An exploration of the hydration care of older people: a qualitative study

Abstract

Background:
Older adults are more susceptible to water imbalance and ensuring they drink sufficiently is a complex and challenging issue for nurses. The factors that promote adequate hydration and the barriers which prevent older people from drinking are not well understood.

Objective:
This study aimed to understand the complexity of issues associated with the hydration and hydration care of older people.

Design:
A qualitative study using multiple methods.

Settings:
Two healthcare sites providing care for older people in the South West of England: a hospital ward in a major hospital and a care home providing personal and nursing care.

Participants:
Twenty-one older people aged 68-96 years, were recruited to the study from the hospital ward and care home. The inclusion criteria for older people to participate
were men or women aged 65 years and over and the exclusion criteria were being unable to provide informed consent, or being too ill or distressed to take part in the study. The staff participants of nurses and health care assistants totalled 21. The inclusion criterion for staff was any nurse or health care assistant providing hydration care. Seven friends or relatives participated by making anonymous comments via a suggestion box available to all friends and relatives.

Methods:
Data were collected via interviews with older people, focus group discussions involving staff, suggestion box comments made by friends and relatives and twelve hours observation of hydration practice. The data were analysed using thematic analysis.

Results:
Health professionals successfully employed several strategies to promote drinking including verbal prompting, offering choice, placing drinks in older people’s hands and assisting with drinking. Older people revealed their experience of drinking was diminished by a variety of factors including a limited aesthetic experience and a focus on fluid consumption rather than on drinking as a pleasurable and social experience.

Conclusion:
The rich and varied dimensions usually associated with drinking were lacking and the role of drinking beverages to promote social interaction was underplayed in both
settings. Hydration practice which supports the individual needs of older people is complex and goes beyond simply ensuring the consumption of adequate fluids.

*Key words:*

Drinking
Hydration care
Older people
Qualitative research
What is already known about this topic?

- Many older adults do not drink adequate amounts of fluids.

- Drinking is a complex activity involving a variety of physical and psychological factors.

- The aspects of current hydration practice which improve oral hydration in older people and those features which deter drinking are poorly understood.

What this paper adds

- Hydration care tends to emphasise fluid consumption rather than the pleasurable and social benefits of drinking thereby neglecting the complexity of the intervention.

- The factors which contribute to older people’s diminished experience of drinking have been identified.

- These findings provide insights into the future development of hydration care which goes beyond simply ensuring the consumption of adequate fluids.
Introduction

Drinking water and other fluids is fundamental to health and well-being regardless of the person or their situation. However age-related changes make older people more vulnerable to water imbalance and many older adults do not reach their recommended daily intake of oral fluids (Keller, 2006). Drinking is a complex behaviour involving multiple physical and psychological factors played out in varied social environments. The factors promoting adequate hydration and the barriers which prevent older people from drinking sufficiently in healthcare institutions are not well understood.

Background

Getting older adults to drink is a complex and challenging issue for nurses (Alford, 1991, Zembrzuski, 1997) and preventing dehydration in older people is important for health professionals working in both hospitals and care homes (Archibald, 2006). Suboptimal hydration is associated with increased susceptibility to urinary tract infections, pneumonia, pressure ulcers, confusion and disorientation (Chidester and Spangler, 1997, Mentes, 2006) whilst adequate hydration is associated with fewer falls, lower rates of constipation, better rehabilitation outcomes in orthopaedic patients and reduced risk of bladder cancer in men (Michaud et al., 1999, Mukand et al., 2003, Robinson and Rosher, 2002). Although the health benefits of proper hydration are well established, dehydration is prevalent in both older hospitalised adults and residents of care homes throughout the developed world (Haveman-Nies et al., 1997, Joanna Briggs Institute, 2001, Mentes, 2006). Specific interventions for improving oral hydration in older people are poorly understood (Hodgkinson et al.,
2003, Ullrich and McCutcheon, 2008). The straightforward approach to improve hydration status is for older people to consume adequate fluids. Whilst a minimum fluid intake of 1500ml per day for older people is proposed (Hodginkson et al., 2003, Mentes, 2006, WHO, 2002), there is no single recommended daily intake (Hodginkson et al., 2003) since the optimal amount depends on various factors including weight, health status, and energy expenditure (Simmons et al., 2001). Drinking is a complex behaviour determined by many interrelated factors (Köster, 2009) and controlled by homeostatic mechanisms and non-homeostatic controls including social, psychological and environmental influences (Kenney and Chiu, 2001). Both drinking and hydration care could be considered complex activities given the combination of possible influences, potential interactions and variable outcomes (Richards and Borglin, 2011). The aim of this study is to investigate the complexity of issues associated with hydration and hydration care of older people by exploring older people’s experiences of drinking fluids and health professionals’ beliefs and behaviours regarding hydration care.

**Methodology**

An interpretive approach was used in this study to investigate the complex issues associated with hydration and hydration care. The research sought to make sense of the experiences of older people and health professionals for the purpose of extending knowledge to support developments in hydration practice and interpretive description (Sandelowski 2000; Thorne et al, 1997; 2004) provided the methodological framework for the study.
Setting

The study was carried out in South West England. A convenience sample of one ‘Care of the Elderly’ ward in a major acute hospital and one care home providing personal and nursing care were recruited. The ward contained approximately 32 beds including four patient bays (4-6 beds per bay) and a number of individual rooms. Drinks were prepared in a small ward kitchen. The care home provided care to about 50 residents and had a Care Quality Commission quality rating of 2 stars (Good) (CQC, 2010). Residents’ rooms were organised on two floors, each having a small kitchen which could be used by residents, relatives and staff to make drinks at any time. There was a dining room and recreation room on each floor, a conservatory and garden; drinks were served and consumed in all the communal spaces and within residents’ rooms. A number of water coolers were available on each floor. In both settings drinks were distributed from a drinks trolley following meals and at other regular intervals.

Participants

Participation in this study was voluntary. Older people (men and women) from both settings were invited to participate in the study. Staff from the clinical care team in each setting identified potential participants for the study. These older people were invited to join the study by researchers and those who were interested in participating following discussion were recruited. The inclusion criteria were men or women aged 65 years and over. There was no upper age limit in eligibility. The exclusion criteria were being unable to provide informed consent, or being too ill or distressed to take part in the study. Nurses and health care assistants providing hydration care in each setting were recruited to the study by researchers. The
inclusion criterion for staff participation was any nurse or health care assistant providing hydration care.

**Methods**

The research approach involved a multi-method design (Creswell and Plano Clark, 2007). Using multiple sources (older people, staff, and relatives) and multiple ways of gathering data (focus groups, interviews and observations) was designed to enhance the quality of the data (Creswell and Plano Clark, 2007; Fossey et al., 2002; Johnstone, 2004). Two care settings, a hospital ward and a care home (nursing), were used to explore hydration and hydration care from the perspectives of older people and health professionals. Since the purpose of sampling in this study was to collect as much data as necessary to capture all the elements of hydration and hydration care, maximum variation within theoretical sampling was appropriate (Lincoln and Guba, 1985; Sandelowski, 1995). Both settings provide care to dependent older people and older people in both settings are reliant on health professionals for hydration care. The differences between residents in nursing homes and patients in long-stay hospital wards and the differences between the institutionalizing capacities of both settings are not considered profound (Higgs et al, 1998). The choice of these two settings provided scope for maximum variation (Thorne et al, 1997) thus enabling the complexities of hydration and hydration care to be more fully understood.

The research involved focus groups with staff, interviews with older people, and observations of hydration practice in both settings. Friends and relatives also contributed by posting comments in suggestion boxes. The multi-method design
employed three data collection stages during a period of eight months in 2010. This approach was chosen to enable a comprehensive and corroborated understanding of hydration and hydration care to be developed from the perspectives of both older people and health professionals.

In the first stage, a focus group discussion was held in each setting to capture health professionals’ views. Each discussion lasted about 45 minutes and took place in a room free from disturbance. During the discussion open-ended prompts were used to elicit health professionals’ views about current hydration practice. In the second stage, data were gathered over three two-hour non-participant observations in each setting. Observational data was collected in the care home over a three week period and included three observations: a lunchtime period, a bingo/afternoon tea time and a ‘keep fit and sherry’/lunchtime period. The three observations in the hospital ward took place during an eight week period; they included a mid-morning drinks/lunch period, a lunch time and an evening mealtime. The hydration care was scrutinised and various aspects including interaction, (non-verbal and verbal) and assistance (pace, placing of drinks, and hydration devices used) were recorded. Observations were documented separately for each participant during the observation period as brief notes and additional reflections were recorded in a field diary. Observations of the environment including patients’ access to the provision of fresh water/other beverages, presentation of drinks, distractions, institutional and non-institutional features, and the use made of hydration devices were also recorded.

In the third stage, older people’s views on hydration practice were collected via semi-structured interviews in both settings. The interviews lasting between 10 and 25
minutes were conducted in the resident’s room or beside the patient’s bed. During the interview, open-ended questions (see Figure 1) were used to elicit older people’s perceptions of hydration care and the factors which they considered encouraged or discouraged fluid intake. Relatives and friends were invited to make comments about hydration care via a suggestion box made available in each setting.

**Data analysis and interpretation**

The focus group discussions and interviews were electronically recorded with consent and transcribed verbatim. Data collection and analysis was an iterative process. Thematic analysis of the data involved becoming familiar with the data by reading and re-reading transcripts, coding transcripts, identifying themes and categories (Morse and Field, 1995). The qualitative data analysis programme NVivo8 was used for handling data and coding. During analysis codes were regularly reviewed and refined according to new data. The principles of theoretical sampling were used (Charmaz, 2006) and observations and interviews were sought to further examine and elaborate on the emerging interpretative theories as the study progressed. Writing and re-writing the thematic analysis was an integral part of interpreting the data (Richardson, 1994). In the third stage, interviews with older people continued until data saturation was reached and no new themes or insights were obtained (Bowen, 2008). Key themes and concepts were initially identified by the lead researcher and cross-checked by the research nurse.
Rigour

The trustworthiness or rigour of the study has been established using the criteria of credibility, transferability, dependability and confirmability (Guba and Lincoln, 1989). Credibility has been addressed by prolonged engagement with the settings and allowing sufficient time to become immersed in the data to generate themes which capture the essence of older people’s hydration and hydration care. The use of multiple-methods or data triangulation enhances credibility and has added richness and depth to the inquiry. Transferability, the degree to which the findings of this study may be judged by the reader to be applicable to other settings (Guba and Lincoln, 1989) is supported by a detailed description of the settings, sampling strategy and sample. Dependability has been addressed by providing details of data collection, data analysis and interpretation including the illustration of themes and categories by illustrative quotes from the raw data. The initial thematic analysis was confirmed independently by the research nurse. Confirmability is established when credibility, transferability and dependability are achieved (Guba and Lincoln, 1989). The trustworthiness of the report is established by a well-defined analytic process and an audit trail which captures how the data has been interpreted (Lincoln and Guba, 1985).

Ethical considerations

Ethical approval was gained from Frenchay Research Ethics Committee (Ref: 09/H0107/89) and from the Faculty Research Ethics Committees, University of the West of England (Ref. HSC/10/01/17). Informed consent was negotiated at a number of levels; firstly consent was obtained for the setting to participate in the study and to allow observations to be made in designated areas. Secondly, written consent was
obtained from staff willing to participate in focus groups and/or be observed and for patients/residents willing to participate in individual interviews and/or be observed. Thirdly, the ongoing consent of older people and staff was verbally sought prior to the observations. Relatives and friends gave their implied informed consent by voluntarily posting anonymous comments in the suggestion box displayed in each setting with accompanying information.

**Findings**

Eleven older people were interviewed about their experiences of drinking and hydration care, five care home residents (3 male, 2 female) and six hospital patients (1 male, 5 female) (see Table 1). Of the four older people participating in the observations in the care home, three were also interviewed, whilst the older people interviewed in the hospital setting were all different from those observed. The age range of care home residents was 68-82 years, whilst the hospital patients’ ages ranged from 71-96 years. Four staff including qualified nurses (RNs) and healthcare assistants (HCAs) participated in each of the focus group discussions. Twenty-one staff participants were observed providing hydration care, ten care home staff and ten hospital staff (see Table 1). Seven relatives or friends posted comments about hydration care, two in the hospital suggestion box and five in the care home box.

The focus groups, observations, interviews and suggestion box comments revealed many aspects of hydration care including factors which promote drinking and enable older people to consume adequate fluids as well as aspects of hydration care which deter drinking. In the care home, older people were observed drinking in communal sitting rooms or dining rooms designed to create a comfortable environment.
However institutional features such as uniform furniture and crockery; fixed schedules and lack of privacy were evident. These characteristics were more conspicuous in the hospital setting where hydration care was observed in 4 or 6-bedded bays. Patients were observed drinking whilst in bed or sitting in their bedside chair, amid a busy clinical setting.

Both older people and health professionals provided insights into their understanding of the importance of hydration and made reference to the pleasure of drinking. Older people revealed their drinking experience could be diminished by various factors. Observations of hydration care support the diminished quality of the drinking experience and highlighted aspects which did not meet the individual needs of older people. Six key themes with their subcategories emerged from the data (see Table 2) and these provide the sub-sections for the findings reported below. The study sought to deepen understanding of the complexity of issues in hydration and hydration care by capturing the voices of older people and staff from two settings. The verbatim quotes provide explanation and illustration of the emerging themes rather than comparison between the two settings.

**Availability of drinks**

The pattern of drinking for older people in both settings was largely dictated by the drinks trolley appearing at frequent intervals although drinks were also provided on request. One patient described the routine:

> It’s regimented, You can have two in the morning, have a breakfast, you can have more at 9.30, another one at 11 o’clock, then you have your dinner time one or two,
Then 3 o’clock you have another, 5 o’clock you have another, 9 o’clock you have another... it keeps the wheels going round... (St Hospital interviewee)

Whilst the drinks trolley seemed to mark time, the routine did not cater for individual preference, for example, one hospital patient considered the last hot drink at 9 pm was too early and another care home resident commented:

I get up at 6 o’clock ... I don’t have my first drink until nearly 9, so that is inconvenient.  
(J Care home interviewee)

Different personnel were responsible for the drinks’ trolley at different times in the hospital setting (HCAs and domestic staff) leading to inconsistencies in the patient experience. During one observation, a patient had a drink of tea in a cup with saucer, and later was given tea in a plastic beaker with a straw. Volunteer ‘coffee ladies’ in the hospital ward were celebrated for taking the drinks trolley round in the morning:

...we’ve got coffee ladies who come in...they are our saviours, they are the ones that you rely on ...they do encourage the ladies to drink... and it would probably help us more if we didn’t have to panic, if they’re not there we then have to stop doing ... looking after a patient to go out and do the hot drinks at 10 o’clock. (HCA, Hospital focus group)

One notable difference observed between the drinks trolley routine in each setting was the apparent lack of snacks offered in hospital whilst residents were routinely offered a biscuit or piece of cake. A finding common to both settings was that used cups were collected by nurses, HCAs and domestic staff without asking older people whether they had finished or wanted any more to drink.
Although drinks were available at mealtimes they were erratically drunk and observations highlighted very little fluid seemed to be offered or consumed when medications were administered, this was confirmed during several interviews. Water was freely available in both settings. A covered jug of water was refilled daily with tap water. Nurses and HCAs indicated they thought it was important for older people to drink water, yet they considered many older people didn’t like water. This was confirmed by a few older people who didn’t like its taste:

I don't like...water at all. I think it’s vile... (E care home interviewee)

The temperature of water also seemed to affect its palatability; both staff and older people suggested that cold water was preferable. One care home resident was deterred from using the ‘water cooler machine’ because of difficulty with the plastic cups:

...terribly thin cups you see ... it takes a lot to drink...bang, all the water comes out...

(J care home interviewee)

Observational data revealed that care was usually taken when positioning jugs and drinks to make them accessible to older people who were able to drink independently. A comment in the hospital ward suggestion box was that all drinks should be within easy reach of patient, indicating that drinks may not always be ideally positioned. Readily accessible drinks not only depend on the drinks being placed appropriately, but also on the positioning of straws if used. One resident had a plastic beaker of sherry and lemonade placed in her hands by a healthcare assistant, unfortunately the straw was facing the wrong way and the resident was
observed struggling for several minutes to get the straw in the right position to suck.

**Pleasure of drinking**

There were limited instances of older people exhibiting or reporting pleasure associated with their drinking. Observation of a ‘keep fit and sherry’ activity in the care home witnessed several older people drinking sherry with relish. Whilst attempts were made to cater for individual preferences, some individuals reported being unable to ‘choose’ their preferred drink or decaffeinated tea or coffee. Some older people revealed how certain drinks were evocative of pleasant memories. One hospital interviewee when describing his fondness of sherry described in vivid detail memories of driving a sherry tanker in Spain and another recalled fond memories of drinking water:

I've been brought up on water, I'm from the Welsh valleys...drinking out of the stream... Just scoop it up... (L Hospital interviewee)

Drinking beverages had a social as well as functional role and nurses and HCAs in both settings recognised the importance of drinking with others:

So we can offer a cup of tea, sitting around a table and we can have a drink and sit with them and encourage them to drink along with the family ...they also drink too.

(Nurse, Care home focus group)

Several older people also mentioned the social aspects of drinking:

Oh I just have a cup of tea and chat. (M Care home interviewee)
Despite the recognition that social interaction was an important dimension to drinking, observations in both settings revealed occasions when opportunities to interact were missed in the offering, serving and consumption of drinks.

**Understanding the importance of hydration**

The relationship of drinking with health was alluded to by both health professionals and older people:

> You’ve got to keep your water supply clear. (L Hospital interviewee)

> The fruit juice is good for them, you know, the water is good for flushing yes... (HCA, Care home focus group)

Nurses and HCAs appreciated that foods such as soup and ice-cream were sources of fluid whilst older people seemed less aware of the role of food in hydration. Nurses were observed filling in fluid monitoring charts in the hospital setting; sometimes they elicited information from patients and other times from relatives, in some instances it was unclear how they knew what to record. This imprecision in the recording of fluid intake was exacerbated by unfinished drinks being removed by HCAs and domestic staff without recording the volume consumed. Some of the interviewees suggested they monitored their own fluid intake to some extent and were aware of the consequences of neglecting to drink:

> A year ago Christmas I was in here...neglect, dehydration...I wasn’t very well, but I wasn’t drinking enough as well. (L Hospital interviewee)
Care home staff also reported the use of charts to monitor fluid intake and demonstrated their awareness of the possibility of dehydration and its manifestations:

...they have seriously dry lips. You look at the tongue...the catheter, the skin turgor and the sunken eyes... (Nurse, Care home focus group)

**Help and assistance with drinking**

Nurses and HCAs in both settings reported using various strategies to encourage older people to drink including recognising their individual needs. Strategies and tips were exchanged between staff members. A novice health care assistant suggested:

...that’s what I’m learning now, trying to find tricks and ways...The way to hydrate a client is to know his likes ...but talking to each other so everybody is aware how the best way to get a client to drink... (HCA, Care home focus group)

As well as providing physical assistance, communication skills were also considered important in encouraging fluid intake including being encouraging, calm and friendly. One resident reported a strategy he employed of choosing drinks which did not discolour his clothing if spilled, whilst a patient revealed how she encouraged a fellow resident to drink:

... she’d got a job picking the cup and saucer up. I try and talk her into just having a cup. Forget picking the saucer up, just have the cup. (L Hospital interviewee)

A limited range of drinking aids were observed in both settings, most commonly a flexible disposable straw in a plastic beaker with a lid. Staff reported problems controlling the flow of fluid from beakers with spouted lids.
Family, friends, fellow residents and volunteers were able to support staff in hydration care in various ways. Relatives were observed bringing drinks in, pouring drinks, prompting and helping older people to drink, and in hospital some also kept a tally of the drinks consumed so that they could inform staff. Hospital staff perhaps underestimated their role:

Relatives are not involved in helping patients to drink, whilst voluntary workers are very important (HCA, Hospital focus group)

Some relatives indicated via the suggestion box that hospital staff did not provide advice about how to support their relative regarding the types or volume of fluid that their relative could consume. Older people demonstrated differences in requesting help; some disclosed they wouldn’t ask for assistance whilst others suggested they did.

**Barriers to drinking**

Insufficient time was the most often mentioned barrier to drinking by older people, nurses and HCAs:

...but the thing is we just haven’t got the time to do it, it’s just flat out continually as soon as you walk in. (HCA, Hospital focus group)

Yes, but one of the problems is if they’re short staffed...when they come to collect the tray the time is too short. So you’re compelled to be quicker than you would like. (J Care home interviewee)

Many older people commented that their frailty affected their independence in drinking. They had to rely on staff or relatives to pour out their drinks and needed varying
amounts of assistance with drinking. Their choice of drinking vessel was influenced by their ability to manage its weight or control spills.

Several factors made older people less inclined to drink. A lack of thirst sensation was reported by some older people. Another deterrent for one interviewee was worry about having to pass urine too frequently:

I don’t ever want to drink during the day too much...I have drinks with my food, I spend lots of pennies. (D Care home interviewee)

Spending a penny is a euphemism which some older people use to mean ‘passing urine’ and originates from using penny coins to operate locks in public toilets.

Compliance with the routine of drinking framed by mealtimes and the timing of the drinks trolley could also be detrimental for some older people:

Drinks by clock- fixed number of tea or coffee at certain times, will not drink at any other time. (Hospital suggestion box)

Observations revealed that consumption of fluids was severely impeded by older people being tired or sleepy, and in hospital, by being away from the ward for extended periods such as occupational therapy sessions.

**Diminished experience of drinking**

Drinking was often viewed as a task or burden, something that had to be done, rather than as a pleasurable activity:

...that lady there, she’s not drinking...they keep on to her like they do with me:
“You’ve got to drink”. (L hospital interviewee)

In both settings, hydration care was viewed, particularly by HCAs, as one of several ‘tasks’ or chores:

...by the time we go to the rooms we’re really trying to rush and make sure that everybody’s well fed and so the focus is on food, then drinks usually in the day like you say when you do a pad round, you change the pad, fluids afterwards. (HCA, Care home focus group)

Balancing hydration care with other activities was also considered detrimental to the drinking experience:

...it’s not the ideal situation is it to go from washing patients to getting people meals and getting commodes in the middle of it all... (HCA, Hospital focus group)

Older people’s sensibilities about the aesthetics of drinking revealed various shortcomings which limited their pleasure in drinking. Aspects of taste, temperature and appearance of drinks and the utility of drinking aids could and did impair the quality of their drinking experience. Individual tastes varied; some older people liked drinking water, for others the taste was improved by cordial, although the poor taste of cordial provided for patients was commented upon in the hospital focus group. One interviewee with swallowing difficulties commented that the thickeners used in drinks tasted unpleasant. Older people also revealed individual preferences about the temperature of hot drinks. Some liked to cool their drinks with extra milk, others liked hotter drinks:
I like it hot, yes. Sometimes it’s not all that warm. (D Hospital interviewee)

Observations revealed drinks were sometimes left on a patient’s table when they were occupied elsewhere, having a wash for example, consequently some patients were drinking tea or coffee that had gone cold. Cold drinks served at room temperature were also negatively commented upon by some older people. Care home residents were observed being offered cold drinks with ice on a particularly hot day, whilst hospital staff bemoaned the lack of facilities to make iced drinks.

Individual preferences about particular types of drinking vessel were also made:

Well I like an ordinary cup I must admit, and I don’t like thick mugs but it wouldn’t stop me from drinking. (Sm Hospital interviewee)

However, the design and appearance of cups, saucers and other drinking vessels used in both settings tended to be uniform, robust and rather bland, and older people were unable to choose a colour or design to match the type of drink or their disposition. The type of drinking vessel seemed to contribute to self-identity, one interviewee using a beaker with a spout commented:

...basically the beaker. Because you see I’m in my second childhood. (J Care home interviewee)

Some nurses, HCAs and relatives were observed being more aware about how the desire to drink might be adversely affected by the presentation of the drink and its placement. Drinks were sometimes placed on tables cluttered with left-over food, used cups and urine bottles.
The observations and interviews indicated ways in which older people’s dignity was respected in relation to hydration care. These included both nurses and HCAs asking older people what they would like to drink in an appropriate way, helping older people to be in a comfortable position to drink, being aware of older people’s preferences and allowing older people sufficient time to finish their drinks. There were instances however, where a loss of dignity could diminish older people’s experience of drinking. The nurse and HCAs in the hospital focus group reported there were sometimes not enough staff to ensure older people had sufficient dedicated help to drink:

But then you’re bouncing off patients, you might be in a bed giving a lady a drink on the one side, then you’ll go the other side feeding ... and you’re doing two people at once. (HCA, Hospital focus group)

Sometimes the interaction observed between staff and older people in the offering and consumption of drinks was rather perfunctory and older people were not encouraged to engage in dialogue. Taken together, the barriers to drinking and the diminished experience of drinking revealed in this study suggest various factors which impair older people’s drinking experience (see Figure 2).

**Discussion**

The findings from this study reveal the complex interrelationship of factors which promote or deter drinking and suggest for many older people drinking was a diminished experience. Some of the challenges experienced in supporting hydration
care have been highlighted and a consequence of current hydration practice is that drinking tends to be promoted as a functional rather than pleasurable activity.

Given the diminished sense of thirst in older people (Kenney and Chiu, 2001) other cues and opportunities for drinking become more significant. This study suggests mealtimes were not used effectively as an opportunity to promote drinking despite mealtimes being the way people spontaneously choose to drink (Kenney and Chiu, 2000, McKiernan et al., 2008). Similarly, the opportunity to promote fluid consumption with medication was overlooked in both settings, despite being significant in achieving adequate fluid intake (Chidester and Spangler, 1997, Simmons et al., 2001). Further opportunities to boost fluid intake by offering drinks with snacks (Posthauer, 2005, Zizza et al., 2009) and in association with therapy or recreational activities (Frazer, 2008) were evident in the care home although not in the hospital setting. Nurses and HCAs, but not older people were aware that certain foods were a useful source of fluid (Begum and Jonhson, 2010, Benelam and Wyness, 2010). Taken together these findings suggest that the range of opportunities for promoting hydration was not given sufficient emphasis in practice.

Both staff and older people demonstrated they understood the importance of hydration, and alluded to the health giving properties of water and other fluids. Although older people were encouraged to make choices about what to drink, tea and coffee were often selected. A preference for drinking water is associated with a variety of aesthetic issues including personal experience, memory and health properties (Dietrich, 2006). As well as associating certain drinks with health, older
people associated memories with particular drinks emphasising drinking has other roles in addition to hydration.

An integral part of hydration care is recognising risk factors for dehydration (Collins and Claros, 2011). Nurses and HCAs described what they considered to be signs of dehydration, but did not reveal that they were aware of the complexity of monitoring an older person’s hydration status given the wide variations in signs and symptoms (Joanna Briggs Institute, 2001, Sheehy et al., 2011) and difficulty in assessing and diagnosing dehydration (Bryant, 2007, Vivanti et al., 2008).

A daily record of fluid intake was kept for some, but not all older people in both settings. The use of fluid charts is considered the best approach to monitoring daily fluid intake (Hodginkson et al., 2003, Holman et al., 2005, Joanna Briggs Institute, 2001) although there are concerns about their accuracy (Reid et al., 2004). Reliance on estimating volumes rather than recording actual volumes as witnessed in this study supports these concerns.

Knowledge about individual preferences and needs was not displayed universally by nurses or HCAs. Providing preferred drinks to nursing home residents was successful in increasing fluid intake as was verbal prompting (Simmons et al., 2001). Prompting older people to drink and offering drinks in a systematic way is important because some older people are unable to request fluids (Zembrzuski, 1997) and others may not spontaneously ask for fluids. This study revealed that older people displayed great variation in their inclination to request drinks or help with drinking. Other strategies to enhance hydration revealed in this study included placing drinks
in older people’s hands, pouring out drinks, making older people comfortable prior to drinking and helping them to drink. Staff also reflected on the importance of interpersonal skills and suggested that an encouraging and gentle manner was helpful. Having time to talk and drink alongside older people was also considered important although this was not observed other than during organised activities in the care home. The contribution of relatives in supporting hydration care was underestimated by hospital staff and possibly underutilised since relatives indicated they needed more guidance from staff about supporting hydration, this has been highlighted elsewhere (Anglian Water, 2009).

Hydration devices to support fluid intake appeared to be underused in both settings. The ubiquitous use of a straw to assist drinking may relate to its availability, disposability, lack of stigma, encouragement by staff, lack of awareness of other assistive hydration devices and because it is a low tech and simple solution. Many assistive drinking devices are available (Dymond 2010) although their acceptance by older people is complex (Lilja et al., 2003). Given the frequency with which people increasingly use various spill resistant, insulated and disposable containers or sports bottles it is surprising they were not more visible in either setting.

Insufficient time was reported as a significant barrier to performing hydration care. This is highlighted in other studies (Kayser-Jones et al., 1999, Mentes 2006; Simmons et al., 2001). The quality of care provided may contribute to ‘institutionalisation’ being a risk factor for dehydration in older people (Hodgkinson et al, 2003, Sullivan, 2005). Whilst care home HCAs indicated they learnt strategies to encourage fluid intake from their more experienced colleagues, it was intriguing that
the role of education in developing hydration care was not expressed by nurses in either setting.

Some frail older people in the study were dependent on others to obtain sufficient fluids. Physical and cognitive decline are important factors which limit optimal drinking (Simmons et al., 2001, Mentes, 2006) and contribute to older people relying on staff or relatives for assistance in drinking. The relative absence of hydration devices in both settings may enhance this dependence (Fraser, 2008). Intriguingly, those older people who are ‘semidependent’, that is, older people who are capable of obtaining their own fluids, but who in practice do not do so, may be most at risk of dehydration (Hodgkinson et al., 2003).

Helping older people, instead of encouraging them to drink unaided where possible with the support of hydration devices, may increase behavioural dependency (Stabell et al., 2004). Dependency is a complex issue and having help with drinking may enable the older person to enjoy some interaction with staff and in choosing to seek help the older person has used strategies of selection, compensation and optimisation (Stabell et al., 2004). Independence is associated with high self-esteem and well-being and is shaped in part by the interaction pattern of staff (Baltes, 1996). The complexity of hydration care is reinforced by the recognition that drinking activity offers staff the possibility of promoting both independence and social activity. Staff intimated the difficulty in encouraging some older people to drink sufficient fluids. A typology of older people’s drinking characteristics including those who can drink, those who can’t drink and those who won’t drink (Mentes, 2006) may be too
simplistic given older people's drinking characteristics were observed to fluctuate in this study.

Drinking is a complex behaviour determined by a variety of factors (Köster, 2009). The factors which curtail the desire to drink emerging from this study include tiredness, a declining sense of thirst, a lack of pleasure associated with drinking and fear of incontinence or frequent urination. The richness and variety usually associated with drinking appeared lacking in both settings. An important dimension of drinking irrespective of hydration is its ability to conjure up memories and pleasant associations and thereby offer comfort. A cup of tea in different circumstances can comfort and relax or revive and stimulate (Burnett, 1999).

Older people revealed various shortcomings concerning the aesthetics of drinking such as the taste, temperature and appearance of drinks and the utility of drinking aids which limited their pleasure in drinking. People drink beverages for a variety of reasons including, sensory stimulation and encouragement of social interactions (Mattes, 2010). Older people in this study reflected on the social as well as functional aspects of drinking and whilst social interaction was considered an important dimension to drinking, the role of drinking beverages to promote social interaction was underplayed in both settings. The emphasis appeared to be on fluid consumption rather than on drinking as a pleasurable and social experience. Limited verbal interaction and lack of spontaneous interactions between older people and staff associated with hydration have been reported elsewhere (Ullrich and McCutcheon, 2008). The social aspects of mealtimes in hospital have similarly been described as impoverished (Dickinson et al., 2005). Removing this important
dimension contributed to a diminution in the quality of the drinking experience for older people. The presence of other people can have a dramatic effect on drinking and eating, an effect called social facilitation (Stroebele and De Castro, 2004).

Other environmental features such as accessibility, location, ambient temperature and lighting can exert powerful effects on consumption (Stroebele and De Castro, 2004), whilst decor, background noise, seating, hand-washing facilities and appropriate eating utensils can make mealtimes more pleasurable (Stanner, 2002) and by inference can improve the experience of drinking. There was little evidence of modifying the environment to promote drinking, although the proximity of activities such as washing and toileting together with interruptions by clinical staff and absences from the ward environment were considered to have an adverse effect on drinking.

Drinking was often viewed as a task or burden rather than as pleasurable. Since attending to individual preferences is important in promoting fluid intake (Archibold, 2006, Simmons et al., 2001) the failure to cater for preferences other than choice of drink, such as temperature and the type and colour of the drinking vessel is surprising. Although a strategy employed to promote fluid intake is to prompt older people to drink whenever the opportunity arises (Mentes, 2006), it ignores the richer experience of drinking and reinforces the stereotype of dependency rather than encouraging care which is individualised and age neutral (Phelan, 2011). Whilst verbal prompting promotes fluid intake (Simmons et al., 2001) persistent reminders to drink may also diminish the experience of drinking. This exemplifies the
complexity of hydration care and suggests subtlety in hydration care is necessary to promote pleasure and a sense of wellbeing.

The study revealed hydration care did not always overtly support older people’s dignity. The presentation of appetising drinks to encourage enjoyment and creating an environment which respects dignity are important aspects of hydration care (CQC, 2010). In contrast, lack of choice, unpalatable drinks and insufficient time to assist an older person witnessed on occasions in this study all contribute to a diminished experience and loss of dignity.

**Limitations**

Although this research has provided a rich and in-depth understanding of the complexity of hydration care, a few limitations are noteworthy. Whilst various data collection methods were employed to increase the credibility and comprehensiveness of the data, the different contexts and cultures of the two settings may not have been sufficiently considered in developing the theoretical interpretations. Although, direct observation of practice contributed to the triangulation of data, there may be some concerns that this data collection method altered hydration practice. Moreover, it should be recognised that observation of practice was limited to communal areas and that observation did not extend to times when patients were away from the ward or residents were in their own rooms. Whilst the role of nurses and HCAs in hydration care has been explored, the study did not attempt to delineate distinctions in hydration practice relating to type and level of professional qualification.
Conclusion

This study has emphasised the importance of both the social and functional roles of drinking and revealed factors which contribute to the pleasure of drinking and those which diminish the drinking experience. The findings reveal the complexity of hydration care and emphasise that supporting the individual needs of older people is complicated and goes beyond ensuring the consumption of adequate fluids.

Older people gained pleasure from drinking by selecting their preferred drinks, through the limited social interaction and from the pleasant memories that drinking could evoke. A greater emphasis on encouraging relatives and friends to support hydration and to drink alongside older people would be appropriate, especially since the presence of others can increase fluid intake (Stroebele and De Castro, 2004). The opportunities to socialise with others and interact meaningfully with staff would also more effectively support older people’s dignity (Robinson and Gallagher, 2008). A range of factors which deterred drinking or diminished the experience were revealed including a reduced aesthetic experience, loss of dignity and drinking being considered troublesome and a chore.

Whilst staff in both settings demonstrated various strategies to support optimal fluid intake, a greater emphasis could be given to promoting fluids at mealtimes and with medication since these are key times that older people drink (Simmons et al., 2001). Encouraging older people to choose their drinking vessel from a range of colours, materials and design to match their mood and drink could help to enrich each drinking experience and promote verbal interaction with staff. The provision of a
colourful drinks trolley (Robinson and Rosher, 2002), offering decaffeinated tea and coffee (Davidhizar et al., 2004), and serving drinks at the right temperature could also enhance the experience.

A greater use of hydration devices including insulated mugs to keep drinks at the right temperature could also be employed to enhance drinking. Using smaller and lighter jugs which encourage independence and coloured jugs to highlight those at risk of dehydration such as the ‘red jug scheme’ (NHSIII, 2010) could be used to promote drinking (Campbell, 2011). Some basic education about the principles of hydration would also seem to be appropriate for volunteers who were perceived to play a significant role in the provision of hydration care in the hospital setting, and this could be extended to older people and their relatives. Nurse education to improve hydration care, raise its importance and change attitudes to hydration should also be considered (Ullrich and McCutcheon, 2008). The subtleties of hydration care are illustrated in the relative prominence given to prompting, since whilst it promotes fluid intake (Simmons et al., 2001) constant reminders to drink may also diminish the experience of drinking. The social and behavioural aspects of healthcare interventions need further delineation to determine the most effective approaches.
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Conflict of interest

Three authors (Jenny Cloete, Elizabeth Dymond and Adele Long) are employed by North Bristol NHS Trust, the same trust which awarded the small grant which funded the research. Elizabeth Dymond is Innovation Manager within the Research & Innovation Department, North Bristol NHS Trust.

Ethical approval

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