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Lessons construction can learn from other sectors

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Construction and Women: the Lessons Construction can Learn from Other Sectors

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The construction industry is traditionally considered a white, male-dominated industry. The UK construction industry is at its busiest for a decade and is suffering from skill shortages in both craft and manual trades, and at the professional level. The issue regarding the lack of women in construction has become more prominent recently, attracting government and industry-wide attention due to this potential skill shortage facing the industry. To meet these targets the industry cannot rely on recruiting the traditional male-dominated workforce. Therefore the UK government is examining ways to encourage women into traditionally male-dominated jobs. Since then a number of initiatives have been introduced promoting construction careers to women; however they have yet to achieve the desired effect. The main aim of this paper is to investigate how the construction industry can successfully recruit and retain professional women by looking at what lessons can be learnt from other sectors such as medicine. Hence this paper looks into other sectors, in particular the medical sector and how it has become an accessible career for women. It also focuses on the culture of other sectors to establish the influence this has over the employment of female professionals.

Keywords: construction, other sectors, women.

INTRODUCTION

The construction industry is traditionally considered a white, male-dominated industry. Currently there are over 11 million women employed in the UK, accounting for almost 50% of the workforce (Fielden *et al.*, 2000). The gender composition of the workforce throughout the UK has changed dramatically over the last 20 years; the UK male labour force has increased by 3%, whereas the female workforce has risen by over 40% (Cartwright and Cooper, 1994). Whilst women may be entering the workforce in increasing numbers, female workers remain concentrated in certain occupational sectors such as education, health and service sectors, notably banking, insurance and the retail trade (Department of Employment, 1989). In contrast, women have continued to be under-represented in the construction industry sector, which has been regarded traditionally as a stereotypically 'male' occupation. According to the Construction Industry Training Board (2003), women only account for 9% of the construction workforce. This means construction continues to be a mostly male-dominated industry.

The report 'Accelerating Change' led by Sir John Egan (1998) expressed concern regarding the shortage of people with the technical and management skills to fully utilise the new techniques and technologies available. Thus the potential skills shortage facing the industry has been a popular topic for discussion over recent years. To meet these targets the industry cannot rely on recruiting the traditional male-dominated workforce. Indeed, it is said that "a major obstacle to the industry to recruit the best people is the fact that half of the population is largely ignored by the industry" (Green,

2005). A study by Green (2005) further highlights the current position: “it’s a pretty rare breed of woman that works in the industry”; “we need more women to fill the skills gaps and to make a change”. Thus the recruitment of women is imperative to achieving these objectives and prolonging the growth of the industry.

Despite it being such a great concern, there has been very little change in the number of women working in industry. Numerous initiatives promoting construction careers to women have been developed but have yet to achieve the desired effect.

This paper reports the progress of an ESF-funded research project on identifying why there is a lack of professional women in construction. The main aim of the project is to investigate how the construction industry can successfully recruit and retain professional women by looking at what lessons can be learned from other sectors, such as medicine, marketing and media studies. In this context this paper intends to compare the construction industry with the medical sector and discover how this has become an accessible career for women. It also focuses on the culture of the medical sector to establish the influence it has over the employment of female professionals. A comprehensive literature review and semi-structured interviews conducted within the construction and medical sectors were the major methodology adopted to produce the results.

CURRENT STATUS OF WOMEN IN CONSTRUCTION

The construction industry is one of the UK’s chief employers, employing over 2 million people and accounting for more than 1 in 14 of the total UK workforce (CITB skills forecast Report, 2003). The role of the women in employment is changing radically in most societies and, as mentioned earlier, in Britain women constitute just over half of the total workforce. However as per the CITB Report (2003), it was revealed that women still constitute only 9% of the construction sector workforce. The true position of women in construction can be seen only when this figure is further broken down. Accordingly, 84% of women in construction hold secretarial posts, whereas only 10% are employed in a professional capacity and the remaining 6% are craft and trade level employees. Court and Moralee (1995) noted that the under-representation of women in construction only became an issue in the 1980s. In 1988, less than 7% of the full-time construction industry workforce in Britain was women. The Equal Opportunities Commission (EOC, 1995) stated in its annual publication that “women continue to be significantly under represented in the primary sector (agriculture and energy and water), in most manufacturing, in transport and communications and, in particular, in the construction industry”. Since then there have been number of studies carried out by various researchers on the under-representation of women within the construction industry (Gale, 1994; Fielden *et al.*, 2000).

Thus the lack of women in construction has been a concern for many years now. The studies in these areas have been invaluable in pinpointing the factors militating against the participation of more women in the construction workplace, and in particular, recruitment into the construction professions (Agapiou, 2002). The UK construction industry is at its busiest for a decade and is suffering from skill shortage in both craft and manual trades such as bricklaying, plumbing and painting, and at the professional level, in engineering, quantity surveying and estimating (Whitlock, 2002). The issue regarding the lack of women in construction has been made more prominent recently, attracting government and industry-wide attention, due to the potential skill shortage facing the industry. Therefore the UK government is examining the ways to encourage women into traditionally male- dominated jobs. Since then a number of initiatives have been introduced in order to improve the current situation and raise awareness, such as women working on construction committees and women as role models. Though

researchers have focused on how to improve the participation of women in the construction workplace, the objectives seem to be aimed rather towards solving the labour resources crisis and skill shortages than improving equal opportunities for women (Agapiou, 2002). Despite the number of recent recruitment initiatives, the industry has failed to make significant progress in recruiting more women. Over the years it can be seen from Figure 1 below that the number of women working in the construction industry has remained constantly low.

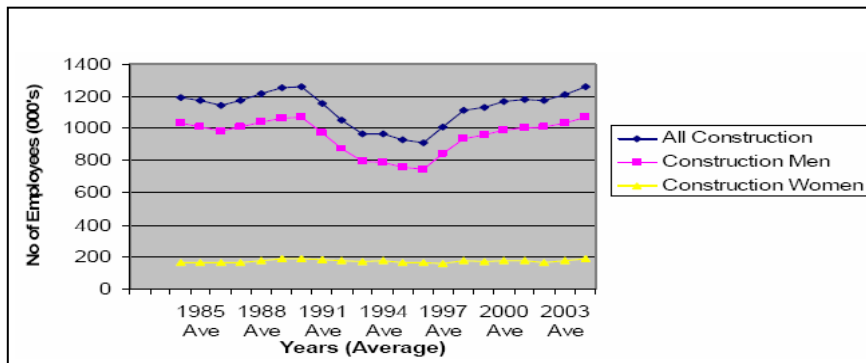


Fig. 1: Employee jobs in the UK construction industry 1984 to 2004 (Office of National Statistics, 2004).

From Figure 1 it is apparent that women's participation rate is low in the construction industry. Traditional gender divisions in the construction sector continue to be evident and vertical segregation is still prevalent, with women remaining under-represented in construction. As mentioned earlier, women now make up half of the working population and constitute over half of the entrants to university. However, the majority still seem to be segregated into the four occupational sectors of banking, hospitality and catering, education, and health, which are traditionally lower-paid areas. In this context, the next chapter will look into the status of women in other sectors, in particular medicine.

WOMEN IN THE MEDICAL SECTOR

This section gives an overview of the status of women in the medical sector. This sector was studied in order to find out how it became an accessible career for female.

AN OVERVIEW OF THE MEDICAL SECTOR

Medicine was once, as construction is now, a male-dominated industry with many similar factors to construction that are seen as detrimental to women working in the industry. These include long working hours which make domestic commitments difficult to accommodate, and a highly stressed culture. Yet these issues clearly do not put women off entering a career in medicine. Like construction is at present, medicine used to be the epitome of a male-dominated profession. However, as the number of women entering university education has increased, the number of women admitted to medical school has also followed this trend, rising considerably over recent years. The Royal College of Physicians (RCP), London (2004) cites that the proportion of women medical students remained at 20 to 25% until 1968, and since then the numbers have increased steadily, exceeding 50% in 1991. This figure continued to rise steadily from 54% in 1996, to 57% in 2000 and 58% in 2001. A recent report by the British Medical Association (BMA) (2004) has now placed this figure at around 60% and still rising. This steady increase in female medical students is now noticeable in employment figures. Research by Finlayson *et al.* (2001) found that women now constitute a substantial part of the medical workforce, with a steady increase in all grades. The number of women in the medical specialties is also growing. However, it has been noted that the number of women working at consultant level, in academia and in

positions of seniority is relatively low given the increase in other areas (Finlayson *et al.*, 2001; BMA, 2004; RCP, 2004). Arguably, this could be due to the low number of women entering the medical profession in the past, and the time lag between women entering medical school and working up to these senior grades.

The perception of women in medicine started to change in the late 1960's due to the growing concern about the shortage of doctors and an over reliance on doctors from overseas. As a result of these concerns there was an increase in the number of provincial schools, which meant women could be admitted without reducing the number of places available for men. Furthermore, in this period medical schools adopted the standard admissions procedures used by other universities, which took into account grades (A-Levels) rather than the 'old boy's network' approach (Elston, 1993).

The possible reasons for the increase of women in the medical profession could be the changes in the medical sector over the last century and changes in attitudes towards women in medicine. However a number of different reasons were presented by various medical authors. Those are briefly discussed under the following sub heading.

REASONS FOR THE INCREASE OF WOMEN IN THE MEDICAL PROFESSION

A prominent factor behind the increase of women in medicine was the change in admissions procedures, as mentioned previously. This issue is significant, as women have traditionally done better than their male counterparts in A-Level examinations and nowadays girls are continually surpassing boys at all academic levels. Herbert (2004) identifies that unlike previous generations, modern women are in a position where they can be whatever they want to be, are working hard and achieving the high grades necessary for a career in medicine. Another research carried out by Lambert *et al.* (1996) found that self-appraisal of an individual's own skills and aptitudes was a great influence on medicine as a career choice; women now have the self-belief in themselves that they can achieve, and succeed in the career they desire.

The influence of the range of socialisers on career choice is another factor for the increment in the numbers of women in medicine. The increased entry of women to the medical sector was attributable to female high achievers being directed towards a career in medicine by 'a range of socialisers' such as school career's advisers and family members (Powell *et al.*, 2004). Similarly, studies by Jawitz *et al.* (2000) found that family members and particularly parents had a profound influence on career choice.

A further determining factor behind the increase of women doctors, as argued by Chidambaram (1993), is the need for doctors to be representative of their patients. During the 1980's the medical profession was under scrutiny following a spell of negative publicity focusing on cases of inappropriate behaviour and the functioning of male medical practitioners in relation to female patients. Thus it was perceived that women doctors would provide a 'equal and empathic' service to female patients. This implies that the reason for the increase in the recruitment of women practitioners was to undertake these women's health issues. Research by Brooks (1998) supports this theory, finding that as the number of women doctors has raised so has the number of women's health services.

The medical profession faced further problems in the last decade in that GPs felt their professionalism was being compromised by the contract negotiations of the early 1990's. There was unease amongst GPs regarding their professional status in comparison with hospital specialists. GPs were considered as self-employed

contractors, independently contracted to the government, usually working with other self-employed doctors in practices. During these contract negotiations, GPs argued that the idea of being salaried would compromise their 'autonomy as professionals'. This led to a vast change in the structure of General Practice with the introduction of the 'New Contract' in 1990 by the Secretary of State, Kenneth Clarke. During this period the number of women entering the medical profession, and General Practice in particular, rose steadily. Crompton and Le Feuvre (2003) identified that it was these developments in General Practice that have made the field more 'female friendly'. However, despite these 'female friendly' changes, it has been noted that the New Contract has imposed greater stress on GPs due to increased workloads.

A report by the RCP (2004) found that unlike construction where part-time work is seen as impractical, the medical profession is more open to flexible working practices with a significant number of female practitioners, particularly those in more senior positions, working part-time. In 2003, 30% of women consultants worked part-time in comparison to 9.8% of male consultants, whilst 16.5% of women registrars made use of some flexible working arrangement compared to just 1.5% of men in the same position.

However, further research by Heiligers and Hingstman (2000) found that the desire to reduce working hours is not restricted to female doctors; over 40% of male MDs currently working full-time stated that they would prefer a part-time career focus. As per female MDs, the reasons cited for this part-time preference were predominantly related to the home domain. Furthermore, research by Fagan and Burchell (2002) identified that like the part-time women doctors, men choosing or preferring to work part-time are more likely to be in a position of seniority.

In medicine, support networks for women such as mentoring have grown in popularity as the number of women entering the profession has increased. They are now used to support women in medicine at all levels from mentoring during training, to 'women's groups' set up to offer encouragement to female practitioners.

A further reason for many doctors, not just women, choosing to enter the profession is prestige. Simon and Gick (1994) cited that this status originates from the public perception of doctors as bright, well-educated and thoroughly-trained individuals, which was particularly prevalent in the times when few were entering further education. On the other hand, Weger (1993) suggests that this prestige stems from the 'curing' aspect of the profession and the dependence that society has on doctors. He also highlighted that medicine has lost some of its social status as it has become more feminised, noting that it was considered more prestigious when it was male dominated.

The prestige of the medical sector has been maintained throughout the last few decades by the high grades required to enter medical school, the stature of the 'red brick' universities where these medical schools are situated and the financial rewards associated with the profession. However, it has been asserted that the prestige of medicine has started to diminish. Similarly, research by Simon and Gick (1994) found that numerous doctors in their survey commented on medicine's loss of prestige. Doctors who discussed this loss of prestige attributed it to a lack of appreciation and a lack of understanding by both patients and the NHS trust alike.

In addition, studies have shown that women in medicine dominate the lower echelons of the profession but are under-represented in more senior and consultancy positions. As previously cited, this could be due to the low numbers of women entering the profession in the past or, like construction, medicine is possibly experiencing the proverbial 'glass ceiling'. The next section will investigate this theory further by looking at the effect of culture on the employment of women in both the medical and

construction sectors. It is anticipated that this section will highlight if, and perhaps how the culture of medicine has changed to become more receptive to women. In this context, this section identifies details of initiatives that the construction industry could use to address its cultural problems.

THE EFFECT OF CULTURE ON THE EMPLOYMENT OF WOMEN IN THE CONSTRUCTION AND MEDICAL SECTORS

Culture can be defined as “the customs, ideas, art, etc of a particular civilisation, society, or social group” (Manser and Thomson, 1999). The expression ‘culture’, when discussed in terms of a corporation or organisation, is a complicated concept. In construction, culture causes further confusion due to the size of the industry; not only is it necessary to consider the culture of the construction industry as a whole, but also the values of the several sub-sectors of the industry such as house building, civil engineering, commercial builds and so forth.

Previous research of the medical sector has highlighted that the culture of the profession in the past was not too dissimilar to that of the construction industry. However, given the change in the structure of the medical profession, it was perhaps to be assumed that the culture would also have changed in order for the sector to become more receptive to women. However, this has not necessarily been the case and the authors found that the medical profession has more of a cultural problem than was first suspected, especially in the clinical setting. This chapter highlights that the medical profession is however taking considerable actions to improve its culture. In contrast, research in the construction industry identifies that despite knowing about its cultural problems for many years, it just does not seem to be making a conscious effort to change.

THE CULTURE OF THE CONSTRUCTION INDUSTRY

Regardless of its different sectors and the disparity in values, the culture of the construction industry in general can be described as openly masculine (Gale, 1994). Similarly, Dainty *et al.* (2000) describe the construction industry as a male-dominated and threatening environment, with an engrained culture characterised by masculinity, conflict and crisis. Research by Bennett *et al.* (1999) corroborates this, discussing the male values of the industry. These include long working hours, working away from home, geographical instability and a highly competitive culture. In today’s workplace these male values are generally considered extremely old-fashioned, but in construction, managers and professionals maintain these ‘traditional’ values and pass them on to others in the industry. For example, in terms of women working in construction, it was assumed that the older men would be more prejudiced; however, research by Gale (1994) found that young male construction professionals studying for their professional examinations were equally as narrow-minded. From this, it seems that the possibility of implementing a more open-minded culture is very slight.

In terms of recruitment, Gale (1994) found that the image and culture of the construction industry strongly deter women from entering it. Fielden *et al.* (2000) identified with this, citing the industry’s poor image as a reason why so many people, regardless of gender, are uninterested in a career in construction. Almost a decade on from Gale’s study, research by Turrell *et al.* (2003) found that little had changed in the industry regarding its perceived image. The result of these views is that people, and in this case women, are less likely to enter the industry. This is because both men and women prefer to stay within their comfort zones; they are less likely to enter a career if they find the culture unpleasant, discriminatory or reactionary. This problem has been a concern for many years now has been brought to the forefront of industry attention by public figures such as Sir Michael Latham and Sir John Egan. More recently, the

former Minister for Construction, Beverly Hughes, acknowledged the issue and stated that unless there was a step change in image and culture, the construction industry would face difficulties attracting new recruits to meet its long-term skills needs (Agapiou, 2002).

THE CULTURE OF THE MEDICAL SECTOR

As previously discussed, the medical profession has made considerable progress in the employment of women. Phillips (2004) cites that women make up 60% of all new doctors and identifies that in less than a decade they will outnumber men. This increase in women in medicine is significant considering how masculine both the profession, and the culture and values of the profession were. Like the construction industry, Dumelow and Griffiths (1995) stated that the 'male orientated' organisational culture, the career structure, available opportunities and work practices of medicine were discriminatory towards the employment of women. However, research by Riska and Wegar (1993) noted that as the profession has become more feminised there has been a gradual change in the male culture and attitudes, and that the sexual bias in medical practice is steadily being eliminated.

In addition, Dumelow and Griffiths (1995) noted that female trainees are less likely to enter hospital medicine, suggesting that the inflexible training and working practices may discourage women. Similarly, Heiligers and Hingstman (2000) revealed that hospital medicine is characterised by long working hours, night and evening duties and weekend work, and clearly such practices are unfavourable to women with family commitments. Research by the British Medical Association (2004) supports this by finding the reasons why many women are entering other more 'female friendly' areas of the profession.

White *et al.* (1997) also noted that women have difficulties in finding employment at consultancy level. Dumelow and Griffiths (1995) asserted that the criteria used in the recruitment process in medicine, and other male-dominated professions, are male defined. Both the profession and the public have a particular type of person in mind when they think of consultants, and during the recruitment process this can disadvantage women, and other doctors, who do not fit in.

Given the growing proportion of female doctors, it is clear that in general the medical profession has very few recruitment problems; however, there are certain areas of medicine which fail to attract sufficient numbers of women.

SUMMARY

Based on the women's opinions of the cultures of their respective industries, the cultures are concluded to be unfavourable to women working in both these professions. However, whilst this is still the case in the medical sector, its culture is now better than it used to be due to ongoing changes in the profession such as the introduction of flexible training, working time directive and so forth. In contrast to this, the women surveyed from the construction industry had varied opinions on the issue. The majority of women interviewed considered the culture of the industry to be adverse to women. Those who believed the industry to be unfavourable to women had children and therefore could not work the extra long hours and work away from home, as was sometimes expected of them.

The doctors surveyed considered flexible working as the reason why medicine has become such a popular career choice for women. However, whilst such practices are becoming more commonplace they are still not that popular in hospital medicine. All of the doctors surveyed noted that such arrangements have still not been fully accepted

and that they would be concerned about the effects such arrangements would have on their careers. When the question about flexible working was raised with the women in construction, they all responded that it would aid retention and make the industry more attractive to women.

MAJOR FINDINGS

As mentioned earlier, the comprehensive literature review and the semi-structured interviews conducted within the construction and medical sectors were the major methodologies adopted to produce the results. The next stage in the research process was the analysis of the data collected. The analysis of the interviews undertaken for this study followed the process outlined by Hall and Hall (1996): “qualitative analysis involves three activities: data reduction, data display, and conclusion drawing”. The first stage of analysis as identified by Hall and Hall (1996) is data reduction, which is the process of selecting, focusing, and simplifying the interview transcripts. This was done by reading through the transcripts and extracting the most relevant data for all of the questions listed in the interview schedule, and any additional questions that were raised during the interview. The next stage in the analysis process is to impose order on the data. This was done by producing a data matrix which tabulated the interview data; the respondents were listed as columns and the questions as rows. Two data matrixes were created, one for each sector, to allow for a cross comparison between the two industries. This matrix format was an ideal way of putting together the summarised data from the previous section; “it provided an ‘at a glance’ way of noting the responses and making comparisons” (Hall and Hall, 1996). This system made it easy to identify patterns in the responses and from this it was possible to note the relationships between the employment of women in the two sectors, which then went on to highlight the key themes of the study. The final stage of analysis was to display the data and draw conclusions.

FINDINGS IN TERMS OF RECRUITMENT

This section aims at identifying possible initiatives to aid the recruitment of women to the construction industry. Analysis of this part of the interviews identified a number of key themes, discussed below, that attracted the women surveyed to their chosen career.

EDUCATIONAL EXPERIENCES

In terms of education, which is one major factor influencing career choices, the medical professionals had chosen subjects at school and college that led to a natural progression into a career in medicine. However, this was not the case for the women in construction. Most of them had entered into other occupations prior to construction.

FAMILY INFLUENCES

Whilst the selection of school subjects and educational experiences are an important influence on career choice, this does not explain where an interest in subjects such as science and maths, traditionally male-dominated areas, originates from. In this study, family influences and childhood experiences were found to have an effect in stimulating an interest in such male-dominated fields. The majority of the women surveyed in medicine had close family members working in the profession. Correspondingly, the majority of the doctors surveyed felt they were well exposed to the profession. In contrast, only a few of the women in construction surveyed had family with attachments to the industry. This therefore corresponds with the research of Dainty *et al.* (2000) which found that female entrants were less likely to have been advised to join the industry by friends or family with experience in construction. Early childhood experiences and socialisation processes may well draw individuals to particular careers (Powell *et al.*, 2004). Women surveyed from construction felt they had very little

exposure to the industry prior to starting work or construction education. From this, it seems that women with family connections in the profession are more exposed to the industry, and are more likely to enter a career in the industry.

PERSONAL ATTITUDE

A further factor highlighted from the interviews regarding career choice was personal attitude. None of the women surveyed, regardless of profession, were deterred by the male-dominated image of the sectors. All of the women surveyed from construction attributed this to the individual characteristics of women in the industry. This corresponds with the research by Gale and Cartwright (1995), which found that women in construction with a more masculine and assertive approach are more likely to succeed. All of the women surveyed from the medical profession stated that they were not discouraged by the male-dominated image, as they did not consider the profession to be overly masculine. One doctor interviewed who was working in an overly male-dominated environment stated that this did not make a difference to her.

INFORMATION AND SUPPORT

A further factor affecting career choice and, in turn, recruitment, which revealed mixed opinions, was the information and support the women had received from parents, career advisors and teachers. All of the women surveyed from the medical profession stated they had received good career advice from teachers. The majority of the doctors surveyed also had very supportive parents and none had received any opposition to their career choice. In comparison, the women surveyed from construction had faced little opposition but the majority had received very little advice. Again, the exception was the women with family connections in the industry. As the majority of women in construction had entered the industry later in life, the careers advice received from schools or colleges was not relevant. However, the one woman interviewed who had entered a career in the built environment straight from college received very little support from careers advisors.

RECRUITMENT INITIATIVES

The final part of this section on recruitment concentrated on the opinions of these women on why the medical profession has become such a popular career destination for women, and why the initiatives developed by construction's professional bodies have had only limited success in attracting women to the industry. All of the women interviewed from the medical profession were unanimous in their opinions on why medicine has become so popular for women; the flexible training and working available in general practice. One of the women also discussed that she thought it was considered more socially acceptable for women to work in medicine than construction, and that medicine offered good opportunities to progress in a career. However, the women in construction had mixed views regarding the initiatives aimed at attracting women to the industry. None of the women were influenced by any such campaigns; they were unsure about their effects and the image of the industry portrayed by them.

FINDINGS IN TERMS OF RETENTION

This section focuses on the retention of women in their respective professions and the factors affecting retention. The construction industry seems to have problems retaining well-educated female professionals. This part of study aims at investigating the reasons why women leave the construction industry and why women doctors tend not to leave the medical profession.

Analysis of this section of the interviews demonstrates mixed responses from the women working in construction with regard to whether they would leave, or have previously left the industry. Some would consider leaving the profession and some

others had left the industry previously but had returned. In contrast, as predicted, none of the women surveyed from the medicine had considered leaving the profession. The only doctors with children who were surveyed had considered part-time working, but not leaving the profession. This raised the question as to the difference between these two sectors that caused women to leave one but not the other. The direction of the interviews then went on to consider this and an analysis of the results identified a number of key themes which are discussed below.

CAREER PROGRESSION

One of the main reasons that women leave the construction industry is difficulties associated with promotion. All of the women interviewed from construction felt there was little possibility for promotion. This contrasts with the research of Dainty *et al.* (2000) which found that women's relative over-representation in certain sub-fields within construction such as quantity surveying, adversely affected women's promotional opportunities. However, since the women interviewed had not been in the industry that long, it may be too early to know for sure whether this is truly the case. It would be of interest to find out whether women who have been in the industry a lot longer are still as optimistic. Similarly, all the women interviewed from the medical profession thought that in their current position there was the possibility for progression. This is supported by the fact that the women surveyed had already experienced promotion and were at quite senior levels in their careers.

DISCRIMINATION AND BARRIERS TO CAREER PROGRESSION

In line with the previous issue, none of the women surveyed from the construction industry felt they had faced any discrimination, or any barriers that had hindered their progression. However, they claimed that this is not because they do not exist but because they had found ways to overcome them. In contrast to the women in construction, the majority of the female doctors spoke openly about the discrimination and barriers they had faced in general, and in relation to career progression. Only one of the women stated that she had not faced any discrimination. However, she was the youngest woman surveyed and therefore may have entered after the profession had become more female orientated. One of the women felt that taking time off to have a child had affected her career progression. This theme raises the question of why women surveyed from construction were more reluctant to discuss discrimination than those from medicine. In line with this, Fielden *et al.* (2001) noted that even though there is legislation in place to overcome such discrimination, women in construction are expected to tolerate sexual discrimination whereas women in other professions do not.

CAREER SUPPORT

The next issue which has an effect on the retention of women is the support these women receive to assist them in their occupations. The questions centred on mentoring. Analysis of the data concerning mentoring from the construction interviewees revealed similarities with those in the medical sector. All of the women, irrespective of sector, felt that it was good to have a mentor. Most of them had unofficial mentors rather than official ones. However the women in construction argued that as they belong to the minority group, they experienced practical difficulties in finding a suitable person from whom to seek advice.

MOTIVATIONAL FACTORS

A further factor investigated through the interviews relating to the retention of women was what motivated these women in their careers. The aim of this question was to find out what motivates female doctors that is lacking in the construction industry. All of the women surveyed from the medical profession mentioned money as a motivator; however this was not considered as important as it was for the women in construction.

Job satisfaction and caring for people was also ranked as an important factor in the medical sector. However, the women in construction mentioned job satisfaction as their main motivational factor. This may reflect the fact that the construction industry is a low-paid industry as compared to medicine.

CONCLUSIONS

This research paper presents the partial outcome of an ongoing research project entitled 'Construction and Women'. This project mainly aimed to recruit and retain more women in the construction industry by looking at what lessons can be learned from other sectors. Accordingly the medical sector has been analysed to find out how it became an accessible career choice for women. After having done the analysis on other sectors such as marketing and media studies, possible recommendations will be made on the lessons construction could learn from such sectors.

Research of the construction industry for this study found that the culture seriously militates against women, both discouraging them from entering the industry and affecting their retention in the profession. This study also highlighted the similarities between the cultures and values of the medical and construction sectors. However unlike the construction industry, medicine has made considerable efforts to address its cultural problems.

Many suggested that by recruiting more women into the construction industry, the culture could be changed to a certain extent. This corresponds with the Construction Industry Board's report on 'Women and Men in Construction' (1996), which found that in many cases, women hold the skills essential for bringing about such cultural change. However, Gale (1994) noted that there was no evidence to prove that an increase in women in the industry would automatically change the culture, stating that those who have chosen a career in construction have chosen the culture of the profession and therefore have a stake in promoting and maintaining this culture.

A further factor highlighted by the interviews with regard to implementing a change in culture was education. Among the recommendations suggested to attract more women into construction, the issue of education was mentioned by every respondent. It was stated that not only students at school levels, but also parents, industry employers and career advisors need to be educated. Education at a very early age is the best way to improve the situation; this should not be undertaken only by the education centres, but through a tripod collaboration between such centres, the government and the industry. There cannot be just one stakeholder; this is the collective responsibility of the collaborative bodies. There may also be the need to educate the industry and the employers on how the contribution of women may enhance the growth of the industry.

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REFERENCES

Agapiou, A. (2002), "Perceptions of gender roles and attitudes toward work among male and female operatives in the Scottish construction industry", *Construction Management and Economics*, 20, 697–705.

Bennett, J. F., Davidson, M. J. and Gale, A. W. (1999), "Women in construction: a comparative investigation into expectations and experiences of female and male

construction undergraduates and employees”, *Women in Management Review*, 14(7), 273-291.

Brooks, F., (1998), “Women in General Practice: responding to the sexual division of labour?”, *Social Science and Medicine*, 47(2), 181-193.

Cartwright, S. and Cooper, C. L. (1994), *No Hassle! Taking the Stress out of Work*, Century Business, London.

Chidambaram, S. M. (1993), “Sex stereotypes in women doctors’ contribution to medicine: India”. In Riska, E. and Wegar, K. (eds.), *Gender, Work and Medicine: Women and the Medical Division of Labour*, Sage Publications, London.

Construction Industry Board (1996), “Tomorrow’s team: women and men in construction”, Report of the CIB Working Group 8, Thomas Telford and Construction Industry Board, London.

Court, G. and Moralee, J. (1995), “Balancing the building team: gender issues in the building professions”, Institute for Employment Studies/CIOB, University of Sussex.

Crompton, R. and Le Feuvre, N. (2003), “Continuity and change in the gender segregation of the medical profession in Britain and France”, *International Journal of Sociology and Social Policy*, 23(4/5), 36-58.

Dainty, A. R. J., Bagilhole, B. M. and Neale, R. H. (2000), “A grounded theory of women’s career under-achievement in large UK construction companies”, *Construction Management and Economics*, 18, 239-250.

Dumelow, C. and Griffiths, S. (1995), “We all need a good wife to support us”, *Journal of Management in Medicine*, 9(1), 50-57.

Elston, M. A. (1993), “Women doctors in a changing profession: the case of Britain”. In Riska, E. and Wegar, K. (eds.), *Gender, Work and Medicine: Women and the Medical Division of Labour*, Sage Publications, London.

Equal Opportunities Commission (1995), “Job segregation linked to gender bias”, Equal Opportunities Review 60, March/April, Equal Opportunities Commission, Manchester.

Fagan, C. and Burchell, B. (2002), “Gender, jobs and working conditions in the European Union”, Dublin: European Foundation for the Improvement of Living and Working Conditions.

Fielden, S. L., Davidson M. J., Gale, A. W. and Davey, C. L. (2000), “Women in construction: the untapped resource”, *Construction Management and Economics*, 18, 113-121.

Gale, A. W. (1994), “Women in non-traditional occupations: the construction industry”, *Women in Management Review*, 9(2), 3-14.

Gale, A. and Cartwright, S. (1995), “Women in project management: entry into a male domain? A discussion on gender and organisational culture – Part 1”, *Leadership & Organisation Development Journal*, 16(2), 3-8.

Green, E. (2005), "The recruitment and retention of women in construction: what lessons can construction industry learn from the medical profession with regards to the recruitment and retention of professional women?", unpublished BSc quantity surveying dissertation, University of Salford, UK.

Hall, D. and Hall, I. (1996), *Practical Social Research: Project Work in the Community*, Macmillan Press, London.

Heiligers, P. J. M. and Hingstman, L. (2000), "Career preferences and the work life balance in medicine: gender differences among medical specialists", *Social Science and Medicine*, 50, 1235-1246.

Jawitz, J., Case, J. and Tshabalala, M. (2000), "Why not engineering? The process of career choice amongst South African female students", *International Journal of Engineering Education*, 16(6), 470-475.

Manser, M. and Thomson, M., (eds.), (1999), *Combined Dictionary Thesaurus*, Chambers Harrap Publishers Ltd., Edinburgh.

Powell, A., Baginhole, B. M., Dainty, A. R. J. and Neale, R. H. (2004), "An investigation of women's career choice in construction". Proceedings of the Association of Researchers in Construction Management Twentieth Annual Conference, 1-3 September, Heriot Watt University.

Riska, E. and Weger, K. (1993), "Women physicians: a new force in medicine?". In Riska, E. and Weger, K. (eds.), *Gender, Work and Medicine: Women and the Medical Division of Labour*, Sage Publications, London.

Turrele, P., Wilkinson, S. J., Astle, V. and Yeo, S. (2002), "A gender for change: the future for women in surveying". Proceedings of FIG XXII International Congress, 19-26 April, Washington DC.

Weger, K. (1993), "Conclusions". In Riska, E. and Weger, K. (eds.), *Gender, Work and Medicine: Women and the Medical Division of Labour*, Sage Publications, London.

White, B., O'Connor, D. and Garret, L. (1997), "Stress in female doctors", *Women in Management Review*, 12(8), 325-334.

Whittock, M. (2002), "Women's experiences of non traditional employment: is gender equality in this area a possibility?", *Construction Management and Economics*, 20, 449-456.

WEBSITE REFERENCES

British Medical Association (2004), "The way forward: medical women", <http://www.bma.org.uk>, viewed April 2006.

Construction Industry Training Board (2003), "Construction skills and foresight report", <http://www.citb.co.uk>, viewed September 2004.

Eagan, Sir, J. (1998), "Rethinking construction", <http://www.construction.detr.gov.uk/cis/rethink/index/htm>, viewed July 2005.

Finlayson, N., Lorimer, A. R. and Alberti, K. G. M. M. (2001), "Women in hospital medicine: career choices and opportunities", <http://www.rcplondon.ac.uk>, viewed June 2005.

Herbert, K. (2004), "Where have all the men gone?", <http://www.studentbmj.com>, viewed December 2005.

Lambert, T. W., Goldacre, M. J., Parkhouse, J. and Edwards, C. (1996), "Career destinations in 1994 of United Kingdom medical graduates of 1983: results of a questionnaire survey", <http://bmj.bmjournals.com>, viewed July 2005.

Phillips, M. (2004), "Medicine loses its balance", <http://www.melaniephillips.com>, viewed April 2005.

Royal College of Physicians, London (2004), "Briefing on women in medicine", http://www.rcplondon.ac.uk/college/statements/briefing_womenmed.asp, viewed April 2006.

Simon, M. and Gick, P. (1994), "A study of physicians' reactions to health care reform", <http://www.drmsimon.com/articles/article5.htm>, viewed June 2005.