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# The Link Between Facility Maintenance and Work Stress/Satisfaction in Residential Aged Care

T. Hilaire<sup>1</sup> and K. Maund<sup>1</sup>

<sup>1</sup>The University of Newcastle, Australia  
Trevor.Hilaire@Newcastle.edu.au

## Abstract

Currently in many developed countries populations are ageing due to a number and combination of circumstances. Residential aged care (RAC) provides a role in addressing the associated need to care for ageing people but the potential for increased demand means RAC providers must look to further efficiencies for sustainability. The care team provides hands on care in RAC and work stress/satisfaction within the care team can be affected by the quality of care and directly impacts the resident's quality of life. The work stress/satisfaction within the care team can also be affected by the built environment. Appropriate design of the built environment can optimise work stress/satisfaction and this paper will propose that maintenance of that environment can also have an impact. This paper will report on a previous study comprising semi structured interviews with care team members and management representatives from a multi case study comprising a number of RAC facilities. Content analysis was carried out on interview scripts. The study revealed facility maintenance was not only important to preserve an asset and reduce hazards, it also revealed facility maintenance to have a bearing on a number of factors which impacted the care team's work stress/satisfaction. This paper will suggest that strategies to improve perceived control of facility maintenance may increase a view of self-worth and go towards optimisation of work stress/satisfaction amongst the care team thus promoting a level of social sustainability.

## 1 Introduction

Currently in many developed countries there is an amalgamation of circumstances which result in creating ageing populations (Black et al., 2012). The potential demand this may place upon existing systems has been recognised and societies are looking for ways to lessen the approaching impact.

At this juncture the question may be raised as to what influence construction management could have on the impact of an ageing population and readers are respectfully directed to the theories of environmental psychology which seek to rationalise the relationship between an individual and the physical environment (Aspinall, 2001). An individual's interaction with the physical environment determines the role the physical environment plays in the contribution to stress or satisfaction (Codinhoto et al., 2009). In a work environment like a residential aged care (RAC) facility, work stress/satisfaction can contribute to stress related work absences and staff turnover (Cameron & Brownie, 2010) which impose a financial burden on the RAC organisation and the wider community.

RAC facilities have a unique and particular set of circumstances including working with cognitively impaired residents, exposure to death and dying, caring for residents with challenging behaviours, engaging in long term relationships with vulnerable residents and sometimes conflicting ideals between the care level and other work responsibilities. These circumstances can result in a demanding and challenging role for the care team (Edvardsson et al., 2009).

Carers (Assistants in Nursing (AIN), Certified Nursing Assistant (CNA), Personal (or Patient) Care Assistants (PCA) or nursing aide) within the care team in RAC provide 80% to 90% of resident care and are thus the "linchpin" to the provision of quality care (Castle, 2007; Proctor et al., 1998) which is a major component of quality of life for many residents (Bowling & Gabriel, 2007; Smith et al., 2012) in RAC. Carers therefore have the greatest potential to affect quality of life for residents (Courtney et al., 2003; Hannan et al., 2001).

Work stress/satisfaction however is influenced by individual perceptions resulting in varying effects on people. For example some sounds may represent noise to some individuals but are not noticed by others (Aspinall, 2001). This aspect forms a challenge when trying to design a RAC facility with an optimal impact upon the care team's work stress/satisfaction.

There are many factors that influence work stress/satisfaction within RAC facilities and this research will investigate the role facility maintenance, as one of the factors, plays in the work stress/satisfaction of RAC building users. Facility maintenance includes any operation necessary to maintain building quality (Australian Government Department of Health and Ageing, 2006; Aged Care Standards and Accreditation Agency Ltd, 2014) and therefore can range from changing a light globe, patching surfaces to replacing major and minor components if necessary to preserve the quality of the facility which, in this context, includes the gardens and outdoor areas.

The aim of this paper is to report on the impact of facility maintenance identified within a previous two stage study of design influences with the potential to impact upon the care team's work stress/satisfaction in RAC. In reporting the previous findings a number of multi faceted links between facility maintenance and the care team's work stress/satisfaction are identified which answer the question of whether strategies to improve perceived control of facility maintenance may increase a view of self-worth and go towards optimisation of work stress/satisfaction amongst the care team.

When viewed in the context of an ageing population with the associated economic, social and environmental allied to the impact on quality of care and the potential effect on quality of life in RAC, it would appear reasonable to investigate the ways in which maintenance of the built environment impacts upon the work stress/satisfaction of the Care Team in RAC facilities.

## 2 Research Method

The influence of facility maintenance in RAC was identified in a larger two stage study of aspects of the built environment with the potential to impact upon the care team's work stress/satisfaction in RAC. Although not initially included in the larger project, facility maintenance was identified by a number of participants in Stage 1 of the project and was therefore included in Stage 2 which included a multi-case study of existing RAC facilities designed post the Aged Care Act (1997). The case studies included participation of the care team and managers of each facility in informal interviews where their experiences and perceptions were investigated in regard to the potential of facility maintenance (along with several other aspects of the built environment) to impact upon the work stress/satisfaction of the care team. Data analysis included coding and thematic analysis of the qualitative interview scripts assisted by the use of appropriate software. (Hilaire, 2016).

## 3 Results

During Stage 1 of the project comments about facility maintenance were raised by 11% of participants. The comments indicated a number of perspectives, the most common being that the level of facility maintenance can be interpreted as a reflection of the importance the organisation places on the facility and thence by association the workers within that facility. The perception of inadequate maintenance has been indicated with comments like *"I don't like the fact that it's in a bit of disrepair, you'd think that after spending millions on buildings they would keep it all nice and that sort of thing. It's starting to get all shabby and that spoils the niceness of it so people lose concentration and ram a wheelchair into a wall and leave a gash, they don't care about fixing the gash and they don't care about us."* and *"The building is actually falling apart on the outside where we have our smoke breaks. It hasn't been repaired at all, ever so they don't care. They don't care about us either."*

The perception of inadequate maintenance also had the potential to contribute to work stress in a second way where participants indicated their desire to care for their work environment could be frustrated. Comments supporting this perception included *"The plasterboard on the walls is falling apart. It gets knocked by beds and stuff especially in dementia and the plasterboard is so crumbly it makes a hole straight away. It worries me they don't fix it but why should we worry if they don't"*.

The third major aspect is the concern over the perception of the community and in particular the relatives of residents. This sentiment was expressed as *"The buildings aren't run down and shabby but if they were I would worry about the impression they would make on relatives and people in the community"*.

However, on the other side of things good maintenance of an older building received positive comments like, *"I don't really like the building it is old style and I don't like the colours but it has a good maintenance crew and it's well looked after which keeps it neat and nice. It has to look nice, it's their (residents) home and it has to look nice for them."*

Stage 1 of the larger project revealed that facility maintenance has several facets with the potential to impact upon the work stress/satisfaction of the care team and supports the measure of facility maintenance success put forward by Chan et al., (2010) where facility functionality includes people factors such as employee perceptions and the ability of the maintained workplace to enhance productivity (Ball & Ormerod, 2000).

The cases selected for Stage 2 of the larger project were in general fairly well maintained facilities and therefore did not offer a direct comparison between a well-maintained facility and a poorly maintained facility. However, there was a comparison between an original facility on one site and the current new facility which replaced it. The original facility was evidently well received by staff and

well maintained however when the decision was made to construct a new facility the maintenance ceased. Two of the participants had experienced working in the new and old facility and had therefore experienced i) a well maintained older building, ii) the same older building not maintained, and iii) a new building. These participants explained *“The old building was built in the 1960s, so it's a bit old, it was really nice to be in until they stopped taking care of it, then it just started falling apart.”* and *“towards the end, less money got spent on it and it started to look really dilapidated and it was embarrassing. It didn't matter that it was old when it was well maintained, but when they let it go, it was awful. It was pretty depressing being over there.”* These comments indicate that in this instance the older well maintained facility satisfied these participants however as less maintenance was carried out it became “embarrassing” and “depressing” which demonstrates a potential to impact upon work stress/satisfaction in some individuals.

There was accord between the care team and management participants in all cases that facility maintenance could have a positive impact on staff attitudes to work. Comments from care team participants in Stage 2 included *“This building is looked after really well, they (management) care about it and want it around and functioning well for a long time, that's a good thing for me.”* and *“As soon as we put in a work request it gets fixed, probably within a few days, they (management) care about the building and us. Management here is good that way, the last place I worked nothing happened so we didn't bother and in the end I left.”* and *“Things get fixed here very promptly, sometimes the next shift you see it has been sorted out, I love it, you know that when you report something you are taken seriously.”*

The management participants were more philosophical about the extent of maintenance and extended the effects through to the residents with comments like *“Maintenance also flows through to the people that work here, if you don't maintain the building then the people who work there think if they don't care about the building then they don't care about us so why should we care about the building and it flows through to the residents. It can become a vicious cycle.”* A sentiment expressed by the care team was also echoed by the management participants. A prompt response to a staff request for maintenance produced a beneficial effect on the staff, comments supporting this include *“Staff feel good if they report something for maintenance and it is fixed pretty soon, they feel acknowledged and that we have recognised they do exist and what they say is important. If they got ignored they would start to feel they were not important”*.

The management participants were quite open about the cost but also pointed to what they perceived to be the resulting benefits. Comments supporting this idea included *“Aged care organisations have to publish their financials so we know that we spend more on maintenance, which includes landscaping, than any of the top 25 ..... Building maintenance for us is extremely important, a lot goes into the gardens but that feeds back into the resident and staff's view to the outdoors so that people have something well maintained and good to look at. This goes towards quality of life for the residents and also greatly helps the staff”* and *“The monetary values don't take into account all the benefits, it absolutely impacts on staff, it shows that we care for the building and we then automatically care for the residents and the staff.”* The management participants from one facility explained that their outlook on maintenance came from experiencing the benefits at the sister facility which is an older building. Comments included *“It is a good example of where we used our experience from another facility and applied it here, we believe maintenance has an impact on the resident as well, they think if they don't care about the place, they're not going to care about me either, I think overall it (facility maintenance) is a great success.”*

Another advantage to effective maintenance was the reduction of potential hazards. This is supported by comments which included *“It (maintenance) is very important, we are lucky it is a new facility but it is still very important to have a good maintenance programme running for issues and hazards as they occur.”*

The effect of maintenance was very adequately summarised in a comment by a management participant *“Building maintenance has a big psychological effect on the people that work there, the*

*most beautiful building will lose appeal if it is allowed to become shabby*". This comment links perceptions of facility maintenance and attitudes at work to demonstrate the widespread impact of facility maintenance.

## 4 Discussion

During Stages 1 & 2 of the larger research project participants identified ways in which their perception of adequate or inadequate facility maintenance impacted on the work stress/satisfaction of the care team.

The participants indicated that facility maintenance has several facets and is not solely a life cycle methodology (Assefa et al., 2007). Maintenance of a facility is a part of the role of Facilities Management (FM) (Tay & Ooi, 2001) however, this research has revealed that the effects can run much further and can also fit within the interdisciplinary field of environmental psychology (Aspinall, 2001) which theorises the relationship between an inhabitant and the environment they occupy (Bell et al., 2001). The research has identified that this relationship is rooted further back in the participant's experience and in some instances their perceptions can be more relevant than reality (Tucker & Smith, 2007). This is borne out in this research by the way participants perceived the importance an organisation placed on facility maintenance was a reflection of the importance that same organisation placed on the care team. Care team participants also noted the importance of a timely response to a maintenance request. This perceived control of facility maintenance may increase the view of self-worth and impact upon work stress/satisfaction amongst the care team (Cooper et al., 2008). The participants also projected the perceptions of the community and experienced embarrassment based on those projected perceptions.

Care team and management participants offered a number of insights into the potential impact upon the work stress/satisfaction of the care team influenced by facility maintenance.

The far-reaching effects of facility maintenance include:

- The level of facility maintenance can be interpreted as a reflection of the importance the organisation places on the facility and thence by association the workers within that facility,
- Inadequate maintenance could see an erosion of the desire within staff to care for their work environment,
- The perception of the community can be projected by the care team to create a feeling of embarrassment,
- A prompt response to a staff request for maintenance can produce a beneficial effect as staff interpret this as acknowledgement by the organisation,
- Benefits of maintenance flow back to residents who perceive that if management cares for the building then they automatically care for the residents and the staff,
- Address issues and hazards as they occur,
- Inadequate maintenance can be depressing to some individuals of the care team, and
- There is a maintenance – attitude link that can impact the work stress/satisfaction of the care team.

## 5 Conclusion

In RAC the work stress/satisfaction of the care team has the ability to impact on the resident's quality of life via the influence on quality of care. The theories of environmental psychology recognise the association between an individual and the facility. This research found that the

maintenance of the facility forms a part of the relationship between the individual and the facility and has far reaching effects not limited to the traditional ideas of asset preservation and risk reduction. Facility maintenance can play into the perceptions of the care team and can influence their work stress/satisfaction in RAC.

The findings from this research have implications for RAC organisations and facility managers who can realise the impact of facility maintenance for future planning.

## 6 References

- Aged Care Standards and Accreditation Agency Ltd. (2014). Annual Report 2012/2013 (pp. 92). Parramatta, NSW: Aged Care Standards and Accreditation Agency Ltd.
- Aspinall, P. (2001). Building Behaviour. *Building Services Engineering Research & Technology*, 22(1), 34-46.
- Assefa, G., Glaumann, M., Malmqvist, T., Kindembe, B., Hult, M., Myhr, U., & Eriksson, O. (2007). Environmental assessment of building properties - Where natural and social sciences meet: The case of EcoEffect. *Building and Environment*, 42(3), 1458-1464.
- Australian Government Department of Health and Ageing. (2006). Building Quality for Residential Care Services - Certification.
- Ball, L. J., & Ormerod, T. C. (2000). Putting ethnography to work: the case for a cognitive ethnography of design. *International Journal of Human-Computer Studies in Higher Education*, 53(1), 147-158.
- Bell, P. A., Greene, T. C., Fisher, J. D., & Baum, A. (2001). *Environmental psychology* (5 ed.). Fort Worth: Harcourt.
- Black, D., O'Loughlin, K., Kendig, H., & Wilson, L. (2012). Cities, environmental stressors, ageing and chronic disease. *Australasian Journal on Ageing*, 31(3), 147-151.
- Bowling, A., & Gabriel, Z. (2007). Lay theories of quality of life in older age. *Ageing & Society*, 27, 827 - 848.
- Cameron, F., & Brownie, S. (2010). Enhancing resilience in registered aged care nurses. *Australasian Journal on Ageing*, 29(2), 66-71.
- Castle, N. (2007). Assessing Job Satisfaction of Nurse Aides in Nursing Homes. *Journal of Gerontological Nursing*, 33(5), 41-47.
- Chan, D. W. M., Chan, A. P. C., & Lam, P. T. I. (2010). Identifying the critical success factors for target cost contracts in the construction industry. *Journal of Facilities Management*, 8(3), 179-201.
- Codinhoto, R., Tzortzopoulos, P., Aouad, G., & Cooper, R. (2009). The impacts of the built environment on health outcomes. *Facilities*, 27(3), 138-151.
- Cooper, R., Boyko, C., & Codinhoto, R. (2008). The Effect of the Physical Environment on Mental Wellbeing *State of Science Review : SR-DR2* (pp. 50). London: Government Office for Science.
- Courtney, M. D., Edwards, H. E., Joyce, S., O'Reilly, M. T., & Duggan, C. (2003). Quality of life measures for residents of aged care facilities: A literature review. *Australasian Journal on Ageing*, 22(2), 58-64.
- Edvardsson, D., Sandman, P.-O., Nay, R., & Karlsson, S. (2009). Predictors of job strain in residential dementia care nursing staff. *Journal of Nursing Management*, 17, 59-65.
- Hannan, S., Norman, I. J., & Redfern, S. J. (2001). Care work and quality of care for older people: a review of the research literature. *Reviews in Clinical Gerontology*, 11, 189-203.

- Hilaire, T. J. (2016). *Sustainable residential aged care: The influence of the built environment on carer work satisfaction and stress* (PhD), University of Newcastle, Newcastle NSW.
- Proctor, R., Stratton-Powell, H., Tarrier, N., & Burns, A. (1998). The impact of training and support on stress among care staff in nursing and residential homes for the elderly. *Journal of Mental Health, 7*(1).
- Smith, R., Fleming, R., Chenoweth, L., Jeon, Y.-H., Stein-Parbury, J., & Brodaty, H. (2012). Validation of the Environmental Audit Tool in both purpose-built and non-purpose-built dementia care settings. *Australasian Journal on Ageing, 31*(3), 159-163.
- Tay, L., & Ooi, J. (2001). Facilities management: a "Jack of all trades". *Facilities, 19*(10), 357- 362.
- Tucker, M., & Smith, A. (2007). User perceptions in workplace productivity and strategic FM delivery. *Facilities, 26*(5), 196-212

