similarly, the mean score of the KRS was significantly higher at follow-up ( $M = 23.44$ ,  $SD = 3.77$ ) than at pre-test ( $M = 19.67$ ,  $SD = 4.93$ ),  $t(44) = -6.36$ ,  $p < 0.001$ , Cohen's  $d = -0.95$ . There was no significant difference between the mean score of post-test of the KRS and follow-up,  $t(44) = -0.57$ ,  $p = 0.836$ .

Table 2 presents responses at post-test and 1-month follow-up to supplemental items 1–4 measuring how watching digital life stories may have changed staff's perceptions of the resident and their care practices towards them.

### 3.2 | Qualitative Results

Fifty-two (85.24%) staff responded with brief comments to the question, "Please describe how your relationship, interaction or work with this resident might change in the next month", immediately after watching the video. At follow-up, 37 (60.66%) staff responded to how their relationship/interaction or work with the resident *had* changed in the previous month. About half ( $n = 34$ ) of respondents provided comments at the two time points. All comments were analysed, even where they had provided comments at only one time point. All comments were positive; no staff reported that their relationship with a resident had worsened. Responses were very brief, ranging from one or two lines to four lines of text (range: 3–85 words). Overall, in these brief responses, many staff indicated that understanding the resident's life history and values equipped them with the confidence and knowledge to improve their relationships with residents and personalise their care. These findings closely align with the quantitative survey responses, indicating increases in knowledge of the resident, improved interactions, and more effective engagement with them. Results are organised into two themes: Equipping staff for behaviour change and Intended and actual behaviour change.

#### 3.2.1 | Equipping Staff for Behaviour Change

Staff noted firstly that the digital stories equipped them for behaviour change via two main mechanisms: Knowledge and understanding of residents and attitude change.

**3.2.1.1 | Knowledge and Understanding of Residents.** Staff responses indicated that the digital life stories provided them with knowledge about the resident's life history, values, preferences, and interests. Several staff indicated that they already knew the resident well, but they either gained more information or had their understanding validated or enriched, stating, [Participant 1]: "I already knew certain things about her

TABLE 2 | Staff responses to supplementary items one to four at post-test and 1-month follow-up.

| N = 61                                                     |                                                                                   | Staff self-reported changes to views of resident at post-test |                                                        |                                                    | N = 61 | Staff self-reported changes to care practices at 1-month follow-up                 |                                                        |                                                        |                                                    |
|------------------------------------------------------------|-----------------------------------------------------------------------------------|---------------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------|--------|------------------------------------------------------------------------------------|--------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------|
| n = 59                                                     | Q1. Watching this video has                                                       | Changed my view of (resident's name) in a positive way        | Changed my view of (resident's name) in a negative way | Made no difference to my view of (resident's name) | n = 47 | Q1. Watching that video has                                                        | Changed my view of (resident's name) in a positive way | Changed my view of (resident's name) in a negative way | Made no difference to my view of (resident's name) |
|                                                            |                                                                                   | 78.0%                                                         | 0.0%                                                   | 22.0%                                              |        |                                                                                    | 80.9%                                                  | 0.0%                                                   | 19.1%                                              |
| Staff self-reported changes to care practices at post-test |                                                                                   |                                                               |                                                        |                                                    |        |                                                                                    |                                                        |                                                        |                                                    |
| N = 61                                                     |                                                                                   | Yes                                                           |                                                        |                                                    | No     |                                                                                    |                                                        | Unsure                                                 |                                                    |
| n = 59                                                     | Q2. Watching this video will improve my relationship with (resident's name)       | 86.4%                                                         | 3.4%                                                   | 10.2%                                              | n = 47 | Q2. Watching that video has improved my relationship with (resident's name)        | 76.6%                                                  | 10.6%                                                  | 12.8%                                              |
| n = 59                                                     | Q3. Watching this video will improve my interactions with (resident's name)       | 83.1%                                                         | 6.8%                                                   | 10.2%                                              | n = 47 | Q3. Watching that video has improved my interactions with (resident's name)        | 78.7%                                                  | 6.4%                                                   | 12.8%                                              |
| n = 59                                                     | Q4. Watching this video will help me work more effectively with (resident's name) | 84.7%                                                         | 6.8%                                                   | 8.5%                                               | n = 47 | Q4. Watching that video has helped me work more effectively with (resident's name) | 80.9%                                                  | 8.5%                                                   | 10.6%                                              |

Note: NR = Not relevant due to no contact with the resident in the past month.

background and history, but the video has brought these things to life". Others reported a deeper understanding of why residents acted in particular ways:

[Participant 2]: "I can provide better care for [the resident] knowing what matters to [the resident] and work with behaviours of concern".

[Participant 3]: "understanding why she needs the things she needs and why she behaves a certain way for things and situations".

**3.2.1.2 | Change in Attitudes.** For some staff, the knowledge of the resident's life history positively impacted their attitudes or feelings about a resident:

[Participant 4]: "I admired her more after knowing about her struggles as a child".

[Participant 5]: "I now feel closer to her knowing more of her background".

Overall, the language used by staff indicated a sense of ease and confidence that they were better equipped to work with the residents, using the knowledge and understanding gained from the digital life stories as a springboard;

[Participant 6]: "I look forward to asking her more about her life".

[Participant 7]: "helps me to think how to approach her to have more interactive relationship".

[Participant 5]: "I have more confidence when I'm in her room".

### 3.2.2 | Intended and Actual Behaviour Change: Better Relationships and Better Care

Immediately after viewing the digital life story, staff reported their intentions to use the knowledge of the resident they had gained largely to improve their conversations with residents. At one-month follow-up, many staff reported successfully doing so: they were more able to initiate conversations or have more meaningful, longer, or more in-depth conversations.

[Participant 8]: "I know more about [the resident] now and I have more things to talk about with her".

[Participant 9]: "The conversation has also been very meaningful".

Some staff described how deeper conversations then led to closer relationships with residents.

[Participant 9]: "I feel [the resident] has opened up more and talk more to me than she did before".

[Participant 10]: "I feel we have become closer, we have so many shared interests".

[Participant 1]: "A greater understanding of [the resident] has led to an enhanced relationship with her".

[Participant 11]: "I have developed a more therapeutic relationship with the resident after this survey. I got to know her more deeply. I have understood more about her life and assist her with care needs being [sic] more deeply".

For some staff, the improved relationships enabled them to provide better care for the residents. Better care was manifested in various ways, including:

Encouraging and engaging the resident positively, even in brief interactions;

[Participant 11]: "what changed, though, is how often I insert positive comments and encouragement in our normal and quick day-to-day Hi/Hello interaction".

[Participant 12]: "My treatment has become more effective as I can get more participation from [the resident] and her positive engagement in group activities" providing more meaningful and targeted activities for the resident.

[Participant 13]: "has given me a better perspective on the type of activities she would like to be involved in", and "we can incorporate her passion for music and art". and more informed staff responses to responsive behaviours, including [Participant 12]: "how to avoid any triggers which can easily upset [the resident]".

## 4 | Discussion

Although there is an aspiration to implement a person-centred framework of care in Australian RACFs, challenges persist in personalising care according to individual requirements. A significant impediment to personalised care practices is that staff do not know residents well, including their life history. This lack of familiarity can hinder RACF staff's ability to customise services and interactions based on the residents' values, needs, and preferences, as prescribed by a person-centred care model (Brownie and Nancarrow 2013; Paddock et al. 2019).

This study examined if watching digital life stories about residents led to stable improvement in staff knowledge and understanding of those residents and care practices towards them. As expected, compared to baseline, scores on the KRS were significantly higher at post-test and remained significantly higher at follow-up. Further, at 1-month follow-up, most staff (77%–81%) reported that watching the stories improved their relationship, interactions and practices with the resident featured in the story.

These results are consistent with and extend upon preliminary evidence for the use of digital life stories in RACFs. Through the use of imagery, narration and music, digital life stories allow the viewer to gain insight into the values, preferences, and life history central to a resident's identity (Stargatt et al. 2022). In using this multimedia approach, it is possible that exposing staff to these identity aspects in an emotionally immersive manner enhances their understanding and knowledge of residents (Laing et al. 2017; Lang et al. 2019). In previous research (Bhar et al. 2021), such improvements were found immediately following viewing the story; in this study,

we replicated these findings and found that such gains were maintained 1 month later, demonstrating the stability of such enriched views.

Consistent with Bhar et al., (2021), 78% of staff experienced a positive change in their view of the resident at post-test. In the current study, an even higher percentage endorsed positive change at follow-up (81%). No staff indicated a negative change in their view of the resident. In their qualitative responses, staff described feeling positively towards residents and being positively impacted by the knowledge obtained by watching a resident's digital life story. These findings may be attributable to the content of digital life stories often highlighting the positive attributes central to a resident's identity, for example, their resilience in times of struggle or the love of their family. Staff may personally identify with these insights, leading to a deeper appreciation of their care recipient promoting positive changes in attitudes and views towards them (Hausknecht et al. 2019).

The current study also extended on Bhar et al. (2021) findings that over 70% of RACF staff believed watching the digital life story of a resident would improve their care practices towards them. In the current study, we returned to staff a month after they watched the story and asked if their interactions, relationships and practices with the resident had changed following watching the story. Staff open-ended responses indicated improvements in confidence to engage residents in more meaningful interactions and improved relationships with them. Staff also reported engaging in specific person-centred care practices tailored to residents' preferences and values. It is possible that watching the digital stories presented a previously missing opportunity to develop the knowledge required to recognise a resident's identity when engaging them, leading to improved interactions and relationships (Håkansson Eklund et al. 2019; Seah et al. 2022).

The findings of the study have implications for clinical practice. Digital life stories of aged care residents show promise in enhancing RACF staff members' knowledge and understanding of those in their care. This understanding can enable staff to adapt their care practices to align with person-centred care principles, allowing them to tailor their assistance and interactions based on residents' preferences, values, and life history. Such personalised approaches are likely to affirm residents' sense of personal identity, enhance their care experiences, and improve their overall quality of life (Haunch et al. 2021; Seah et al. 2022). In this study, most staff agreed that these digital life stories could and did enhance their relationships, interactions, and effectiveness in working with residents. Specifically, staff described being equipped to undertake person-centred approaches such as the tailoring of activities to the needs of the resident and informed responses to responsive behaviours.

Digital life stories may provide an efficient method for staff viewing them to improve their knowledge and understanding of residents while overcoming common barriers that otherwise impede it. Specifically, as digital life stories do not require physical space, they can effectively communicate a wide range of information about a resident while avoiding environmental

barriers to identity expression common within RACFs (Paddock et al. 2019; Riedl et al. 2013). Additionally, for staff members with diverse levels of proficiency in the English language, digital life stories present an effective method of conveying information about residents, overcoming potential challenges associated with written files (Mavromaras et al. 2017). While considering the tight time constraints frequently experienced by staff, watching a 3–4-min digital life story emerges as a practical strategy to circumvent this challenge (Oppert et al. 2018). Given this efficiency, management teams could incorporate digital life stories into staff inductions, training modules or handovers for staff viewing. This approach may assist staff in initiating a meaningful conversation that builds rapport, affirms residents' identity, and enhances the personal impact of these interactions for both the resident and the staff member involved.

These implications are to be considered in the context of seven important limitations. First, our study did not involve a control group. Hence, it remains unclear if improvements in staff knowledge were due to watching the digital life stories. This limitation introduces the possibility that staff could have rated items more positively at post-test and follow-up due to perceiving it to be the socially desirable response or expected by the researchers. To overcome this limitation in future research, investigators may wish to incorporate an active control condition. This condition may involve attentional control tasks (e.g., watching a video about person-centred care), usual care (e.g., attending a handover meeting about a resident, reading file notes about residents) or other types of informational sources about a resident (e.g., written life stories, autobiographical posters). Such controls would help clarify if watching digital life stories about residents was more effective than attentional, usual care or other devices to improve staff knowledge and understanding.

Second, this study did not measure behaviour directly but rather self-reporting of staff regarding their care practice. Future research needs to measure behaviour using more objective indicators. Such measurement would lead to a more valid account of the impact of such stories on behaviour. Third, our study did not assess the direct impact of digital life stories on residents. Consequently, conclusions about the benefits of these stories, particularly in terms of enhancing staff care practices such as improved relationships, interactions, and working effectiveness, are confined to the staff perspective. Digital life stories have been shown to have positive effects on residents' mood, memory, social connectedness, and relationships with staff (Stargatt et al. 2022). Hence, future investigations should incorporate resident measures to provide a more holistic understanding of the implications of these stories for person-centred care practices and benefits to residents.

Fourth, validation of the KRS against other measures, such as interviews, is yet to be conducted. Fifth, all qualitative data were brief written responses (one to four lines) with no follow-up or interview to probe further or clarify ambiguous statements. Approximately half of respondents only provided a comment either immediately after the story or at 1-month follow-up, leading to gaps in our understanding of how their interactions with residents changed over time and whether their initial intentions were realised in behaviour change. Sixth, staff were recruited

by volunteer coordinators from their organisations' head offices. Although upon gaining consent, it was indicated staff responses would not be shared, staff may have engaged in socially desirable responding due to feeling professional pressure from their workplace superiors. Future studies could have an independent administrator perform staff recruitment to overcome this issue.

Finally, the study did not explore the correlation between the editorial or production quality of the digital life stories and their impact on staff. Future research could investigate which of the specific elements or story aspects within digital life stories have a significant impact on viewers' acquisition of knowledge and understanding of residents. For example, it may be that stories that included greater use of evocative language were more effective than stories that did not. In doing so, future digital life stories could be standardised to include such elements to promote increased acquisition of this knowledge and understanding. Additionally, investigating the costs associated with the production of these stories in relation to the benefits they yield could provide valuable insights.

This is the first study to show that watching digital life stories is associated with an improvement in knowledge and understanding of residential aged care staff up to a month following story viewing. This study is also the first to show that watching such stories appears to be associated with improvements in person-centred care practices in RACFs. Staff reported improvements in their care practices with residents and attributed such improvements to watching the stories. Staff perceived that their view of residents and their relationships, interactions, and the effectiveness of their work with them improved. The use of digital life stories in residential care settings appears to be beneficial in enriching staff perspectives of their residents and in translating aspirational person-centred principles into tangible actions and hence can be more widely utilised across Australia.

## Author Contributions

E.M. undertook data collection, statistical analysis and wrote the article. S.B. designed the study, supervised the data collection and assisted with writing the article. R.C. designed the study, supervised the data collection and assisted with writing the article. J.B. is a statistician and was responsible for the statistical design of the study and supervising statistical analysis. K.A. was responsible for the study's qualitative design, undertook qualitative analysis and assisted with writing the article. A.B. was responsible for the study's qualitative design, undertook qualitative analysis and assisted with writing the article.

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## Conflicts of Interest

The authors declare no conflicts of interest.

## Data Availability Statement

Research data are not shared.

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## Supporting Information

Additional supporting information can be found online in the Supporting Information section.