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Infection prevention as “a show”: A qualitative study of nurses’ infection prevention behaviours

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Background; Control of infection and prevention of healthcare associated infections is an ongoing issue worldwide. Yet despite initiatives and strategies to reduce the burden that these infections cause, healthcare workers’ practice is still reported as suboptimal and these infections persist. Much of the research to date has primarily focused on predicting infection prevention behaviours and factors associated with guideline compliance. While this has given valuable insight, an investigation aiming to understand and explain behaviours that occur in everyday practice from the perspective of the actors themselves may hold the key to the challenges of effecting behaviour change. This study questioned “How can nurses’ infection prevention behaviour be explained?” This paper presents one of three identified themes ‘Rationalizing dirt-related behaviour’.

Design; This interpretative qualitative study uses vignettes, developed from nurses’ accounts of practice, to explore nurses’ reported infection prevention behaviours

Participants; Registered nurses working in an acute hospital setting and had been qualified for over a year. They were recruited while studying part-time at a London University.

Methods; Twenty semi-structured interviews were undertaken using a topic guide and vignettes. Interviews were transcribed verbatim and analysed using the framework method.

Results; The findings demonstrate that participants were keen to give a good impression and present themselves as knowledgeable practitioners, although it was evident that they did not always follow procedure and policy. They rationalized their own behaviour and logically justified any deviations from policy. Deviations in others were criticised as irrational and explained as superficial and part of a ‘show’ or display. However, participants also gave a presentation of themselves: a show or display that was influenced by the desire to protect self and satisfy patient scrutiny.

Conclusions; this study contributes to the identification and explanation of nurses’ infection prevention behaviours which are considered inappropriate or harmful. Behaviour is multifaceted and complex, stemming from a response to factors that are outside a purely ‘scientific’ understanding of infection and not simply understood as a deficit in knowledge. This calls for educational interventions that consider beliefs, values and social understanding of dirt and infection.

Key words- infection prevention, healthcare associated infection, qualitative research, compliance, nurse, Goffman,

What is already known about the topic?

- Healthcare associated infections are a continuing problem within healthcare, and are costly to both health services and users.
- Current policy and guidance provide education and monitoring tools to record and audit infection prevention practices but do not examine the root cause of non-compliance and inappropriate behaviour.

What this paper adds?

- Inappropriate infection prevention does occur in practice but is attributed to others' behaviour rather than own
- Behaviour is often self-protecting and may be part of a socially constructed reality where a show is performed to convince the audience that practice is based on knowledge
- Complex social behaviour requires multifaceted interventions which existing policy and guidance do not always provide.

Introduction

Infection control and prevention of healthcare associated infections are an essential part of healthcare. While there is a body of work that examines factors affecting compliance with guidelines and is aimed at predicting infection prevention behaviours, some behaviour that occurs in everyday practice remains unexplained (Pittet 2004). Examining such behaviours may provide a key insight into the challenges of behaviour change and may ultimately inform new initiatives aimed at improving practice, increasing quality of patient care and enhancing infection prevention.

As far back as 1860, Florence Nightingale emphasised the importance of hygiene, cleanliness and standards of care, yet despite this infections in hospitals and other healthcare settings continue to be a major concern for health services (Department of Health (DH) DH 2009). While today's hospitals are much cleaner, safer places than in the 19th and early 20th centuries, dirt and infection still threaten patient safety (DH 2009) through transmission within the hospital environment. However, despite current scientific knowledge and policies, beliefs and practices associated with cleanliness do not always accord with the implications of the 'rational' scientific approach or even immediate objective evidence (Morrow et al 2011). For example, despite a clear recognition of the importance of hand washing in reducing transmission of microorganisms, compliance by health professionals is often poor and protective equipment is not always used appropriately (Pittet 2000).

In 2011 the World Health Organisation (WHO 2011) reported that healthcare associated infections accounted for 16 million additional days in hospital throughout Europe with total costs estimated at approximately €7 billion, while in the USA the estimated total cost per year was \$6.5 billion. In the UK, the cost of treatment and management of healthcare associated infections has continued to rise with recent estimates of €53.9 million per year, attributed to the resulting increased length of stay (WHO 2011).

In the first decade of the 21st century, the control of healthcare acquired infection, most notably the globally problematic Meticillin-resistant *Staphylococcus aureus* (MRSA), became a major focus of UK health policy as rates of infection were perceived to be too high (National Audit Office (NAO) 2009). Repeated UK government initiatives (DH 2001a, 2001b, 2003, 2004, 2005, 2007, 2008) led to some reported improvements in control (NAO 2009); however evidence suggests that infection spread continues to be poorly understood by healthcare workers and the general population, with practices not underpinned by sound knowledge and evidence (Easton et al 2007, Nichols and Badger 2008, Morrow et al 2011). Furthermore, although the need to understand infection prevention behaviour has been identified as a key factor in improving practice and a significant step towards modifying behaviour (Pittet 2004), little research has been undertaken regarding the motivation behind specific behaviours. Some studies have identified why certain procedures and practices are not carried out, for example handwashing, but few have considered workers' behaviours as a

whole or investigated the key determinants to behaviour and infection prevention practices (Pittet 2004, Whitby et al 2006).

Despite training and education, compliance with good practice remains variable. Evidence suggests this is affected by many factors, including perception of one's own practice and intention, motivation, perception of threat and social or peer pressure (Chan et al 2002, Stein et al 2003, Pittet 2004, Akyol et al 2006). Additionally, knowledge does not necessarily correlate with good practice; low compliance with standard precautions has been noted in those who reported a high level of conflict between providing patient care and the need to protect themselves (Gould 2004). It has been argued that appropriate responses to infection only occur when there is a perceived risk and when efficacy is expected (Jenner et al 2002). Jenner et al (2002) cite self-protection as a motivating factor even when the main organizational purpose is patient protection and infection reduction. Personal responsibility and attitudes are predictors of intention to practice hand hygiene, with behaviour, to some extent, being predicted by perceived behaviour, control and intent (Jenner et al 2002).

Behaviour, which is influenced by both rational and irrational thoughts, may therefore not be congruent with policy. Paradoxically, policies perceived as rational by government agencies may be adhered to even when healthcare workers believe they are not effective, or may be adapted to accommodate irrational fears (Kennedy et al 2004). Any behaviour deemed inappropriate warrants further investigation and may require considerable examination and interpretation before the rationale behind it can be explained. Healthcare workers by the very nature of their role may find that their behaviour is influenced and conflicted by automated thinking and what is learnt through education and training, or seen in clinical practice (Curtis 2007); this conflict may play a significant part in how they behave. Curtis (2007) discusses how disgust of dirt is part of human nature, with dirt and disgust both stemming from the cultural construction in which we live combined with an element of "gut feeling" (p661). Similarly infection prevention and hygiene behaviours carried out by healthcare workers as a group may actually be a socially constructed concept which can be understood by identifying the interpretations, knowledge and reality that have informed the behaviour.

This paper presents one of three themes identified in a larger study that aimed to understand nurses' infection prevention behaviours within acute hospitals by eliciting nurses' explanations of observed behaviours. The main study gained insight into perceptions of risk regarding infection prevention, the behaviours nurses adopted to reduce risk and the belief systems they were operating from.

We present here one theme in which participants explained their own and others' behaviours in different terms; specifically they could recognise inappropriate behaviour in others but not in themselves. There was a sense that participants were at ease rationalizing their own behaviour but that they were unable to do this for others. The notion that a display or 'show' was being performed also emerged with some recognition from participants that this may be driven by both the desire to appear knowledgeable and an awareness of patient scrutiny. These findings, and the explanations they offer, have significant potential to impact and influence on nurses' infection prevention behaviour (Jackson 2011).

Methods

This interpretative qualitative study used in-depth interviews in order to explore nurses' perceptions of risk and contagion, and the explanations they provided for their own and others' behaviours. Twenty individual interviews were conducted over a 14 month period by

CJ. Registered nurses, who were undertaking part-time post qualification education at university, were recruited. Inclusion criteria were, qualified for one year or more, working in an acute setting, not studying a course that had infection prevention as its focus. The sample was both convenient and purposeful. Ethical approval was granted by King's College London (ref 06/07-7).

Interviews which lasted between 30-45 minutes were conducted in two stages. In the first stage eight participants were interviewed using a topic guide developed from the literature. The topic guide had 3 foci: perception of risk and contagion in the hospital setting; concerns relating to transmission of infection to family and friends with precautions taken to prevent this; and whether policies were appropriate and influential. Participants were also asked to recall an incident where they had observed or had carried out infection prevention behaviours that they deemed inappropriate, for example wearing gloves and aprons when not required. Following transcription of these interviews, two vignettes were developed that represented observed practices. Both vignettes included similar observations based on behaviour identified by the first 8 participants, only behaviours identified by two or more participants were considered for the vignette development. Each vignette represented an acute ward setting divided into four bays. In each bay a specific behaviour was described that could have been considered inappropriate or outside the recommended policy and guidelines, for example the use of gloves and protective clothing where there was no identified infection risk or for carrying out menial tasks where there was no actual patient contact. These vignettes were used with the topic guide to elicit explanations of the behaviours from the remaining 12 interviewees (table 1). Participants were asked if they recognised the behaviours in the vignettes, if they considered them appropriate or inappropriate and what explanations they could offer for the behaviours described.

In bay one, the beds are being made, both staff members are wearing gloves. One wears the same gloves for the whole bay, the other wears double gloves and after 4 beds removes the outer pair and continues to make the remaining 4 with one pair on.

In the next bay a nurse is recording the blood pressures of all the patients. She is wearing gloves and an apron which she keeps on for all 8 patients. One patient is having a bed bath; her nurse is wearing gloves and an apron to wash her.

Table 1-Excerpt from vignette

Interviews were audio taped and transcribed verbatim and all potentially identifying text anonymised, participants' details were kept confidential and all were allocated pseudonyms to maintain anonymity. All interviews were analysed using a set of predetermined analytical phases as part of the Framework method (Ritchie and Spencer 1994). Familiarization of the data occurred by a process of immersion with initial themes recorded. By drawing on the emerging themes and the interview topic guide, and by recording any recurrence or prevailing patterning, a thematic framework was identified. Indexing of the data was then completed by applying the framework to the verbatim transcripts of the interviews. Finally the data were considered as a whole. In the final interviews participants confirmed what others had said and with no new information or themes emerging it was decided that enough data had been generated to answer the question. Three main themes emerged. Participants were sent transcripts of their own interviews for comment as part of the member checking process. The final 6 participants were also sent emerging themes for comment and confirmation. No negative responses or discrepancies were received from any participants regarding the

content of the interviews, analysis or emerging themes. In order to increase credibility an independent academic reviewed all transcripts and identified comparable themes within them.

Participants

Participants ranged in age from 24-53 years with the largest group (40%) being between 24-29 years. Thirteen women and seven men were interviewed. Level of previous nursing education was University diploma (roughly equivalent to an associate degree, 60%), bachelors degree (30%) and postgraduate degree (10%). Years of experience in nursing ranged from 1½ to 20.

Findings

The findings present the theme '*Rationalizing dirt related behaviours*'. This theme, which has 3 subthemes, identifies important aspects of behaviour and considers participants' explanations and rationalization of these; both their own and that of others they reported observing. Participants explained their own and others' behaviours in different terms; significantly they could recognise inappropriate behaviour in others but not in themselves. There was a sense that participants were at ease rationalizing and logically justifying their own behaviour if it was outside recommended policy and guidelines, but that they were unable to do this for others. The notion that a display or 'show' was being performed emerged with some recognition that this may be driven by both the desire to appear knowledgeable and an awareness of patient scrutiny.

Rationalizing and rationalizing the irrational

The study found that nurses rationalize their own behaviour even if they recognise that it does not fit with recommended practice, ultimately always seeing their own practice as correct. The implication that the participant's own practice was in line with infection prevention policy at the time was clear from the first interview; all participants presented themselves as knowledgeable practitioners who understood infection prevention practices. Alan for example stated that his own practices were good and followed policy:

"My own infection control practices are good and I follow the policies. I'm always careful when patients are in side rooms and make sure I don't bring anything out, making sure I've washed my hands" Alan

This was reiterated in all interviews; participants did not recognise their own practice as anything other than correct. Participants also gave the impression that it was important that their knowledge of the scientific rationale and good infection prevention practices were recorded, presenting themselves as knowledgeable doers who carried out correct procedures. For example, Carol commented that she never worried about cross infection because her own practices were so good, while Betty saw her hand hygiene as very thorough:

"...and I've never worried and I think that's probably more down to my own practices than luck" Carol.

"No, I think my hand washing is probably a bit more thorough, up to the top of your uniform and spending about five minutes washing your hands if you've something that's really infected" Betty.

Participants implied that 'normal' hygiene rules do not apply if something is perceived as somehow 'more' infected. The behaviour is rationalized; because it is 'more' infected, a

distinction is made between 'infected' and 'more infected'. The latter poses a greater risk and therefore behaviour beyond rational policy is required and justified. Only one participant saw her practice as less than ideal, identifying that she perhaps was a risk taker towards herself but never at the expense of a patient; she also has a presentation she is trying to convey; 'I do take risks with myself, however I am a good nurse and would never put my patients at risk'. For all the other participants their practice seemed to be beyond reproach. However, as the discussion developed it became apparent that nurses' behaviour did deviate from policy if they saw any risk to themselves, for example:

"as a nurse, as a professional practitioner, it is up to you to rationalize what you deem is good and safe.....and as long as you rationalize and are aware of the consequences of your action, I think that's more important rather than just following guidelines" Peter.

This change to procedure was then rationalized so participants could maintain the perception that their practice was in keeping with policy and infection prevention. Nurses' presentation that they fully complied with policy seemed to be the default position; only when behaviour was examined much more closely did the "what I say I do" and the "what I really do" become differentiated.

Participants associated any deviation in their behaviour outside hygiene and infection prevention policies with the desire to avoid dirt, germs, bacteria and anything that was unknown. For participants dirt could contain germs and bacteria, which while not actually responsible for a named infection, could still potentially be a risk to them and they were protecting themselves. Participants identified that patient contact also involved the risk of contact with infection and dirt. However infection had tightly defined boundaries and could be clearly identified whereas dirt could compose of germs, bacteria and waste products but not necessarily any identified infection. Germs and bacteria were considered as dirty and unclean, but not infectious until identified as such by microbiological testing. Infection, once identified, could be treated accordingly with actions that were supported by the policy recommendations. When there was an identified infection the behaviour was clear; a threat had been identified and there were specific procedures to follow. Self was threatened by infections and, as there was risk involved, precautions were needed. A definitive diagnosis of infection gave the participants the information they needed to decide what precautions to take. Most felt that their own practice and that of others improved when there was an identified infection. For example, Betty worked in an area where she considered others' practice to be generally poor, however she reported that infection did improve other nurses' practice:

"If something is obviously infected, they [nurses] are better because they want to protect themselves as well" Betty.

However if acknowledging a situation where no infection risk existed, participants rationalized the irrationality of any of their own inappropriate protective behaviour by explaining that they were protecting themselves from dirt and uncleanliness which was unpleasant and unknown. They also identified how they assessed risk of the activity and acted appropriately, for example Irene felt that she knew about risk activities and would always make the correct judgement:

"Yes, and, you know, you know the difference between a major risk and something that if you wash your hands and say, you know, you rationalize it" Irene.

The participants consistently presented themselves and their practice as beyond reproach. The presentation to the researcher was one of a knowledgeable practitioner who rationalized their own practice. Infection prevention practices allowed them to rationalize the irrational or indeed to rationalize the human nature instinct to protect even when evidence demonstrated that it was not required. When they chose to ignore or deviate from any formal hygiene or infection prevention policy, rather than acknowledging that this was irrational, they found ways to justify it, identifying a risk beyond the remit of the policy.

Rationalizing or condemning irrational behaviour in others

Having clearly identified their own practice and rationalized all aspects, participants subsequently condemned any inappropriate behaviour they had witnessed in others as irrational, or rationalized it as being a self protection mechanism in a situation where there was no risk. The participants appeared not to see any similarities between their own practice when they acted outside the policies and 'rules', and the practice of others who were perceived as doing the same; they did not acknowledge that others may have similar reasons for their behaviour. Olivia commented that

"If you are washing somebody, you are just washing.....So, what are you protecting from? I have no idea what they are protecting themselves from personally. The person is not having any skin disease and the person is just like me and you" Olivia

The behaviours of others were clearly divided into either; the irrational, described as lack of thinking and ridiculous practice which went against common sense and was completely without explanation; or rationalized as protection, for example:

"I think that's what it is; they're seeing it as a protection for themselves. Yes, which is ridiculous" Irene.

This is in sharp contrast to their own behaviour which while acknowledged as self protection was not recognised as anything other than acceptable. In addition, the protective behaviour of others was seen purely as protection for self, without any thought or consideration for the patient:

"It goes back to that thing about protecting yourself rather than thinking about the wider environment and the implications for the people" Steven.

While the participants had not made the concern for patients explicit in the discussion regarding their own behaviours, perhaps demonstrating that their 'good' practice following policy and rules implicitly meant that they had the patient's interests at heart. Other nurses' inappropriate behaviour was seen as being driven by a desire to follow their own rules and to act outside the recognised behaviour, even though they knew the scientific rationale behind the policies and procedures. It was not generally seen as a lack of education in qualified nurses, more of an attitude or mindset where the desire to protect self took precedence over all scientific rationale. In addition participants described observing inappropriate behaviour of others such as glove wearing, which in an attempt to protect self, actually increased risk because they failed to change the gloves between patients, for example,

“Yes, their main concern would be themselves, although if they looked at it a bit more, they are thinking, ‘That patient has got this, so we don’t want to spread it around.’ Although they are [spreading it]” Kenneth

The participants saw this incorrect wearing of protective clothing as self protecting and poor practice. All participants agreed that they themselves would only wear gloves when needed, either because there was infection or there was risk of contact with dirt, whereas they felt that others carrying out inappropriate protection practices did so because they were not thinking about the scientific rationale behind the practice and only considering themselves. No thought was being given to the patient in terms of how they felt or the increased risk that inappropriate behaviour could pose. Some participants even thought the behaviour may simply be driven by laziness or a desire to save time by using gloves as an alternative to hand washing:

“Or maybe they just can’t be bothered to wash their hands thoroughly, hand washing again, you know. Some people take off these gloves and just one pump of alcohol gel and that’s it. That is not disinfected properly,” Linda

The participants recognised and always condemned any incorrect and inappropriate behaviour in others. When they recognised that their own behaviour or practice was the same or similar, they explained their actions as a defence against dirt and as an avoidance strategy. They did not however offer this as an explanation for others’ behaviour.

The display of practice: is it all a show?

The final subtheme identified that role modelling and leading by example, whether to peers or patients, was a recurring topic and suggested that the display of correct procedure was the basis of improving practice. Although there was concern voiced by participants that an incorrect display would do more harm than good, any practice witnessed often enough could be taken as the norm and become part of routine practice. Roger verbalized how when patients see certain procedures they come to accept them as the norm:

[Patients think] “they are [nurses] just doing it because they’re being asked to follow the procedures and that’s all it is.’ So that maybe it exactly” Roger

When considering others’ inappropriate behaviour, participants identified that this was an attempt by the other staff to give the impression that infection prevention and transmission were taken seriously. There seemed to be an assumption that the overt display of wearing protective clothing by nurses was to give the impression to patients that they were being thorough, and taking precautions. Even the participants themselves accepted that sometimes they were trying to give the right impression:

“at times, even in the clinical area, they [patients] do watch us as health professionals. They do watch us as to how we provide care.... You see. They do watch us how we provide care, so that also should give us an indication that it’s something that is what they’re thinking about seriously” Geoffrey,

“You could argue, and I think that...., whether there should be a lip service to the fact that, that we wear gloves, observationally, if someone is checking you out, or alternatively if

you're seen to wear gloves, then that seems to be more, more of an indicator that you take these things" [seriously]...Steven

The concept of making the right impression or performing for the patients, were recurring themes that participants recognised both in their own practice and in others, for example

"So you're doing it [wearing gloves] to prevent yourself being basically assessed by the patient as incompetent or not maintaining hygiene standards..... We're under thorough scrutiny by patients. They see everything you do...So I think it's a bit of both really. Yes, so I think we do that to satisfy the patients" Linda

This overt wearing of protective clothing and the impression it gave was reiterated by Roger, who on the one hand felt that patients may be offended by being washed by someone wearing gloves asking *"What is wrong with me?"* while on the other hand the patient may feel that the nurses were only following procedure and that it was nothing personal, because they knew the nurses and knew they were preventing infection – even if in reality there was no infection risk and the display was not actually necessary: However the data suggests an acknowledgement that wearing gloves to wash a patient could be offensive and may make the patient feel dirty, with most participants recognising that wearing gloves to carry out simple procedures could be interpreted in different ways:

"I mean I won't go to every patient with gloves and apron because it makes them feel like they are dirty when they are not" Kenneth.

"I think they feel, in one way they probably feel embarrassed because they think that people think that they're dirty or sometimes there are reasons why you should wear gloves and aprons" Peter.

Although the idea that patients are dirty is often what participants were saying when they discussed protective behaviour; if they suspect dirt they take precautions. Carol sums this up quite succinctly:

"Well I have seen nurses wash patients as well with gloves on, ... that to me is awful, because to me that says that you're not clean, so I would imagine that some of the patients feel that way. I've never had a patient complain to me about a nurse not wearing gloves" Carol

Carol implies that patients could pick up on this and get the impression that they are being perceived as dirty or unclean and there was some recognition that a number of patients preferred the use of gloves, seeing it as less personal or that the correct procedure was being carried out. However patients can only see this as correct procedure if that is the impression they have been given, i.e. if they are convinced by the performance. If the display has been consistently that gloves are worn for all patient contact then this will become accepted as the norm.

Discussion

For participants it seemed important that their own good practice and presentation were acknowledged in the first instance before any further discussion regarding inappropriate behaviour or less desirable practice could be considered. This presentation of self in the initial stages of the interview has some links with Goffman's (1959) work on presentation of

self in everyday life which discusses how those providing a service present themselves in their role and give a particular impression. For Goffman this presentation is used to give a good impression of the service and the part they play in it. It seemed important to participants that their own good practice and presentation was acknowledged in the first instance before any further discussion regarding inappropriate behaviour or less desirable practice could be considered.

Having given this presentation of themselves it then became apparent that despite their reports of correct procedures at all times, policy was not always carried out if risk to self was identified. Whilst identified infection simplified behaviour because the rules were clear and protection was needed against harmful micro-organisms (Whitby et al 2006), where there was no actual identified infection participants rationalized their behaviour as protection from the unknown and the unpleasantness of dirt. This change to procedure was then rationalized so participants could maintain the perception that their practice was in keeping with policy and infection prevention.

Participants failed to see the similarities between their practice and the practice of others and offered different reasons for this behaviour. They understood their own behaviour because they knew the reason for it, they were responding to a certain set of external circumstances that justified their behaviour. This logical justification allowed them to rationalize their own behaviour and continue to see it as appropriate and as long as the rationale was sufficient it was permissible. They also suggested that in some instances healthcare workers are only really paying lip service to any form of infection prevention by carrying out some form of practice that is either incorrect or incomplete. The actual process is not being thought through and there is an appearance of correct behaviour but only on a superficial level. The early work of Roth (1957) considered infection prevention practices that were not based on rational scientific evidence but had become a ritual of expected and agreed behaviour. Roth identified that inconsistencies in practice, both in compliance and correct usage, rendered the practice to be of no benefit at best and a risk at worst. Similarly participants in the current study saw the incorrect wearing of protective clothing not only as symbolic and self protecting, but also poor practice and a vehicle to increase the risk of infection. Where participants themselves had acted in the same way, they accepted that their behaviour was based on an avoidance or disgust of others rather than a scientific rationale; they did not however recognise the same level of thinking in others and the attribution of behaviour differed (Morrow et al 2011).

The results of this study demonstrate similarities to the work of Morrow et al (2011) who considered causal attribution theory when trying to determine the causes of behaviour in relation to the control of MRSA. They demonstrated that when clinicians attributed MRSA acquisition they consistently overestimated the extent to which this occurred in areas other than their own, and as a direct result on the actions of others. Conversely, they underestimated the role that they themselves played in this acquisition and the extent to which transmission occurred in their own clinician areas. MRSA acquisitions and transmission was seen as something that occurred elsewhere and as a result of the actions of others. Morrow et al (2011) concluded that although in some cases transmission had occurred elsewhere, when there was any degree of uncertainly acquisition was attributed to other settings. Rather as the current study, Morrow et al also identified that staff commonly demonstrated favourable bias towards their own performances. When considering risks both studies identified external factors, such as others poor infection prevention practice, as presenting the greatest risk. When attributing our own behaviour we have information available that we do not have when observing others. We are aware of our own external

influences and internalise less, furthermore there is a tendency to attribute behaviour to whatever makes us look the best, a self serving attribution process. Participants identified that they were at risk from others within the healthcare setting, and regardless of education and understanding they are ultimately part of the wider population and their perceptions and the reality they constructed was influenced by external forces. However while participants saw the patients as 'others' who are vulnerable and the cause of disease (Joffe 1999) they also perceived a risk to themselves from these 'others' through contact with dirt, uncleanliness and the unknown. Distinct groups are identified from the data; self whose practice is rational or can be rationalized, and the 'others' who in this instance are both staff members and the patient. Crucially however, risk to self from others was highlighted rather than risk to others from the participants.

The final subtheme draws more significantly on the impact that patients have on this behaviour. The description of a display that nurses are giving evolves where nurses, under patient scrutiny, are putting on a show of knowing what to do, giving the right impression, and carrying out the correct procedures. This again has resonance with the work of Goffman (1959) who suggests that any individual playing a part is asking the audience to take the impression they are giving seriously. The audience is asked to accept that the actor has the attributes the performance suggests and that the task they are performing has "the consequences that are implicitly claimed" (p28). This behaviour may however be nothing more than a show, especially if the performance is not based on evidence and best practice, but a desire to please or reassure the audience.

However the data in this study also suggest that wearing gloves as a part of the display, particularly when not required, could be interpreted by patients as a sign that they were dirty. Gloves, aprons and uniforms and their symbolic reference have been previously noted (Douglas 1966, Twigg 2000, Van Dongens 2001) with both Twigg (2000) and Van Dongen (2001) acknowledging that gloves can symbolically say to the patient "you are contaminated". It was recognised by both these authors that care should be taken not to cause offence and that workers often felt guilty about using protective clothing because of the connotations attached to it. Twigg (2000) concluded that nurses and care workers use gloves to protect against this pollution and this has been demonstrated here. Nevertheless, while it has been suggested that that this protection may go beyond hygiene and may actually be more to do with professional barriers (Douglas 1966, Twigg 2000), this was not a consistent theme in these findings where only one participant mentioned looking professional and maintaining professional boundaries. These findings strongly suggest that one of the prime reasons for glove wearing was to demonstrate and provide an impression of a knowledgeable practitioner. Participants reported being very aware of the patients' scrutiny and recognised a culture where patients were actively encouraged to question practice, as seen in the '*cleanyourhands*' campaign which is still active in the UK today (DH 2004, NPSA 2008). This campaign which consisted of posters, leaflets and badges, aimed to give both staff and patients ownership of the campaign by making infection prevention everybody's business. Significantly, it encouraged patients to challenge workers to clean their hands essentially providing constant observation to ultimately affect behaviour. Thus the desire to satisfy the patients' scrutiny may take precedence over rational thought and common sense. Nurses, who inappropriately use infection prevention measures confidently, may in fact be playing a part. By asking the audience to believe that they are someone who knows the subject and who takes the correct actions to prevent infection spread, they are asking them to believe that they know and understand that rationale. The individual or actor may be completely taken in by the act or conversely may be cynical about it while still carrying it out (Goffman 1959).

Each of the participants had a presentation of themselves that they were trying to convey. In the clinical setting this performance has a readily available audience for the majority of the time. Their actions are constantly observed by an audience made up of patients, who are often new and have not seen the show before, and other disciplines who may not all be convinced by the performance (Goffman 1959). A nurse putting on apron and gloves is sending a message, 'I know what I am doing', and although elements of the show are not 'rational' scientifically they are about creating the best impression. However not everyone within the audience may be convinced by the performance. While those without the informing knowledge, for example patients, may be comforted by the actions, other observers with more accurate scientific knowledge may in fact be horrified by the behaviour. The audience is then divided into those who believe the performance and the message it is giving, and those who recognise the action, but are not convinced by the performance.

Limitations

It is acknowledged that self report of practice is flawed, particularly in relation to infection prevention, as espoused practice and actual practice can differ significantly (Jenner et al 2006, Nichols and Badger 2008). However this study is strengthened by the use of vignettes which can reduce socially desirable responses (Hughes and Huby 2002). By allowing participants to discuss their own practice, the practice of others and the vignette character, some of the potential for the disparity between actual and reported behaviour may have been eradicated.

Conclusions

This paper shows that infection prevention behaviours among nurses can be understood through a lens of social theory. Nurses make judgements about their own infection prevention behaviours which permit deviations from policy because of post hoc rationalization whereby the behaviour is reinterpreted in the light of motivation and intentions. Consequently the transgression is not registered as such. Judgements about the behaviours of others differ and others' practice was explained as being at a superficial level and part of a show or display. Deviations are dismissed as simply 'irrational'. The interpretation made of both own and other behaviours shed light onto the complex social construction of behaviour that is guided by a framework that is removed from a purely scientific rationale. Infection prevention behaviour was described in terms of "a show" that is performed to cast the actor in a good light rather than to strictly comply with guidelines, echoing the classic work of Irving Goffman.

The participants in this study demonstrated that they had the knowledge and education required to understand the principles of infection prevention procedures, the transmission of disease and risk of contagion. However their behaviour exists outside what is taught and accepted as correct. It is insufficient to say that education can change this behaviour; this behaviour (and the reasons for it) has to be recognised first and foremost by those carrying it out before an attempt can be made to change it. This complex behaviour requires multifaceted interventions which existing policy and guidance do not completely provide. This study has shown that nurses are not aware of the discrepancy between their own practice and practice which meets policy requirements; they lack insight and self awareness and while they may recognise aspects of the 'show' they fail to recognise the part that they themselves play in it. The show and the behaviours within it form part of the socially constructed reality of the clinical area; healthcare workers see relevance to self in terms of risk to self and have developed practices and displays which negate this. Reflection on these practices may be a constructive way towards gaining self awareness and knowledge from experience (Schon

1987, 1991, Johns 2000 Forrest 2008). Rather as the study's participants recollected practice they had seen, reflection allows the practitioner to recall their own actions and experiences, thus enhancing self awareness and allowing own practice to be examined. Reflective sessions or clinical supervision programmes (Driscoll 2000) would allow healthcare workers to firstly express their fears regarding dirt and infection before considering whether their own behaviour actually meets the policy requirements or is in fact not based on the scientific rationale.

Finally this study only interviewed nurses and as other healthcare workers are involved in infection prevention it would be useful to examine their behaviours as well. Perhaps more significantly and it would be worth examining patients' perception of nurses' behaviours, how much they observe and direct the show, and ultimately whether they are convinced by it.

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