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Cultural influences on workplace safety: An example of hospital workers' adoption of patient lifting devices

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ABSTRACT

Aims: A sociological and anthropological view of culture was used to investigate how work culture, independent of "safety culture", may affect safety in the workplace. We explored how work cultures of nurses and physical/occupational therapists (PT/OTs) in two acute care hospitals are related to the adoption of patient lifting devices.

Methods: Focus groups were conducted between 2006 and 2009, seven with nurse staff ($n = 39$) and two with PT/OT staff ($n = 17$), to explore issues concerning a Minimal Manual Lift Environment policy, initiated in 2004, and subsequent use of patient lift equipment. Audio recordings of the sessions were transcribed; text data were analyzed using N6-QSR. Cultural facilitators and barriers to the adoption of patient lift equipment were examined.

Results: Data revealed cultural similarities and differences between these healthcare professions. Both displayed a "patient first" approach to care-giving which may promote lift device use for patients' benefits, not necessarily for staff safety. Also, the implied purpose of patient lifting devices clashes with the nurses' cultural emphasis on compassion, and with PT/OTs' cultural emphasis on independence except when use increases patients' independence.

Conclusions: Cultural expressions regarding the nature of care-giving among healthcare professionals may affect the propensity to adopt safety measures in complex ways. The workers' understanding of the purpose of their work, and acceptable means of conducting it, should be understood before implementing safety interventions. The utilization of lift assist teams, who are not socialized into the cultures of nursing or PT/OT, may be one means of circumventing cultural barriers to lift equipment use.

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1. Introduction

The terms "safety culture" and "safety climate" have become prevalent in studies of work-related injury and musculoskeletal disorders. Although they may represent different things to various researchers (Guldenmund, 2000; Hale, 2000), these concepts are often directed at elements of culture that address safety matters explicitly. For example, according to Guldenmund (2007), the goal of safety culture (and safety climate) is to "determin[e] the importance of safety within an organization" (p. 723). We argue, however, that the culture in an organization may affect safety without explicitly being *about safety* at all.

One manner in which culture may be highly relevant for safety is that it is used in part to guide the norms of acceptable behaviors and work conditions which may be related to safety, even though the culture does not explicitly address safety or risk. As a means of making sense of the world (Geertz, 1973), culture among workers provides a framework within which aspects of the workplace will be understood. Culture may affect many decisions concerning how work is to be done and some of these may affect work-related injury risk. For example, classic sociological studies of piecework incentive systems have shown that work groups may generate "shop floor" norms regarding an acceptable rate of work output (Homans, 1992; Roethlisberger et al., 1939; Roy, 1953). Such norms may be based, in part, on culturally determined assessments of fairness (Homans, 1992) without any consideration of safety. Nonetheless safety may be affected when the rate of work output (i.e., work pace or intensity) and risk of injury are related.

The predominant aspect of the nursing profession around which its culture is based is caring for patients (Chambliss, 1996; Leininger, 1984; Reverby, 1987); the culture of nursing has been referred to explicitly as the "culture of caring" (Leininger, 1984). This cultural trait exists, in some form, in other healthcare occupations as well, for example, among nurse aides (Anderson et al., 2005) and among surgeons (Bosk, 1979). While some aspects of the culture of caring span healthcare occupations, others may vary by occupation (e.g., nursing vs. surgery) and by the local setting within an institution

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(e.g., intensive care unit vs. emergency department in a single hospital). The view of culture used here, therefore, acknowledges both broad and local sources of culture[1] and cultural variation. In this study, the cultural interpretations of care-giving among nursing and PT/OT staff in two acute care hospitals were investigated. We identified characteristics of the culture of caring within each occupational group and explored how these cultural traits affected how patient lifting devices, provided as part of a newly implemented safety policy, were defined within each group.

What we are concerned with here is most closely associated with what has been called "occupational culture" (Schein, 1996) and its potential impact on safety, apart from that of "safety culture". In this study, we explore how culture among nurses and physical and occupational therapists working in the acute care hospital setting may affect safety and how the meaning associated with care-giving among nursing and PT/OT staff may include cultural biases towards the adoption of patient lifting devices into patient care routines. In Hale's words, we explored "cultural influences on safety and not safety culture" (Hale, 2000, p. 5).

This study was part of an ongoing evaluation of a Minimal Manual Lift Environment (MMLE) policy implemented in a tertiary care hospital and an affiliated community hospital in the Southeastern United States to provide for the safety of patients and staff during all patient-handling tasks. Details of the MMLE intervention are described elsewhere (Schoenfisch et al., 2011). Briefly, the medical center and community hospital in this study implemented the MMLE policy on inpatient nursing units in October 2004 and January 2005, respectively. Lift equipment and transfer devices were purchased for inpatient units. Both facilities use a train-the-trainer approach to instruct the staff in proper lift use; unit "coaches" are trained to teach staff about safe use of the equipment, and the MMLE policy, on an ongoing basis. Ergonomists from the university Occupational and Environmental Safety Office (OESO), who had been working with inpatient nursing staff surrounding patient-handling concerns several years prior to the intervention, were involved in coordinating and implementing efforts to support the MMLE policy, coach/staff training, and use of the lift equipment. Quantitative results of the broader evaluation (Schoenfisch et al., 2011) suggested limited and variable adoption of the patient lifting devices had occurred over the 5 year period following their introduction on nursing and PT/OT units. Using qualitative data from focus groups, the purpose of this analysis was to explore the possible role played by the culture in the limited adoption of the patient lift equipment.

2. Methods

Focus groups were planned from the outset of the larger evaluation to qualitatively assess several issues concerning the policy initiative including the adoption of the patient lift equipment. Focus groups were conducted between 2006 and 2009 with nursing and PT/OT staff members. Subjects were recruited via the posting of flyers on hospital units and through verbal recruitment by a study researcher at unit staff meetings. Focus group sessions were audio-recorded and recordings were transcribed; N6-QSR text analysis software (QSR International Pty Ltd., 2002) was used for content analyses. Text data were analyzed for common themes related to patient lift equipment use and suggestions for improvement (described below). All focus groups took place on hospital property while the participants were not on shift. Nursing and PT/OT staff participated in separate focus group sessions. All participants signed consent forms before participating. Identification numbers, unique only within each focus group, were assigned and used to identify responses. The Duke University Medical Center Institutional Review Board approved all study procedures.

This study included nursing and PT/OT staff from both hospitals on units where the institution had provided mechanical patient lifting devices as part of the MMLE policy. The staff rosters from both hospitals combined consisted of 2424 inpatient nurses, 679 nurse aides and 115 PT/OT (including aides), on average, over the course of any year during the intervention period. Within the hospital settings, PT/OT and nursing staff interacted regularly, enabling members of each profession to comment on the other during focus groups. PT/OT would sometimes work on the nursing unit and at other times they would work with patients in their designated therapy space. PT/OT would routinely retrieve and return patients from and to the nursing units, often assisting with transfers between, for example, wheelchairs and beds.

A total of nine focus groups were conducted. Seven of these focus groups included a total of 34 nurses and 5 nurse aides; two focus groups contained a total of 16 PT/OT and one OT aide. One focus group consisting of nurses and nurse aides, and another consisting of PT/OT, were held in 2006, 2 years after the MMLE policy was initiated. Nurses and aides participated in three focus groups in 2007; four focus groups were conducted in 2009, one of which was populated by PT/OT.

The study design used for the larger evaluation of the MMLE policy was a "prestructured case" approach described by Miles and Huberman (1994). At the outset of the evaluation, focus group guides were designed to elicit information concerning several broad domains pertaining to the overall evaluation of the minimal manual lift policy including awareness of the policy, training, adoption, etc. Original focus group guides were not intended to conduct an analysis of culture. However, in the early sessions culture began to reveal itself as a potential factor affecting the adoption of the patient lift equipment. To investigate the role of culture more explicitly, focus group guides were modified based on early focus group session data in a manner described by Morgan (1996). It was in the final five of the nine total focus groups that aspects of culture were explored explicitly. However, the text data from all focus groups were examined as responses to other items revealed the nature of the culture among nursing and PT/OT staff without it necessarily being described as a factor related to the adoption of patient lifting devices. That is, the content of the culture – how the staff understood the nature of their work – came through even without it being directly questioned in focus groups.

For this exploration of the role of culture, we focused on the following domains: (1) staff use of the patient lifting equipment, particularly the circumstances under which it is more or less likely to be used, (2) staff interpretations of the role and purpose of the lift devices, (3) references to culture as a barrier to adoption made by the participants themselves, and (4) descriptions of the cultural traits related to care-giving in each profession. These domains were contained in a semi-structured focus group guide, not a questionnaire, and we allowed the group members to discuss topics in the order they were raised. Data were reviewed and coded according to these themes. The focus group study team consisted of three interviewers; debriefing sessions were held at the end of each meeting to interpret and clarify what participants had said.

A perspective of culture taken from sociology (Alexander, 2003; Demerath, 2001; Griswold, 2008; Parsons and Shils, 1951) and anthropology (Geertz, 1973) was used to frame our questions and interpret our findings. In this view, culture is seen as consisting of "systems of socially constructed meanings, beliefs and values that symbolically convey interpretations of what reality is and ought to be" (Demerath, 2001, p. 172). Stemming from this definition of culture, we take work culture, or the "meaning of work," to refer to the systems of beliefs, derived from sources external and internal to the workplace, that workers use to interpret the

[1] The historical roots of cultural content of nursing are not addressed here.

purpose of their work and to orient activities pertaining to the work process.

3. Results

3.1. The importance of "culture" to staff and sources of cultural variation

The nurses and PT/OT both perceived "culture" as varying by profession and, perhaps to a greater extent, by unit or floor. Professional differences are described below. Many nurse and PT/OT staff commonly referred to "the culture on that floor" indicating their beliefs that (1) culture, as they defined it, is an important determinant of worker behavior and (2) that professional specialty and the hospital unit were the predominant organizational entities that determined culture and its variation.

These PT/OT (commenting below) who were discussing some nurse behaviors believed that the behaviors in question were a function of local unit "culture" which may vary by floor but may be common across multiple floors:

> #6: *"But I don't think that's true of all the nurses. I think . . .."*
> #9: *"Not all, not all."*
> #6: *". . ..that's the culture of that particular floor."*
> #9: *"Okay, well then on our floors."*
> #7: *"Yes."*
> #3: *"My floor too."*

The following further demonstrates both that culture is seen as an important factor in behaviors at work, and that culture, as they defined it, varies by local setting:

> #7: *"But I think a lot of it still goes back to nursing cultures. . ."*
> #5: *"Yeah, that's 3rd floor. Different cultures."*

3.2. Nursing staff culture: compassion

The theme of "compassion" was very strong among the nurses. This was not observed among PT/OT. One nurse illustrated the connection between nursing and compassion, one element of altruism, explicitly by describing her recollection of wanting to become a nurse when she was just a child:

> *"I had met somebody who was a nurse and I, I was in school, in elementary school and I had to shadow her. You know, so, and I saw how compassionate she was and how people appreciated her and I loved that and from the time I was in fourth grade, I've always wanted to be a nurse. . ."*

This emphasis on compassion was also revealed in a demonstration of how it was important to be understood as compassionate, including towards coworkers, even when irritated. One nurse who complained about her perception of unequal workload as unfair nonetheless felt compelled to establish her compassion for others:

> *"Yeah, it's not that I'm not compassionate, I am compassionate, but it's just that, truly, honestly, like I tell you, when I come in and I see I got all the heavy duty ones and so and so is pregnant and has got an easy assignment, I think that's not fair."*

Similarly, a nurse explained why a nurse aide who came up in the discussion (but was no longer employed at this institution) was seen as such a good worker:

> *". . .one of the best NA's I've ever worked with in my entire career. You know, she was compassionate, took care of the patients, she was kind, took time with them, she'd do what she was supposed to do, you know. . ."*

When referring to patients, to themselves and to those in other care-giving occupations, compassion was a common measure – often stated explicitly – of what it is to be a good nurse.

Examples of compassion were illustrated by the actions described. Nursing staff described such a strong desire to provide comfort for others that they would go so far as to spend their own money or overcome institutional obstacles to better the experience of patients' family members:

> #4: *". . .we all have done it. Taking money out of your own pocket so that the husband or wife from out of town could go downstairs to get something to eat. . ."*
> #1: *"Mhmm."*
> #4: *". . . Some little thing. . ."*
> #2: *"I always just steal them a tray."*

Here, two nurses acknowledge the importance of compassionate physical contact for the patient and the joy and satisfaction they get from these "little things" such as simply holding a patient's hand:

> #4: *"To hold their hand. . ."*
> #1: *". . .And hold their hand and give them something. . .they've basically almost given up and you're encouraging them."*

In one focus group, nursing staff demonstrated the purpose of nursing and the satisfaction it brings:

> #4: *". . .The one-on-one magic moment is what it's all about."*
> #1: *"Mhmm."*
> #5: *"Makes a difference."*
> #3: *"It makes a difference."*
> #1: *"It does and you can go home with a smile on your face. . ."*
> #4: *"Yes."*

The nurses want to make a positive difference for people – such is their life's work – and they find joy in having achieved this. In the follow up to this exchange, one nurse illustrated the nature of nursing as an "all-in" commitment to patient care:

> *". . . And I hate to say it, sometimes you come here and the stress of your personal life, you don't have time to think about it, so, for the 12 hours you're here, whatever was bothering you at home, you won't know about it until you clock out,. . .once you get into the patient, you literally don't think about anything else."*

Another nurse demonstrated the intensity of her feeling for her work as she declared *"I actually have a love of nursing. . ."*

Finally, the historically religious undertones of nursing and care-giving were displayed by one nurse when the group was asked why they keep working as nurses despite the hardships that go with the job:

> *"I guess I'm a spiritual person and, in the Bible, God tells you to help those in need, so I always go into it as. . .I'm doing God's work. . .it's a blessing to watch and be able to care for someone. . ."*

3.3. PT/OT culture: independence

PT/OT, in contrast to nursing, put a strong emphasis on the value of independence. One PT/OT not only displayed this value but also confirmed the difference in approaches to care-giving between nursing staff and PT/OT:

> *"And we're people that generally really value independence and see that as something to work towards. I think sometimes nurses, they're caring for people, which we're all caring for people, but*

it's more of a '**let me help you as much as possible**' *[among nurses] as opposed to* '**let me help you be as independent as possible**' *[among PT/OT]*" (emphasis added).

Other PT/OT further acknowledged the differences:

#6: *Nurses are highly co-dependent. They truly are. There are studies on that.*
#12: *Right.*
#6: *But they have a high level of co-dependence and they want to take care of you.*

In reference to their independent mannerisms, one PT/OT suggested that there is a certain type of personality common among their profession:

"....but there's a certain personality, I think, that chooses to be a therapist and it'd be interesting to study that." (several laughing)

Thus, in the view of these PT/OT, the kind of care PT/OT see themselves providing is clearly different than the kind of care nurses provide. PT/OT, it seems, want to be independent individuals and they want their patients to gain independence from any form of care requirements. The goal of care for PT/OT is creating independent and physically maximally functional individuals.

Although PT/OT volunteered their opinions on the nursing staff, nursing staff had little to say about PT/OT beyond occasionally describing their tasks and job functions.

3.3.1. Pride in physical skills

PT/OT were often chosen to lead classes to demonstrate patient lifting/transferring techniques for nurses including the use of patient lifting devices and body mechanics. They took pride in their physical condition, knowledge of and ability to use body mechanics to lift patients "safely". They clearly see themselves as better able to perform lifting tasks than nurses are. Referring to nursing staff, one occupational therapy aide said:

"....their body mechanics are very, very poor. The way they handle the patients, it is just scary, how they do it... I just...sometimes say, no, no, no....just stop it. I'm going to do it. Because I don't want them to injure the patient either."

PT/OT also believed themselves to be in better physical condition, on average, than nurses:

"Yeah, how many nurses have you seen going up and down the stairs? We always take the steps."

It was also noted by one OT/PT staff member that no one in their department smoked cigarettes, implying that at least some nurses do. In addition one PT/OT staff member claimed that a nurse noted the physical differences between nursing staff and PT/OT staff while another PT/OT listed some reasons for the physical differences:

#12: *"You know what comment a nurse made to me? ...she made the comment if you look at the level of obesity within our department and then within nursing, or just the physical shape, conditioning....it's pretty different."*
#9: *"Lifestyle, activity, what they eat."*

When asked how they decide whether to use the lifting equipment one PT/OT summed up their independence and their pride in their physical skills by replying simply:

#12: "*I always try on my own at first...*" (without patient lifting devices).

This demonstration of PT/OT's orientation towards patients' independence was mixed with pride in doing things the hard way and a poke at the nursing staff:

#12: *"And I think the other thing is we're 'solution focused'. So our goal...[is] how can I figure out how [the patients] can do that so they can go home."*
#3: *"Yeah and be independent."*
#12: *"Not what's easiest."*

There is a stark cultural difference in the orientation towards care-giving between nursing staff and PT/OT, and PT/OT staff were wont to talk about it.

3.4. Culture and use of patient lift equipment

These differences and similarities in cultures between nursing staff and PT/OT were expressed in part through the views and use of patient lift equipment. One common theme was the notion that patient well-being, which was defined differently between occupations, came ahead of one's own. That is, there was a belief among both occupations that the "patient comes first". This cultural trait allowed for, or even required, the use of patient lifting devices when it improves patient care as defined by their occupation. Second, the objectives within the culture of care among PT/OT provided for the use of the devices when use was connected to therapeutic value. In such cases, the protection afforded the staff member by use of the equipment was a fortunate by product, hardly the reason for their use.

3.4.1. Patient first

While some nurses and PT/OT did mention concern for their own safety, one nurse emphasized: *"Always patient first... You always think of patient safety first..."* This comment resonates with several quotes (noted above) concerning the dedication to patient well-being and remarks about protecting patients (noted above and below).

When PT/OT were asked if they viewed the patient lifting devices as being for their safety, patient or both, the group responded "both." They were then asked how they believed nurses viewed the lifting devices and they declared that nurses tend to think of the patient lifting devices as for the nurses' benefit more than the patients'. Nurses were, unfortunately, not asked this question directly. However, if the view stated by the PT/OT is correct, it suggests that the purpose of patient lifting devices may not fit with the nurses' culture of compassion and their orientation towards providing first for their patients.

3.4.2. Therapeutic value of lifting devices

PT/OT indicated that there were times when the lifting devices could be used to aid the rehabilitation process. One PT/OT went so far as to say she was *"a better therapist"* thanks to the availability of the patient lifting devices.

#10: "*They say the most therapeutic lift is the [powered portable stand-assist lift] because you can stand them, so they get weight bearing.....that's a therapeutic thing. They can...they actually can engage their muscles and help as the machine is helping them but they can be involved.*"
#9: "*...the fact that they get into the chair and they're sitting upright...*"
#3, #2, #1:*"Yes. It is therapeutic." (several talking)*

Several PT/OT confirmed the therapeutic potential for lifting devices. They stated that simply moving patients from the bed and sitting them in a chair had substantial therapeutic value.

#12: *"And just the blood pressure changes and the orthostatic hypertension and all that stuff..." (several talking)*

#1: *"...and breathing. Just breathing."*
#12: *"...and the respiratory...it's just huge."*

The therapeutic value noted by PT/OT can be not just physical but mental as well:

#6: *"I sometimes will use the [powered portable stand-assist lift] when I'm working on being weight-bearing standing. Just the experience of somebody who hasn't been standing at all to getting up, is just psychologically such a boost."*

In contrast to these comments by PT/OT, nursing staff made no comments regarding any therapeutic value of the lifting devices, except when referring to this application performed by PT/OT.

3.4.3. Concern for patient safety when using lifting devices

Many nurses stated concern about how using the devices could be dangerous to the patients if operated improperly. This, it seems, may be linked to the infrequent use of the devices which leads to them needing to relearn how to use the devices each time. Nursing staff said:

#10: *"What I have seen a lot on the floor is they're not assessing the patients very well as to know the right equipment to use and that makes it very difficult because if you're not using the right size and you're not using the right equipment..."*
#13: *"Then it's dangerous."*
#10: *"That is very dangerous. I have observed a patient and some nurses turned over the [powered portable full-body sling lift], as big as it is was, tilted over...it was on top of even a nurse. It was terrible."*

Another nurse described the concern that the patient might fall from the device if not used correctly:

"...we talk about the safety things that have to be in place like the harnesses, how they have to click in. I have to know that the harness is clicked in because, that little tab is clicked in, because if not, there's a risk the patient's going to fall..."

3.4.4. Using lifts when a patient has fallen

One application of the lifting devices that appears to be becoming common, among both nurses and PT/OT, is when lifting patients who have fallen to the floor. When asked if they get the lift to pick up a patient off the floor the response from nurse staff was overwhelming: *"Absolutely! Yes! Absolutely!"*

#3: *"It's like automatically, someone's getting the lift."*
#2: *"We don't even try to lift the patient."*
#4: *"No."*
#2: *"Not at all."*
#4: *"You can't."*

Another nursing staff member declared that the use of lifts to retrieve fallen patients is a new and now common application of the patient lifts:

#2: *"So, that's one thing that has changed, like we used to always call everybody when somebody fall, everybody run into the room, and we would lift and throw the patient..."*

And the justification she stated for this use of the equipment:

#2: *"Because you hurt yourself when you have four different people trying to lift at the same time..."*

While some nurses and PT/OT acknowledged that this is safer for the staff members doing the lift, it seems this may be due in large part to the patient's safety as well. As one nurse described:

"...But, falls, ...they go get the lift and they ...take them back to the bed and you have a chance to...evaluate the patient there without saying that I lift them and I hurt them, injured them more or stuff like that. So, the lift has been a benefit, a lot of ways."

In addition, nursing staff explained that when a patient falls they are usually disoriented or dizzy and that for a period of time after they have been picked up they remained at risk for falling again as the patient may not yet have recovered from the spell which led to the fall. They noted that using the lifting device was a way to get the patient off the floor and stabilize them for a sufficient period allowing them to regain their stability, thereby lowering the chance of a repeated fall.

3.5. Patients' views of the lifting devices

Caregivers' descriptions of patients' reactions to the lifting devices were mixed. Some declared patients liked the devices while others thought patients were commonly less than enthusiastic about being lifted mechanically. Some nursing and PT/OT staff noted that patients are often scared by the devices, particularly the first time the lifts were used on them. PT/OT suggested that this may be the result of a lack of confidence in use of the devices displayed by nurses in the presence of the patient:

#5: *"...with us too, we'll have some patients and they're like, 'are you [the PT/OT] going to come help [get me] back', it's that same thing again because they're scared that nurses don't know how to [use the lifting device]. They're really scared [the nurses] are going to drop them or not put them up correctly and they'll sit there and ask you [the PT/OT] and then if the nurse says, 'well actually, I'm not comfortable with it', you know...then you're going back in again [to work the lifting device]."*
#3: *"You're forced to say 'Yeah.'"*
#5: *"Because you want the patient to feel confident and safe too, you know."*

The above passage may also reflect PT/OT's pride in their ability to use the devices effectively.

4. Discussion

Nurse and PT/OT staff identified culture as a barrier to change affecting the use of patient lifting devices. As might be expected, nurse and PT/OT staff use the term "culture" to mean, approximately, "the way things are done around here." The staff members seemed to conceive of culture as varying – almost in its entirety – across hospital units. Cultural differences by occupation were also noted but these, to many participants, seemed to explain less than cultural variation by unit. How things were done on one unit could be quite different than on another (for example, the extent to which various components of the MMLE policy were adopted), and "culture" was, at times, the explanation participants offered for these differences. We, however, do not adhere to this understanding of "culture". The participants' definition does not distinguish behaviors, formal job task assignments, and other organizational features from the abstract system of meaning that is culture (Alexander, 2003; Demerath, 2001; Geertz, 1973; Griswold, 2008; Parsons and Shils, 1951). Another limitation of this definition is its failure to acknowledge the aspects of culture which span units and occupation, and which may have origins in ethics created long ago (Helin and Lindstrom, 2003). Therefore, we do

not rely on participants' definition of culture to understand its salience. What is significant, we believe, is that many participants believed culture, as they conceive it, to be a factor related to the use of the patient lifting equipment. While it is quite understandable that their definition of the term differs markedly from definitions used among the social scientists cited here, researchers need to be aware of different understandings and applications of the term.

4.1. Cultural differences between nurse and PT/OT staff

It appears that the dominant cultural theme among nurses can be characterized as *compassion*. Nurses see as their objective minimizing patient pain and discomfort and maximizing the patients' sense of being cared for. Nurses, as one PT/OT said, *"want to take care of you as much as possible."* Nurses can feel a joyful reward of their work by witnessing improvements – physical and other – in their patients' conditions.

The central value of the form of the culture of caring among the PT/OT is *independence*. PT/OT staff see themselves as strong and independent personalities. This was made evident by the PT/OT's pride both in their ability to do lifting tasks in a manner they believed to be safer than nurses, and in being a more physically fit group, on average, than they believe nurses to be. PT/OT staff seek to make their patients *"as independent as possible,"* just like they are – of high physical capacity and able to fully care for themselves.

The focus group data, therefore, suggest that the meaning of care-giving differed between nursing and PT/OT staff. Differences between occupations were revealed by what each group said about their own cultures and remarks made about the others'. These findings support the cultural "differentiation", or "sub-cultures", among professional groups working within the same organization, noted by others (Haukelid, 2008; Richter and Koch, 2004; Schein, 1996).

Despite the differences in culture between nursing staff and PT/OT, there are indeed some important commonalities. The most important of these may be that, for both groups, patient care is the central value. Both professions are striving to improve the health of sick or injured people referred to, by both, as patients (not, for example "clients"). In other words, both occupations intensely value care-giving, see patients' needs as often coming before their own, and have as their goal the improvement of patients' health via their care-giving efforts. The emphasis placed on the differences in approaches to care-giving, noted frequently by both PT/OT and nurses, suggests the commonalities may be so strong as to be invisible to them.

4.2. Culture and the patient lift devices

Focus group data indicated that nurses' culture included all of the critical attributes of altruism as defined by Smith (1995): personal responsibility toward others, *compassion*, empathy and commitment to the needs of others. Smith (1995) equates her definition of altruism with self-sacrifice. Others have made the connection between self-sacrifice and the act of caring itself within nursing (Helin and Lindstrom, 2003; Pask, 2005). Our data suggest that nurses define the patient lifting devices as things meant to protect nurses from patient handling injuries; they are not widely interpreted as having significant benefit for patients. It is possible, therefore, that the defined purpose of such devices may collide with their cultural meaning of care-giving and the acceptable methods of delivering care. In a culture where it is "always patient first", and in which compassionate care may be expressed, at least in part, through self-sacrifice, it might be difficult to achieve widespread use of patient lifting devices interpreted as protection for nurses. Self-preservation, represented by use of the lifting devices, is diametrically opposed to self-sacrifice which is a central dimension of caring, the core purpose of nursing (Leininger, 1984).

To be clear, this connection between the culture of nursing is made by combing our interpretation of the focus group data and the literature on nursing culture. We did not hear nursing staff explicitly state this connection, nor that this is a reason why adoption has not been widespread. Nonetheless, our focus group data combined with the literature on the "culture of care" in the nursing profession leads us to believe the structure of the culture, this system of meaning we observed among nurses, leaves little room for the use of devices. Patient lifting devices do not fit within the form of the culture of care among the nursing staff. Future work on the culture among healthcare providers should examine this possibility directly.

The role of culture in the pattern of interaction with lifting devices among PT/OT staff was more directly evident from the data than it was among nursing staff. We believe it is fairly simple to draw a logical connection between the value PT/OT staff place on their ability to perform manual lifts by applying body mechanic techniques and their general reluctance to use the lifting equipment. PT/OT are trained in body mechanics and often teach them to nursing staff. If performing manual lifts is a culturally accepted means of demonstrating their independence and their expertise, in which they pride themselves, then PT/OT staff may be less likely to retrieve a lifting device to transfer a patient. Using the lift equipment logically eliminates the possibility to demonstrate one's independence and proficiency afforded by performing manual lifts. Our data are also consistent with at least one other study by Cromie et al. (2002), which concluded that these particular elements of PT culture are barriers to use of the patient lifting devices.

However, the cultural acceptance of using the lifting devices for therapeutic purposes also seems relatively evident from the data. Inasmuch as lift equipment is defined as useful in achieving the goal of mobilizing patients and getting them on the road to independence, it is harmonious with PT/OT staff's cultural interpretation of care-giving. PT/OT culture is therefore conducive, at least at times, to its use. This connection between patient therapy and the value of independence was made by others (Darragh et al., 2009). However these other researchers noted the caveat that the devices could be used to promote independence but that patients must be quickly weaned off their use so as to prevent them from *becoming dependent* on the device. That is, the therapist must be careful to not overuse the device during therapy lest it *interfere* with the promotion of independence.

Both nurse and PT/OT staff, according to the focus group data, are more inclined to use the patient lifting devices when it lowers risks to the patient. One such instance which several nurse and PT/OT staff claimed *always* requires a lift is when a patient has fallen to the floor. This was surprising to us as we expected that when patients had fallen to the floor there would be a sense of urgency to get the patient off the floor as fast as possible. We predicted this would be an instance in which the devices would *not* be used. However, focus group data reveal that nurse and PT/OT staff believe that using the lift after a fall (1) decreases the risk of worsening injury that may have occurred as a result of the fall, and (2) provides stability while the fallen patient regains balance and orientation, thereby decreasing the risk of a subsequent fall. Therefore, the use of the lifting device, taking the time required to track it down, bring it to the fallen patient, and operate it effectively, were all justified in this circumstance where its benefit for the patient was clear to them. Despite the safety benefits to staff of using devices to lift patients from the floor, our data suggest that the motivation to use the lifting devices may be a product of the "patient first" aspect of the culture. That is, in circumstances when use of the device is believed to benefit the patient, its use is in

harmony with the cultural aspects common to nurse and PT/OT staff. Under such circumstances where the activity does not clash with the culture, it seems lifting devices may be more likely to be used by both nurses and PT/OT staff.

4.3. Culture and safety interventions

When implementing a new policy or device into a social system as complex as that of a hospital several organizational features must be taken into consideration. What this exploration provides is an example of how the culture of work can affect how new measures, such as safety interventions, will be adopted. Understanding culture as a system of interconnected ideas, symbols and meanings (Alexander, 2003; Demerath, 2001; Geertz, 1973; Parsons and Shils, 1951) which workers use to interpret the purpose of their work suggests that the new measure will have a better chance of being implemented if it does not conflict with this pre-existing system of meaning. This notion is supported by Richter and Koch (2004) who state that the success of an intervention can depend on whether the measure is "meaningful to the local actors" (p. 718). Furthermore, as Haukelid (2008) notes, one potential response to an intervention that workers do not find meaningful is outright sabotage of the measure. Here we suggest that patient lift devices may actually stand in contradiction to *some* cultural elements of *both* nursing and PT/OT. We find it interesting that this may be true despite very prominent difference in the cultures of each profession.

Nurses defined the lifting devices as an intervention designed to protect themselves. This purpose of the lifting devices stands in opposition to nurses' cultural form of caring and may be working against the adoption of the patient lifting devices. It appears that there is more – but still limited – room for lifting devices within the cultural framework of PT/OT than in the framework of nursing. In some cases the equipment can be used to promote independence of the patient, through its use in therapeutic care. However, our data suggest that the therapists' cultural system, which connects their own independence with competence via knowledge of body mechanics and the ability to "safely" lift patients manually, conflicts with the use of patient lifting devices.

Some researchers examining culture and safety in the workplace are beginning to question the idea of whether workplace cultures can or should be changed (Antonsen, 2009; Hale, 2000; Hopkins, 2006). Our results suggest that culture change may be difficult, particularly when considering that some of the foundations of the notions of care-giving as sacrifice go back to at least the Middle Ages (Helin and Lindstrom, 2003). It may be better to understand and acknowledge cultural barriers and change organizational structures to improve safety in the workplace. For example, an organization might increase its division of labor by creating lift teams that specialize in the task of transferring patients, repositioning them in bed, etc., (Charney et al., 1991; Haiduven, 2003). Without having internalized either model of caring that we observed among nurses or PT/OT, these specialists would not carry with them these cultural barriers.

4.4. Limitations and strengths

This study did not start out as an investigation of the culture of healthcare. Rather, this study was a component of a larger evaluation of the minimal manual lifting policy and patient lifting devices. Some of the focus groups conducted early in the study period were therefore not intended to explore aspects of culture explicitly. However, it soon became apparent that culture may have been affecting the use of lifting equipment and data gathered early on were very useful for this exploration. That elements of culture did appear in the early focus groups, we believe, supports the idea that culture plays a role in the adoption of the lift equipment in this study setting. An additional strength of this, serendipitous as it was, is that it is highly unlikely that these data contain any bias due to leading focus group participants towards cultural descriptions or explanations.

While elements of the focus group guide remained fixed across the evaluation, some domains were modified as issues emerged over time. As the issue of cultural barriers to change revealed itself as potential issues in early focus groups, we believe it was appropriate to update the focus group guides (Morgan, 1996) to include questions addressing these emergent themes.

The fact that groups were segmented by occupation[2] so the participants would feel less inhibited by the presence of those in other professions or jobs (Hollander, 2004) is a strength of this research. It is unfortunate that the number of focus groups with nurses outnumbered those with PT/OT by a ratio of seven to two. However, this reflects, in part, the fact that nurses simply outnumber PT/OT in each hospital. The clear differences in culture we heard from these two professions indicate that additional focus groups with PT/OT would not have substantively changed our interpretations of the results. The focus groups spanned 3 years and therefore a considerable period had passed during which the staff could become familiar with the MMLE policy and the patient lifting devices presented to them.

While focus groups were segregated by profession (to the extent described above), and nearly all participants were female, factors such as age, seniority and race, all heterogeneous within focus groups, may have affected the views expressed in front of coworkers. However, we have no reason to believe that group composition could explain differences between nurses and PT/OT reported here.

The nature of small convenience samples that comprise focus groups may raise concerns about internal and external validity, and the ability to extrapolate findings to other (non-healthcare) working populations, as the sample of participants may not represent the proportions of workers by hospital or by worker characteristics such as race or gender. We would like point out that the objective in cultural analysis is to be sure that *the culture* is given adequate opportunity to be represented, or more appropriately revealed, and that this is not entirely dependent on having a thoroughly representative sample of individuals in the focus groups.

The purpose of the cultural analysis conducted here using focus groups was to uncover and describe the *existence of* some elements of the cultures of two occupational groups, to contrast these, and expound upon how observed cultural patterns may be related to the use of patient lifting devices. To this end, focus groups, with the noted sampling strategy, achieved this goal by examining conversation among participants and between participants and ourselves. Examining the way issues are framed in conversation among several participants (in front of each other and outsiders) is quite different than, for example, studying attitudes and their distribution, or investigating the extent to which norms are shared by group members. We cannot say how widely shared or deeply held the norms are among individuals in our study or in the population from which they were sampled, but clearly we observed the existence of collective understandings of caregiving that differed between occupations. The findings of this single qualitative study need to be compared with existing and future research to determine their generalizability.

We believe the composition of the team of moderators was a strength of this research. For most focus groups there were three moderators present. The moderators were all epidemiologists but they had different backgrounds relevant to this study. One was closely monitoring the quantitative data on lift equipment usage, a second had a background in nursing and the third had training in

[2] With the exception of the inclusion of aides in some nurse focus groups noted above.

sociology. We believe this combination of moderators provided a range of expertise that was useful for probing focus group members from several important angles. This combination also served well to interpret focus group data.

In this report, we first identify some of the core values of care-giving which appear to differ between the professions of nursing and physical and occupational therapists. While the depictions of cultural differences between professions have face validity, the connection to the low use of patient lifting devices was made largely by the researchers. For example, PT/OT staff did not themselves say they do not use lifting devices *because* it interferes with their value of independence. Rather, we acknowledge that *we inferred* this connection using some evidence from quotes they provided, quantitative findings regarding lift equipment use, and published literature germane to the topic. Additional research to investigate this connection is recommended.

5. Conclusion

Nurse and PT/OT staff possess different cultural definitions of the purpose and nature of care-giving, the acceptable means of delivering care and how successful patient care is measured. It appears that the cultural interpretations of caring, which emphasize compassion among the nurse staff and independence among the PT/OT staff, may affect how patient lifting devices are defined and pattern the circumstances under which their use is and is not acceptable. We believe this demonstrates a connection between work culture and safety independent of issues of "safety climate" or "safety culture."

While other structural features pertaining to the organization of the workplace will also affect behaviors, and interact with culture, we point out that culture is important because it has a role in patterning behaviors independent of these other factors (Geertz, 1973; Kane, 1991; Parsons and Shils, 1951). Attempts at improving safety such as offering safety devices or other technologies, promoting safer practices or procedures and implementing safety incentives are likely to be interpreted by workers through their culture. Understanding how work cultures may define safety intervention measures, and pattern the responses to them, will likely help improve the chances of a successful intervention.

We conclude that culture – the "fabric of meaning" (Geertz, 1973) – is a factor, among many others, that must be taken into account when considering how to implement new safety policies among healthcare workers. Thinking about culture in the ways that many sociologists and anthropologists do can have pragmatic implications for interventions to improve workplace safety.

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