Facilitating healthy ageing in construction: stakeholder views

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Abstract

The objective of this paper is to demonstrate how the experience and knowledge of construction workers can be utilised to encourage healthy ageing and facilitate healthy working behaviours. The population is ageing globally leading to an increasingly ageing workforce and with the abolishment of an official retirement age working into later life is becoming commonplace. Natural age-related declines such as reduced vision, hearing and muscle strength make it difficult to remain in industries such as construction where heavy manual labour is commonplace. A previous study by the authors found that construction workers have good ideas for both maintaining and improving their health and well-being at work. Workers suggested solutions which could facilitate healthy ageing such as improving facilities and personal protective equipment and wanting better knowledge transfer systems such as more apprentices to pass their knowledge on to. This paper discusses how these findings could be used in the construction industry to improve health, well-being and healthy ageing. Focus groups with industry stakeholders presented them with these ideas; they were asked about their perceptions of older workers and how they thought the ideas suggested by their workforce could be used to improve health, well-being and ageing. Barriers and opportunities to change were investigated and stakeholders were encouraged to consider how they could encourage involvement of their workers using participatory ergonomics techniques. Stakeholders were positive about the older workforce and were keen to promote change within their companies. This research forms part of a larger study, sponsored by Age UK's Research into Ageing Fund, which aims to produce a resource for dissemination across the industry, encouraging engagement of the workforce to facilitate healthy working behaviours. It is essential that ideas from workers are harnessed and utilised to ensure that all workers can age healthily at work.

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1. Introduction

The issue of an ageing population can be seen worldwide, with Japan, Canada and Australia being among the countries with the highest life expectancies[1]. Western Europe has one of the oldest populations, with 17% aged 65 and over in 2010 which is predicted to increase to 30% by 2060 [2]. In the UK, the Equality Act of 2006 rules it illegal to discriminate against an employee due to their age and this, coupled with the abolition of an official retirement age in the UK, means that accommodating the older worker in the workplace is now more important than ever [3].

There are a multitude of age-related changes that can affect an individual’s ability to work; vision becomes compromised due to a hardening of the lens of the eye, hearing becomes more difficult with age particularly at speech frequencies, muscle strength and stamina decrease alongside the capacity to recover quickly after injury and illness [4, 5]. Despite this, it is important to realise that individuals age at different rates and that one individual may be able to perform work tasks that another individual may struggle with. Despite the difficulties that may be faced by ageing and older workers, previous research has suggested that remaining in work can have positive effects on health and well-being and that an early retirement can lead to the development of unhealthy habits such as smoking, drinking and social isolation [6].

Construction is one industry in particular where older and ageing workers could potentially struggle with task demands. Construction is well known for being a tough heavy industry where workers are required to perform repetitive manual tasks such as heavy lifting, twisting and turning, in awkward and cramped positions. The working environment is not always pleasant, with noise, dust and sometimes very little natural light and ventilation; the workplace is not always designed with the older worker in mind.

Despite the issues they may face in the workplace, previous research has suggested that older workers are valued within the industry; they are considered to be loyal, reliable, experienced and produce work of a high quality however they are also perceived to be against personal protective equipment and other health and safety regulations and initiatives and also work at a slower pace [7]. These negative perceptions often outweigh the positives due to a lot of construction work relying on high levels of productivity in short periods of time.

The design of the workplace can be modified to help workers to age healthily in their jobs as demonstrated by previous research. This is particularly the case in sectors where there is the opportunity to exercise fairly good control over the workplace and task set up. BMW worked with a pilot production line in one of their factories; the line had an average age of 47 which was demonstrative of their ageing workforce. Working together with the management team, the production line came up with 70 changes to the workplace, including orthopedic footwear, changing the flooring to reduce knee strain and changing the angle of the monitors to reduce eye strain. Overall these changes accounted for a 7% increase in productivity in one year [8]. The approach used in this study and many others like it, is known as participatory ergonomics. This approach encourages the involvement of the end-user from the very beginning to the end of a change process. A previous research study conducted by the authors found that construction workers of all ages have good ideas for workplace design which in turn can encourage healthy ageing in the industry even in the challenging changeable construction environment [9]. These ideas ranged from modified behaviours to improve health and fitness such as attending the gym, playing recreational sports and taking vitamins and supplements, to requesting a higher number of apprentices on their sites in order to pass on their knowledge and experience to younger workers. There were also a number of low cost changes suggested, such as improved welfare facilities, changing rooms and canteens and improved toolbox talks and interactive sessions, all suggesting that the construction workforce are aware of their needs in order to improve their health and well-being at work.

This paper presents the findings of a follow up study, where the ideas from the workforce were presented to stakeholders in construction to investigate the opportunity for change.

1.1. Aims and objectives

An in-depth study investigated how stakeholders in construction perceive older workers and explored their opinions on opportunities and barriers to change within the industry. The aims of this study were:

- To understand stakeholders’ views of older workers
To present ideas from the workforce and capture stakeholders’ opinions of these
To explore the opportunities and barriers to change within the industry
To investigate ways in which stakeholders can move forwards with the ideas presented by their workforce

2. Research methodology

Focus groups were held with stakeholders from three construction companies; a maintenance firm, a domestic build company and a civil engineering company. Site and Project Managers were asked to assist with participant recruitment, by inviting employees who could provide valuable contributions to discussions around health and well-being and healthy ageing in the construction industry. It is acknowledged that this would tend to recruit workers who were considered to be ‘suitable’ by their managers which may not be truly representative of the whole worker population.

Focus groups were chosen as the most appropriate method of data collection as they allow for a larger amount and a broader range of data to be collected from several industry respondents simultaneously. As these focus groups were made up of a homogenous group with common backgrounds and experience, they were able to carry out checks on one another which provided natural quality control of data collected [10].

Prior to the session starting, participants were given an information sheet detailing the specifics of the study and were reminded that they would remain anonymous throughout the analysis of the study. Participants were also reminded of their right to withdraw from the study at any point. Ethical approval was granted by the Ethical Committee at Loughborough University.

Focus groups were led by the researcher with the assistance of a flexible schedule based on the aims and objectives of the study. Table 1 shows the focus group schedule.

| Theme | Topic | Content |
|-------|-------|---------|
| Views Welcome and introduction | Context and background, ageing population, older workers |
| | Perceptions of older workers | Positive & negative perceptions, opinions, experiences |
| Design Ideas from the workforce | Company specific findings, general findings, high and low cost suggestions |
| Discussion | Positives and negatives of ideas, barriers and opportunities, which ideas would work and why |
| How can the ideas be implemented? | Cost, prioritized list, worker involvement, time frames, idea capture, incentives |
| Future Moving forward | How to keep workers involved, how to continue to capture ideas, competitions, toolbox talks |

Focus groups began with a welcome presentation to provide participants with context and background to the research, including the issues faced globally regarding an ageing population and therefore an ageing workforce. Participants were then asked to brainstorm their opinions of older workers, both in general and specifically in the construction industry. The sessions were recorded however the researcher also took summary notes at the front of the room on a large flip chart which facilitated further discussion through reflection of the comments made. Following the brainstorm, the stakeholders were then presented with a selection of ideas from their own workforce followed by ideas from construction workers from other companies. These ideas facilitated discussion, which was encouraged and prompted by the researcher; opportunities and barriers to these suggested changes were explored including the potential cost and time it would take to implement the more realistic ideas. Participants were asked to consider how these suggestions could be implemented and also how the feedback process would work, between management and the workforce so that they would know their ideas were being listened to. A final presentation was given to demonstrate previous initiatives in construction which have been used to encourage good health and well-being behaviours at work such as the Olympic Park build in London offering their workers a porridge breakfast for £1. The Delivery Authority on this build believed that this initiative contributed to a decrease in a previous spiked period of accidents due to workers not eating a healthy and sustainable breakfast early in the morning [11].
Following this presentation, participants were then asked to brainstorm ways in which they could improve and sustain the involvement of their workforce, by encouraging them to continue suggesting ideas and changes to improve their health and well-being at work.

3. Results

3.1. Demographics

A total of 18 stakeholders from three construction companies participated in the focus groups. Table 2 shows the demographic information of each participant.

| Company          | Occupation                          | Age Range | Number of years spent in occupation | Number of years spent in construction |
|------------------|-------------------------------------|-----------|-------------------------------------|---------------------------------------|
| Maintenance      | Building supervisor                 | 35-49     | 20                                  | 30                                    |
|                  | Health and safety coordinator       | 50+       | 7                                   | 30                                    |
|                  | Mechanical services manager         | 50+       | 10                                  | 35                                    |
|                  | Electrical maintenance supervisor   | 35-49     | 28                                  | 28                                    |
|                  | Maintenance manager                 | 50+       | 25                                  | 25                                    |
| Domestic build   | Head of human resources             | 50+       | 25                                  | 30                                    |
|                  | Site manager                        | 35-49     | 9                                   | 19                                    |
|                  | Project manager                     | 35-49     | 16                                  | 26                                    |
|                  | Project manager                     | 35-49     | 10                                  | 26                                    |
|                  | Senior project manager              | 50+       | 19                                  | 40                                    |
|                  | Health and safety advisor           | 25-34     | 3                                   | 5                                     |
|                  | Client liaison manager              | 35-49     | 6                                   | 15                                    |
|                  | Director                            | 35-49     | 6                                   | 25                                    |
| Civil engineering| Safety, health and environment advisor | 25-34     | 3                                   | 3                                     |
|                  | Project manager                     | 35-49     | 13                                  | 14                                    |
|                  | Project manager                     | 35-49     | 16                                  | 22                                    |
|                  | Civil engineer                      | 25-34     | 5.5                                 | 6.5                                   |
|                  | Health safety and environment advisor | 35-49     | 10                                  | 10                                    |

3.2. Focus group results

Audio recordings of the focus groups were uploaded into NVivo software and transcribed verbatim. The transcripts were then thematically coded by the researcher following the structure of the focus group schedule (Table 1).

151 references were coded under the theme of “views” which included positive and negative perceptions of older workers, younger workers, views of older workers in specific trades such as scaffolding and 38 miscellaneous references. There were a relatively equal number of positive and negative references about older workers, with 24 positive and 22 negative. Over 70% of the responses were related to older workers and in all three focus groups, positive perceptions of older workers were the first to be discussed. Positive perceptions of older workers include being more skilled, being more experienced, being better thinkers, passing their knowledge onto younger workers, being less lazy, more respectful and more loyal. Negative perceptions of older workers included them not wanting to accept changes, having a lack of discipline in combination with ‘old school’ habits, taking more risks, wearing less
personal protective equipment (PPE) due to feeling as if they are invincible, not being able to keep up with technology and being less ambitious and driven. These negative perceptions were raised with a feeling of understanding and sympathy from the stakeholders, as they are aware that the culture of the construction industry has changed over previous decades.

Younger workers were also perceived in a relatively negative way, with stakeholders making 33 references to them in the context of ‘older workers’. An important and frequently discussed issue with younger workers was that they have been brought up in a different culture to that of older workers, and in the stakeholders’ opinion this has led to younger workers feeling as if they are ‘owed’ something. Their lower levels of experience were also considered to contribute to their lower levels of respect, as stakeholders felt that younger workers were less likely to listen to advice and listen to their older counterparts on site. However younger workers are also perceived to be better with their PPE compared to older workers as a result of them feeling proud to work within their trades.

137 references were coded under the theme of “design”, when stakeholders were encouraged to consider the ideas and suggestions put forward by their own workforces. Sub-themes within “design” included suggested changes to PPE, facilities, apprentices, health and well-being, feedback, human resources, new creations, toolbox talks and tools and machinery. The most frequently referenced suggestion from the focus groups was PPE with 44 references, as this was reported to be an important issue within the workforce. Issues included changing the design of dust masks, gloves and goggles to ensure the material did not become worn away and the goggles did not become steamed up which lead to a compromise of vision. Stakeholders identified both barriers and opportunities for change based on the suggestions provided by the workforce. Opportunities for change included stakeholders agreeing that more money could be spent on PPE and that the workforce could be given more choice of PPE. Another opportunity to improve the situation was to offer the workforce the opportunity to “top up” the budget for PPE, particularly with footwear, so that workers could pay extra for a ‘higher end’ pair of work boots. However there were a number of barriers to potential changes in PPE, with the most frequently discussed being money. A second barrier was the discrepancies between sub-contractors, as some companies provide their workforce with PPE whilst others expect the workers to pay for it themselves. A third barrier was personal ownership, stakeholders felt that in order for them to spend more money on PPE, the workforce needed to demonstrate that they were willing to care for their equipment and treat it with respect.

There were 26 references to facilities, following the feedback that the workforce would like improved toilets, washrooms and canteens. There was less of a financial barrier due to a lot of these suggestions being relatively low cost however an important barrier for the stakeholders was the respect with which the facilities would be treated with and in the case of installing shower blocks, whether they would be used enough or not. The civil engineering company were very keen to rectify the situations reported by their workforce, by providing a more reliable source of hot running water, providing a more secure way of storing toilet rolls so that supplies were not lost and ensuring the toilet facilities were kept clean and tidy. Stakeholders within the domestic build company were equally as keen to improve their welfare facilities such as rest-rooms, recreational rooms and shower blocks. In particular the stakeholders felt there was an inequality between the facilities provided to the workforce on construction sites and those for the management teams in offices, which presented an opportunity for change to encourage equality. The issue of the respect paid to the facilities was also an issue within this company.

There were 19 references made about apprentices, all of which came from stakeholders from the maintenance firm focus group. The workforce had suggested a higher number of apprentices be taken on board so that the older workers within the firm could pass down their knowledge. However there was a significant barrier to this suggested change as the maintenance firm does not cover enough areas of one particular trade to facilitate a full apprenticeship scheme. The issue appeared to stem from a lack of communication between management and the workforce as the reasons for the lack of apprentices were never clearly stipulated to the workers.

Additional discussions within the focus groups included health and well-being (9 references), as workers had suggested they receive discounted gym membership or opportunities for physiotherapy massages to combat work-related musculoskeletal symptoms. Further suggestions included the provision of water coolers and sun cream on sites in hot weather however these suggestions were all met by the barrier of personal responsibility and ownership, with stakeholders feeling that workers should be prepared to come into work and be able to work healthily. Additional issues discussed included the lack of a “golden handshake” when older workers leave the industry, and
the issues faced by Human Resources personnel when they have to deal with older workers who are losing the capacity to perform job tasks well.

A total of 164 references were made within the theme of “future” where stakeholders were asked to brainstorm and discuss ways in which they could keep their workforce involved and engaged. Sub-themes included feedback, facilities, health and well-being, PPE and toolbox talks as well as 34 miscellaneous references.

Feedback was the most discussed topic with 51 references; stakeholders discussed ways in which a high level of feedback could be maintained between managers and the workforce. Existing methods of feedback were discussed, such as a “feedback board” however stakeholders felt that workers were not engaging with this tool and therefore it was not being utilized to its full potential. Further methods were bi-monthly meetings and “ideas/comment boxes” however the issue still remained seated within the engagement of the workforce. This presented an opportunity for stakeholders to consider how they could return to their workforce and encourage them to participate and engage by providing them with a sustainable level of feedback. Incentives for engagement were also discussed as potential opportunities such as a ‘league table’ of reporting near misses with monthly prizes of vouchers being given out. An additional barrier related to moving forward with feedback techniques was communication, as when workers were filling out report and feedback forms they were not hearing anything from their supervisors about how this was going to be taken forward.

There were 26 references to moving forward with the facilities; these included having a member of staff regularly checking the toilets to ensure they are in good working order and also putting more money aside each year to improve the welfare facilities for the workers on site.

The 17 references made about PPE included the stakeholders discussing PPE requirements with subcontractors to ensure that there would be a minimum level of PPE expected for each worker and also spending more money on PPE in general.

There were 17 references made about health and well-being at work, with all three focus groups speaking about changes they wanted to make. Stakeholders of the civil engineering company have previously had ‘safety critical medicals’ and occupational health checks for their immediately employed staff and identified the opportunity for these to be continued in the future, potentially offering them to additional sub-contracted employees. Stakeholders within the domestic build company focus group discussed making changes to the canteens on their sites to make sure they were offering a wider range of healthy balanced meals. Stakeholders within the maintenance firm focus group saw genuine opportunities to offer discounted gym memberships and physiotherapist sessions to their workforce and stated that this would be something they would look into.

Further potential changes that could be acted upon in the future included encouraging more interactive and valued toolbox talks, by introducing interactive props and inviting guests such as older workers to talk to younger workers, stakeholders being more prescriptive of their needs with sub-contractors and ensuring there are systems in place to monitor the impact of these initiatives.

Overall, the stakeholders were keen to listen to the ideas suggested by both their own workforces and other workforces within the construction industry. They were also very happy to try and facilitate these changes where possible and were able to express the barriers to some suggestions and justify why some ideas may take longer than others.

4. Discussion

In the case of all three focus groups, initially older workers were perceived positively; stakeholders were quick to identify the positive attributes that they bring to a workforce such as their knowledge, commitment and loyalty, which supports previous research [7]. Also in support of previous research, negative perceptions of older workers included the speed at which they work and their attitude towards health and safety regulations [12]. It has been reported that often older workers are given less manually stressful jobs to compensate for their decreased ability to meet these types of task demands [12]. These negative perceptions may cause further issues in the workplace particularly between supervisors and older workers due to their “I know better” attitude. Stakeholders accept and acknowledge the issues with retaining older workers in the construction industry, voicing their concerns about how to manage the age related declines in work ability, particularly in heavy manual trades. These concerns suggest that
the employers are willing to adapt in order to accommodate older workers and that, in contrast to previous research suggestions, they do not feel that older workers are a burden who need to be forced out of the industry [13].

The lengthy and in-depth discussions surrounding the opportunities and barriers to change demonstrate a need for better levels of communication between the workforce and management. The consideration given by the stakeholders to many of the suggestions revealed the multitude of opportunities available within the industry to improve healthy working behaviours which in turn could help facilitate healthy ageing. Ensuring a high level of quality communication and feedback whilst working with the end-users of products has been shown to be successful in the past in a variety of industries [14, 15].

The barriers and opportunities surrounding PPE have been discussed in construction for many years, particularly due to the changes in regulations over recent decades. Involving the end-users in the design of products related to the working environment has been shown to be a successful approach in the pastbricklayers were included in the design of work equipment [15]. Likewise, the issue of having high quality welfare facilities, an issue recognized by both the workforce and the stakeholders, has been identified as a priority in previous research reports [16].

The enthusiasm of the stakeholders was encouraging, for interventions and initiatives to work, it is essential that supervisors and managers encourage the engagement of the workforce. It has been suggested that without the buy-in from senior members of the workforce, workers feel that their ideas are less likely to be accepted and are therefore less likely to put their ideas forward [17, 18].

Various methods of engaging the workforce and increasing feedback were discussed. Methods such as competitions, incentives and workplace ‘champions’ have been shown to be successful in the past and previous research has also highlighted how important it is to ensure that each worker is given the opportunity to voice their own personal opinion and ideas [19].

5. Conclusion

Stakeholders in the construction industry clearly view older workers as an asset to the workforce however they do also cause concern when considering the physical ability and capacity to perform the heavy manual tasks which are so common place in construction. Despite this, stakeholders are keen to retain older workers in the industry and are open to facilitate changes to ensure this is possible. With engagement and involvement of the workforce, working together with supervisors and managers, interventions have a higher likelihood of success which would therefore encourage sustainable and effective changes. It is important that construction companies work together, with good levels of communication and feedback to ensure these changes can be made and sustained.

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