

**A Walk Through Dementia: exploring the effects of a virtual reality app about dementia on students' knowledge and attitudes**

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# **Impact of the 'A Walk-Through Dementia' immersive virtual reality app on care delivered by undergraduate healthcare students: a mixed methods study**

## **Abstract**

### **Background**

Virtual reality enables healthcare professionals' insight into the lived experience of dementia. The '*A Walk-Through Dementia*' (AWTD) app was implemented in first year undergraduate healthcare students' education.

### **Aim**

To evaluate students' reaction, learning and influence of the app on clinical practice.

### **Methods**

The app was used during dementia training sessions. Informed by the Kirkpatrick model for training evaluation, data was obtained (i) on the day through post-training survey (ii) four months after in focus groups.

### **Results**

Response rate: survey (65%, n=271/414) and focus groups (n=11). Students found the app engaging (83.1%, n=225); reporting deepening dementia understanding (91.9%, n=249). After using the app, students felt they would change their behaviour (77.9%, n=211), approaching care with a more person-centred focus.

### **Conclusion**

The immersive app improved students' confidence in delivering personalised care. Further research should consider adaptation for students with disabilities and sensory impairments and ensure cultural appropriate content for international relevance.

## **Background**

Dementia education helps healthcare professionals to develop knowledge, skills, and confidence to provide person-centred, humanised care (Skills for Health, 2018; Surr et al., 2020a; Williams & Daley, 2021). Experiential learning is seen as a valuable approach for fostering empathy and understanding the challenges of dementia (Alushi et al., 2015; Skills for Health, 2018; Slater et al., 2019). While dementia education for undergraduate healthcare students is crucial (Scott et al., 2019), there is a lack of consensus on the best method due to limited evaluation and heterogeneity of educational interventions (Alushi et al., 2015). It is thought that experiential learning may provide a deeper level of learning in comparison to didactic teaching and traditional placements (Kolb, 1984). Simulation-based learning has been shown to foster deeper learning and more positive attitudes towards

dementia (Williams & Daley, 2021). Regulators, the Nursing and Midwifery Council (Holt, 2024; p4), have reported students value simulation practice learning 'for providing a safe, supportive environment in which to practise and reflect, improving their confidence'. The Council of Deans (2024) have recognised that simulation is transformative in supporting the generation of skills and in diversifying nurse education beyond traditional clinical settings.

### ***Immersive virtual reality simulation***

Advances in virtual reality (VR) and 360-degree videos enable a more creative delivery of immersive experiential learning through a headset. Evidence supporting use of virtual reality simulation and its effectiveness in undergraduate teaching about dementia is rapidly developing (de Abreu et al., 2017; Gilmartin-Thomas et al., 2018a; Gilmartin-Thomas et al., 2018b). Stafford et al (2024) conducted a Randomised Control Trial comparing the impact of a VR application on nurses' knowledge and attitudes towards people living with dementia, to video-based, non-immersive training. They found VR was more engaging than traditional training in highly experienced dementia care practitioners, and lead to objectively significant greater positive and negative emotional responses than video. A recent review found that VR technology can potentially enhance dementia knowledge, attitudes, empathy and sensitivity of healthcare professionals and students (Jones et al., 2021). In a qualitative study, the 'myShoes' virtual reality dementia training experience was shown to improve students' awareness of the lived experience and increase empathy towards people (Adefila et al., 2016). Peng et al (2020) examined the impact of a modified Virtual Dementia Tour (VDT) designed to simulate impairments and sensory overload experienced by people with dementia on 45 second year nursing students. Using the Jefferson Scale of Empathy-Health Professional Students, they found that empathy level demonstrated significant overall improvements ( $106.69 \pm 9.49$  vs  $115.51 \pm 10.16$ ,  $P < 0.01$ ) after taking part in the VDT. Yet Jones et al (2021) note that to support inclusion of VR in the undergraduate curriculum, further studies are needed to strengthen the evidence base. This includes studies that examine large group teaching (Argyriou et al. 2017; Kusuma and Adipranata 2017) and the persistence of practice change beyond the immediate training timeframe (Surr et al., 2020b).

### ***A Walk-Through Dementia***

A Walk-Through Dementia' (AWTD) ([www.awalkthroughdementia.org](http://www.awalkthroughdementia.org)) are three individual 360-degree simulation films to gain a fully immersive insight into the varied symptoms

experienced by those people with dementia, showing how everyday tasks become more challenging as dementia progresses. The films were co-developed by Alzheimer's Research UK (ARUK), people with dementia and family carers and show a person with dementia: (i) going to the supermarket, (ii) walking on the road, and (iii) making a cup of tea. They can be viewed through a Google Cardboard headset or headset-free on the app or website.

### ***Study rationale***

Various dementia training packages are available in health and social care, yet few have been robustly evaluated (Scerri et al, 2017; Surr et al, 2017). To overcome this, the "Dementia Education and Learning Through Simulation 2" (DEALTS2) programme (commissioned by Health Education England and developed and evaluated by Bournemouth University) was created. DEALTS2 focused on simulation-based learning to place staff in the shoes of a person with dementia (Heward et al., 2021a; 2021b). The evaluation identified improvements in confidence and opportunities to critique their practice in a safe environment among those delivering the training (Heward et al., 2021b). Best practice from this approach was applied to developing a learning toolkit for the AWTD films, which were mapped to Tier 2 of the Dementia Training Standards Framework (DTSF) (Skills for Health 2018) and guided by the Humanising Values Framework (Todres et al. 2009).

### ***Development of the 'A Walk-Through Dementia' learning toolkit***

The AWTD learning toolkit (Board et al., 2019) was designed to support health and social care staff delivering dementia training to implement the AWTD app into their training programmes. The learning toolkit was iteratively developed by a multidisciplinary team including people living with dementia, family carers, and healthcare students, explaining the learning that could be gained from utilising the AWTD app in dementia training.

### ***Study aims and objectives***

The overall aim of the study was to evaluate students' reaction, learning and influence of the AWTD app on clinical practice. The research objectives were to:

1. Identify how undergraduate healthcare students perceive the AWTD app, gaps in learning and further development opportunities.
2. Examine the extent to which the AWTD app influenced care delivered by undergraduate healthcare students in clinical practice.

## **Method**

### ***Study design***

The AWTD app was used as a learning tool in a dementia training day to first year (Level 4) undergraduate healthcare students enrolled at Bournemouth University on the Adult Nursing, Mental Health Nursing, Occupational Therapy, Physiotherapy, Operating Department Practitioner, Child Nursing programmes (total n=414) in October 2019 (n=262) and April 2020 (n=152). For this explanatory-sequential mixed methods study (Creswell et al, 2003), data was collected on the day in a post-training survey. Closed and open questions and Likert scales were used to measure students' reaction to the AWTD app, learning about dementia, and suggestions for improvement. Four months later two semi-structured focus groups with a purposive sample of the students were conducted. Questions focused on exploring impact of the training on clinical practice. This time frame was selected to ensure students had undertaken their clinical practice placements (in hospitals/residential settings) before participating in a focus group.

### ***Dementia training day***

The dementia training day was facilitated by one of the authors (MB) who also led the development of the AWTD learning toolkit. Intended learning outcomes were to:

- Be able to define dementia
- Have an insight into the lived experience of dementia
- Feel more confident in applying humanised care with a person with dementia.

Content included the types of dementia and its manifestation, a carer's perspective of dementia and an overview of a humanised approach in dementia care. Students had 60 minutes to view and discuss the AWTD app. Discussions about each film were linked to Tier 2 learning outcomes in the Dementia Core Skills Education and Training Framework (Skills for Health, 2018), as set out in the learning toolkit (Board et al., 2019).

### ***Data collection***

During delivery of the first session, students were invited to evaluate their learning of the AWTD app by completing an anonymous survey hosted on the universities virtual learning environment (VLE). On the second delivery there was a technical issue with the VLE and so students were invited to complete a paper-based survey, albeit the same questions. Students were reassured that their decision to participate had no impact on their studies or commitment to the course. At the end of the survey students that were interested in taking part in a focus group were invited to leave their contact details. The research team followed up with those who left details and invited them to a focus group at the university campus.

### ***Data analysis***

Each data set was interpreted separately before triangulating. Survey data was input into an Excel spreadsheet for analysis. Survey responses were analysed using descriptive statistics (i.e., frequencies, means, and percentages). Audio recordings of focus groups were transcribed and reviewed for accuracy. Focus groups transcripts were analysed using a thematic analysis approach (Braun and Clarke, 2006). The analysis was inductive, and later linked to the Kirkpatrick model (1959) for evaluating training effectiveness. Initial themes were identified by three authors (MB, RM, MH) and discussed and shaped with the remaining author (JM) until consensus was reached.

Findings from the focus groups and survey were then triangulated (Carter et al, 2014). Triangulation of the data allowed for a deeper, more comprehensive understanding of the impact (Denzin, 1978). During triangulation the findings from both sources were examined in terms of how the quantitative results concurred with focus group themes.

### ***Ethical considerations***

Ethical approval was obtained from the University Research Ethics Committee (Reference ID 17242). In accordance with the Data Protection Act 1998, principles of informed consent, voluntary participation, the right to withdraw, and confidentiality and anonymity were adhered to. Surveys contained a short overview about the study. Completing a survey indicated agreement to participate and for anonymised data to be included in the study. Focus group participants were provided a participant information sheet and asked for written/verbal consent beforehand. All identifiers were removed from focus group transcripts prior to analysis.

## Results

### ***Participant characteristics***

The survey was completed by students, enrolled on the following professional programmes: Adult Nursing (n=130), Mental Health Nursing (n=40), Occupational Therapy (24), Physiotherapy (31), Operating Department Practitioner (26), Child Nursing (n=16) (Table 1). The response rate was 65% or n=271, equating to 55% or n=144 for the first session; and 84% or n=127 for the second. Four months later two semi-structured focus groups with a purposive sample of the students (n=11) were conducted, participants were all Adult Nursing students (n=10 females and n=1 male). The response rate for the paper version was higher than the VLE form.

<Insert Table 1 here>

### ***Accessible and engaging***

Students were positive about the AWTD app, 90.8% (n=246) agreed or strongly agreed that it was 'easy to use', 90.4% (n=245) 'easy to navigate', 86.4% (n=234) 'engaging design', 77.2% (n=209) that the experience was 'natural and realistic' engaging, and 83.1% (n=225) found the experience engaging (Table 2).

<Insert Table 2 here>

Some students explained that they felt nauseous after viewing the AWTD app. Most reflected this positively as part of the 'VR' experience:

*'I wasn't sure if it was meant to feel a bit wobbly, when you're walking with them on the street. Maybe that's what they [person with dementia] feel like... like if you were going to have a panic attack and everything seems a little bit unreal'.* Student Nurse, Participant 2, Focus Group 2.

Only one student reported this feeling of sickness negatively:

*'I wanted to be sick after I'd watched it. I don't know if it is just people that get travel sick [that would feel sick after watching it]. It did make you feel awful... I wouldn't watch it again because of the way it made me feel. But I do think it's a good idea'.* Student Nurse, Participant 2, Focus Group 1.

### ***Insight and understanding***

Most students felt that they had increased their knowledge of dementia after viewing the AWTD app. 81.1% (n=220) agreed or strongly agreed that the AWTD app had challenged their perceptions about dementia, 81.6% (n=221) felt they had learnt more about the symptoms of dementia, and 91.9% (n=249) that they had gained a deeper insight into the challenges faced by people with dementia (Table 3).

<Insert Table 3 here>

Students suggested that viewing the AWTD app had evoked their emotions which had increasing their feelings of empathy, compassion, patience and understanding for people with dementia:

*'The app lets you see what it's like to have dementia so in practice you can be more empathetic towards the patient'. Student Nurse, Participant 4, Focus Group 1.*

They felt that the interactive element enabled them to experience what it is like to 'walk in the shoes of a person with dementia'. This meant they related learning back to their clinical practice, as these student nurses discussed:

*Participant 5: .... It's easy to like forget learnings..... and that app, because it's interactive, it's good...*

*Participant 3: It evokes feelings doesn't it .... you feel a bit emotional... when you're seeing and hearing and experiencing, those feelings somehow are a bit more real so you can perhaps relate to them a bit better.*

*Participant 2: It hits home a bit more, doesn't it.*

*Participant 3: It's easy for healthcare professionals to become complacent. I've done that training; I understand what it is but it's instilling that in daily practise.*

*Participant 2: Walk in their shoes for a while.*

Students suggested that the AWTD app had made them more aware of how dementia may impact on people's lives, as one student discussed the sensory impact and how they realised that dementia effects more than memory loss:

*'Well, when you think of dementia, you just think of people forgetting things. You don't realise how sensory it is and how the accumulation of noises or lots of things going on can create different feelings for a person. So, it brought it more home. rather than just us being assuming, 'Oh, dementia, so they've forgotten things.'*

Student Nurse, Participant 3, Focus Group 2

Whilst others appreciated gaining an insight from the AWTD app, they felt that it could not prepare them fully for the complexity and individuality of dementia they had done on to experience in their clinical practice on an older people's ward:

*'So it [AWTD app] gave me an insight, into what to expect, but what I've come across is completely different to anything like that. I'm in hospital environment and they're all treated completely individually because they show dementia in different ways....*

*So, it gave me an insight but not to the extremes that I've seen it now.'* Student Nurse, Participant 2, Focus group 1.

And other students felt that it would be beneficial to develop further simulations based on clinical settings (like hospital wards) where personal care is being delivered:

*'It would be a really good idea to do a hospital [scenario] because there is so much going on - people, noises, lights and trolleys, there's so much to see.'* Student Nurse,

Participant 4, Focus group 2

### **Challenging attitudes and stigma**

After viewing the AWTD app, 77.9% (n=211) students agreed or strongly agreed that they would change their behaviour or attitude towards people with dementia (Table 4).

<Insert table 4 here>

Some students described how viewing the AWTD app had challenged their perspectives on caring for people with dementia:

*'The app has changed my perspectives on how I should care for people with dementia and what I could do to make their lives easier and not dehumanised into thinking that they are all the same.... I have learned how we should see things in their perspective rather than forcing them to see what we would call the normal aspect of life, therefore understand their emotional perspective'. Occupational Therapy Student, Survey respondent.*

Students also acknowledged that the AWTd app helped them to understand how distress might influence the behaviour of a person with dementia. For example, the puddle from the 'a walk on the street' video enabled students to understand how perception difficulties might be distressing for people with dementia especially if this was ignored or brushed off by staff as difficult behaviour:

*'I like the puddle thing.... You know like there's a carpet sometimes, but patients would go around it? Because they see it and they think it's a black hole or something. That's what the puddle reminded him. And it kind of made sense. Some people might avoid areas like I have seen patients that walk really close to walls and stuff and I've looked and the carpet's a bit different.'* Student Nurse, Participant 3, Focus Group 2

This led students to recognise that people with dementia can be anxious and fearful and that they themselves (as well as other staff and family carers) have a role in reducing or exacerbating distress:

*'With violent behaviour, if you can see [patient] getting wound up because [staff] they go to them rushing, [we need] to identify that they need more time as part of their care. You need a care plan for them to make sure that then that person doesn't get flustered and doesn't get anxious, otherwise people get labelled as being difficult to deal with, and it's us that's causing it.'* Student Nurse, Participant 3, Focus group 1

### **Improved dementia care**

Many students were able to relate the scenarios they viewed in the AWTd app to their clinical practice and use this learning to respond to the needs of the person with dementia accordingly. Two students gave specific examples outlining this. One student recalled an incident from practice when she intervened to reassure a person with dementia:

*'Yeah, the puddle thing, I had a patient last week and he got down on the floor, there was a big black mark on the floor, a stain. Everyone said get up, but I could see he was nervous, so I stayed with him and reassured him.'* Student Nurse, Participant 2, Focus group 2

Another student described how she had turned the television down to reduce fear and confusion:

*'Just last week, I had an experience that made me think of the app actually.... I could hear three televisions on, it was loud, echoing through the corridor. And there's a lady, her room is across the way from all these televisions. And it made me think of*

*[the lady] going to the supermarket and all the noises. And I thought that probably doesn't help her fear.... So we turned them down.'* Student Nurse, Participant 3, Focus Group 2

Moreover, students were able to recognise ineffective communication in the 'supermarket' video:

*'I was getting really angry with the cashier, thinking...I've got to say, just give her a minute, you know, you're confusing her and she's already confused'.* Student Nurse, Participant 2, Focus Group 1.

And went on to highlight specific examples of how they had changed their communication to better support people with dementia, including slowing down speech, using simpler language, giving patients more time to process what was being said, and using non-verbal actions such as mimicking self care:

*'Looking at the app that you can see how scared they are and confused. So in care you have to put yourself in the patient's position, how they're feeling and how you respond to them. So being more patient and being more understanding'.* Student Nurse, Participant 5, Focus Group 2.

*'Yeah, I give her more time. Like she needs more attention, so I need to slow things down..... I think presence is quite settling, [me] even just to be there. Yeah, it does make a difference'.* Student Nurse, Participant 4, Focus Group 1.

## **Discussion**

The study aim was to explore students' reaction, learning and influence of the AWTD app on clinical practice. The findings show students feedback about the AWTD app and its use in dementia education were largely positive. Students suggested that the opportunity for them to 'walk in the shoes of a person with dementia' and experience daily life through their perspectives was a novel and invaluable part of this training. The VR approach was something students enjoyed as it increased their understanding of dementia, evoked feelings that challenged their thinking about dementia, and enabled them to reflect on how they might improve their own care delivery. This supports findings of previous study that outlined the AWTD app as an experiential learning tool that can provide a deeper cognitive and emotional awareness of living with dementia (Hicks et al., 2021) and other VR studies more

generally that showed learners increased empathy for people with dementia after receiving training (Adefila et al., 2016; Peng et al., 2020). However, this study reports on a larger sample, demonstrating the positive impact of the AWTD app when more than 200 people are receiving training simultaneously.

The study approach of revisiting students to discuss the impact of the training after several months in clinical practice placements reveals unique qualitative insight into the value and effectiveness of this VR training. This understanding might not be gained by studies collecting data only on the same day as the training (Surr et al., 2020b). The importance of humanised person-centred care and knowing an individual's life story was emphasised by students after viewing the AWTD app, which demonstrates the value of the AWTD app as a learning tool to develop a deeper understanding in learners of more complex philosophical and theoretical concepts such as person-centred care (Kitwood, 1997) and the humanisation values framework (Todres et al., 2009). This adds further mass to existing debates about the benefits of novel experiential learning approaches for supporting healthcare professionals to understand the challenges of living with dementia and develop the fundamentals of person-centred care (Alushi et al., 2015, Skills for Health, 2018; Slater et al., 2019).

### ***Strength and limitations***

This study demonstrates potential benefits of using the AWTD app in dementia education aimed at students. Impact of the educational intervention (on the day, and after four months) were measured to ascertain persistence of practice change beyond the training timeframe (Surr et al., 2020b). Using a mixed method approach has enabled exploration of student reaction, learning and suggestions for improving the AWTD app. The qualitative insights are based on a smaller purposive sample of students, and the recruitment approach (asking students to leave contact details if interested in taking part) may have limited the pool of potential participants and therefore the interpretations that were made. Here the focus was on measures of perceived impact on clinical practice that were self-reported by participants. A limitation of using self-reported instruments, is the reliance on the accuracy of participants insights (Fryer and Dinsmore, 2020). Further research could therefore examine behaviour change to determine care improvements more specifically, as well as patient experience, and application in other healthcare settings and should include qualitative data collection to support arguments on the effectiveness of the AWTD learning tool (Surr et al, 2017). Students were able to identify other scenarios that could be developed emphasising the

value of using a phone app and google cardboard technology for a VR immersive learning experience.

## **Conclusions**

The findings demonstrate that using the AWTD app as a learning tool in undergraduate healthcare student education can enhance the dementia care delivered in clinical practice. Some students were able to retain key learning about dementia from viewing the app and reflect on how, as a result, they had changed their practice four months later. Getting an insight into the lived experience of dementia, through the AWTD app, therefore did enable some students to deliver more humanised person-centred care to people with dementia. Further research should consider adaptation for students with disabilities and sensory impairments and ensure cultural appropriate content for international relevance.

## ***Implications for practice***

- VR-based dementia education can effectively boost healthcare students' confidence to deliver humanised, person-centered care in clinical settings.
- The AWTD app can be used alongside a suite of training resources to better prepare healthcare professionals for clinical practice. It is adaptable for large group education sessions, highlighting its potential as an immersive dementia education tool.
- The Google Cardboard viewers and the app are accessible when delivered in a venue with access to the internet and mobile devices. Accessibility was enhanced by working with Health Education England to ensure the materials are available on the e-Learning for Health portfolio.
- There may be some benefit in developing further VR-based dementia training materials in particular clinical settings (i.e., hospital ward, care home etc.) and considering how it may need to be adapted for students with disabilities or sensory impairments.
- Those delivering training using the AWTD app should carefully prepare and monitor learners in case of nausea.

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**Table 1: Survey respondents by course enrolment**

| Dementia training day | Number attending training day | Courses enrolled on                      | Completing questionnaire (n=) | Response rate |
|-----------------------|-------------------------------|------------------------------------------|-------------------------------|---------------|
| Session 1             | 262                           | Adult Nursing                            | 104                           | 55%           |
|                       |                               | Mental Health Nursing                    | 40                            |               |
| Session 2             | 152                           | Adult Nursing                            | 26                            | 84%           |
|                       |                               | Child Nursing                            | 16                            |               |
|                       |                               | Physiotherapy                            | 31                            |               |
|                       |                               | Occupational Therapy                     | 24                            |               |
|                       |                               | Operating Department Practitioners (ODP) | 26                            |               |
|                       |                               | Course Unknown                           | 4                             |               |
| Total                 | 414                           |                                          | 271                           | 65%           |

**Table 2: Student reaction to the 'A Walk-Through Dementia' app**

| On a scale of one to five, how much would you agree with the following statements about 'A Walk-Through Dementia': n=271 (%) |                   |          |           |            |                |         |              |
|------------------------------------------------------------------------------------------------------------------------------|-------------------|----------|-----------|------------|----------------|---------|--------------|
|                                                                                                                              | Strongly Disagree | Disagree | Neutral   | Agree      | Strongly Agree | N/A     | Non-response |
| a. I found the technology easy to use                                                                                        | 6 (2.2)           | 4 (1.5)  | 15 (5.5)  | 117 (43.2) | 129 (47.6)     | 0 (0.0) | 0 (0.0)      |
| b. I found the app/website easy to navigate                                                                                  | 4 (1.5)           | 5 (1.8)  | 15 (5.5)  | 123 (45.4) | 122 (45.0)     | 0 (0.0) | 2 (0.7)      |
| c. I found the design engaging                                                                                               | 4 (1.5)           | 8 (3.0)  | 24 (8.9)  | 101 (37.3) | 133 (49.1)     | 0 (0.0) | 1 (0.4)      |
| d. The experiences were natural and realistic                                                                                | 3 (1.1)           | 14 (5.2) | 44 (16.2) | 108 (39.9) | 101 (37.3)     | 0 (0.0) | 1 (0.4)      |
| e. I found the experience emotionally engaging                                                                               | 3 (1.1)           | 11 (4.1) | 27 (10.0) | 111 (41.0) | 114 (42.1)     | 4 (1.5) | 1 (0.4)      |

**Table 3: Student learning about dementia after viewing the AWTD app**

| How much would you agree with the following statements about 'A Walk-Through Dementia': n=271 (%) |                   |          |           |            |                |         |              |
|---------------------------------------------------------------------------------------------------|-------------------|----------|-----------|------------|----------------|---------|--------------|
|                                                                                                   | Strongly Disagree | Disagree | Neutral   | Agree      | Strongly Agree | N/A     | Non-response |
| a. AWTD challenged                                                                                | 4 (1.5)           | 10 (3.7) | 32 (11.8) | 115 (42.4) | 105 (38.7)     | 4 (1.5) | 1 (0.4)      |

|                                                                                |         |         |           |            |            |         |         |
|--------------------------------------------------------------------------------|---------|---------|-----------|------------|------------|---------|---------|
| my perceptions of dementia                                                     |         |         |           |            |            |         |         |
| b. I learnt more about the symptoms of dementia                                | 2 (0.7) | 9 (3.3) | 34 (12.5) | 110 (40.6) | 111 (41.0) | 3 (1.1) | 2 (0.7) |
| c. I gained a deeper insight into the challenges faced by people with dementia | 2 (0.7) | 1 (0.4) | 12 (4.4)  | 109 (40.2) | 140 (51.7) | 5 (1.8) | 2 (0.7) |

**Table 4: Student behaviour to people with dementia after viewing the AWTD app**

| How much would you agree with the following statement about 'A Walk-Through Dementia': n=271 (%) |                   |          |           |            |                |         |              |
|--------------------------------------------------------------------------------------------------|-------------------|----------|-----------|------------|----------------|---------|--------------|
|                                                                                                  | Strongly Disagree | Disagree | Neutral   | Agree      | Strongly Agree | N/A     | Non-response |
| a. The experience has changed my behaviour or attitude towards people with dementia              | 5 (1.8)           | 7 (2.6)  | 40 (14.8) | 104 (38.4) | 107 (39.5)     | 6 (2.2) | 2 (0.7)      |