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Title	A feasibility study of dementia communication training based on the VERA framework for pre-registration nurses: Part II impact on student experience
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Title:

A feasibility study of dementia communication training based on the VERA framework for pre-registration nurses: Part II impact on student experience.

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Abstract

Background

People living with dementia have complex communication needs, especially during acute hospital admissions. The VERA framework (validation, emotion, reassurance, activity) was designed to promote person centred communication between student nurses and people living with dementia, but there is limited evaluation of its impact.

Aim: To measure the impact of dementia communication training (based on VERA) plus older adult unit (OAU) placement on students' ability to recognise opportunities for person centred (PC) communication compared to OAU placement alone.

Method

A control pre-post study design was used. Dementia communication training plus follow-up during OAU placement was delivered to 51 students (5 OAU, two hospitals) while 66 students (7 OAUs, five hospitals) acted as controls. The primary outcome was students' ability to recognise PC communication assessed using case vignettes. Data were collected using electronic survey and focus group interviews. Data analysis used independent non-parametric Mann-Whitney U test and thematic analysis.

Results

In total 52 students (response rate 40%) completed surveys at the end of placements, (38 intervention, 14 control group students). In the intervention group, participants were significantly more likely to identify PC responses with a mean score of 10.5 (SD 3.0) compared with 7.5 (SD 3.0) in the control group (p=0.006). In focus group interviews (n=19 students), the main themes were: connecting with patients, VERA in practice, communication challenges, and learning environment. VERA was described as a flexible approach that added to participants' communication toolkit. The learning environment, complexity of patients and organisational resources were important contextual factors.

Conclusion

The VERA framework has potential as a foundation level dementia communication training intervention, but it requires more rigorous testing. Nursing can lead the way

in developing and embedding evidence-based, interdisciplinary dementia communication training in preregistration curricula.

Key words

Dementia communication, person centred communication, student nurse, curriculum, quasi-experimental design

INTRODUCTION

In acute care settings, high quality care for people living with dementia is fundamentally dependent on effective, competent and compassionate communication by all staff, especially nursing. Yet, despite the growing proportion of people in acute hospitals with dementia (Timmions et al., 2015), there are deficits in staff capability to meet the physical and emotional needs of this group of patients (WHO, 2016). Dementia training can be ad-hoc and often limited to awareness raising rather than developing specific communication skills and strategies (Jackson et al., 2016).

The inadequate preparation of qualified staff, is compounded by a lack of compulsory foundation level training in preregistration curricula for all health care professionals (HCP) (Alushi et al., 2015). One of the difficulties for educators is the lack of consensus on what constitutes foundation level communication skills in dementia and no readily available evidence-based training packages (Wood et al., 2016). This article is the second of two reporting on a feasibility study of a foundation level dementia communication training based on the VERA framework (Blackhall et al., 2011).

BACKGROUND

Systematic reviews suggest that any type of dementia training is welcomed by staff and students as it increases awareness and knowledge, but such training does not necessarily result in behaviour change (Alushi et al., 2015, Eggenberger et al., 2013, Machiels et al., 2017). There are well documented contextual reasons for why it is difficult to maintain new behaviours in practice (Michie et al., 2014), especially behaviours as complex as person centred communication with people living with dementia.

However, one of the greatest opportunities to leverage change across a complex system is to embed fundamental skills during the core training of those who will work in that system. Hand hygiene, recognition of the deteriorating patient and cardio-pulmonary resuscitation are good examples of specific skills in preregistration

curricula that enabled foundation level, standardised skill sets in the qualified workforce which are built upon through post-qualification training.
This study sought to add to the emerging evidence base on the VERA framework in developing foundation level dementia communication skills (Hawkes et al., 2015). The following hypothesis was tested: student nurses who receive dementia communication training during their older adult unit (OAU) clinical placements can more frequently recognise opportunities for person centred communication, using case vignettes, compared to students undertaking OAU placements alone. Instruments to measure the main outcomes (person-centred communication and dementia communication confidence) were also developed as part of the feasibility study.

METHODS

A quasi-experimental control pre-post study design was used. Students from one university undertaking OAU placements in seven acute care teaching hospitals, from April 2016 to December 2016, were eligible to participate in the study.
The OAU placements were a standard part of students' programme and were not influenced by the study.
The target sample size was 80 subjects (40 per group) to allow for drop out. Teare et al., (2014) recommend a minimum of 70 subjects (35 per group) to estimate the pooled standard deviation for a continuous variable. Two hospitals (5 OAU) were selected to receive the intervention and five hospitals (7 OAU) acted as the control sites (due to limited resources, random allocation was not possible). Only dedicated OAU were selected, one hospital had a specific dementia unit, however, patients with dementia constituted a significant portion of patients on all units. The units had a similar bed capacity (28-32 beds) and staffing levels. Students in both groups were encouraged to avail of any Trust dementia training and received standard supports available to all students (mentors, link lecturers, clinical tutors).

Intervention

The intervention consisted of a 2.5 hour face-to-face dementia training based on the VERA framework with follow-up short reflective discussions during clinical placement facilitated by lecturers (Naughton et al., 2018). Students received the training at the

start of their OAU. The duration of placements ranged from four to twelve weeks and the numbers of students per unit ranged from 1 to 8. In total there were 130 eligible students, 66 in the control and 64 in the intervention group.

Figure 1Trial Flow diagram

Recruitment strategy

Ethical approval for the study was provided by the University Ethics Committee (HR15/162270). Eligible students were sent study information and an invitation to participate through their university email account. Students in the intervention group signed an informed consent form prior to training while students in the control group completed anonymised surveys (return of the survey indicated consent to participate). Students in the control group were offered the training at the end of their placement.

In the intervention group 80% (51/64) of eligible students participated in the training session, and 59% (38/64) completed post placement surveys. Recruitment from control sites was low at 21% (14/66) (Figure 1).

Data collection

Students in the control and intervention sites completed online surveys, pre and post their OAU placement. The survey was comprised of four instruments and demographic questions. The primary outcome was students' ability to identify person centred responses and application of the VERA principles which was tested using bespoke case vignettes (Veloski et al., 2005). Four evolving case vignettes were written with 14 items in total, each item had four response options (supplemental file). The case vignettes were tested with students (n=5), not involved in the current study, who provided feedback on clarity and ease of completion. Face validity was provided by two senior clinical nurses in dementia. In addition, three people with dementia provided feedback on one of the case vignettes to examine authenticity.

Secondary outcomes measured using validated questionnaires included 'A Sense of Competency in Dementia Care', a 17 item instrument with a four-point Likert scale (Schepers et al., 2012), and knowledge of dementia using the DK-20, a 20 item instrument (Shanahan et al., 2013). The DK-20 was split in two, with 10 questions in

the pre and ten questions in the post survey, to reduce the length of the survey. We developed a bespoke questionnaire to measure students' perception of readiness for placement and confidence with dementia communication was developed. The instrument consisted of seven questions (e.g. I feel confident I have the skills to interact with a person with dementia) and used a five point Likert scale ranging from 'none of the time' to 'all of the time' (supplemental file).

Data collection involved a mixed methodology approach. Survey data were collected at baseline (T1) prior to the intervention and following students' clinical placement (T2). Electronic questionnaires were sent to students using their university email account with two reminder emails, in additional postal questionnaires boosted response rates by 8%. Focus group interviews (n=4) were held with students in the intervention group. Interviews were carried out at the end of clinical placements. The interview questions sought to understand how the intervention worked and in what circumstances.

Data Analysis

Descriptive statistics using medians and interquartile ranges (IQR) for continuous data and percentages for categorical data are presented. Tests for statistical difference between the intervention and the control group were based on post intervention surveys and used the non-parametric Mann-Whitney U test. Subgroup analysis was carried out for participants with paired pre and post data using ANOVA to control for baseline scores.

The internal validity of the survey instruments was tested using Cronbach's alpha. Three of the survey instruments demonstrated good internal reliability with Cronbach's alpha >0.80, but splitting the items on the DK-20 questionnaire adversely impact reliability (Table 1).

Table 1 Analysis of Internal Reliability using Cronbach's Alpha

RESULTS

In total, 52 students completed the post intervention survey (38 intervention, 14 control group students) giving an overall response rate of 40%. The majority of students (84%) were from the larger BSc. programme with the remainder from the

post graduate diploma programme (PG Dip) (table 2). There were no significant differences in group characteristics.

Table 2 Intervention and control group characteristics

Impact of intervention

The intervention showed a positive impact on the primary outcome. Participants in the intervention group were significantly more likely to identify opportunities for person centred responses with a median score of 11 (IQR 3.2) compared to 9 (IQR 5) in the control group (p=0.002) (table 3). There was no significant difference between the groups in the other outcome measures. A similar pattern was observed in a sub-group analysis (n=30) of participants with paired data using ANOVA, but the sample size was small (n=23 in intervention and n=6 in control group) (Supplemental file).

Table 3 comparison of outcomes

In both groups, questionnaire items receiving the lowest scores were those related to managing behaviour that challenges and engaging people in creative activities, just over 20% of respondents felt very capable or confident in managing these situations by the end of clinical placement.

Qualitative evaluation

Data from the focus group interviews with students (n=19) who received the intervention provided greater insight into why and how students used the training in practice and the influence of contextual factors (supplemental file student profile). A central theme in the data was ‘Connecting with people with dementia’ with three related themes: VERA in practice, Communication Challenges and Learning Environment. Eight sub-themes captured participants’ experiences and learning during their older adult placements (Figure 2).

Figure 2 Students experiences of communicating with people with dementia

1.0 Connecting with patients

Connecting with patients was core in how participants described their experiences of caring for people with dementia. Participants' striving to connect with patients centred on seeing the person as an individual and recognising the person's emotional needs.

> Yeah, it's so important to build that relationship because they're so terrified already, they don't know what's going on [Female (F) 3 Focus Group (FG) 1]

Participants' interactions with people with dementia were broadly divided into 'affirming interactions' describing a positive connection and 'non-affirming' interactions describing a lack of connection with patients. All participants were able to recount examples of both, however, the emotional impact on participants varied, especially to 'non-affirming' interactions.

1.1 Affirming interaction

Interactions where students felt they had made a connection with a patient reaffirmed participants' belief in their nursing skill as communicators, they described such experiences as 'building confidence', 'performed well', 'formed a connection'.

> It did feel really nice that she felt really comfortable with me and she just wanted to stay with me. That was quite nice. It was quite sweet. So she was just literally hugging me for ages (laughs). It was nice, yes". [F4,FG 2]

1.2 Non-affirmed interaction

Students recognised patients' emotional distress and they tried to respond, however, non-affirming interactions occurred when students' efforts to connect did not result in a reciprocal positive emotional response in patients. Some students, often those with previous experience of caring for people with dementia, accepted they were not able to meet the emotional needs of the person at that time.

"You just let them, because you can't change it anyhow. You try everything. They're so in it and you just think, 'What can you do? [F3, FG 1]

In contrast, other students, often less experienced, described a greater sense of uncertainty, frustration and even fear. Participants described feeling like they ‘cannot manage’ ‘useless’ and ‘helpless’.

> She[the patient] was just saying really random things and she started getting really aggressive and as much as I tried to stay calm and change my tone of voice and go with whatever she was ….. It wasn’t helping the situation, so I ended up having to get a nurse and I just felt really helpless basically” [F4, FG 1]:

2.0 VERA in Practice

VERA was used by students to help connect with patients, the impact of the training was summed up by two themes: flexible approach and building confidence.

2.1 Flexible Approach

Participants recognised the individuality of people living with dementia and the need to adopt flexible approaches. Participants used the VERA framework as a fluid concept rather than a step-by-step approach, adapting the framework as required during patient interactions.

> I have tried to just think, ‘Oh yeah, I can use VERA and go through each thing but it doesn’t quite work. Like sometimes, you’ll just approach it in your own way and you think, ‘Oh yeah, I am using VERA. [F3, FG 3]

Students actively tried to engage the individual by becoming familiar with the person’s history, likes and dislikes which they used to establish rapport.

> So we kind of redirected the conversation towards, ‘Well, I’m writing some reports. I know you used to write lots of reports [patient was former teacher],’ and then it led on to a discussion about her work and my work so we kind of distracted her away from her worries at that moment and got her to talk about herself, which was really good [F1 group 2]

Participants also recounted instances where VERA had not worked, this tended to be with a person who was already in a high state of anxiety or agitation.

> But I have found that if someone is already aggressive it doesn't do anything; for me, it didn't really worked. But most of the time it does [F3,FG 4]

Participants described using some of the specific communication strategies taught during the training such as mirroring the person's tone or emotion, repeating key words, verbalising reassurance.

> [Student recounting VERA phrases] 'I can see that you are not happy… or I can see that you are upset.' It's like magic [change in patients response] [F3 FG 2]

Initiating activities with patients was the least successful aspect of VERA (as reflected in the questionnaire data). Few participants were able to identify specific activities beyond conversation that they used with patients. However, there were some examples of student ingenuity and creativity.

> We [two students] have someone on the ward that's a bit of a wanderer, likes to take all the things out of the cupboard and keep them for himself. So the other day we asked him and another man if they want to sit in the dayroom and have their dinner in there and watch TV. So we moved the table in with them, .. they sat there so happy for a good few hours having chats, talking to each about their lives. [F2, Group 4]

For the majority of participants, there was frustration at the lack of distraction resources and activities available for patients and the high levels of boredom their patients experienced.

> [Patient with dementia] He just needs something to fiddle with, because he's gone through his fourth cannula in two days. So he just needs something to fiddle with. Today he fiddled with the temperature pack thing [student had given patient an empty cardboard box] [F2, FG 2]

2.2 Building confidence

Students were adamant the training had a positive impact on their confidence through extending their range of communication strategies and adding to their

communication tool-kit. Students felt reassured that there was ‘not just one way’ to interact, and that ‘going with the patient’s reality’ was a legitimate strategy. This knowledge gave them courage to try different approaches based on knowing their patients’ routines and emotional states.

> I think it makes me feel like I’ve got a better arsenal or more in my toolkit to offer [F 1, FG1]

3.0 Learning Environment

A key factor in enabling students to connect with their patients and use VERA was the wider learning environment on the OAU. Two sub-themes were identified: ‘learning from placement and response of others.

3.1 Learning from placement

While participants valued the training, their learning was more strongly influenced by exposure and caring for people with dementia during their placement. Gaining experience and getting to know their patients enabled students to interpret more nuanced, non-verbal behaviour, however, the training supported them to interpret behaviour in terms of needs and unmet needs.

> It’s using the theory that you’ve taught us but then using that with our experience that we’ve gained from this placement. [F4, FG 1]

Students gained in communication confidence and competence over the course of their placement. They also suggested that the training was applicable to non-older adult units where they had also cared for patients with dementia but without any real understanding of what to do.

> [Describing previous placement] I was on a general surgery ward, and I had probably three or four patients that had dementia. So if I’d have known this then …. if I’d have had this then, or especially the other students that haven’t had any training, they would have really benefited from it. [F4 Group 2]

3.2 Response of others

A fundamental aspect of the learning environment was the response of others, especially permanent staff. Participants described varied experiences in learning from and receiving feedback from staff during placement. When participants observed staff using similar communication principles to VERA, it reinforced their confidence to model the technique.

> What I've realised though, on these wards, is that a lot of the nurses do this framework without realising it and they do it so well. I was watching my mentor and she just knew exactly the right thing to say for each patient. She could calm them down instantly but she was using things that we've been taught. [F2 , FG 1]

Similarly, when staff or families actively commented and provided positive feedback on students' ability to connect with a person, students flourished and developed more personal resilience to deal with less successful communication attempts.

> The deputy ward manager came and spoke to me just whilst I was sat with one of the ladies and he said that he was really pleased. He felt that I was much more confident than I was four weeks ago … I felt quite proud of myself. I suppose because I'm quite shy but just more confident. [F 3, FG 4]

However, participants were also critical of some of the practices they observed, especially where staff were perceived to ignore patients' emotional needs or interactions increased patients' distress.

> I just see so many interactions where they approach it in completely the wrong way and they just make the patient so agitated. [F 4 Group 3]

The dementia training enabled students to more readily identify poor practices and they commented that VERA training may also be useful for some staff.

4.0 Communication challenges

Students operationalised their dementia training through problem solving the multiple communication challenges they encountered on a daily basis. Communication challenges were broadly stratified into patient factors and organisational factors.

4.1 Patient factors

Even with their training, students sometimes felt under-prepared for the complexity of the challenges they encountered. Examples included communicating with a person with dementia who was aphasic, had limited English or profound sensory deficits such as deafness or blindness. The VERA framework predominately relies on verbal interaction and this was seen as one of its limitations.

Such communication barriers impeded students' ability to interpret and respond especially to emotional needs; at times this caused frustration, but it also stretched students to adapt their existing strategies.

> [Speaking about a lady who was blind] I was using sort of facial expressions to mirror the emotion. That was part of the VERA training, and I found that challenging with somebody who was blind so I would often use my tone of voice and always hold their hand when I was speaking to them just so that they knew sort of which side of the bed I was on and so that they knew that somebody was talking to them [M 1, FG 4]

While there were some traditional communication aids available (picture boards), none of the OAU used technology such as translation software, or electronic tablets with a personalised music playlist or photos to support interactions.

The single greatest stress and barrier to students establishing a connection with patients was distressed behaviour, especially physical aggression. While the training supported students to interpret such behaviour as 'unmet need'; they struggled to apply their existing strategies and to reconcile their expectation of meeting patients' needs and reducing the person's distress.

> It's aggressive patients. Once they're hitting you and they've got something in their head and they want to leave, anything you're saying, they're just not going to take it into account. VERA didn't exactly work [F2 Group 1]

In such situations, students mainly worked out what to do by themselves, in general, they did not learn new strategies from staff. Such encounters caused some students' real stress and anxiety; though gradually over the course of their placement they developed more personal resilience to cope with it.

> This sounds awful but I used to be terrified of patients who would scream because I've never experienced that. I'd be so scared to go in the room and try and calm them down because I'd think they'd start getting aggressiv[F2 group 1]

Students were not aware of individualised behavioural management plans for patients with a history of aggression. For students and staff alike, there appeared to be little expert support to help formulate and implement such plans within the acute care setting.

> With the lady that wanders round, sometimes if staff see I'm trying to calm her down, they'll say, 'Don't bother because she's just too agitated.' People say, Just leave her. It's fine' but that is because she gets really agitated and aggressive and hitting you with her purse or with her stick [F2 Group 1]

4.2 Organisational factors

Organisational factors also impeded students' efforts to connect with patients and to apply their new skills. The most prominent of these factors were under staffing and time.

> I think also doesn't help by changing staff faces all the time. It just adds on to their agitation and also the shortage of staff; when you have eight patients for one nurse. When do you have time to validate or to engage and to talk? [female 3 Group 1]

The shortage of activities and distraction resources were already mentioned. Other issues raised by participants was staff training and maintaining staff enthusiasm and motivation. Participants observed some excellent practice, but there was significant variation among members of the team, whereby some staff were more disengaged

from patients.

> People who do that [ignore PWD] , I ask myself have they always done that or have they just been around these people so long that they've just gotten used to it and it's just easy for them now to do it that way and just ignore them [F4 group 3]

Observing such behaviour combined with other organisational barriers tainted participants' views of working with this population, despite largely enjoying their placement experiences.

DISCUSSION

The VERA based dementia training combined with learning from the clinical environment, increased students' ability to recognise opportunities for more person centred responses above and beyond learning gained from clinical placement alone. Qualitative data suggested students were able to apply VERA flexibly through increased confidence and an expanded range of communication strategies, but the learning environment, patient and organisational factors were important contextual influences that impacted on students' ability to connect with patients.

Similar to other preregistration training (Wood et al., 2016, Alushi et al., 2015, Jackson et al., 2016) the intervention shows promise, but the impact on student behaviour and the quality of interaction with patients should be evaluated using observational methodologies. The dementia training combined with experiences from clinical placement was likely to be synergistic. The qualitative data helped explain the mechanism of action of the intervention. From the student perspective, the training reduced fear and built confidence to adopt flexible and creative approaches to connect with patients. It was most valued by students with little or no prior experience of people with dementia, suggesting the training may be more suitable in the first year of a curriculum.

The data also point to realistic expectations of the training, students using VERA did not always manage to connect with patients. In these circumstances, they described VERA as 'not working'. VERA is designed to help students maintain a compassionate and person centred approach, but additional training is required to support patients with more complex behavioural and communication needs (Clissett, et al., 2013, Dewing and Dijk, 2014). The VERA framework is explicitly a foundation level training, designed as a platform upon which to build further skills. In the study herein it provided students with pragmatic strategies to operationalise a person centred philosophy and move beyond task focused and superficial communication observed by Hammar et al., (2017). The potential impact of providing all preregistration healthcare professionals with this type of foundation level training is enormous; because just as students are influenced by their training environments,

they also influence these same environments and the staff they work with (Jackson et al., 2016, Hawkes et al., 2015, Collier et al., 2015)

Strengths and Limitations

The evaluation strategy using electronic survey boosted by postal survey was reasonably successful among the intervention group, but did not engage students in the control group. Incentives such as financial vouchers or offering alternate training may have increased control group engagement. The small control group reduced the power of the study to examine the impact of the intervention and confounding factors, but learning from the feasibility study informs future study design. Electronic data collection was anonymous and the analysis was undertaken by a researcher blinded to the intervention and control group. However, the focus group interviews were conducted by the research team involved in delivering the intervention and may have resulted in socially desirable responses. Two of the instruments used in the study, the case vignettes and Dementia Communication Confidence scale, require further validation and reliability testing.

CONCLUSION

For the growing number of people living with dementia and their families it is inconceivable that staff and students are not equipped with evidence based dementia communication skills. Foundation level dementia communication skills training is required in all preregistration curricula for healthcare professionals as part of the response to the global dementia challenge. This study is significant as it is an early phase trial to develop the evidence base for VERA as a theoretically robust and fit-for-purpose training intervention. The next phase is to examine the impact on student behaviour in clinical settings using rigorous methodology.

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