

An exploratory study into the factors that influence patients' perceptions of cleanliness in an acute NHS trust hospital

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An exploratory study into the factors that influence patients' perceptions of cleanliness in an acute NHS Trust Hospital.

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Abstract

Purpose

If NHS hospitals wish to influence patients to choose them and, as the literature review suggests, cleanliness will be a key influencing factor in making that choice, it would seem important for hospitals to understand what factors lead people to decide whether a hospital is clean or dirty. The research aims to identify what the key factors are that influence patients' perceptions of cleanliness and to rank these factors in order of importance.

Methodology

The project utilised a mixed methodology to collect the data. The hospital staff and people who had been recent patients took part in focus groups in order to gather their views. The current hospital in-patients were surveyed through the use of a paper questionnaire.

Findings

The main themes that influence the perceptions of cleanliness emerging from the analysis can be summarised under three broad headings - appearance of the environment; physical cleanliness; staff behaviour.

The findings suggest that this subject is much more complex than the production of a list. The appearance of the environment is a complex set of perceptions based on what individuals believe to be important, what they observe and what they expect. The research suggests that the appearance of the environment is the most important factor.

Originality/value

The paper starts to explore the factors that influence patient perception of cleanliness and provides practical information to NHS estates and facilities managers.

Keywords: NHS, cleaning, facilities management, patient choice

Type of paper: Research paper

An exploratory study into the factors that influence patients' perceptions of cleanliness in an acute NHS Trust Hospital.

Introduction

In recent years the increased public awareness media spotlight on concerns regarding hospital associated infection (HAIs) such as methicillian resistant *Staphylococcus aureus* (MRSA) has increased attention on aspects of the hospital environment. The public and media perceive a clear link between cleanliness standards and the risk of contracting an infection while in hospital. This has led to people being concerned about going into hospitals for treatment where cleaning standards are seen as not being as high as would be expected.

Since January 2006 most NHS patients have had a choice of hospital available to them, where it is clinically appropriate. By 2008 General Practitioners will be able to offer the choice of any healthcare provider - both public and private sector - who can meet NHS standards (Department of Health, May 2006). This degree of choice has never been available to NHS patients before and as it is in a relatively early stage, it remains to be seen what choices patients will make and on what basis decisions about their care will be made. There does appear to be a strongly held view, with some supporting evidence, that issues around the 'hospital environment' may be a determining factor in the choice of hospital.

Hospitals have also never had to compete in this way before for patients and failure to attract them may mean that in the future a hospital may no longer be viable, and may certainly threaten the independent status of some NHS Trusts.

Literature Review

Liyanage and Egbu (2005), in their exploration of the role of facilities management in the control of healthcare associated infections, found that patients perceptions of quality are not only based on clinical treatments but on a range of other related, support function factors. Within the NHS, Hotel Services are usually classified as services around cleaning, catering, linen and laundry, and portering.

Angelopoulou et al (1998) suggest that if patients feel unable to judge clinical care they may use hotel services aspects of the service as a proxy for the overall quality, while others (Liyanage & Egbu, 2005, and Ferguson & Lim, 2001) suggest that hotel services are seen by patients as part of an integrated care package, which create lasting impressions and which patients feel they are able to control and influence. In other words they feel they understand these aspects of their service and therefore judge the quality.

The view that patients take high quality medical care for granted appears to be supported by recent research carried out by MORI (Page, 2004) to investigate patient and public attitudes to the NHS. It showed that acute medical success alone seems to have little to do with perceived quality of the patient experience and that there was no correlation between hospital mortality rates and patients' perceptions of the quality of their care. This same piece of work did find however those perceptions of satisfaction are strongly linked to perceptions of cleanliness, and much more so than other issues like being put on a mixed sex ward.

MORI's analysis work, 'Frontiers of Performance in the NHS' has identified that clinical measurements, readmission rates, length of stay or waiting times, do not correlate with patient perceptions (MORI, 2004). Batchelor et al. (1994), in their 'Patient Satisfaction Studies', refer to the work of the Health Policy Advisory Unit in 1989, who suggested patient satisfaction is predicted on six underlying dimensions; medical care and

information, food and physical facilities, non-tangible environment, quantity of food, nursing care and visiting arrangements. Three of these dimensions are hotel services/facilities factors and the study suggested that patients will weight the factors according to their perceived importance in order to measure their overall satisfaction.

Todd et al. (2002) carried out an investigation and assessment of attitudes to and perceptions of the built environments of NHS trust hospitals, and in this work they refer to a lack of research carried out in the United Kingdom linking patients' perceptions of care environments and the value they place upon these to health outcomes. They further say that, if the NHS is to improve the patients' experience an understanding of the nature and basis of stakeholder requirements is essential. Their research identified that patients' perceptions of a hospital ward environment were influenced by factors that affected their ability to eat and sleep, feelings of security or insecurity and issues around privacy (particularly in toilet and washroom areas), as well as being able to control factors such as lighting and heating in the environment, and being able to see out of the window (Todd et al, 2002).

Having established that non-clinical and facilities type factors influence patients' perception of care, is there any evidence that cleanliness is a more important factor than other environmental factors? The introduction of Patient Choice in the NHS (Department of Health, 2004) has resulted in research studies being conducted into this area. The Picker Institute's (Coulter et al., 2005) evaluation of the London Patient Choice Scheme found that a high standard of cleanliness was rated as the second most important factor that would influence patients' choice of hospital.

MORI research on Patient Choice carried out for Birmingham and the Black Country Strategic Health Authority (2005), found that on a scale of 24 reasons given for choice of hospital for inpatient stay 'greater standard of cleanliness' and 'nicer environment' ranked 6th and 7th respectively. In addition the study showed that 96% of the people they surveyed felt a reduced risk of hospital infection/MRSA was something they thought about when going into hospital and that for 94% a nice environment was either very or fairly important.

A further MORI research study (Page & Byrom, 2005), 'What will people choose when choice goes live?' used a combination of focus groups, and face to face interviews to collect the data. One of the research questions in the study aimed to identify what aspects are most important to patients when choosing a hospital. They found that length of waiting time and cleanliness were the two most important factors, with cleanliness ranked as the top mentioned by 54% of those interviewed.

The study by Liyanage and Egbu (2005) stated that Hospital Associated Infection (HAI) has had a major impact on the image of healthcare settings worldwide and found that cleanliness standards are highly influential in-patients choice of hospital not simply because of aesthetics but because poor standards of hygiene were felt to increase the risk of contracting infections. This appears to be supported by MORI's (2005) research that found that people were much more likely to use a private treatment centre if it was MRSA free. Furthermore, a recent Kings Fund study (Rosen et al., 2005) into public views on choice in health and health care, found that when people were asked about choice in relation to elective surgery they believed MRSA was less of a problem in smaller, private hospitals and would be influenced in choice of hospital by this.

The research suggests the public perceive a link between HAIs and standards of cleanliness. The role of the media in developing and supporting this assumption cannot be ignored and there are numerous examples of press stories about filthy hospitals and superbugs. This sort of reporting may well be a strong indicator of why hospital cleanliness is seen as an important enough issue by the public to influence their choice of hospital.

Although there is a small amount of literature available which indicates what the public and patients would like to see in hospital ward environments (Todd et al, 2002; Lawson & Phiri, 2003) there does not appear to be any research carried out to identify what environmental factors actually influence the perception of cleanliness, although Lawson & Phiri's research indicated that the quality of bathroom and toilet areas was highly influential in determining patients feelings about their hospital experience.

Aims and objectives

If NHS hospitals wish to influence patients to choose them and, as the literature review suggests, cleanliness will be a key influencing factor in making that choice, it would seem important for hospitals to understand what factors lead people to decide whether a hospital is clean or dirty. This would allow organisations to focus their efforts in service delivery on areas that are important to patients in affecting their perceptions. The focus of the research is therefore "what are the factors within the environment of an NHS Trust acute hospital which influence the patients' perceptions of cleanliness".

The research aims to identify what the key factors are that influence patients' perceptions of cleanliness and to rank these factors in order of importance. The sample of participants is:

- current hospital in-patients
- people who have recently experienced services of the hospital as an in-patient
- hospital staff

Research Method

The project utilised a mixed methodology to collect the data. The hospital staff and people who had been recent patients took part in focus groups in order to gather their views. The current hospital in-patients were surveyed through the use of a paper questionnaire.

By using focus groups, it is widely recognised that the shared social context, and the discussion type format within the support of the group encourages participants to become involved and voice their views and opinions (Collis & Hussey, 2003; Marshall & Rossman, 1999; Richie & Lewis, 2004; Evason & Whittington, 1997). It was important to understand the meaning behind peoples' perceptions and deeper perspectives would be captured through face to face interaction during the focus groups.

The second stage of the data collection involved the use of questionnaires to survey current hospital in-patients. Questionnaires were used as a means of data triangulation, aiming to corroborate the data already collected by the earlier qualitative research. This type of triangulation would enhance the qualitative methods and should increase reliability and validity (Collis & Hussey, 2003). The data generated by the focus groups was an important means of developing the questions for the questionnaire and would provide sound guidance on the matters to concentrate on and the most pertinent questions to ask (Collis and Hussey, 2003).

Sampling

Two focus groups were conducted, the first group consisting of hospital staff and the second group of people who had recent experience of being a hospital in-patient or day patient. Each consisted of 6-8 participants.

The staff consisted of hospital staff whose job role exposed them regularly to a wide range of hospital environments, including staff that had regular contact with patients at ward level and may therefore be aware of some of the issues patients raise or comment on in relation to cleanliness. The staff focus group consisted of a Porter, a Ward Hostess, a Domestic Assistant, an Infection Control Nurse, a Maintenance Assistant and the Patient Advice Liaison Manager. This was judgemental sampling, where participants are selected on the strength of their knowledge of the phenomenon under study (Collis and Hussey, 2003).

The second focus group was made up of people who had been in-patients within the last 6-18 months and had therefore had experienced the hospital ward environment. Participants were recruited through a local network of contacts, colleagues and friends that had been patients recently. This was snowball or network sampling (Collis and Hussey, 2003) where the researcher uses their knowledge to select the participants for the study (Marshall and Rossman, 1999). Four of the participants had had surgery, one of these day surgery, and two who had had babies; one of these participants had also been in the hospital with her son on the children's ward. They had all been in hospital within the last 18 months. When selecting the in-patients to be surveyed for the second stage of the research it was important to ensure a range of different types of patients were included which represented the variety of in-patient wards in the hospital. The wards selected were a maternity ward, a surgical ward, a gynaecological ward and a medical ward.

For the in-patient survey, cluster sampling (Collis and Hussey, 2003) was used where all of the patients on the four types of ward were selected on a particular day, and every individual considered by the Ward Manager to be well enough was given a questionnaire to complete. This meant that there was the potential for approximately 100 questionnaires to be distributed. A degree of qualitative data was planned to be collected through the use of open-ended questions. Therefore it was felt appropriate to restrict the distribution of the questionnaire to this relatively small sample size.

The questions for the questionnaire were designed to take the participants through the patient journey, beginning with their expectations about the cleanliness of the hospital before they were admitted, through their arrival and their actual experience within the hospital environment, ending with a measurement of their satisfaction of the hospital cleanliness after admission onto the ward. The questionnaires were distributed by ward staff whose normal job is to distribute and collect menus and food orders, and who is therefore familiar with the patients on a fairly informal level. To ensure that any patients who did not either read or speak English were able to take part in the survey process the Trust's Interpreting Service was used to assist patients to complete the questionnaires.

Results

Staff Focus Group Results

In general, the group felt that the media played a key role in influencing patients' expectations of hospital cleanliness. For example, the horror stories produced, "*the media make a lot about dirty hospitals*", generates fear and anxiety for patients. When staff were asked how they thought patient's would feel if they believed they were in a dirty hospital the overwhelming area of discussion was around patient anxiety; fear of infections like MRSA and the perceived possibility of death that accompanies this, "*they want to go home and are very, very frightened.*"

The group felt that patients would be very aware of their surroundings and would be looking for dirt and indications that the hospital was dirty. They also felt that patients would be unable to differentiate between aesthetics and things that were actually

important in relation to catching an infection. This was probably as a result of the media focusing on a link between dirty hospitals and HAIs. They understood that this type of outside influence had generated a great deal of fear in-patients. They also felt that old, stained worn out toilet seats and floors gave a poor impression of cleanliness.

The group also believed that the appearance of the environment was a significant influencing factor, and in particular that patients would see the older areas as dirty and new, refurbished areas as clean. They felt this was influenced by things like the pale woodwork and modern colours in refurbished areas, which may reflect standards that now exist in peoples own homes.

The group believed that people's expectations of NHS hospitals had increased significantly in recent years and this again could be a reflection of the high standards of appearance now in people's homes, and that they expected hospitals to keep pace with this.

Participants felt that staff appearance and general behaviour was a significant factor that influenced patients to think of the environment as being better or worse than they expected. They also felt that physical cleanliness was an important factor in influencing patient's perceptions on arrival. In particular, having visible cleaning staff and cleaning in public areas that was carried out throughout the day was reassuring, even in so far as patients would feel that if the cleaning hadn't been done yet it soon would be. They did think that obvious signs of dirt like mud on the floor would also be important in patients deciding whether the environment met their expectations. The actual appearance of the environment in terms of maintenance was also discussed but appears to have been seen by staff as less significant for patients on arrival as things like the initial greeting they receive. The group however felt a range of intangibles including how busy a department is when the patient arrives, the weather conditions (drab weather may give a worse impression), the general feel of the place and the age of the patient may all contribute.

Issues around smells and the perception of physical cleanliness were mentioned only briefly in the discussion. Although they did feel strongly that things like dirty ceiling tiles and dead flies in the lights are very significant as patients spent so much time lying on their backs, in bed or being moved on a trolley, looking at the ceilings.

The group felt that a dirty environment may be seen by patients as an indication that staff were unprofessional and may reflect the standard of care they were likely to receive, and that may also worry about the cleanliness of areas they didn't get to see, like operating theatres, if the wards and public areas were dirty.

Although only a small part of the discussion was on the subject of appearance of the environment, the group did feel that the appearance of toilets and bathrooms would be an important indicator to patients that the hospital was clean to a 'safe' standard and that things like old, stained toilet seats and floors would give the wrong impression. The role professional staff behaviour plays in reassuring patients that they are safe was identified and the group felt that the appearance of areas such as toilets and bathrooms was important for patients to feel safe.

Patient Focus Group Results

As far as appearance of the environment was concerned the visual experience as people arrived at the hospital was found to be very important. The grounds and entrances were important in creating the right first impression. There was however a tension between the appearance of the environment and the actual cleanliness of the environment, the research participants found it very difficult to separate the two factors.

The physical cleanliness appeared to be most important due to its perceived links to hospital associated infections. A clean hospital reassured patients that they were safe. The influence of the media was again recognised by the patient group in influencing their expectation of cleanliness and the environment generally, particularly the television news reports. They were however very aware that the media only show the worst bits to get a good story but that this has the effect of frightening people *"they will show you the bad parts of a hospital somewhere in England and then everybody looks at that and thinks, god that must be the same as our hospital."* In addition, the general reputation about a hospital came across as very important in influencing expectation, *"I've heard some horrendous stories about hospitals."*

Much of the discussion around physical cleanliness and appearance of the environment focused on local hospitals and the experience as patients at these places. This appeared to have shaped their expectation of the environment at that hospital *"there was rubbish and all sorts on the floor"* and *"there was no one cleaning or going around, there were no bins."* It was also stated that the age of the building and the fact that it looked old and shabby and that waiting areas were cluttered had an influence.

Intangibles such as impressions formed from the first point of contact with the hospital, and particularly if it was A&E on a busy or rowdy night, seemed to have some relevance, *"if you come in here during the day the first thing you see is the reception area and that looks quite reasonable. If you come in on a Friday night at 10 or 11 o'clock or midnight or whatever or 2 o'clock in the morning and it's a totally different ball game."* When discussing how the reality of the environment at the Trust met with their expectation after arrival, the group generally gave a positive response.

The greatest part of the discussion was around the appearance of the environment, and both positive (e.g. nicely hung curtains) and negative issues (floors that were damaged and lifting and areas in need of refurbishment) were suggested. The negative images of a poorly maintained environment gave the impression that the environment was dirty, *"the room wasn't what I expected it to be, it just needed completely refurbishing really, but that's not the cleanliness, but it made it feel dirty even though it wasn't."*

Although the group felt that the cleanliness levels in the hospital were generally very good they did identify that the perceived cleanliness of the toilets was *"not quite as good as the general ward"*, particularly at night when cleaning wasn't carried out so frequently. It did become apparent however, that bad smells had also contributed to this impression and that the smells in the environment had a smaller but still significant effect on the perception of cleanliness.

One area that did receive particular attention was the way that the cleaning staff carried out their work, whether they had pulled furniture out to clean and cleaned thoroughly under beds *"I know I dropped something on the floor. I wouldn't normally have looked under the bed, I have to say it was quite dusty and someone had spilt something and it was still there when I left."* In addition, how consistent infection control practices were performed was important - use of alcohol gel, allowing visitors to sit on beds etc. Patients made clear linkages between a clean, well cared for environment, the quality of their care and their safety. Patients felt reassured they would be safe in a hospital where they believed staff cared about a clean environment and this gave them overall confidence in their care.

Results from the In-Patient Survey

On the days of the survey there were a total of 80 in-patients on the 4 wards surveyed. There were 44 questionnaires returned, which produced a response rate of 55%.

Question One - Satisfaction with cleanliness before admission

Patients were asked to rate, on a scale of 1 to 10, with 1 being totally dissatisfied and 10 being extremely satisfied, how satisfied they expected to feel about the cleanliness at the hospital, before admission. This question produced a mean satisfaction of 8.045 and a median satisfaction of 9. An average expectation score of 8 clearly demonstrated that patients' expectations of the cleanliness at the hospital, before they were admitted, were very high.

Question Two - Factors that patients felt influenced cleanliness before admission

Patients were asked to indicate from a list any factors that influenced how clean they expected the hospital to be before arrival.

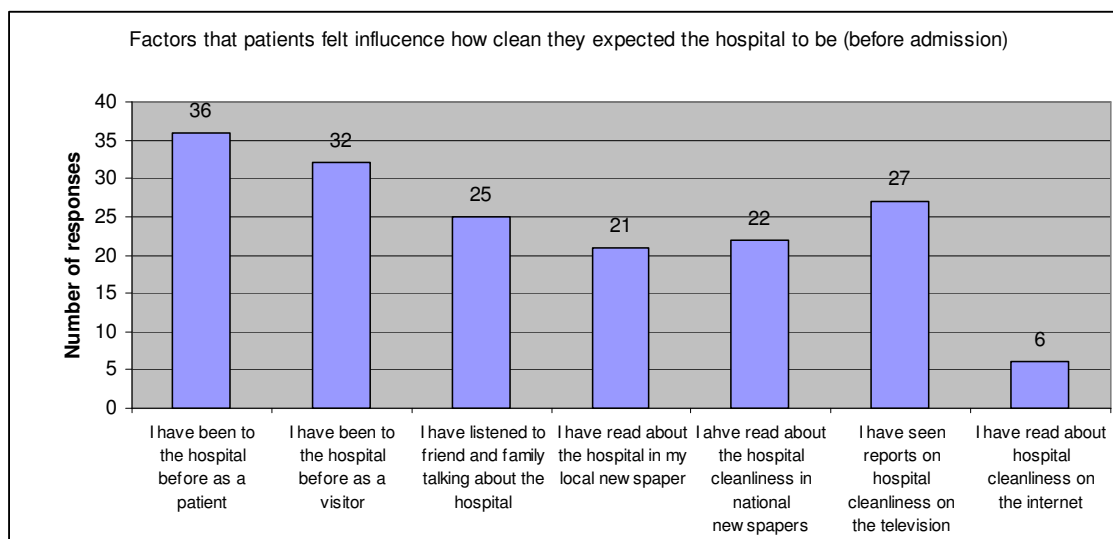


CHART 1 - Factors that patients felt influenced cleanliness before admission

The graph shows the range of factors that patients felt had influenced their expectations of the hospital's cleanliness. Previous experience of the hospital as either a patient or visitor where the most common factors. The influence of the media has also had an important effect, with television stories having the greatest influence.

Question Three - Factors that influence perception of cleanliness in grounds, gardens and car parks.

Patients were asked to indicate from a list if they noticed any factors in the hospital grounds, gardens and car parks that may influence their perception of cleanliness.

Things that patients saw or experienced in the hospital grounds, gardens and car parks

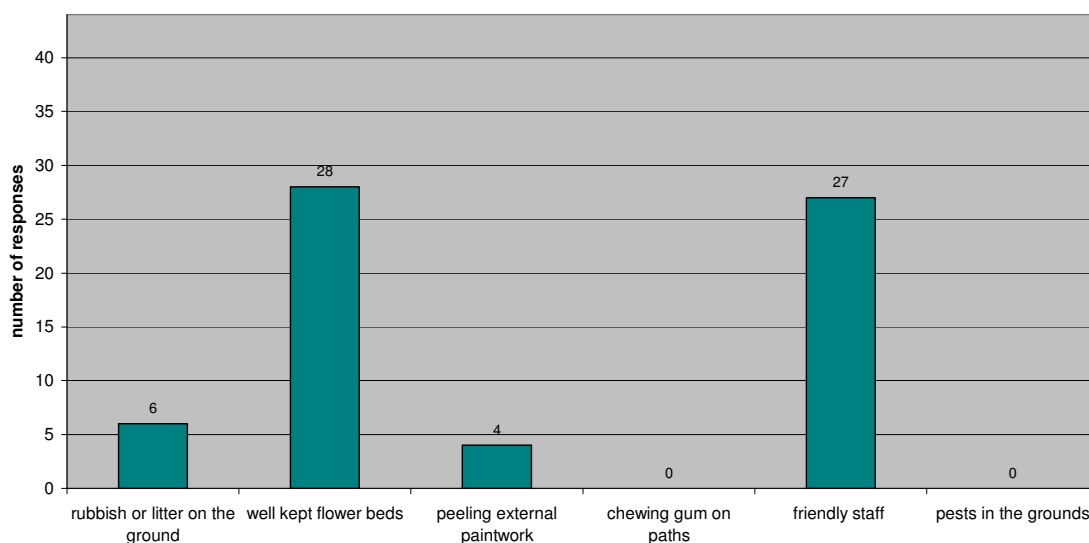


CHART 2 - Factors that influence perception of cleanliness in grounds, gardens and car parks.

Two factors very obviously stood out for patients from this selection were well kept flower beds and friendly staff. Interestingly the 'negative' factors such as rubbish on the ground, peeling external paintwork, chewing gum on the paths and pests in the grounds all received a low number of scores. The two 'positive' factors listed as options (well kept flower beds and friendly staff) received the highest scores. However, this may purely be a reflection of the good standards of cleanliness displayed with the hospital grounds, gardens and car parks. Without assessing the prevalence of negative factors that patients may observe the study cannot suggest that patients are more likely to notice the 'positive' factors over the negative 'factors'.

Question Four - Factors that influence perception of cleanliness in the entrances, corridors or reception areas.

Patients were asked to indicate from a list if they noticed any factors in the hospital entrances, corridors or reception areas that may influence their perception of cleanliness.

Things that patients saw or experienced in the entrances, corridors or reception areas

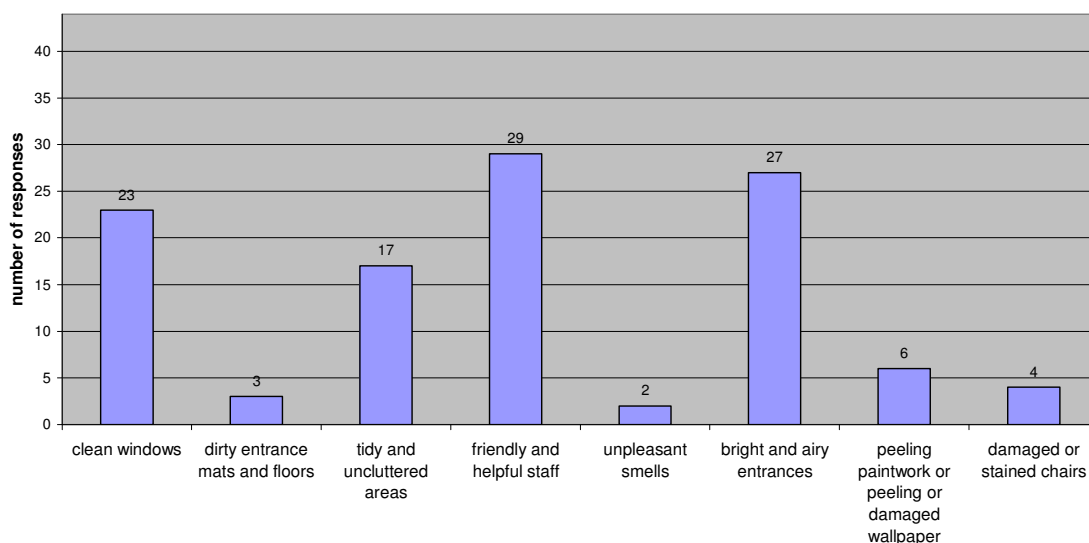


CHART 3 - Factors that influence perception of cleanliness in the entrances, corridors or reception areas.

Four factors stand out friendly and helpful staff, bright and airy entrances, clean windows and tidy and uncluttered areas. Again, these are all 'positive' factors and have been significant enough for patients to have noticed and retained this information from their arrival at the hospital. The four factors that very few patients have selected are what would be considered the 'negative' factors on the list.

Question 5 - Factors that influence perception of cleanliness within the patient bed area.

Patients were asked to indicate from a list if they noticed any factors within their bed area on the ward that may influence their perception of cleanliness.

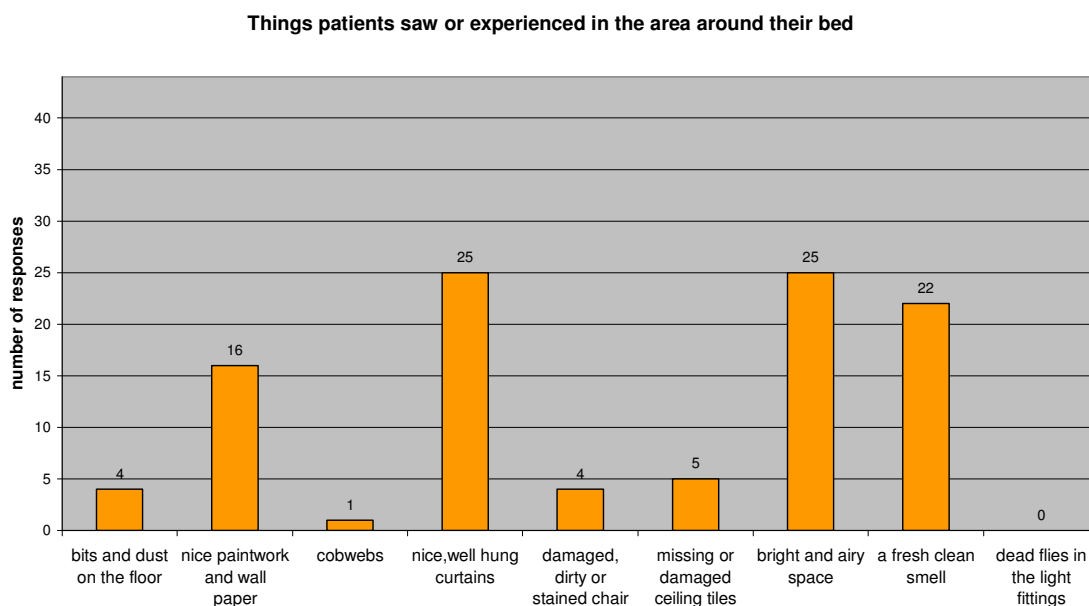


CHART 4 - Factors that influence perception of cleanliness within the patient bed area.

The four factors that have the highest responses are again those that are considered 'positive' factors i.e. that give the impression that the hospital is clean. Again it is noteworthy that the 'negative' factors have scored low around the patients' bed area.

As the questionnaire was filled in on the ward while the patient was in bed, the responses to this question did not rely on memory - i.e. the patient was able to make observations while they filled in the questionnaire, this may mean that these responses are a more accurate reflection of what the patient saw or experienced.

Question Six - Factors that influence perception of cleanliness in the toilets and bathrooms.

Patients were asked to indicate from a list if they noticed any factors in the toilets and bathrooms that may influence their perception of cleanliness.

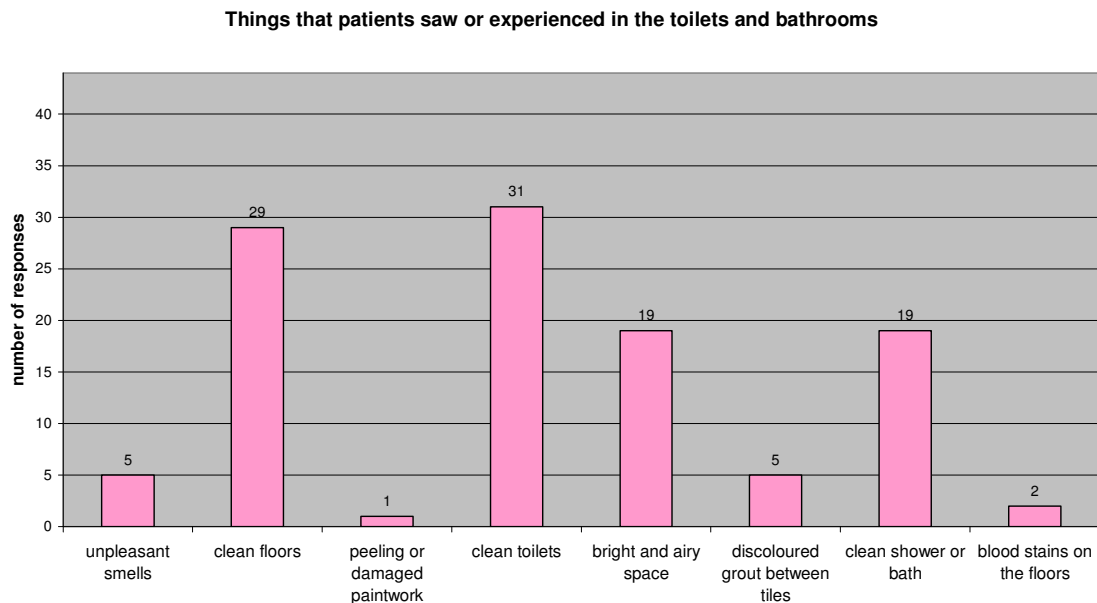


CHART 5 - Factors that influence perception of cleanliness in the toilets and bathrooms.

As with the other questions, the 'positive' factors have been selected by many more patients than the 'negative' ones. Clean toilets and clean floors received the highest number of responses.

Question Seven - Staff behaviour that influences the perception of cleanliness in the hospital.

Patients were asked to indicate from a list if they had observed any staff behaviour that may influence their perception of cleanliness.

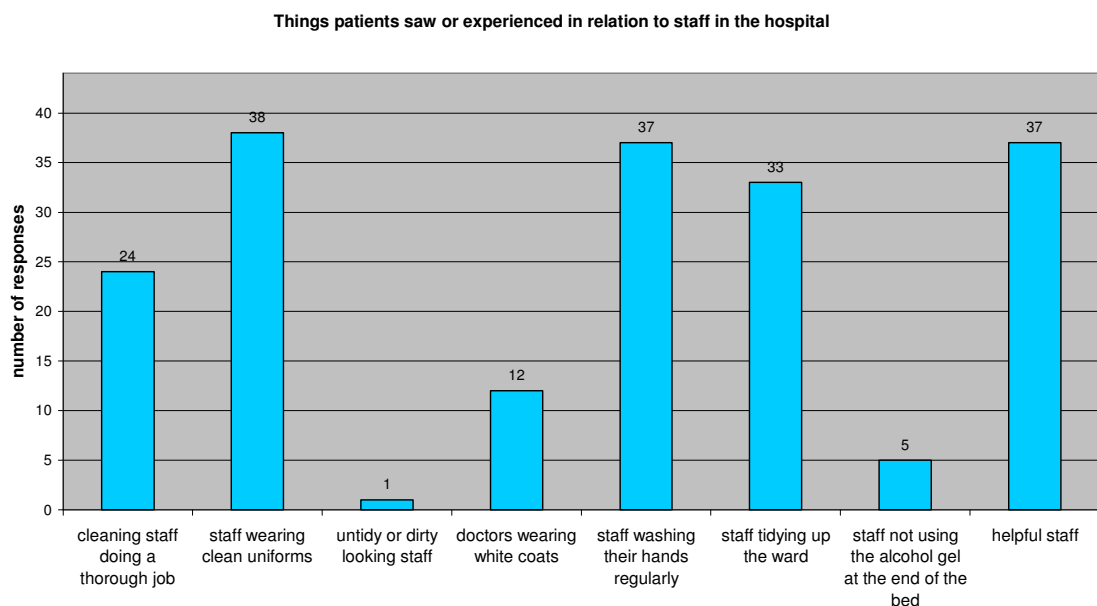


CHART 6 - Staff behaviour that influences the perception of cleanliness in the hospital.

Patients indicated that staff wearing clean uniforms were observed most. The factors considered 'negative', untidy or dirty looking staff and staff not using the alcohol gel at the end of the bed, both received the lowest number of scores.

The rate of response to the factors regarding staff is noticeably higher than the response to the factors in the other questions, suggesting that this is an area where patients are particularly observant and perhaps judgemental.

Question Eight - Satisfaction with cleanliness after admission

Patients were again asked to rate, on a scale of 1 to 10, with 1 being totally dissatisfied and 10 being extremely satisfied, how satisfied they were, this time with the overall the cleanliness at the Hospital after admission, i.e. while they were a patient. This question produced a mean of 8.462, with a median of 9. While the average satisfaction score was very similar to the average expectation score expressed at the beginning of the questionnaire, it does in fact show that satisfaction had increased very slightly against initial expectation while patients were experiencing the hospital.

Conclusions

The purpose of this research was to identify what factors within the environment of an acute NHS hospital influence patients' perceptions of cleanliness. This is important as patients, who now have the right to choose which hospital they will be treated in, are indicating that one of the most important factors in their selection of hospital will be how clean it is (Page and Byrom, 2005). Therefore it is important to understand what factors within the environment stimulate them to sense that something is clean (or not) and make a judgement based on this.

The main themes that influence the perceptions of cleanliness emerging from the analysis can be summarised under three broad headings:

- Appearance of the environment
- Physical cleanliness
- Staff behaviour

Certainly the *appearance of the environment* in terms of maintenance, housekeeping and design, appears to be an influential factor. It is the most important factor when people arrive at the hospital. The visual experience of the grounds, entrances and receptions was found to create the right first impression to patients in meeting with their expectation of a clean hospital. Patients also recognised that a poorly maintained environment gave the impression that areas were dirty even though they could see that physically they were not. It was suggested that a well maintained and presented hospital environment, that addresses all of the symbolic things patients consider to be important to indicate that it is clean, can be powerful enough to lead patients to actually believe it is 'clinically' clean.

It was also clear that patients found it very difficult to separate the appearance of the environment from the actual *physical cleanliness* of the environment. Patients felt that the appearance of the environment was almost as important (in influencing perception of cleanliness) as the actual physical cleanliness. This suggests the appearance of the environment has a very powerful effect on the perception of cleanliness. As the appearance of the environment was such a powerful factor, it could be expected that a that newly refurbished wards would lead to a higher level of satisfaction with cleanliness than older wards (although a simple comparison using data from the patient survey revealed there to be no statistically significant differences in terms of overall satisfaction of cleanliness between patients on newly refurbished wards and those on older wards).

One area that did seem to be more important when it came to physical cleanliness was toilets and bathrooms, particularly on wards. Patients did not feel these were as clean as other parts of the ward and that they were not always cleaned frequently enough. Smells were cited as an important factor along with the state of toilets (in terms of

maintenance) which both seemed to be important in relation to the perception of cleanliness.

The last key theme to influence the perception of cleanliness was *staff behaviour*. How staff worked and how professional they were was judged to be important to patients. Patients felt qualified to judge staff around the non clinical areas of work (i.e. the cleaning and catering services). Patients were able to decide how thoroughly and effectively they cleaned and how consistently they conformed to the professional practices to reduce infections, like hand washing or not allowing visitors to sit on beds. There was a clear message that not being consistent or thorough in these aspects of their work created a very poor impression and had a negative effect on perceptions of cleanliness. Patients expected professionalism from staff and felt anxious regarding their care if certain standards were not met.

The objective of the research to identify the key factors that influence patients' perceptions of cleanliness within an in-patient hospital setting and to rank them in order of importance. The findings suggest that this subject is much more complex than the production of a list. The appearance of the environment is a complex set of perceptions based on what individuals believe to be important, what they observe, what they expect etc. The research suggests that the appearance of the environment is the most important factor. However, there are a number of other factors which add complexity to the question of influence. If the results from the in-patient survey are considered, it suggests that there may be difference between the perceived positive and negative factors. The positive factors scored higher in all the questions than the negative factors, however without assessing the prevalence of negative factors that patients may observe the study cannot suggest that patients are more likely to notice the 'positive' factors over the negative 'factors'.

The reputation that the hospital has for its cleanliness is clearly critical and this reputation is developed by the interplay of a number of factors which are important to the people who use the services of the hospital. Staff, their perceived professionalism, their appearance and behaviour are key factors. First visual impressions are also extremely important. This includes how physically clean key symbols of the environment are and its general presentation, particularly in relation to maintenance and housekeeping.

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