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The Importance of Communities in HE: The Example of WISC, the International Network for Women in Supramolecular Chemistry and its Work to Support the Retention and Progression of Women and Marginalised Genders

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Abstract: Covid-19 has had a disproportionate impact on women and those with caring responsibilities. Within STEMM (Science, Technology, Maths & Medicine) disciplines it is well known that there is gender disparity. However, STEMM is not a monolith and there is a particular lack of retention and progression for women and all those with protected EDI characteristics in the chemical sciences. All such characteristics are of course intersectional.

WISC set out to address the issue of retention and progression in supramolecular chemistry by creating a sense of community and kinship, and develop diversity. The model WISC has adopted “calls in” the community to support each other (Caltagirone *et al.*, 2021), and uses a variety of qualitative approaches to investigate and explore the lived experiences of those who are marginalised in the academy. In this paper we will share a series of fictional vignettes to illustrate the importance of community in addressing marginalisation.

Paper: Women in academia are disproportionately affected by funding structures, academic culture and caring responsibilities. Covid-19, the shutting of laboratories, and reduction in research funding has had a disproportionate impact on women and those with caring responsibilities (Flaherty, 2020). The issue of how women can thrive in academia has been tackled recently by Marian Mahat (Mahat, 2021), and has been a topic of consideration for many years (Stiver Lie and O’Leary, 1990). Within STEMM (Science, Technology Engineering, Maths and Medical disciplines) it is well known that there is gender disparity (Rosser, 2017). However, STEMM is not a monolith, and there is disparity among the disciplines. For example, there is a particular lack of retention and progression for women and all those with protected Equality and Diversity characteristics in the chemical sciences (R.S.C., 2018, 2019). All such characteristics are of course intersectional, with those from minority ethnic backgrounds, with disabilities, or who are first generation to university facing compounded barriers in addition to gender (Ahmed, 2012).

There is no problem in attracting women to study chemistry, for well over 100 years it has been demonstrated clearly that women are interested and keen to study and work in science (Fara, 2018). The proportion of women choosing to study chemistry in the UK was 45% in 2014/15 compared to 20% choosing physics, and yet in both the proportion of women at professorial levels was just 9% (R.S.C, 2018). The issues seem to appear with the challenges that these women face when it comes to their careers, in terms of outright discrimination and more subtle microaggressions due to their socialisation as women, or choices around motherhood (Mason and Ekman, 2007; Monosson, 2008; Colwell and Bertsch McGrayne, 2020). In chemistry more women are employed on short-term precarious contracts, making it difficult to settle down, secure a home and start a family if they choose. More women are involved in interdisciplinary research, yet women author fewer papers, and are cited less. Proportionately fewer women sit on editorial boards, are nominated for awards, and far fewer file patent applications.

Culture has an impact, and often there is one of “old boys clubs” and heavy drinking within chemistry (RSC, 2019). This particularly disadvantages women who are less likely to participate (Phipps & Young, 2015). A survey WISC (the International Network for Women in Supramolecular Chemistry) conducted in 2019 showed that career breaks and having a family is a consideration, as is a lack of role models and mentors (Caltagirone *et al.*, 2021). At the current rate of change, the Royal Society of Chemistry (RSC) recognises that the chemical sciences will never reach gender parity (2018).

WISC set out with the aim to address the issue of retention and progression in supramolecular chemistry by creating a sense of community and kinship, and to develop diversity. Since its launch in late 2019 WISC has created a programme of small group mentoring and support clusters for those who are further marginalised. These clusters include a parenting cluster (for parents, step-parents, adoptive parents, foster parents and prospective parents), a disability/chronic illness/neurodivergence cluster, and a first gen cluster. The model WISC has adopted “calls in” the community to support each other (Caltagirone *et al.*, 2021), and uses a variety of qualitative approaches to investigate and explore the lived experiences of those who are marginalised in the academy. WISC uses Embodied Inquiry as a research approach (Leigh and Brown, 2021) along with creative methods (Kara, 2015). These methods have been chosen specifically to be an antidote to and represent an antithesis of the methods more commonly associated with ‘hard’ research subjects such as chemistry.

WISC’s second survey, exploring experiences through Covid-19, together with findings from ongoing collaborative autoethnographic research, demonstrated the importance of community in general and WISC in particular. Many respondents and participants experienced loneliness and isolation as women in a marginalised field, and these feelings were exacerbated through Covid-19. These

responses were synthesised into a series of fictional vignettes (Clough, 2002; Leavy, 2016). In this paper we will share some of these vignettes to illustrate the importance of community in addressing marginalisation.

The field-specific approach that WISC has chosen to take has been particularly effective at engaging senior academics in the community. WISC wants to intervene within a space that is unfair and marginalised, and change the experiences of those entering the field, drawing on feminist and creative research practices to make sure voices are heard, and show the STEM and Higher Education communities that interventions like this are worthwhile and necessary.

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