Older Women in Computer and Web Science:

"If you're not young, able to pull all-nighters or go to evening events, you're disadvantaged".

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ABSTRACT

In 2015, the UK government revealed that fewer girls chose subjects such as physics[1]. This increases in higher education (83% of degrees in computer science are awarded to males)[2]. Women are subsequently under-represented in the workforce linked with STEM (science, technology, engineering and maths) subjects, and those that do enter this workforce, sometime later leave and never return, often because of on-going family commitments. Nevertheless, the state retirement age in the UK for most women is now 67, meaning many women are expecting to remain in the workplace for longer, or return. This paper considers the unique challenges faced by older women taking a higher qualification in computer science, and suggests an ethnographic study.

CCS CONCEPTS

• **General and reference → Surveys and overviews**;

KEYWORDS

women, science, ethnography

1 INTRODUCTION

In 2015, the government launched a consultation into the gender pay gap which revealed that the overall gap for all employees was 19.1%[3]. The document then goes on to discuss some of the causes, which include the highest-paying sectors being disproportionately represented by men e.g. ICT, 68%, and that women are concentrated in lower-paid occupations e.g. 94% of childcare assistants are women, but only 7% of engineers. The underlying reasons for this are identified by the report, chief among them being the differences of years of experience in full-time work for women. Women often take a

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[1] http://www.apa.org/news/press/releases/2014/08/women-engineering.aspx
[2] https://www.wisecampaign.org.uk/uploads/wise/files/WISE_UK_Statistics_2014.pdf
[3] https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/426646/A_level_subject_take-up.pdf

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'career break' to raise a family, and/or are faced with additional caring responsibilities (grandchildren or elderly parents) later in life. The traditional, linear career progression paradigm is disrupted for women[4]. They may also have to cope with physical and mental health issues arising from the menopause[2].

2 RETURNING TO EDUCATION

Some women choose to return to full-time education, as is the case with the authors of this paper. This is often because they wish to update their existing knowledge and skills, or change their career direction. Older women may bring many benefits to the educational institution they join. This is especially true of work in connection with STEM-based industries, where they become role models. However, they face challenges unique to their position within their respective families and the demands made on them, as well as the health issues referred to above. Older women are often not free to travel outside office hours, reducing opportunities for networking and building the social capital needed for progression[1].

3 PROPOSAL AND METHODOLOGY

We propose an ethnographic study of older women (say, over 35) undertaking PhD study in computer science related work to reveal the difficulties this demographic faces[3], using a 'critical ethnography' methodology.

4 CONCLUSIONS

Older women working in STEM-based industries are an asset. In order do this, they must have access to HE and PhD courses which include at the very least an awareness of the difficulties they may face, and at best a formal structure that acknowledges their difficulties and puts appropriate support mechanisms in place.

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