

WESTERN SYDNEY
UNIVERSITY



**Exploring ways to elevate
women's leadership voices to achieve
career longevity and gender parity**

RESEARCH REPORT

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With respect for Aboriginal cultural protocol and out of recognition that its campuses occupy their traditional lands, Western Sydney University acknowledges the Darug, Tharawal (also historically referred to as Dharawal), Gandangarra and Wiradjuri peoples and thanks them for their support of its work in their lands (Greater Western Sydney and beyond).

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Executive summary



Times are changing in terms of women's agency and ability to affect positive change and develop their professional profiles.

Universally, women from all walks of life—educators, social work, environmental activists, entrepreneurs, sports, musicians, artists, actors, and politicians—are rising in both eminence and distinction. However, gender disparity in higher education (HE) is pernicious, ubiquitous and enduring (Ahmed, 2017; Bell & Bentley, 2005; Carrington & Pratt, 2003; Dever & colleagues, 2008; Winchester & Browning, 2015). Some in HE argue that gender asymmetry is highly evident, but also hard to pinpoint due to its covert nature (for instance, Gray & Mitten, 2018; Leathwood & Read, 2009; Morley, 2013; Winchester & Browning, 2015).

Despite the increased effort by some in academe to include women, we still feel underrepresented in leadership roles, including but not limited to: senior academics, professoriate and executive staff (Carrington & Pratt, 2003). Fewer women, mean fewer voices being heard and our 'invisibility cloak' needs to be lifted and redressed (Mitten et al., 2018). The current impasse begs the question: *How do we bring about positive change in the sector?* This project builds on previous work of gender equity leaders in the field such as Morley, (2013) and Winchester, & Browning, (2015) and aims to heighten the leadership capability and career longevity of women in Higher Education at Western Sydney and beyond.

The overarching research question guiding this study was: *How Should We Elevate Women's Leadership Voices in Higher Education to Achieve Career Longevity and Gender Parity?*

A mixed-method research design was adopted using an online survey and focus group interviews. The latter incorporated aspects of storytelling and reflection (autoethnography) and art-based methods (visual journey mapping). As a poststructural enquiry, this introspective way of narrative research differed from traditional methods of scholarly approach. The common perspectives of their individual narrative was distilled into emergent themes.

Findings

Quantitative data

A total of 217 females from academe, government and the Homeward Bound Project answered the survey. One hundred and twenty (55.30%) had a PhD degree, and 11.52% (n=25) are studying towards a doctorate. The majority (88.5%) were either early or mid-career (EMC) academics. Factors which impacted on their career progression included: 1) having worked with multiple employers; 2) a myriad of career pathways due to circumstances beyond their control; 3) being personally satisfied with work-life balance and not seeking promotion in my career; 4) taken time out of my career for other reasons; 5) career accomplishments have been disrupted due to funding; 6) multiple career paths by choice; 7) being marginalised and not the “in-crowd” within workplace; and 8) their work is invisible, imperceptible and difficult to document especially against checklists aligned to promotion criteria.

Alarmingly, most had been in their careers less than 10 years, yet 86 participants (39.6%) had experienced international relocation and the majority stated they had to be mobile to attain jobs.

The top ten factors women valued most about their profession were: intellectually stimulating; autonomy and control; interest in the field; genuine passion for field of study; intellectual challenge; contribute to new knowledge; collegial work environment; job security, financial reward; and opportunity to travel.

Qualitative data

The metaphor of a maze or labyrinth, rather than the ‘glass ceiling’ best described the complex and convoluted pathways associated with their careers. Whilst navigating their professional pathways, women experienced a workplace culture of systemic discrimination exacerbated by having children and then re-assimilating into the casualised workforce. Most felt their innate skills were invisible to the upper echelon of the academy such as the “emotional labour” and “collaborative glue” they brought to the workplace. Despite an abundance of talented women, they articulated the need to continually prove their credibility. This was compounded by their reluctance to self-aggrandise or self-promote. Lack of transparency in decision making procedures, and choosing to be with family, overrode their need to climb the career ladder. Collectively, these factors impacted upon their enduring professional path.

Summative Comment

Voice is both a right and a privilege. In this study, women’s narratives have contributed to the increasing body of knowledge in the HE workplace. The ability to articulate clear pathways; to bolster career satisfaction; and maintain longevity will address gender disparity and cultural blind-spots.

Acknowledgments

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Introduction



As noted in an email by Western Sydney University's Vice-Chancellor, Professor Barney Glover (21 February, 2018):

“Gender equality is about fundamental human rights. We must continue to challenge the status quo and be innovative and creative in how we overcome the barriers that women, and indeed people of all genders and orientations, face.”

All four authors of this report have a gamut experience as women in academe ranging from full time, part time, fixed-term contract, casuals and higher degree research scholarship holders. The prospect of honouring women's voices resonated deeply due to their respective histories and a constellation of experiences in the academy.

What follows in this report is a synthesis of the key findings arising from the Vice-Chancellor's Gender Equity (VCGE) grant in 2018.

Background information

Interestingly, women fill the majority of lower-ranking academic positions (53.2%) at Australian universities (DET 2016). More alarmingly, less than one-third (31.7%) were senior positions (Level D or E) and less than half (44.7%) occupied Level C positions (DET 2016). Correspondingly, the majority of casual staff in non-academic positions (66.3%) were women. The professional landscape in Higher Education (HE) indicates that gender asymmetry prevails and paints a rather worrisome picture for early career academics.

Evidence based research suggests universities can be disempowering and unfriendly environments for women (Gardner, 2012). As a direct consequence, career trajectories can be stymied or delayed (Acker & Armenti, 2004; Ahmed, 2010; Black & Garvis, 2018; Diezmann, & Grieshaber, 2013; Kimber, 2003; Monroe & Chiu, 2010; Monroe, Ozyurt, Wrigley & Alexander, 2008). Given the underrepresented status of women in academia (National Science Foundation, 2009; Schuster & Finkelstein, 2006; Wasburn, 2007), identifying the underpinning factors and consequences of women's career longevity or premature departure is warranted. To this end, academic women's stories must be told, and more importantly, listened to by those in positions of power or privilege.

The reality and lived experiences of women in higher education can be perceived in a multiplicity of ways. The study used a mixed-methods research design and engaged with 217 women who were representative of a wide cross section of early-career, mid-career and senior academics in Australia and globally.

Literature review

A pervasive and enduring problem

The issue of women's leadership voices in higher education and whether higher education is fair to women has been questioned for at least three decades (Acker & Piper, 1984). During that period, a wide body of literature that has investigated this and related questions, including the issues concerning women in leadership in higher education (see, for example, Bagilhole & White, 2011a; Burkinshaw, 2015; Cullen & Luna, 1993; de la Rey, 2005; Moore, 1987; Morley, 2013; Schwartz, 1997; Sharafizad, Brown, Jogulu, & Omari, 2017; Stevens-Kalceff, Hagon, Cunningham, & Woo, 2007). A further body of literature argues that despite the increasing number of women in the workforce, occupational and hierarchical segregation by gender still exists as organisations continue

to be 'gender constructs' (for example, Bailey, Peetz, Strachan, Whitehouse, & Broadbent, 2016; Carrington & Pratt, 2003; Dever, et al., 2018; Strachan & French, 2007; Whitehouse, 2017). Within these two overarching themes are several sub-themes that are inextricably linked: the challenge of women's representation in leadership in higher education is a wicked issue in which there are many inter-related themes (Figure 2.1). These themes are all set in the context of the institutional cultures of our institutions of higher education, which impact and influence individual behaviours and organisational systems and that result in the leadership labyrinth that confronts women in higher education (Chin, 2011).



Figure 2.1: Themes from the literature

This literature review briefly considers these themes and sub-themes in turn: although there is an abundance of literature on these issues, this study is constrained by time and resources and hence this literature review is similarly constrained. Nevertheless, both scholarly literature and the *grey literature* of government and institutional reports and newspaper articles are used here to paint a contemporary picture of these issues.

The leadership labyrinth

Two decades ago, Klenke (1997) introduced the concept of the leadership (and IT) labyrinth, arguing that leadership is complex and multi-dimensional. While some women have made their way through this labyrinth, new paradigms for leadership and radical social change that takes into account women's values are required for more women to find their way through this maze (Klenke, 1997).

More recently, Eagly and Carli (2016, 2018; 2007) have posited that the *labyrinth* is a more apt representation than is the *glass ceiling* for the complex and nuanced issues faced by women in their attempts to rise to positions of leadership: 'the glass ceiling metaphor conveys a rigid, impenetrable barrier, but barriers to women's advancement are now more permeable' (Eagly & Carli, 2007, p. 1). Conceptually, the labyrinth allows for inclusion of various challenges confronting women as they travel through their careers to leadership roles, sometimes facing impenetrable barriers but at other times finding circuitous routes.

The labyrinth metaphor is also congruent with contemporary conceptualisations of leadership that recognise multiple leadership models (Goleman, 2000; Harrison, 2018; Jones, Harvey, Lefoe, & Ryland, 2014; Snowden & Boone, 2007). Such a multiplicity of leadership models allows for the recognition that women might reach leadership roles via different pathways and that they have different leadership styles, which need to be valued and used to advantage (Chin, 2011).

Gender constructs

It can be argued that the University of Bologna was the first European university to be established (Bowden & Marton, 1998). While the University of Bologna included women on its staff as early as the 12th century, it appears

that women were not admitted as students until the 18th century (Università di Bologna, 2018). The admission of women to study at other European and at Antipodean universities followed in the 19th century (see, for example, Ballarin, Birriel, & Ortiz n.d.; Bergmann, 2013; Ministry for Culture and Heritage, 2018; Oxford University Archives, 2018; University of Bern, 2018; University of Melbourne, n.d.); however, it was not until 1920 that women were allowed [emphasis added] to graduate from Oxford (Oxford University Archives, 2018). Indeed, the *raison d'être* of early universities was to provide the church with educated priests and the state with educated civil servants, both of which were overwhelmingly male (Bagilhole & White, 2013).

These adverse conditions for women seeking to study at university illustrate that gendered constructs are deeply ingrained in higher education, notwithstanding more recent liberal and neoliberal cultures that present universities as 'rational, gender neutral organisations' (Burkinshaw, 2015, p. 27). This representation of gender-neutral higher education institutions has been recognised as flawed for well over a decade (Burkinshaw, 2015), ignoring 'masculinist, white, heteronormative' privileges (Mayes, 2018, p. 1). As will be seen through this literature review, these gender constructs remain as barriers to the progress of women into higher education leadership roles.

Systemic discrimination

Unexamined gender constructs underpin systemic discrimination (Cusack, 2013). Systemic discrimination is evident in organisational policies and practices that disproportionately affect women with negative impact (Jackson & O'Callaghan, 2009). Gaenor Bagley (cited in Burkinshaw, 2015) put this most appositely:

We know women are confident and ambitious, but they have different goals to men. Until these goals are recognised as different, but valued equally with male priorities, workplaces will continue to disappoint and disillusion all but the most tenacious of women. To make real progress in supporting women's careers, we need workplaces and a society that value women's differences and support these aims. This means getting the basics, such as how people are assessed and rewarded at work, right. (p. 18)

In the higher education sector, systemic discrimination can serve to enhance men's opportunities, while limiting those of women; for example, performance criteria used in organisational evaluations may be more subjective in character, especially for senior leadership roles (Roos & Gatta, 2009). Indeed, more than a decade before Bagley made her observation, Don Aitken, upon retiring as Vice-Chancellor of the University of Canberra, commented:

I do not think that making it easier for women to be more like men will assist the process of converting male single-mindedness into socially useful outcomes... Rather, I think we need to work on ways to emphasise and accredit the instinctive values that women hold. (cited by White, 2003, p. 45)

Women's leadership voices in higher education

As indicated at the start of this literature review, there has been extensive research, primarily by women, into women's participation in academia and the barriers to success. For at least three decades, women have been shouting into a vacuum created by the general lack of ownership of the issue taken by men. Although writing about women in the scientific research workforce, the following comment by Bell and Yates (2015) could apply more generally to addressing the issues for women in higher education leadership:

It is time to focus on developing clear actions and strategies to achieve organisational and sectoral change. There is a new imperative to do this as the deterioration of research funding and employment conditions in universities and other public research institutions, and the disjunction between these conditions and the investment required to meet extremely high entry-level standards, presents a significant threat to the attractiveness and sustainability of the science research workforce. (p. 7)

Women in higher education leadership

While women are part of higher education leadership in most countries, the pathway to leadership roles is gendered, tending to be aligned with the traditional male academic career (Bagilhole & White, 2011b). Women who reach higher education leadership roles have had to navigate the labyrinth and its gendered barriers, adhering to institutional and role expectations defined by masculine norms (Burkinshaw & White, 2017; Chin, 2011). At the same time, women in leadership roles tend to be criticised for demonstrating 'soft' management skills (White, Carvalho, & Riordan, 2011). Albeit, these women are in the tenuous position of working in 'communities of practice of masculinities as not yet full members . . . whereas their male counterparts achieved full membership almost by default' (Burkinshaw & White, 2017, p. 10). And, as will be discussed in the following section, women in higher education leadership roles are in a minority (Morley, 2013), adding an inevitable precariousness to their leadership careers (Burkinshaw & White, 2017).

Invisibility

Women outnumber men in the Australian population (Australian Bureau of Statistics, 2018); however, the invisibility of women in leadership roles can make it seem as though they are a minority group. This imperceptibility is clearly apparent in higher education, where women are noticeably absent from leadership roles globally (Morley, 2014), as well as in Australia (Bagilhole & White, 2008; Winchester & Browning, 2015). For example, women university students have outnumbered men since 1987 and now account for 58% of domestic Australian enrolments (Norton, Cherastidham, & Mackey, 2018) and there is a similar proportion (57%) of female university staff (Department of Education and Training, 2018a); however, only 31% of Australian Vice-Chancellors are women (Universities Australia, n.d.). Although such disparities also exist in other fields, gender imbalances in our universities should be of special concern due to the key role that higher education plays in society (Burkinshaw, 2015; Chin, 2011).

Self-effacing

Institutions of higher education have a pervasive masculine culture into which women, aspiring to or achieving leadership roles, learn to 'fit' (Burkinshaw & White, 2017). Nevertheless, this masculine culture is at odds with the self-effacing way many women behave:

There is something about the idea of ambition that makes women distinctly uncomfortable... highly successful women attribute their success to luck and won't admit to being ambitious because they feel it desexualises them and makes them appear self-serving and egotistical. (Fels cited by Burkinshaw, 2015, p. 22)

Furthermore, there is a tension generated within the context of the masculine culture, in which ambitious women are viewed as 'pushy' by men (Roos & Gatta, 2009); a perspective to which women themselves often subscribe:

For these women ambition necessarily implied egotism, selfishness, self-aggrandisement, or the manipulative use of others for one's own ends... These women's denial of their own ambitiousness was particularly striking in contrast to the men I interviewed, who assumed ambition was a necessary and desirable part of their lives. (Fels cited by Burkinshaw, 2015, p. 60)

Arguably, there is an incongruity between the gender constructs of what it means to be female and how leadership roles in higher education, and the pathway to such roles are structured (Morley, 2013), creating barriers for women as they journey through the labyrinth.

Individual attitudes towards women

A few years ago, it could be said that sexism and overt discrimination had waned (Roos & Gatta, 2009). In light of world events over the last two years, including the rapid expansion of the *Me Too* movement (Bennett, 2017) and the resultant backlash (Greenfield, 2018) that is underpinned by presidential misogyny (Habib, 2018), this claim can no longer be made. Within the complex organisational structures of higher education, sexism can be ongoing and elusive (Gray, Knight, & Blaise, 2018). At other times, sexism and sexual harassment can be not only overt, but also blatant, especially for young women (Batty & Davis, 2018).

While sexism is typically viewed as individual issues, many of the organisational structures of higher education serve to foster sexism and harassment in higher education, and to protect the perpetrators. These structures include long hours of research, research in isolation (dependent, perhaps, on an older male supervisor) and the overt hierarchical nature of academia (Kelsky cited by Batty & Davis, 2018). Career progression in academia is dependent upon networking and good references, and victims of sexism and harassment may be reluctant to make a formal complaint and, if they do, they may be ignored by the very organisational structures intended to protect them (Batty & Davis, 2018).

While some practices, such as *mansplaining*, may be seen as innocuous, they entrench gender constructs that disenfranchise women. Such sexism may be dismissed, again as being the fault of the female victim rather than that of the male perpetrator.

When you declare something to be sexist, you are often accused of projecting something (even projecting yourself) onto a situation. You might say: the way it is assumed that the man next to me is the professor, that's sexism. A response typically follows: that is just the way you are seeing things. Sexism is often denied, because it is seen as a fault of perception; something is sexist because you perceive it that way: *you perceive wrongly when you perceive a wrong*. (Ahmed, 2015, p. 8, emphasis in the original)

'Fixing' women

Although Don Aitken, cited above, recognised that 'fixing' women would not be an answer to improving women's access to leadership roles in higher education, the deficit model approach has produced a wide range of interventions, including 'women in leadership' programs, mentoring for women, programs designed to enhance women's confidence and self-esteem and capacity-building programs (Bell, 2017; de la Rey, 2005; Morley, 2013). However, such programs place responsibility for women's lack of leadership progression squarely with women (Burkinshaw & White, 2017). These programs are typically run by women, for women, and while some might see that as empowering, others ask the question: *Why is fixing sexism* [insert preferred gendered issue] *women's work?* (West, 2018).

Development programs

The existence of development programs for women is inextricably linked to the notion of ‘fixing’ women, discussed above. Approaches to addressing the lack of women in higher education leadership roles that focus only on providing development opportunities for women (that is, ‘fixing’ women), without addressing organisational cultures that reproduce inequality, are fundamentally flawed (Morley, 2013). Such a monocular view ignores the complex and wicked nature of the issue, which has proven to be highly resistant to resolution due to contradictory and changing requirements.

The pipeline issue

For the last three decades, there have been more women than men entering higher education to study in Australia (see Figure 2.2). Three decades ago, more than one quarter of all doctoral recipients in Australia were women (Dobson, 2012). Until the turn of the century, the lack of women in senior academia in Australia could be attributed, at least in part, to women being discouraged from enrolling in or completing research higher degrees’ (White, 2004); however, for the last decade more women than men have been completing doctorates (Dobson, 2012). The ‘pipeline issue’ – that is, the contention that there are too few women qualified for leadership roles – is no longer supportable (Bell & Bentley, 2005).

Gender

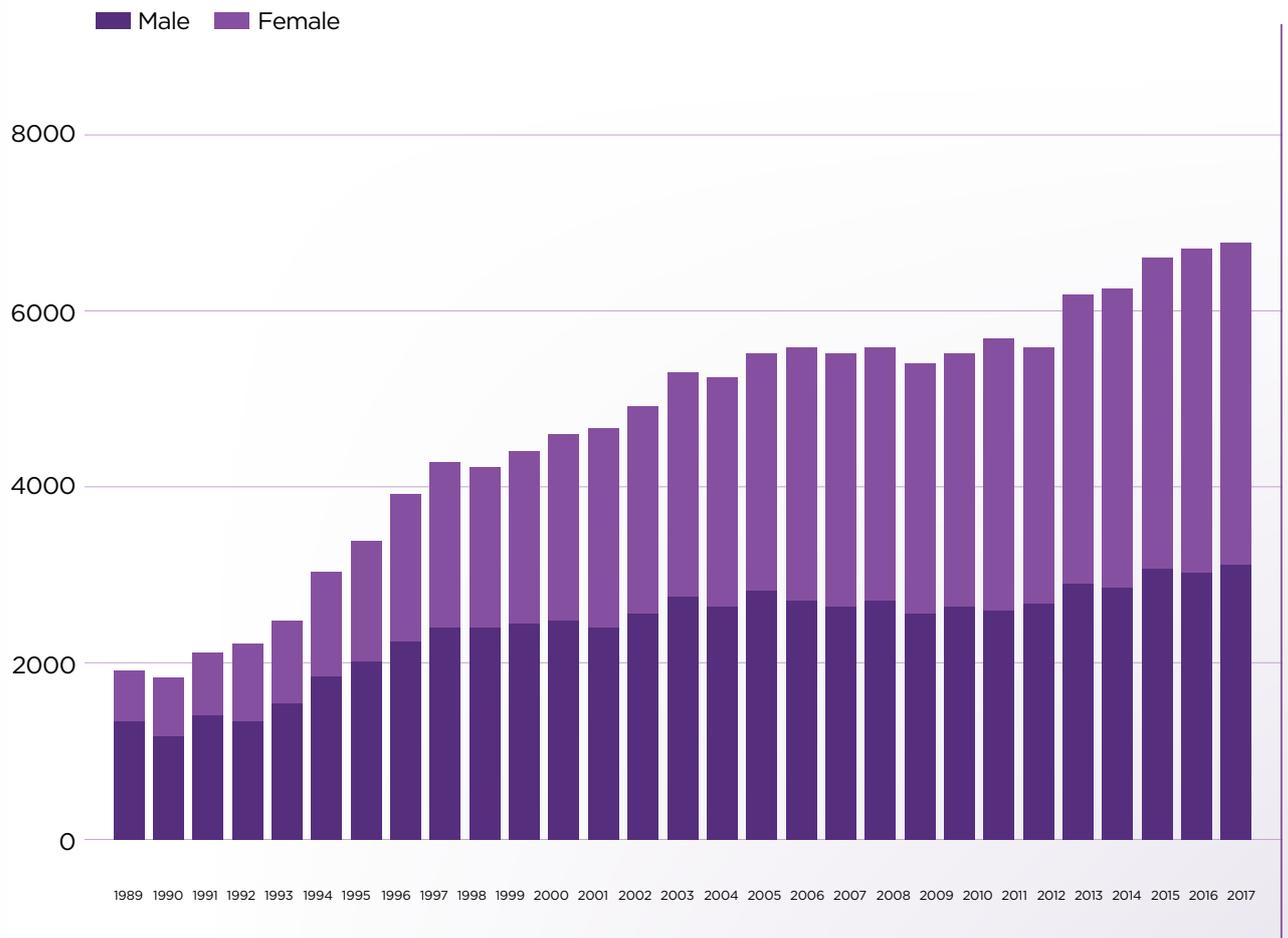


Figure 2.2: Research degrees completions (domestic students) in Australia by gender (Department of Education and Training, 2018b)

Attrition

As women enter the pipeline at the lowest level in increasing numbers, their representation at higher levels continues to improve (Marchant & Wallace, 2013). However, change is slow and women continue to be under-represented at senior levels (see, for example, Figure 2.3).

Academic staff by level and gender, Western Sydney University 2017

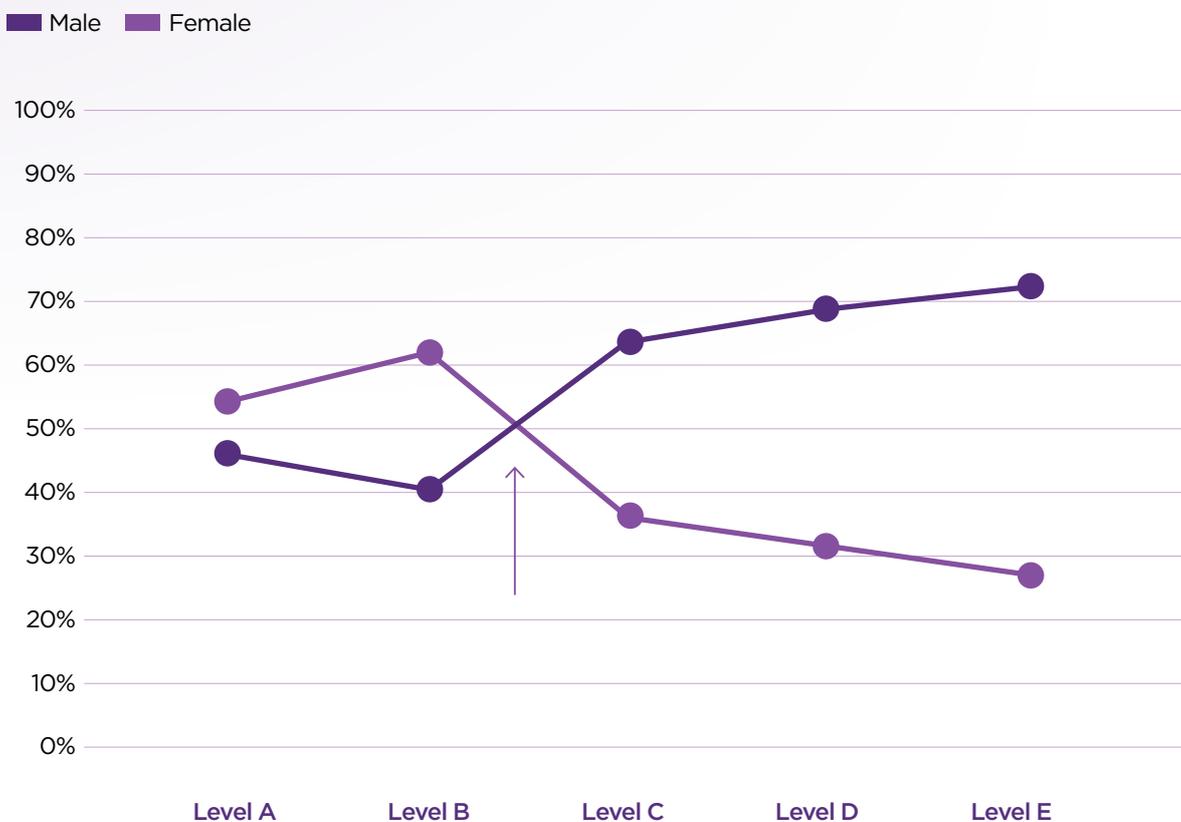


Figure 2.3: Academic staff gender disparity (2017) at Western Sydney University (Aldrich-Wright, 2018)

Deficit models — such as career interruptions, family responsibilities and lack of high profile research — are used to justify or explain the attrition of women (Winchester & Browning, 2015); however, such constructions ‘betray a host of assumptions’ (Bueskens & Toffoletti, 2018, p. 18) that are gender-biased. Indeed,

...these statistics, which show that women are not moving through the pipeline from lecturer A to Professor, highlight a form of sexism. (Gray, et al., 2018, p. 598).

The issue of attrition results from ‘a deep-seated cultural issue within universities’ (Winchester, Lorenzo, Browning, & Chesterman, 2006, p. 514)

Institutional culture

Culture consists of the unwritten rules of the social game. It is *the collective programming of the mind that distinguishes the members of one group or category of people from others*. (Hofstede, Hofstede, & Minkov, 2010, p. 6, emphasis in the original)

An organisational culture that is open and supportive, supporting gender diversity is viewed as the most effective means of improving gender diversity at senior levels (Chartered Institute of Personnel and Development [CIPD], 2015). Yet, as discussed above, higher education institutions have

masculine cultures and currently women must fit into this community of practice of masculinities if they are to succeed (Burkinshaw, 2015). If we are to change the current gender imbalance at the most senior leadership levels in our institutions, there must be a transformative change to institutional culture: a range of ad hoc diversity measures on its own is inadequate. Diversity measures must be systematic and systemic, and supported by a diverse and inclusive institutional culture that is evidenced in the composition of institutional leadership, in leadership styles and performance models (Burkinshaw, 2015).

In conclusion

This literature review is by no means exhaustive. Given the wicked nature of the issue of women in higher education leadership, there is a multiplicity of factors that contribute to the complexity of this issue. For example, there is increasing casualisation of the higher education workforce in Australia (Long, Kimberley, & Cannizzo, 2018; Yasukawa & Dados, 2018) — a workforce that is mostly female. Casualisation is linked to the themes of invisibility and attrition (Crimmins, 2018), but has not been investigated in this literature review. A more comprehensive examination of the factors that contribute to the gendered nature of higher education must be left to a future study. Nevertheless, this review paints a broad-brush picture of contemporary issues that have emerged from the literature, and provides background for this current study.



Data collection methods



Ethics clearance for a mixed-methods research design was obtained from Western Sydney University's Human Ethics committee (H12746). Data was collected from a cross section of early-career, mid-career and senior academic women through both qualitative and quantitative approaches. As the research investigated the retrospective career trajectories of women, this study offers exploratory mapping of women's life histories in academia.

Qualitative data

The focus group interviews enabled a safe space for women's voices to be shared and honoured as part of re-telling their career journey. Using a hybrid approach, the study amalgamated threads of autoethnography, storytelling and art-based visual methods. Participants were invited to reflect upon their gendered career journeys within their chosen profession and the guiding questions used to encourage the introspective process included:

When did you know that gender played a role in your career trajectory?

Draw your experience and map critical points in your career journey.

When finished we invite you to tell your individual story to the group whilst having this audio-recorded. Anyone can opt out of this process at any stage without fear of retribution or penalty?

A total of 11 participants attended the three workshops which were delivered across three organisations. To ensure uniformity in the delivery of the focus group sessions, the same author conducted all three workshops. The framing was intentionally designed to be flexible and negotiated locally at the three sites.

We purposely asked the group to 'draw first, show and tell later'. In other words, we were mindful of honouring the authenticity inherent in their unfiltered stories. Too often, the researchers have experienced the ways in which focus groups can be influenced or biased by dominant voices telling their story first.

Responses were audiotaped and transcribed and emergent themes were coded and analysed based on the basis of these insights. Photos were taken of their artwork to cross-code during the data collection process. In response to unpacking the complexities of the themes, we adopted Crenshaw's (1989, 1991) intersectionality approach as a model to frame our understandings.

Quantitative data

Over 200 women (N=217) responded to an email invite to participate in an online survey. The large sample size adds to the robustness of the study and hence, the smaller margin of error. Survey items were analysed for statistical significance using a T-test, or where deemed necessary, a Mann-Whitney test. The results of the quantitative are provided in Section 5 and also tabulated in Section 9 (Appendix).

Qualitative data

The data from the focus group interviews and arts-based mapping exercise revealed three key emerging patterns across all contexts for women. These included:



01

Leadership and
gender dynamics

02

Flexibility, motherhood
and gender

03

Role models and
gender dominance

01

Leadership and gender dynamics

Effective leadership was a common aspect discussed by participants and, irrespective of gender, leadership styles impacted on the culture of the university and the opportunities in the workplace for women. Multiple common attributes for effective leadership were not always gender centric or significantly favourable of male or female leaders. Rather, participants' concerns centred around the need for transparency, collaboration, communication, flexibility and collegiality in a system of growing uncertainty and stability.

When discussing leadership in terms of gender dynamics, the impact on the workplace for women differed in tone and intensity across contexts. Comparisons between leadership styles were made using gendered language to describe leadership styles. For example, a female leader was described as being maternal and shielding "as much as possible from the craziness happening at the upper levels" (Participant 7). On the other hand, behavioural characteristics such as "pushing people for excellence and having really sort of rigid and firm boundaries of what is and is not going to be acceptable" was akin to "leading like a man" (Participant 7). In other contexts, effective male leaders were described as being paternalistic

and fatherly, which was demonstrated by behaviour characteristics including being "approachable, friendly and willing to help" (Participant 2).

Further to the gender language, participants commented that the university system identified behavioural characteristics around a humanistic approach as "inherently female" and "not valued." The voices from women identifying these issues also recognised the need for change management that would allow people with a humanistic approach to lead in order to move out of the existing "Darwinian, sink or swim" work culture (Participant 7). Commentary indicated that the change needed a radical manoeuvre fearing that;

"Unless there's a major shakeup and unless the women who then get those leadership positions are valued for those other characteristics, then nothing's going to change." (Participant 7)

In these types of workplaces, concerns were also raised about the need to "hold up a façade" and an "all is okay" mentality for fear of being seen as weak and less capable.

02

Flexibility, motherhood and gender

The least effective workplaces were noted as ones with less flexibility and understanding of childcare, maternity leave and work / life balance. These workplaces promoted full time preference despite the need for flexible working arrangements for women with young children. More conspicuous disenfranchising of women was seen where one participant disclosed her pregnancy just before an interview (see Figure 4.1) with the following outcome narrated and illustrated below:

“I was told that, that position was no longer currently available due to changes in funding, which wasn't correct because the project did eventually get funded with someone else in that role” (Participant 1).

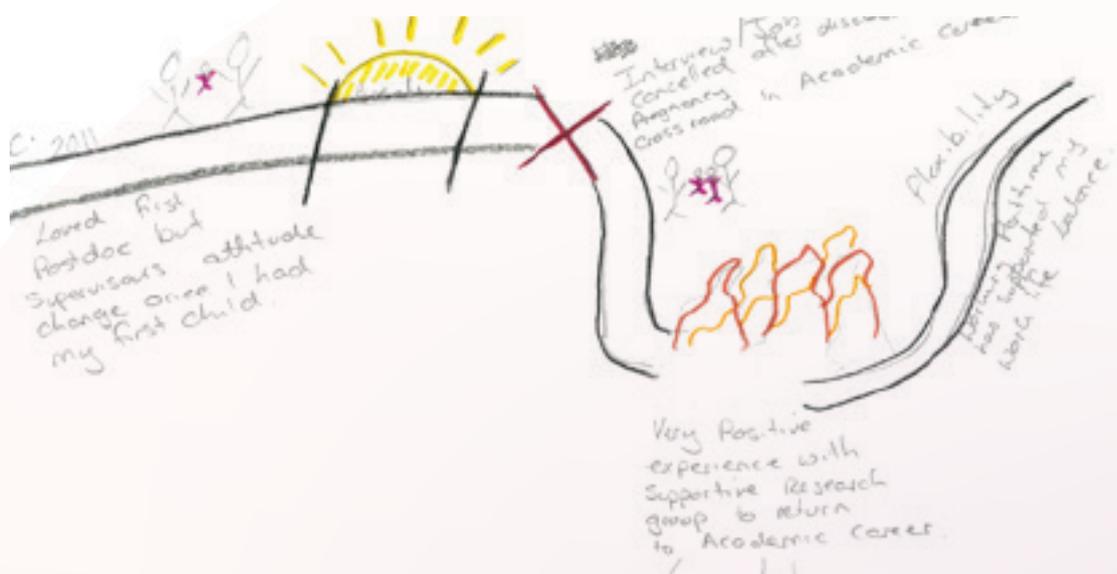


Figure 4.1: The perceived bias when pregnancy was disclosed

On the contrary, positive work cultures that were seen as most supportive with greater job satisfaction were those where flexible work arrangements for women with children was a norm rather than an additional or optional extra (see Figure 4.2). Notably, workplaces were also noted to be value rich supportive teams with multiple contributing factors. These aspects included by supportive women in “leadership-ish positions; men who were also incredibly outspoken and supportive of women” (Participant 5) and: teams where male colleagues had young families (Participant 1). In addition to support in the workplace, as Figure _ below shows, a supportive partner is a key contributing factor for women.



Figure 4.2: Supportive Workplace and Partners

Flexibility was not necessarily limited to part-time work and when provided with flexible hours that allowed female employees to undertake their role and “fit [her] children in around it,” working full-time was manageable. As conveyed in Figure 4.3 flexibility in academic life was also seen to have a significant impact on the opportunities for women to return to work after having children and longevity with both faculty and university as illustrated in the following career journey map.

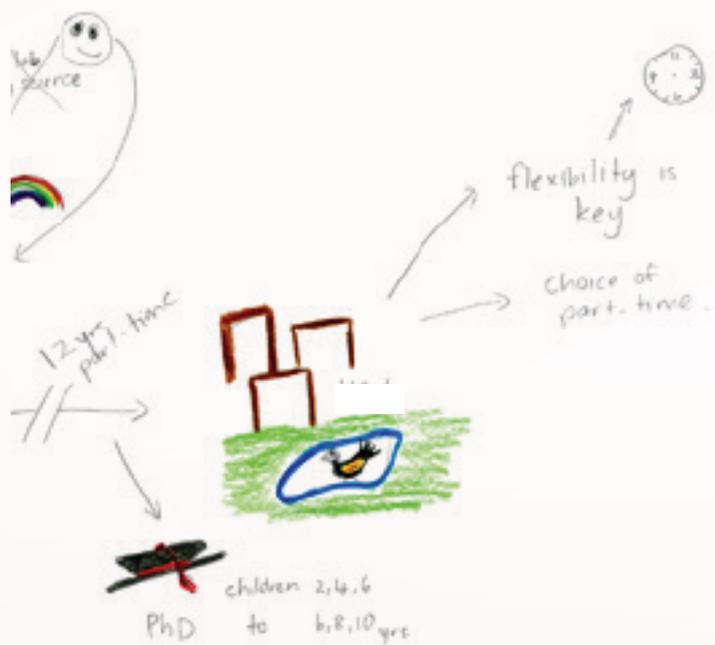


Figure 4.3: Positive Impacts of Flexibility and Motherhood

However, there were common patterns in the responses that reveal more often than not, flexible work arrangements came at a trade-off for challenge, career progression and research opportunities. This left some participants, “happy in terms of work / life balance but professionally really unchallenged” (Participant 3). One remarked she felt “like I have been running a spiralling, circulating marathon with perennial 180 degree turns, road-blocks and speed bumps” (Participant 10) for others, an inflexible work arrangement had a profound effect on their career journey.

There appeared to be a common *heart and head tug-of-war* going on for women at this stage of their life (see Figure 4.5) as noted in the following comment:

“So, I’m happy in terms of my work/life balance, but professionally really unchallenged. But I feel that’s the trade-off that you have to make to stay involved in research. In the future, I’d love to get back into research or to move to a more challenging role, but that needs to be balanced with my commitment to my kids.” (Participant 2)



Figure 4.5: Heart and Head Tug-of-War

The visual career map illustrated in Figure 4.6 represents the negative impact an inflexible workplace had on a woman's career. The scissor trajectory shows the extreme shift in career direction with limited supervisor and university support at the individual and system levels.



Figure 4.6: The Scissor Effect

Similar crossroads are illustrated by women with a subsequent downward turn in career prospects. These pivotal points were indicated by various but defined and illustrated as distinctive downturns or solid lines in their illustrated career map. Invariably, the members of the focus group nodded in agreement when these stories unfolded about the “downward turn” experience (see Figure 4.7). Clearly there was a shared sense of career severance when motherhood entered into the equation and conversation ensued about their respective journeys.

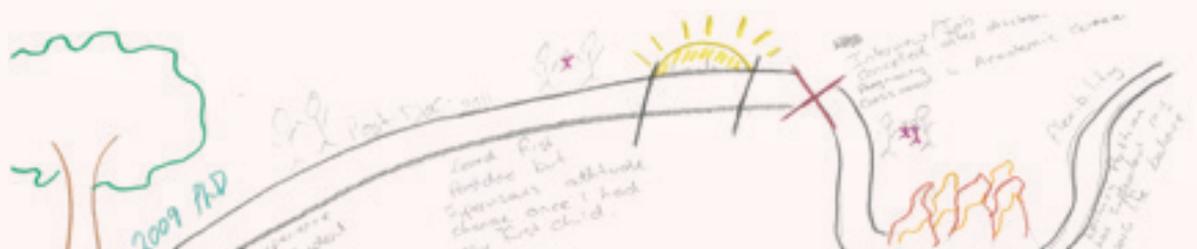


Figure 4.7: The Downward Turn

This pre-emptive issue was also emerging with younger women debating whether they could have “kids and a career, a mindfulness of their “biological clock ticking”. The uncertainty of their career journey and motherhood were discussed as binary choices rather than a dualistic reality.

But I don't know what happens next and I don't know how to fit in wanting to have a child with having career progression because I don't want to progress in science at the expense of not being there for my children” (Participant 4).

As noted in the career trajectory outlined in Figure 4.8, working towards the doctoral degree is, as common to all the maps upward, positive and positioned high in the frame indicating the power, class and positivity assigned to doctoral study. However, this person's conversation clearly demonstrated her concerns for the future as noted in the following excerpt:



Figure 4.8: Upward Trajectory before Career Interruptions

03

Role models and gender dominance

Successful colleague support could be found in contexts irrespective of gender with participants finding various degrees of support and understanding with male or female supervisors. In terms of gender, the results were mixed, with some participants receiving limited support from female supervisors and similarly with male supervisors. However, it was more predominant that women working or studying in a male dominated profession were more likely to experience less flexibility with study timelines, childcare, part-time options, encouragement to continue studying, equal opportunities for career progression or research opportunities. It is also to be noted that the reach of influence in a male dominated biochemistry degree resulted in a female academic advising their female student that they “shouldn’t go on to do a Master Degree or anything.”

Conversely, a woman’s experience was positively affected when supported by strong female role models as indicated in the following career journey map (see Figure 4.9).



Figure 4.9: Impact of Female Role Models

In addition to strong role models, the support of positive expectations from an early age led to noted beliefs that they could achieve anything as described in the following narrative:

“When I went to high school or during my childhood I always thought that girls can do everything just as good as the boys. I had a working mum who I really see as a role model.” (Participant 4)

Yet these early experiences were not widely addressed by participants at the tertiary level with one participant left wondering “Where are my role models?”

More common was the commentary that indicated entrenched gender constructs or mansplaining imposed by males. This attitude was noted by participants in more male dominated professions. As illustrated in the following map (Figure 4.10), a male leader informed the female students that most of them wouldn't make it as an engineer consultant.



Figure 4.10: Gender Entrenchment

Findings also revealed varied gender imbalances that impacted on study, engagement and future employment opportunities.

Overall, science departments were significantly more gender imbalanced. On the opposite scale, areas of health (outside of medicine) noted a female environment and one participant found she needed to return to that environment in order to maintain a work-life balance. Another participant described her experience in her biochemistry degree as being a male dominated academy with only one female professor within a science faculty of fifteen. The same male dominated experience continued through her honours degree in biochemistry in “what was an all-male lab at the time” (Participant 5). This imbalance continued for her academic position as a biophysicist being the only female academic amongst 35 American male physicists in the Physics Department (see Figure 4.11).



Figure 4.11: Gender Imbalance in the Sciences

Gender constructs and externally imposed expectations for success interplay with other disempowering factors as illustrated in the Figure 4.12 that illustrates negative expectations, male dominant institute and lack of role models to assist in achieving goals.



Figure 4.12: Intersectionality

Collectively, the qualitative data from the oral and visual narratives identified that women's career journeys are layered and intertwined with multiple factors that impact on their progression, longevity, intellectual and economic job satisfaction.

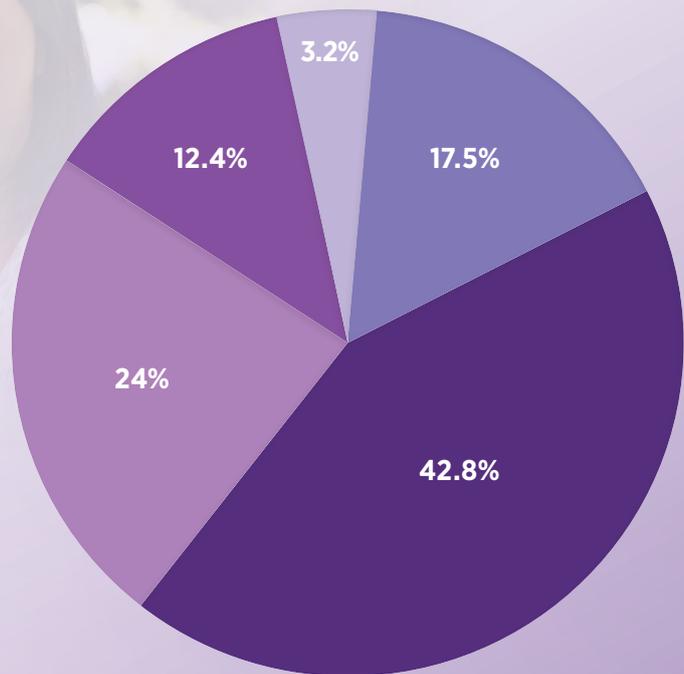
Quantitative findings

Two hundred and seventeen women (n=217) answered the email invitation and completed the qualtrics online survey (see Figure 5.1).

The 30-40 age group was the largest number to respond (n=93) representing 42.8% of respondents. Just over two-thirds of the participants (66.8%) were in the 30-50 age range (n=145) which clearly signals the majority of participants are early to mid-career women (see Appendix Table 4 and 5).



66.8%
of participants are
aged between 30–50
years of age



■ Under 30 ■ 30-40 ■ 41-50 ■ 51-60 ■ Above 60

Figure 5.1: Age distribution of participants

As illustrated in Figure 5.2, over half had a PhD degree (n=120, 55.3%), and 19.4% (n=42) had a postgraduate qualification (see Appendix Table 1 and Table 31). Some (n=25) were studying towards a PhD degree (11.52%) as shown in Appendix Table 3. Among these 25 PhD candidates, 13 came from an undergraduate pathway with an Honours Degree. Five of PhD holders were enrolled in a Diploma or a Certificate. Nine (4.9%) participants had obtained a Diploma, Certificate, or HSC qualifications. While the majority of participants (81.5%) were not currently studying (n=176). Additionally, one participant had completed their degree in 1982 and five were recent graduates who obtained their degree in 2018 (see Appendix Table 2).

Highest level of education completed

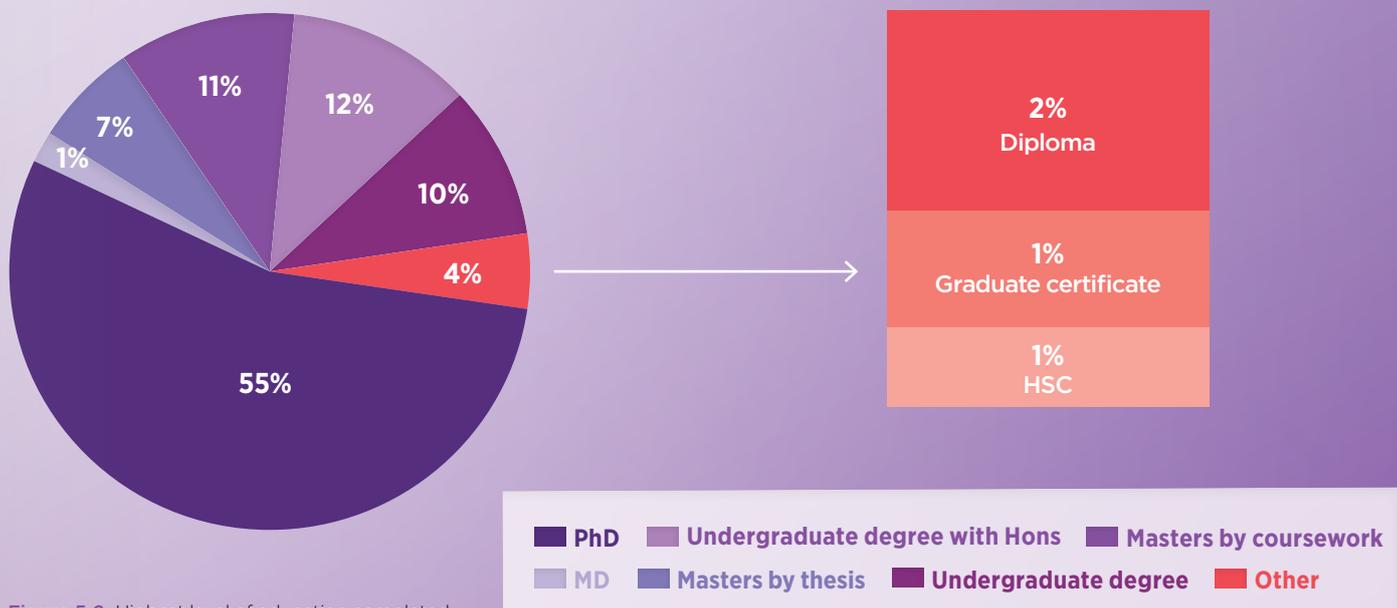


Figure 5.2: Highest level of education completed

Collectively, the three fields in which the majority of participants received their degree were in the Sciences. Firstly, Medical and Health Sciences (39), secondly, Biological Sciences (35) and thirdly Environmental Sciences (27) (see Figure 5.3 and Appendix Table 5). Six participants nominated two disciplines for their highest degree and one reported three disciplines.

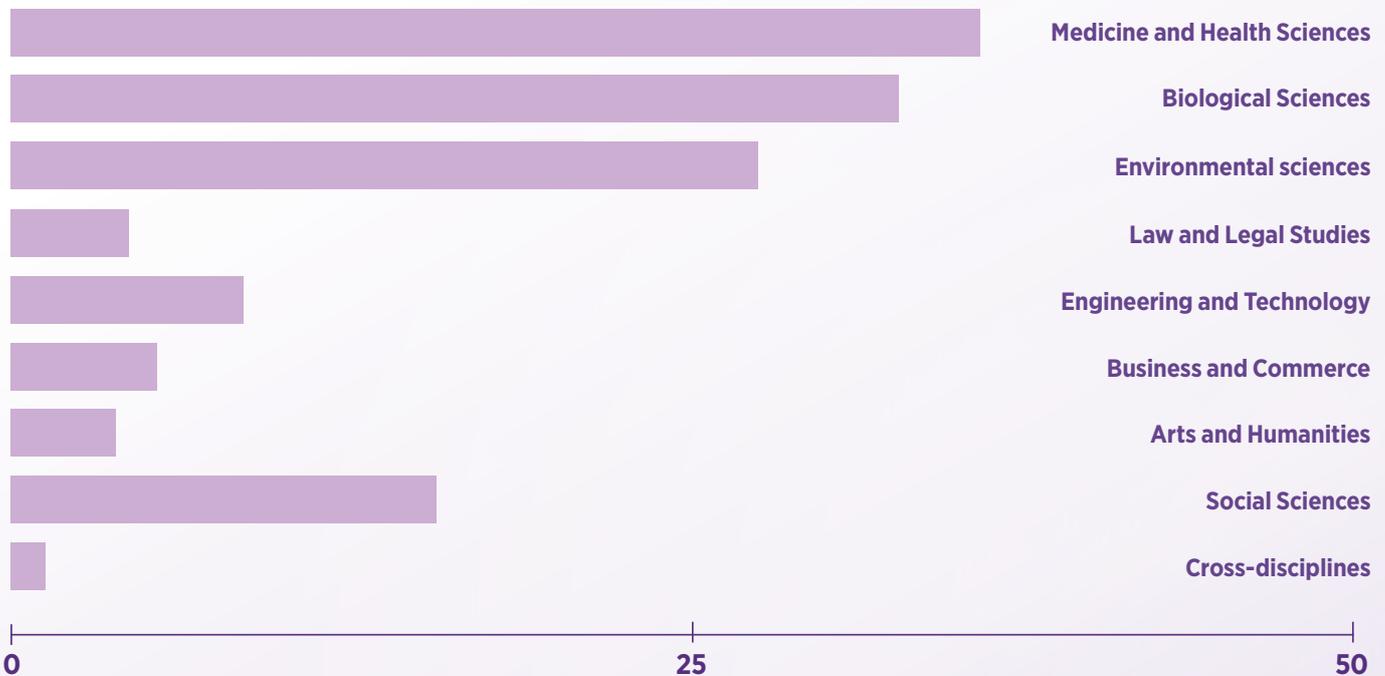


Figure 5.3: Highest level of education completed

As revealed in Figure 5.4, the majority worked within the higher education sector (n=161, 74.2%), followed by consultancy services (n=16) and the government (n=8). Among the 161 in the higher education sector, the majority were at academic level B (n=39, 18.2%) and level C (n=23, 10.7%). Level D (Associate Professor) and Level E (Professor) accounted for 11.6% (n=25) respondents. Operational, senior and middle management were 4.7% (n=10), 5.6% (n=12) and 14 (6.5%), respectively (see Figure 5.4 and Appendix Table 25).

Where do you work

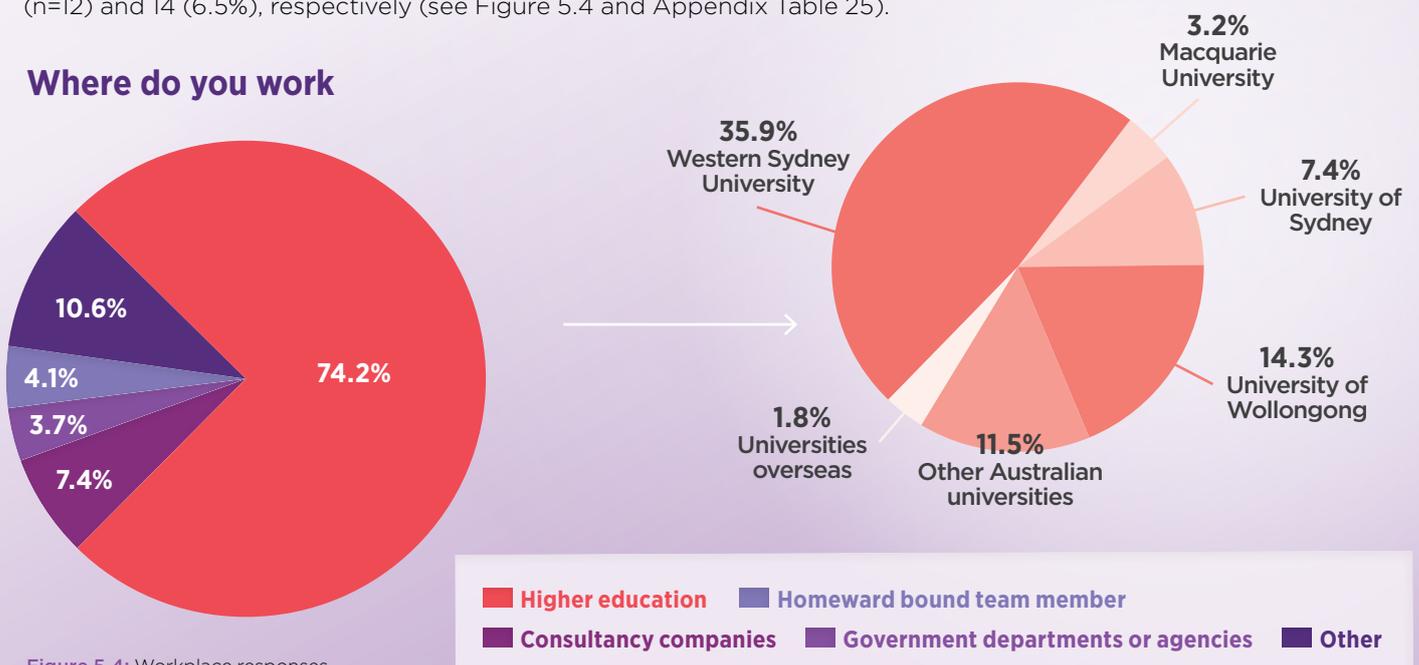


Figure 5.4: Workplace responses

Figure 5.5 conveys the current employment status of the respondents. Almost 50% were in full time continuing positions; 25.4% in full time fixed term; 9.7% were in part-time continuing; 8.3% were casual and sessional; 4.6% part-time fixed term; and the remainder either contractor/self-employed employment or on a PhD scholarship.

49.8%
of participants are in full time continuing employment

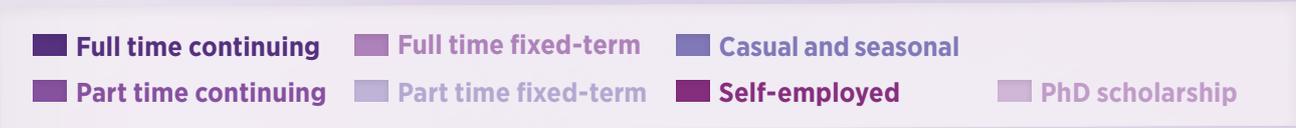
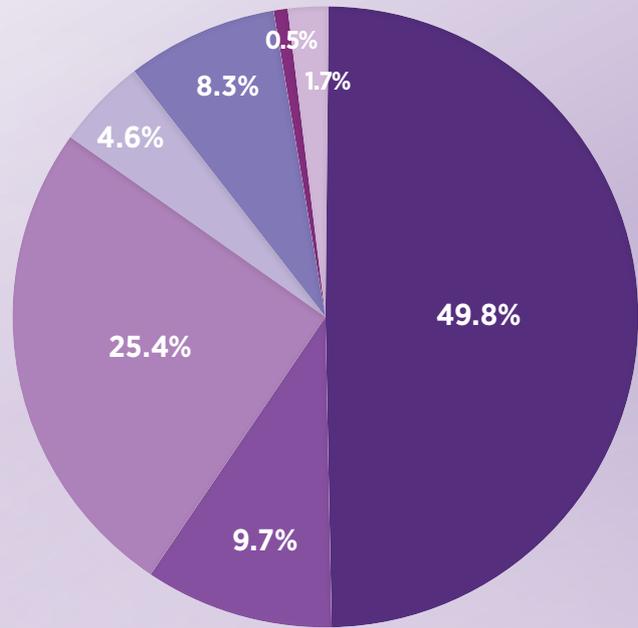
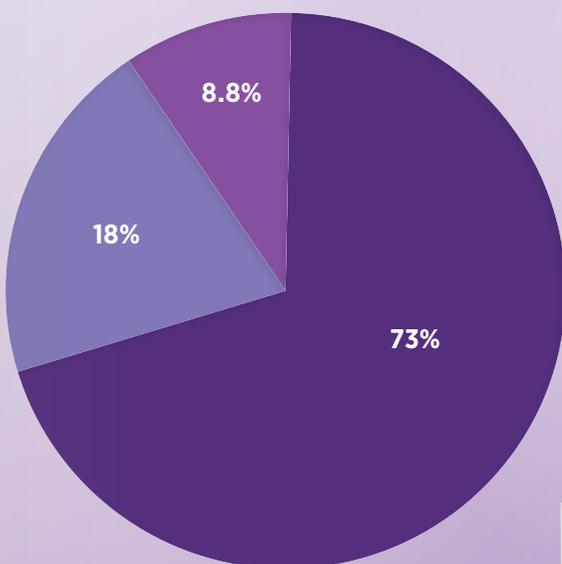


Figure 5.5: Employment status

Almost three quarters (73%) were working in their current position for less than 5 years (n=156) and 18% (n=39) for 5-10 years. Alarming, only 8.8% had worked for 10 years or more in their position (see Figure 5.6). This is reflective of the relatively high levels of mobility for women from workplace to workplace.



Majority of respondents noted the need to be mobile in order to chase jobs



Figure 5.6: Work length in current position

Nearly half of the participants (47.4%) described themselves in early career stage (n=102), and 41.9% (n=90), were in their mid-career stage. Only 23 participants (10.7%) were in their late career stage (see Figure 5.7 and also Appendix Table 12).

Career stage

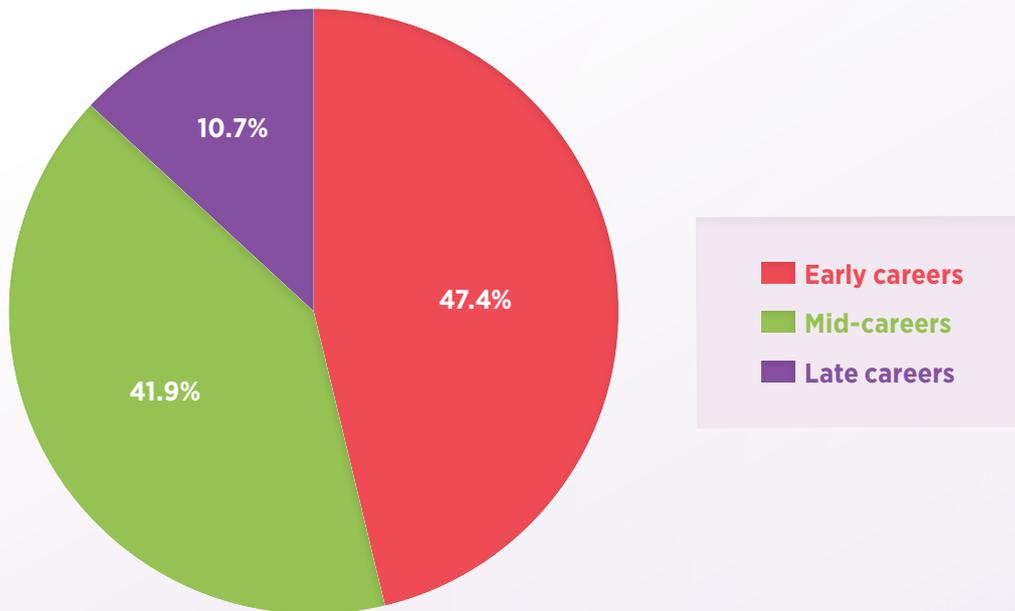


Figure 5.7: Career Stages

Nearly 40% indicated they progressed more slowly than others who qualified when they did (see Appendix Table 26) and around 22% considered they had progressed more quickly than their peers. On a 7-point Likert scale (1= extremely dissatisfied and 7= extremely satisfied), participants were asked to rate their satisfaction with their career progression (Appendix Table 10) and also their satisfaction with their current role (Appendix Table 11). The mean score of satisfaction level for the whole sample was 5.39 (SD=1.60) for career progression and 5.56 (SD=1.39) for their current roles.

Interestingly, 67 participants considered early career stage the most rewarding (see Appendix Table 13), followed by 50 nominating their mid-career stage and 45 electing their PhD student stage.

As depicted in Figure 5.8, the level of satisfaction in career progression and current roles is compared between sectors, and among career stages and employment types. Participants in higher education section have lower level of satisfaction than people in the government departments or industry on their career progression (0.56 points of differences) and current roles (0.19 points of difference), though this difference is not statistically significant by T-test [$t(215)=-1.05$, $p=.30$ for career progression; $t(215)=-0.87$, $p=.39$ for current roles] (see Figure 5.8a). The early careers perceived less satisfied in their career progression ($M=5.31$, $SD=1.58$) than mid-careers ($M=5.43$, $SD=1.66$) and late careers ($M=5.65$, $SD=1.50$) (see Figure 5.8b).

Findings show that majority of respondents are only moderately satisfied with their career progression

*number of participants satisfied with their career progression



Figure 5.8: Level of Satisfaction on career progression and current roles

Level of satisfaction

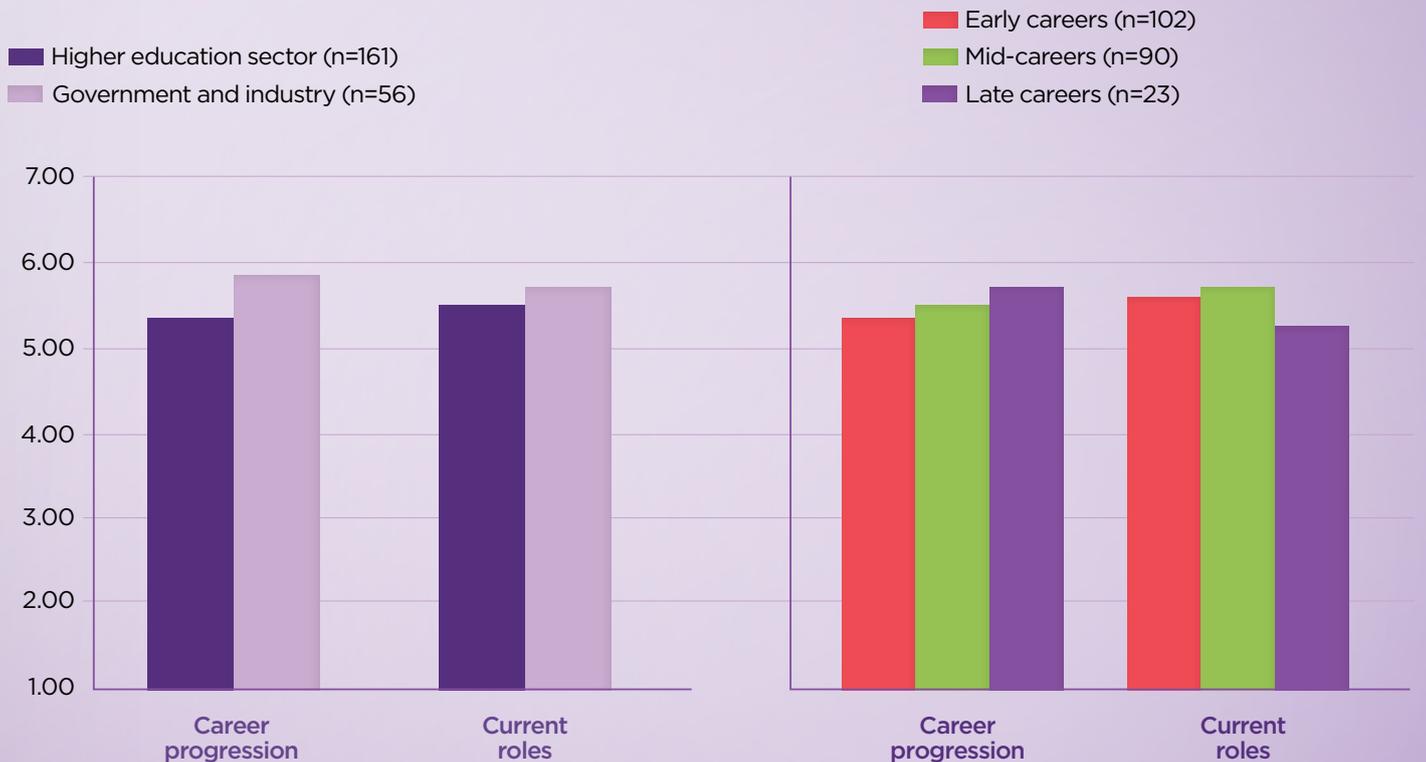


Figure 5.8a: Between working sectors

Figure 5.8b: Among career stages

Interestingly, late career employees had the least satisfaction in their roles (M=5.26, SD=1.81). None of these differences are statistically significant by one-way ANOVA [F(2, 212) = 0.49, p=.62 for career progression; F(2, 212) = 0.65, p=.52].

Based on responses from Question 10, three categories of employment status were created:

- (1) continuing positions including both full time and part time continuing employment;
- (2) fixed term employment including both full time and part time fixed term employment; and
- (3) casual/contractors which include casual, sessional or seasonal contract; contractor/self-employed and other (e.g. scholarship and adjunct professorship).

Figure 5.8c shows the level of satisfaction on career progression and current roles among these three categories of employment.

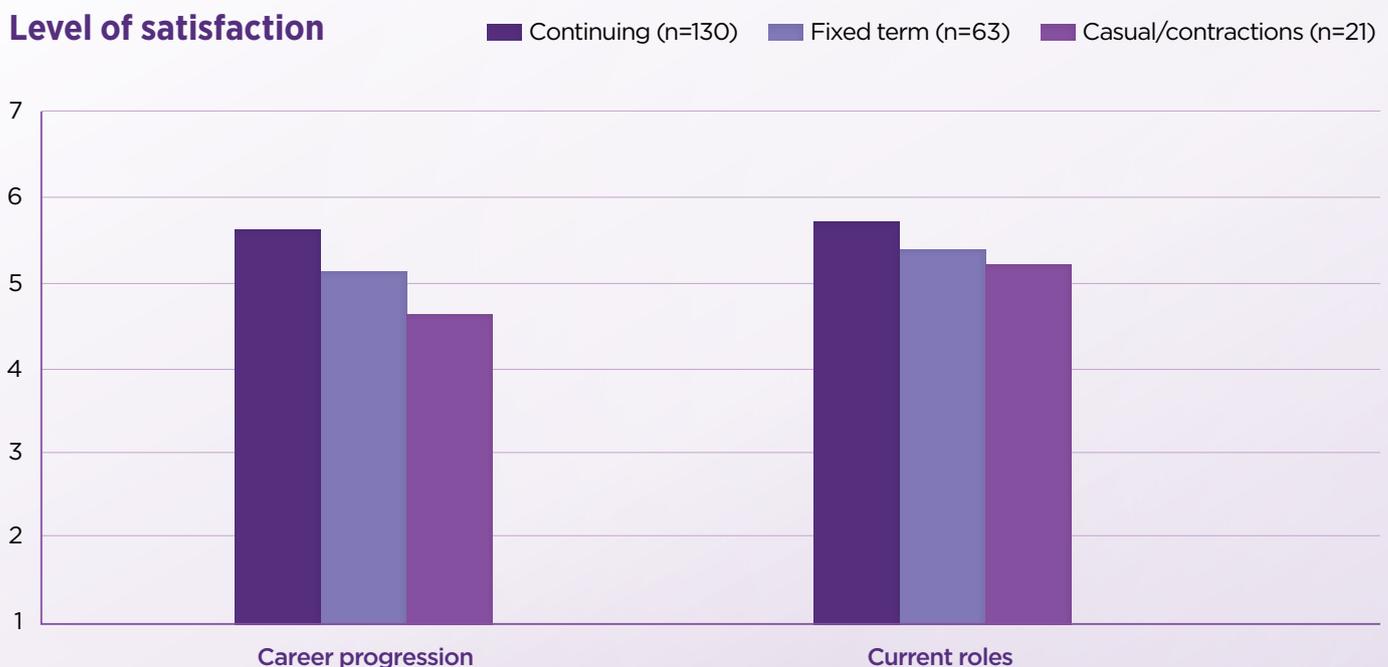


Figure 5.8c: Among employment types

It is obvious the employees in casual/contractors were the least satisfied both in career progression (M=4.62, SD=1.90) and current roles (M=5.24, SD=1.30). Employees in continuing positions have the highest level of satisfaction (M=5.62, SD=1.50 for career progression and M=5.77, SD=1.33 for current role). Fixed term employees ranked in the middle (M=5.16, SD=1.62 for career progression and M=5.33, SD=1.53 for current role). One-way ANOVA shows a significant difference in the level of satisfaction in career progression [F(2, 211) = 4.52, p<.05]. A post hoc test using Scheffe shows the significant difference lies in between continuing and casual employees.

Participants were asked to rate the factors that were valued in their work environment on a 5-point scale (1= highly undervalued; 5=highly valued). Figure 5.9 displays these findings. The higher the mean the greater the factor is valued. The top ten factors valued most were intellectually stimulating work, autonomy and control over work, interest in the field, genuine passion for field of study, intellectual challenge, contribute to new knowledge, collegial work environment, job security, financial reward and the opportunity to travel. Twenty participants selected "other reasons" and nominated factors which included: flexibility, impact (making a change/difference, giving back to the community), and culture (ethical, diversity, friendliness).

Factors which are valued by the respondents in their work environment

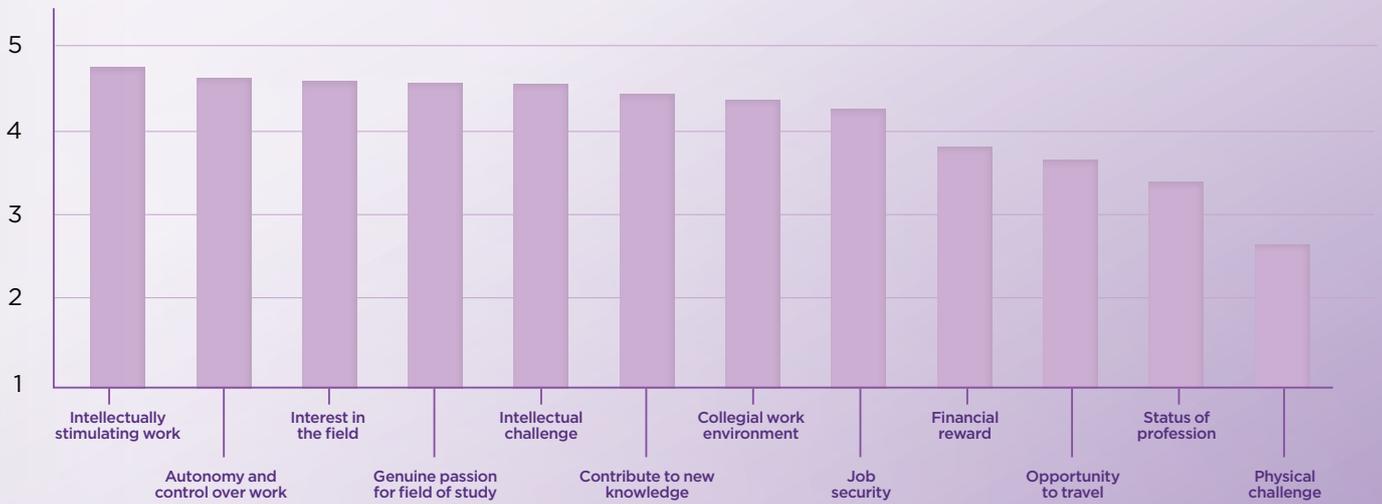


Figure 5.9: Factors valued in work environment

One-way ANOVA was used to compare the ratings of the factors valued in work environment among three groups of participants who were in their early (N=102), mid- (N=90) and late career (N=23) stages (see Appendix Table 32 for mean scores and standard deviation across career stages). Statistical significance was found in their perception of:

1. Autonomy and control over working life, $F(2, 212) = 5.15, p < .01$; and
2. Financial reward, $F(2, 211) = 3.17, p < .05$.

As displayed in Figure 5.10 the factor of 'autonomy and control over working life', a significant difference lies between late careers ($M=4.30, SD=0.82$) and mid-careers ($M=4.73, SD=0.49$). However, there was no such difference between early ($M=4.55, SD=0.65$) and mid-careers, nor between early and late careers. The statistical significance for financial reward is the higher perception among mid-careers ($M=3.96, SD=0.75$) than early careers ($M=3.65, SD=0.94$). The lower perception of early careers than late careers ($M=3.78, SD=0.52$) or difference between mid- and late careers were not found to be statistically significant.

Factors valued in work environment

Early careers Mid-careers Late careers

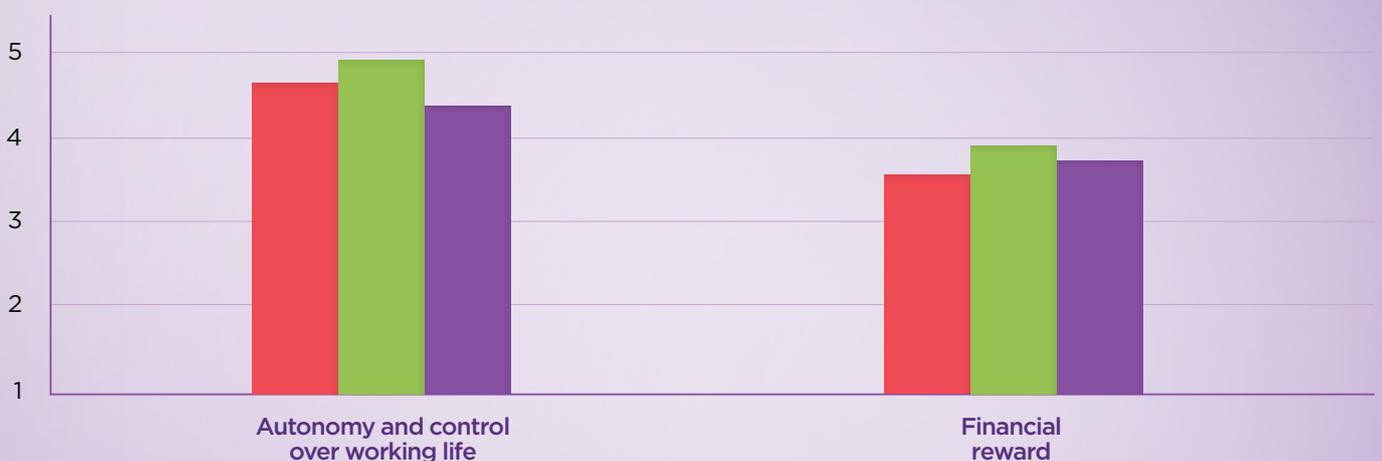


Figure 5.10: Two factors valued in work environment across three career stages

The mean scores of various factors which were valued in work environment (see Figure 5.11) were compared across four groups of participants at different educational levels (below undergraduate, undergraduates including Hons, Masters including MD, and PhD (see Appendix Table 33 for means and standard deviation across different levels of education). One way ANOVA reveals significant differences in the mean scores of the following factors valued in work environment across groups at different levels of education (see Figure 10):

1. Contribute to new knowledge, $F(3, 210) = 7.15, p < .001$;
2. Intellectually stimulating work, $F(3, 212) = 7.54, p < .001$; and
3. Opportunity to travel, $F(3, 210) = 5.97, p < .01$.

Factors valued in the work environment across levels of education

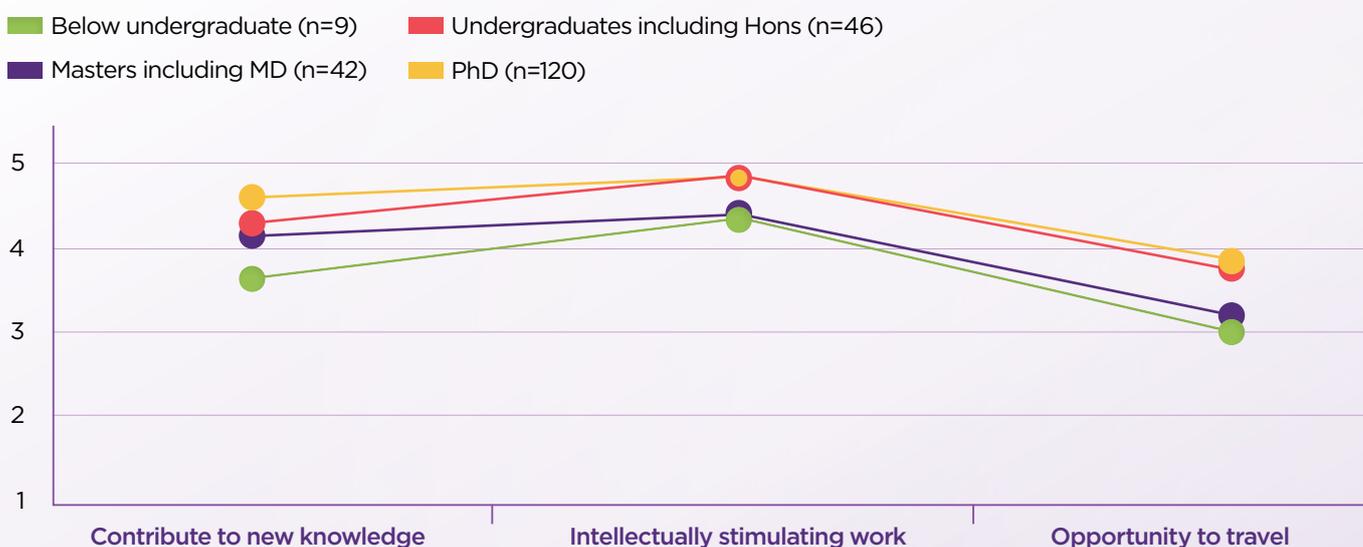


Figure 5.11: Three factors valued in work environment across levels of education

A post hoc test of Scheffe shows that the participants with PhD degree ($M=4.58, SD=0.63$) perceived contributing to new knowledge more highly valued in their work place than Masters group ($M=4.20, SD=0.75$) and below undergraduate group ($M=3.67, SD=1.32$). The intellectually stimulating work was perceived to be significantly more valued among PhD group ($M=4.82, SD=0.44$) and undergraduate group ($M=4.78, SD=0.42$) than Masters group ($M=4.40, SD=0.83$). Opportunity to travel was another factor significantly more valued among PhD group ($M=3.86, SD=0.99$) than Masters group ($M=3.21, SD=1.12$).

Participants were asked to rate a series of factors that resemble to what they do in their career progression on a 5-point Likert Scale (1 = definitely like me and 5 = definitely not like me) (Appendix Table 27). The top five factors are: (1) I work with multiple employers by choice ($M=1.79, SD=0.87$); (2) I have had multiple career pathways due to circumstances beyond my control ($M=1.85, SD=1.24$); (3) I am personally satisfied and not seeking promotion in my career ($M=1.87, SD=1.01$); (4) I have taken time out of my career for other reasons ($M=2.07, SD=0.90$); (5) My career accomplishments have been disrupted due to funding ($M=2.09, SD=1.12$).

These factors were examined among three groups of participants who were in early ($N=102$), mid- ($N=90$) and late career ($N=23$) stages. As the 5-point Likert Scale presents 1 = definitely like me and 5 = definitely not like me, the higher the mean score, the less likely it is the factor applied to the respondents.

Figure 5.12 illustrates that when compared to early career, mid-career and late career were more likely to regard themselves more productive than others. Among the three groups in different career stages, late career regarded satisfaction with their role and level of achievement (M=2.17, SD=1.22) applies to them most and less likely to seek promotion in their career (M=2.82, SD=1.37) than early career (M=3.85, SD=1.22) and mid-career (M=3.85, SD=1.07).

Satisfaction in achievement and role

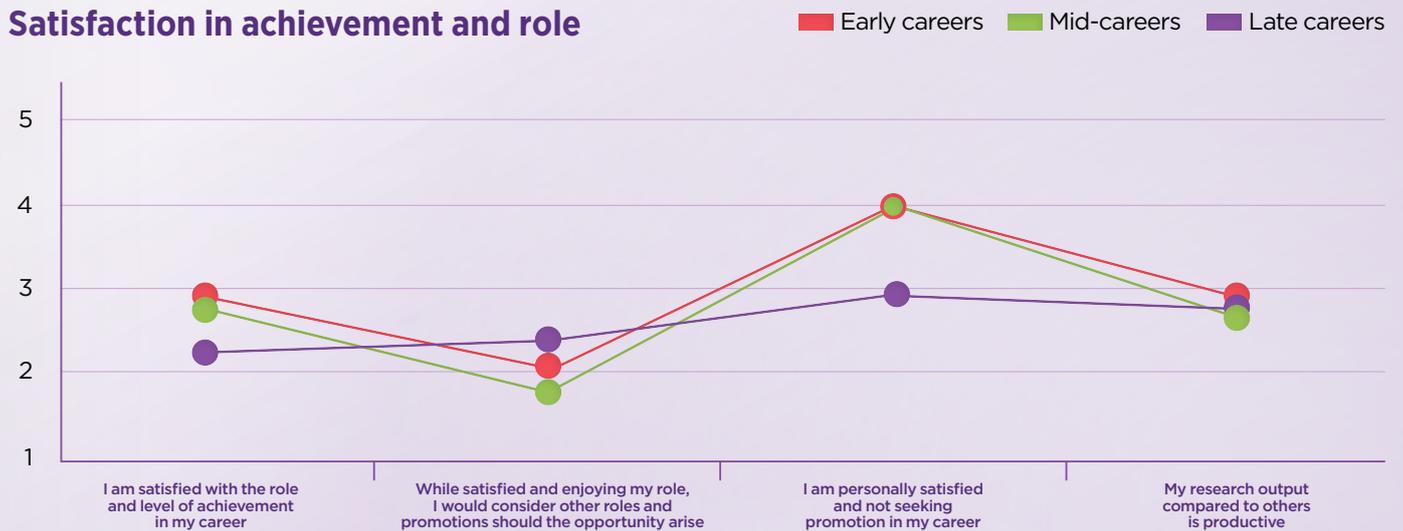


Figure 5.12: Satisfaction in achievement and role

Even though early career and mid-career were satisfied and enjoying their role, they were also open to the prospect of promotion. This applies most to mid-career cohort (M=1.70, SD=0.86), followed by early career cohort (M=1.94, SD=1.09) and late career (M=2.27, SD=1.12). The results suggest mid-career may be more open to opportunities than people in other career stages, as reflected in Figure 5.13. Being prepared, accomplished and ready to apply for promotions/awards and being ready for new opportunities and roles were more applied to mid-career (M=2.25, SD=0.95 for apply for promotion; M=2.00, SD=0.85 for new opportunities), followed by early career (M=2.38, SD=0.99 for apply for promotion; M=2.08, SD=0.91 for new opportunities) and late career (M=2.61, SD=1.08 for apply for promotion; M=2.39, SD=0.99 for new opportunities). When it comes to the item 'workload is out of alignment with promotion criterion', late career women (M=2.95, SD=1.21) are impacted more than the other two groups (M=3.08, SD=0.95 for early career; M=3.02, SD=1.25 for mid-career).

Readiness for promotion



Figure 5.13: Readiness for promotion

Figure 5.14 summarises the rating of four items related to characteristics of respondents. Late career have some characteristics standing out from early and mid-career, in particular, being assertive (M=2.45, SD=1.22 for late career) and not “in-crowd” (M=2.09, SD=0.97 for late career), and they (M=2.27, SD=1.08) were slightly more prepared to take risks than early (M=2.44, SD=0.95) and mid-career (M=2.39, SD=0.90). Early career (M=3.35, SD=1.18) rated themselves more self-aggrandised or self-promoted than mid- (M=3.61, SD=1.22) and late career (M=3.65, SD=1.11).

Characteristics

Early careers Mid-careers Late careers



Figure 5.14: Characteristics of respondents

The mean scores of “I am in career/field I have chosen” for three groups are outlined below. Two of 5 points, is suggestive that our sample were most likely to be working in their preferred field (see Figure 5.15).

Career pathway

Early careers Mid-careers Late careers

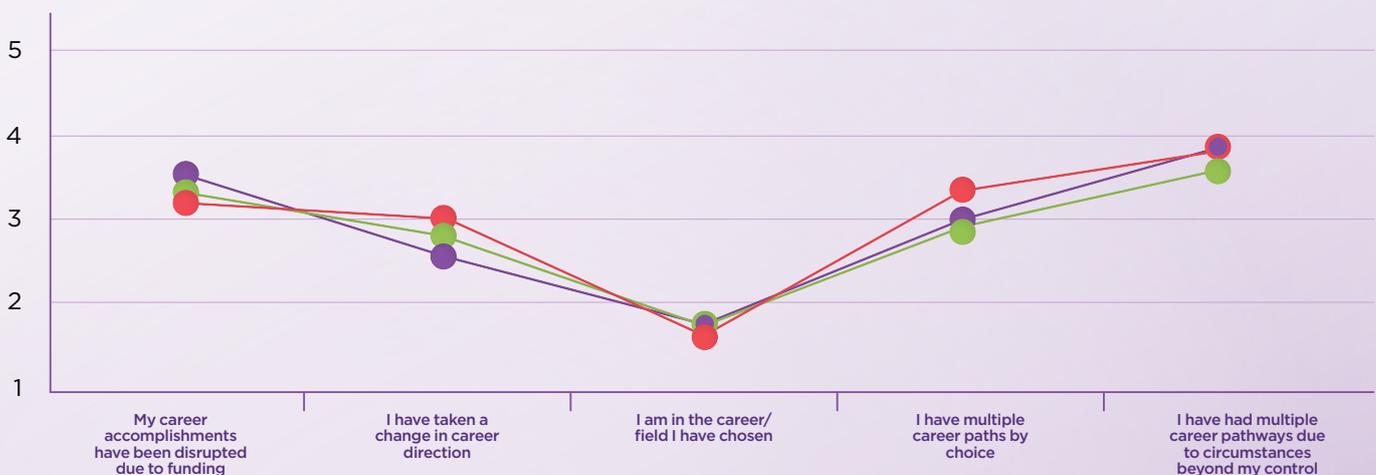


Figure 5.15: Career pathway

The mean scores two items of “My career accomplishments have been disrupted due to funding” and “I have had multiple career pathways due to circumstances beyond my control are above mid-point of the scale. Generally this implies participants have acceptable control of their achievement and career pathways. A small discrepancy of mean scores is found in item “I have taken a change in career direction” which applies more to late careers (M=2.61, SD=1.59), followed by mid-careers (M=2.82, SD=1.45) and early careers (M=3.06, SD=1.49). While late (M=3.04, SD=1.22) and mid-careers (M=2.99, SD=1.38) have similar level of experience in multiple career pathways by choice, early careers (M=3.35, SD=1.43) seem to be slightly more restricted.

In Figure 5.16, it is obvious that ‘I have competing demands to achieve life/work balance’ and ‘I have priorities other than work’ apply to all participants at different career stages, as the mean scores for these two items is below the mid-point of a 5-point scale. The mean score for early careers ‘I have priorities other than work’ is even below 2-point (M=1.91, SD=0.87). Compared to mid- and late careers, early careers were more likely to have taken time out for family reasons (M=3.28, SD=1.65) or other reasons (M=3.60, SD=1.36).

Work and other priorities

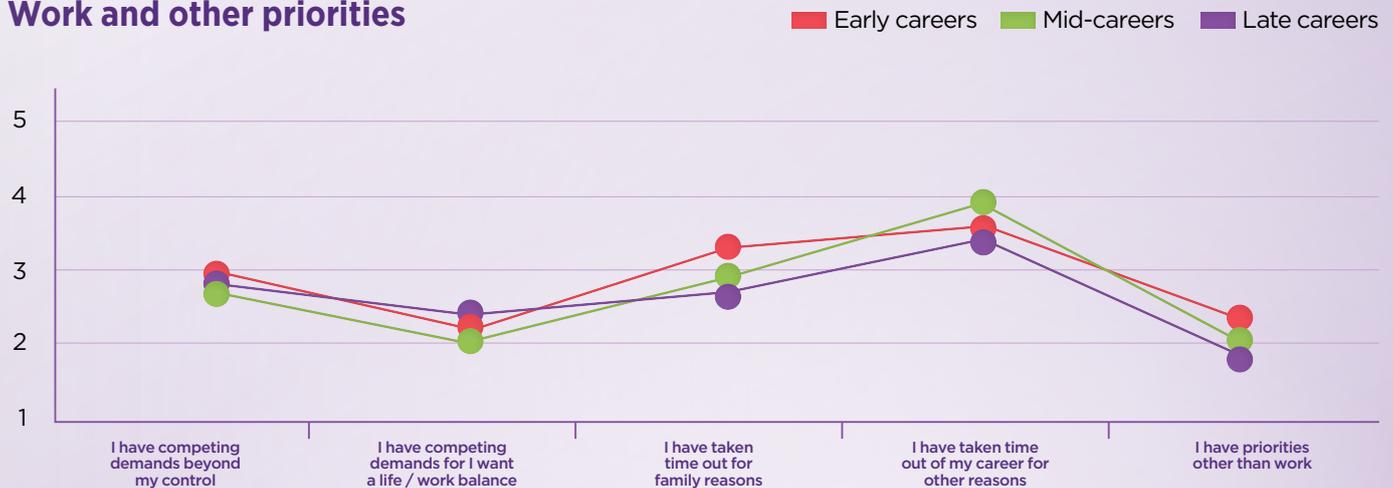


Figure 5.16: Work and other priorities

Figure 5.17 shows the respondents generally were more likely to work with a single employer and they think the employer(s) is an appropriate choice, as the mean scores of these two items are around 2 out of 5-point scale.

About employers

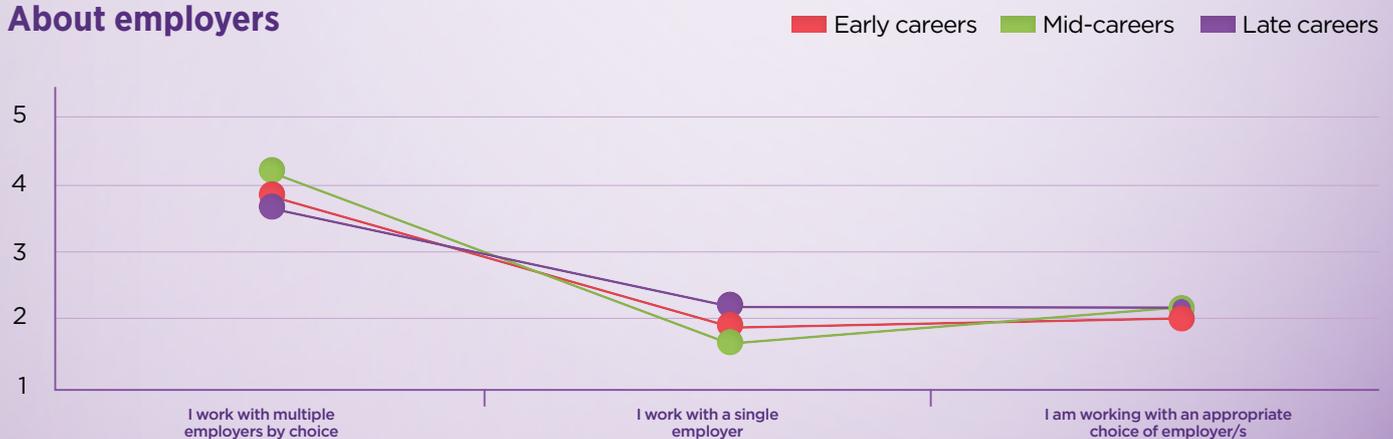


Figure 5.17: Profile of employers

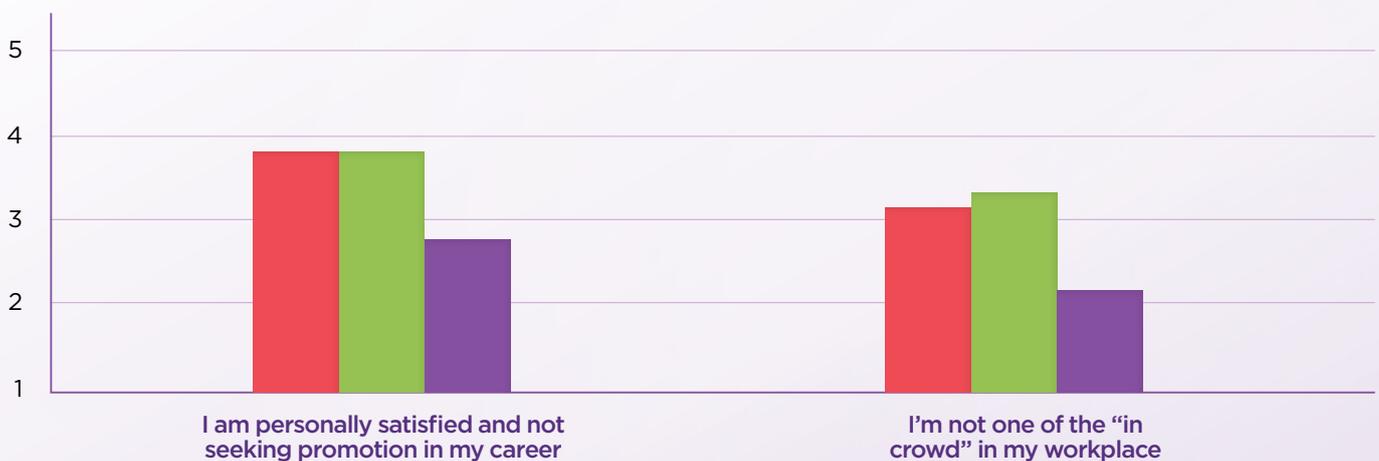
One-way ANOVAs was used to compare the differences of their ratings of all factors above among three groups of participants who were in their early (N=102), mid- (N=90) and late career (N=23) stages. It is showed that late careers had significant lower ratings than early and mid-careers on the perceptions of two factors which impact on the career progression (see Figure 5.18):

1. I am personally satisfied and not seeking promotion in my career, $F(2, 206) = 7.58, p < .01$; and
2. I'm not one of the "In-Crowd" in my workplace $F(2, 201) = 9.60, p < .001$.

There was no significant difference between early and mid-careers. This indicates satisfaction and not seeking promotion is significantly more likely what the late careers would do than early and mid-career professionals. Late careers believed "in-crowd" was a character less like them than in early and mid-career professionals.

Factors in career progression

■ Early careers ■ Mid-careers ■ Late careers



Note: N=217. Standard deviations are in the bracket. Rating on a 5-point Likert Scale with 1 = definitely like me and 5= definitely not like me

Figure 5.18: Two factors in career progression across three career stages

Figure 5.19 indicates the percentage of women within each career stage group (early careers N=102; mid-careers N=90; and late careers N=23) that have been encouraged to apply for promotion. The late career group (n=8, 34.8%) has been encouraged considerably more by senior staff members than early (n=7, 6.9%) and mid-careers (n=5, 5.6%) while mid-careers (n=30, 33.7%) have more been encouraged by their supervisors and managers, 11.9% more than early careers (n=22, 21.8%), and 20.7% more than late careers (n=3, 13.0%). Over one third of the early careers (n=36, 35.6%) have not received any encouragement for promotion, compared to 23% of mid-careers (23) and 13.0% late careers (3).

I have been encouraged to apply for promotion

Early careers Mid-careers Late careers

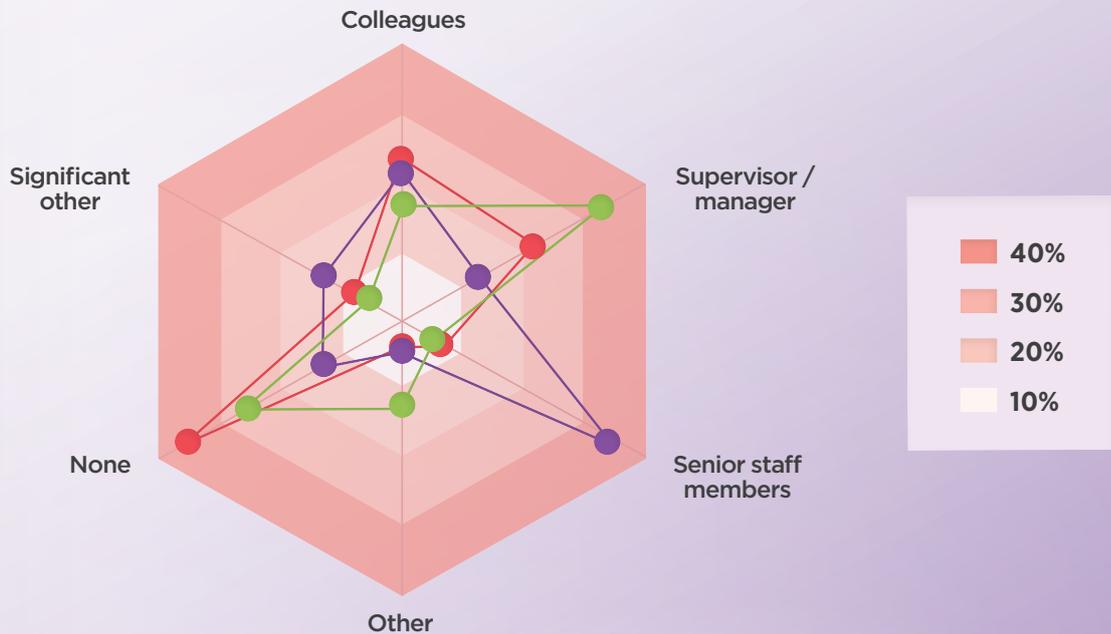


Figure 5.19: I have been encouraged to apply for promotion

Figure 5.20 presents the percentage of participants within each career stage (early careers N=102; mid-careers N=90; and late careers N=23) who have secured a permanent positions or promotion. Over 20% of the early careers had difficulty in obtaining a permanent position or promotion, substantially higher than 2% and 0% among the mid-careers and late careers, respectively. While the late (12.2%) and mid-careers (13%) have similar percentages in securing permanent positions multiple times within an organization, the percentage of late careers achieving permanency or promotions are nearly four times more than the mid-careers. The results suggest nearly half of the early careers may be in an unstable employment condition or facing few opportunities of promotion.

Success in securing a permanent position or promotion

I have never applied Multiple times across organisations/sectors Multiple times within an organisation
 No Yes

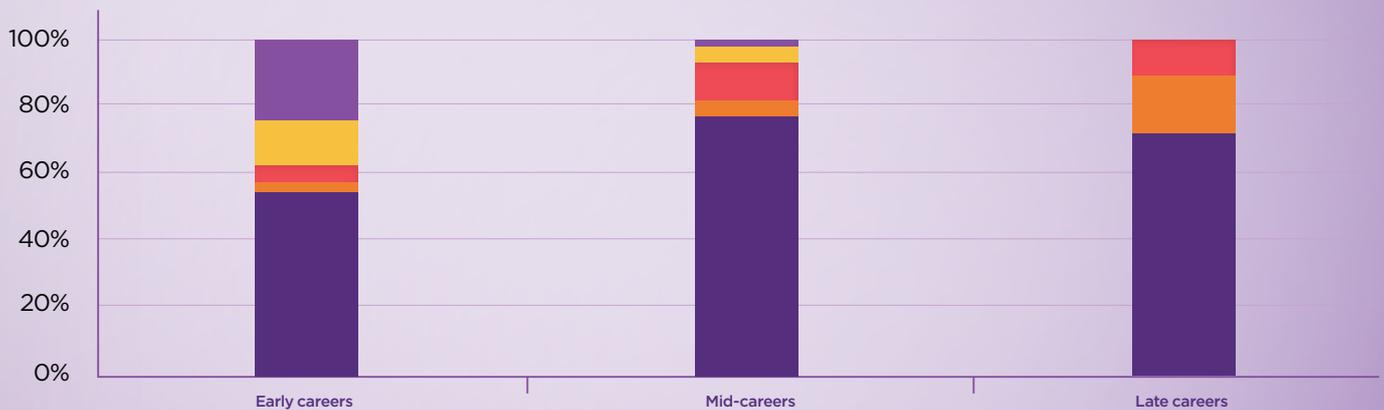
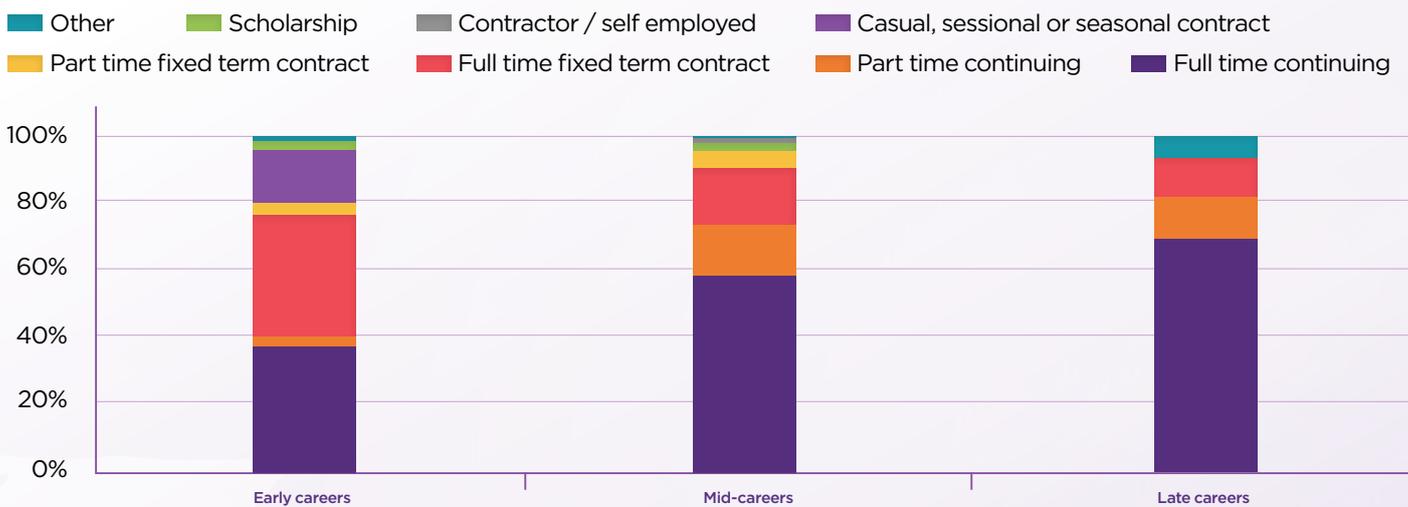


Figure 5.20: Success in securing a permanent position or promotion

The unstable employment condition for early careers was reflected in Figure 5.21. Only one third of early careers are in full time continuing position compared to 58.9% and 69.6% mid- and late careers, respectively. Part time continuing positions also present over four times more among mid-careers (15.6%) and late careers (13.0%) than early careers (2.9%). The casual employment status is substantially more common among early careers (16.7%) compared to mid-careers (2.2%). Only 1.1% of mid-careers worked as a contractor or self employed while none among early and late careers. The one other employment of late career is an adjunct professor (4.3%).

Factors in career progression



Note: N=215. Early careers N=102; mid-careers N=90; and late careers N=23.

Figure 5.21: Employment types across three career stages

Mobility

Nearly 40% of the respondents (N=86, 39.6%) had travelled overseas to enhance their professional standing and 32.7% (N=71) had moved more than three times to progress their career trajectory (see Figure 5.22). These figures are staggering considering these women were predominantly early and mid-career professionals.

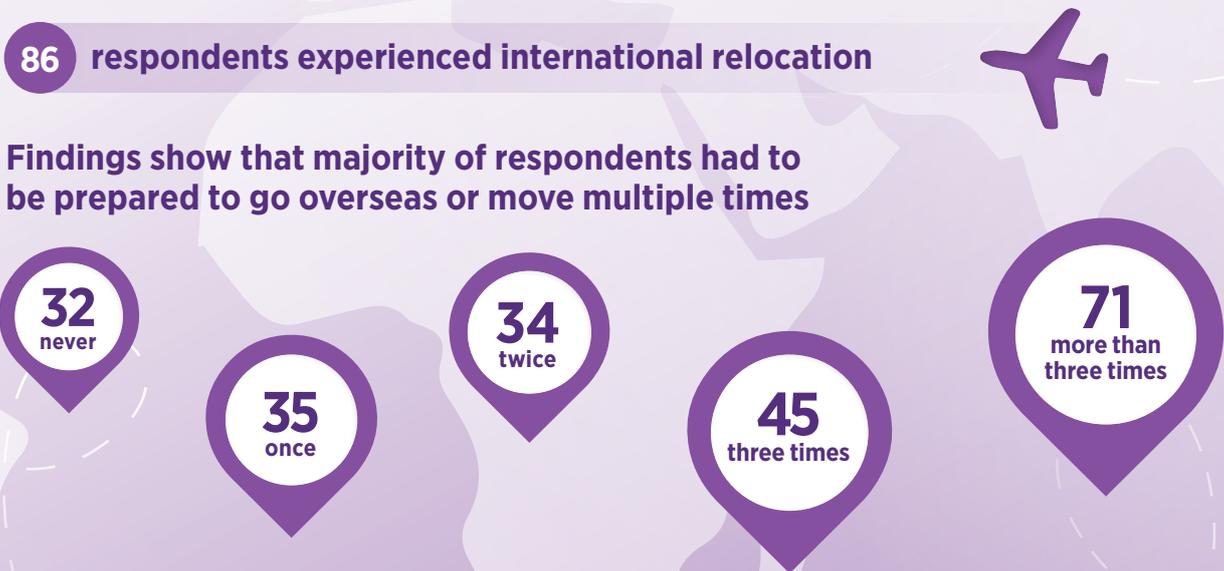


Figure 5.22: Number of times participants moved location in their career

Homeward Bound Cohort

We compared the members of the Homeward Bound Project (HBP) (N = 9) and non-members (N = 208). Due to the small sample size, which resulted in the non-normality of the data of the HBP, we adopted the Mann-Whitney test. The results indicated the HBP cohort reported significantly higher ratings than the non-HBP members on two factors, which are perceived as being impactful on their career progression. The HBP team members (median = 4.00, mean rank = 139.42) rated significantly more highly on being assertive than the non-HBP members (median = 2.50, mean rank = 103.81), $U = 852.50$, $Z = -2.10$, $p < .05$. The HBP team members also had significantly higher score (median = 3.00, mean rank = 111.65) on the item “my research output compared to others is productive” than the non-HBP team members (median = 3.00, mean rank = 78.42), $U = 438.50$, $Z = -2.28$, $p < .05$. In short, preliminary data suggests the HBP team are more productive and assertive than their non-HBP counterparts.

Summary

The top eight factors impinging on career progression are summarised in Figure 5.23 and include:

1. We bring unseen and indiscernible skills to the workplace. For instance, emotional labour is invisible; e.g. involvement first year coordinator roles requiring humanistic skills and counselling input which is covert and unquantifiable;
2. Navigating multiple career pathways due to their competing demands e.g. motherhood;
3. Prioritising ‘family-life balance’ and rationalising the need to be personally satisfied with their career trajectory and downplaying promotion opportunities;
4. Time away from their career due to other competing reasons; e.g. parental leave;
5. Funding interruptions in their career trajectory;
6. Feeling marginalised e.g. not in the “in-crowd”;
7. Women generally find it hard to self-aggrandise; and
8. Casual staff and/or contractors were the least satisfied with their career progression.

The top eight factors which impact on career progression



Figure 5.23: The top eight factors influencing career progression

The implications of these findings will be discussed in the following section.

Discussion

For several decades in higher education (HE) gender discrepancies in power and leadership opportunities have prevailed (O'Connor, 2018).

The research question guiding this study was: How Should We Elevate Women's Leadership Voices in Higher Education to Achieve Career Longevity and Gender Parity? This mixed-methods study has examined the underlying factors which contribute or stymie women's career trajectories from a gender perspective. The study has surfaced several crucial aspects

and insights within woman's life histories in academia. A vital addition which strengthened understandings from the focus group interviews was the arts-based auto-ethnographic research technique. To this end, Black and Garvis, (2018 p. 3) remark:

"Feminist scholars historically and more recently have taken up a range of collective and arts-based methodologies in seeking to write, speak and dramatise lived experiences in modes that do not claim to 'represent', 'reflect' or 'unify' women's lives in academia".

Firstly, the qualitative findings explored issues associated with the integrity and ethical factors within an organisations' workplace culture. The interviews adopted a positivistic paradigm and

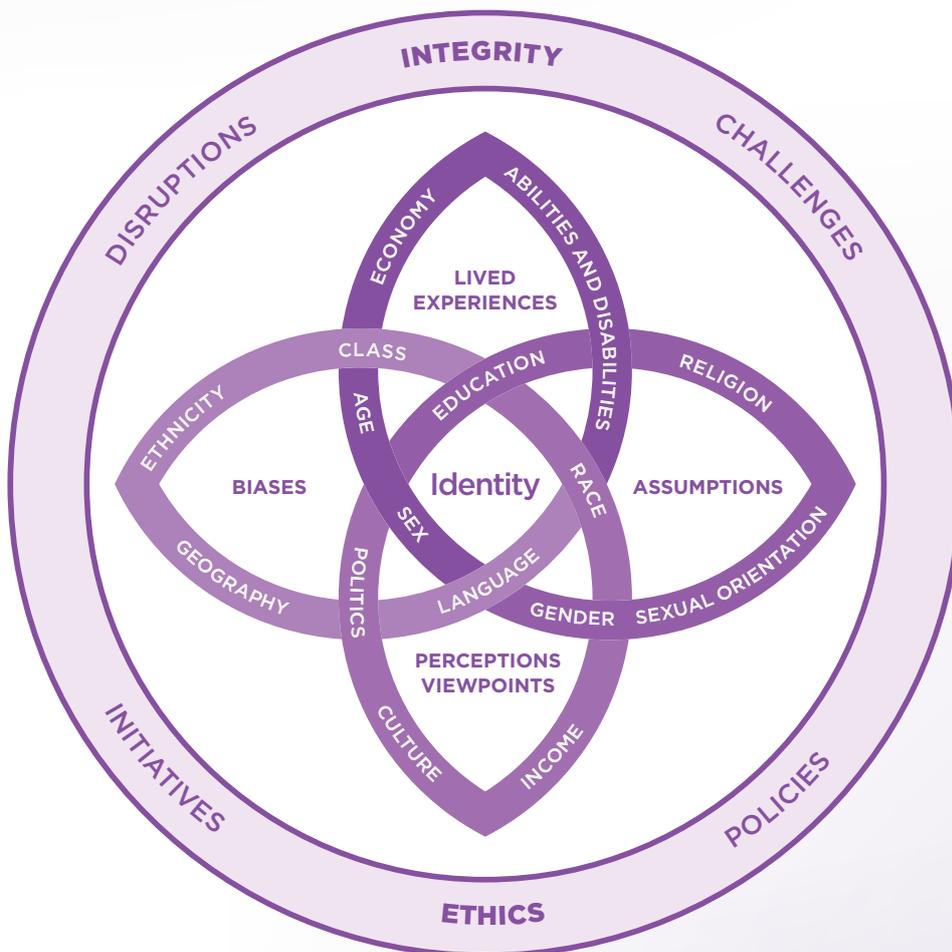


Figure 6.1: The myriad of factors ways impinging on career longevity

engaged with the realities and lived experiences women academics. Life narratives and arts-based journey mappings offered a gateway into understanding the affordances and constraints of women in HE. Career disruptions, challenges, biases, assumptions and lived experiences were articulated in a myriad of ways. Figure 5.1 diagrammatically illustrates the intersectionality of factors contributing to women's leadership voices and career longevity in academia.

The prominent role motherhood and family factors played in women's careers and lived experience cannot be underestimated (Hagedorn, 2000; Ward & Wolf-Wendel, 2004; Wolf-Wendel & Ward, 2006). Sustaining careers in the academy, or conversely, pursuing decisions to depart, is both complex and convoluted for females. Juggling motherhood within academe was linked to a career cross-road in their professional life for many. To this end, having children was clearly demarcated in the arts-based ethnography as a pivotal moment which redefined their career trajectories. For some, electing to work part-time or on a casual basis after having children is intertwined with the need for work-life balance (Bailey, Troup, & Strachan, 2017; Strachan and colleagues, 2016). More importantly, this study concurs with Black and Garvis (2018, p. xvi) who state "motherhood and academia leak into each other in messy ways".

Secondly, the large sample size involved in the quantitative data set (N=217) allowed an alternative picture to emerge. Not surprisingly, casual staff were the least satisfied with their career progression. Almost 40% of the respondents had travelled overseas to enhance their professional standing and 32.7% had moved jobs more than three times to accelerate their career trajectory. Considering the majority of women in this study were predominantly early and mid-career professionals, these findings are poignant indeed.

Factors women valued most in their careers included: 1) intellectually stimulation; 2) autonomy; 3) interest in the field; 4) genuine passion for their chosen field; intellectual challenge; 5) contributing to new knowledge; 6) collegial work environment; 7) job security; and financial reward. Other factors which impacted on their career progression included: 1) having worked with multiple employers; 2) a myriad of career pathways due to circumstances beyond their control; 3) being personally satisfied with work-life balance and not seeking promotion in my career; 4) taken time out of my career for other reasons; 5) career accomplishments have been disrupted due to funding; 6) multiple career paths by choice; 7) being marginalised and not the "in-crowd" within workplace; and 8) their work is invisible, imperceptible and difficult to document especially against checklists aligned to promotion criteria.

The results convey the Homeward Bound Project (HBP) cohort reported significantly higher ratings than the non-HBP members on two factors. Firstly, they are self-rated significantly higher on 'being assertive' and secondly, they perceive themselves to be 'more productive in their research output' compared to non-HBP. In tandem, these factors are perceived as meaningful and impactful on leadership aspirations and career satisfaction.

In sum, voice is both a right and a privilege. Women in HE voiced multiple ways in which they can be empowered to forge career paths and to build self-confidence. By listening and acting upon these insights, we make their underrepresented leadership voices heard.

Conclusion



Underlying the motivation for this study was the under-representation of women in senior management and professorial positions, not only at Western Sydney University but also on a national and international scale.

The main research question guiding the mixed-methods study was: *How should we elevate women's leadership voices in higher education to achieve career longevity and gender parity?* Data collected from early-career, mid-career and senior academic women through both qualitative and quantitative approaches raised some poignant and salient insights.

In terms of **qualitative data**, reflective insights were collected utilising a poststructural feminist approach. Not only did the arts-based journey mapping prove to be a rich source of narrative enquiry, but the creative methodology was an inherent strength of the study. The women found supportive comfort listening to the similarities contained in their respective stories and a nurturing and collegial environment emerged.

From the perspective of the quantitative data, the main factors affecting leadership voices and career longevity include: emotional labour is invisible in the workplace; multiple career pathways needed due to conflicting demands such as motherhood; personally satisfied with family-life balance; career interruptions due to other reasons such as parental leave; funding interruptions in their career; feeling marginalised and not part of the "in-crowd"; find it hard to self-promote; and the casual workforce and/or contractors were the least satisfied with their career progression.

Recently, Larkin's (2017) research identified an increase in the number of women in senior roles of HE ushering in positive change and signalling the tide is turning. Systemic shift is occurring. The HE sector is listening and together we are working to change the prevailing culture to one that promotes the rising eminence of women in academe. However, we also caution redressing the gender asymmetry as a 'numbers game' and balancing the gender ledger, is not the sole panacea or quick fix. Despite these inroads, relatively little examination of women's career trajectories or departure from the profession have occurred in the literature. As exhibited in this study, we need to interrogate further the policies, integrity, ethics, and workplace culture which exists within each organisation. The next tangible step according to Larkin (2017) is one that speaks implicitly into removing gender biased behaviours, actions and attitudes in position descriptions, position advertising, panel members' interview checklists and promotion criteria.

In conclusion, our VCGE project has heightened our understandings of career satisfaction and longevity of women in HE at Western Sydney and beyond. In times of #MeToo and #PressForChange women have found expression and change is afoot. As we work towards a renewing the gender imbalance and inequality, both men and women are claiming agency and shifting the solution to one of a dual responsibility. By embracing a climate of respect and concern, a renewed workplace culture is emerging. Further evidence-based research in this area is warranted and we invite the broader HE sector to embrace these brave conversations and continue a respectful and frank dialogue about the complexity of the issues.

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Appendix

Table 1

Q1 What is the highest level of education you have completed?

Note: N=217

Level of Education	Number	Percentage
PhD	120	55.3
MD	3	1.4
Masters by thesis	15	6.9
Masters by coursework	24	11.1
Undergraduate degree with Hons	25	11.5
Undergraduate degree	21	9.7
Other	9	4.1

Table 2

Q2 In which year did you complete this qualification?

Note: N=213

Completion year	Number	Percentage
1982	2	0.9
1990	2	0.9
1993	2	0.9
1994	1	0.5
1995	2	0.9
1996	1	0.5
1997	2	0.9
1998	3	1.4
1999	5	2.3
2000	3	1.4
2001	3	1.4
2002	3	1.4
2003	9	4.2
2004	5	2.3
2005	9	4.2
2006	8	3.8
2007	10	4.7
2008	14	6.6
2009	11	5.2
2010	11	5.2
2011	10	4.7
2012	19	8.9
2013	10	4.7
2014	13	6.1
2015	17	8.0
2016	14	6.6
2017	19	8.9
2018	5	2.3

Table 3**Q3 Are you currently studying for a qualification?****Note: N=216**

	Number	Percentage
No	176	81.5
Yes - PhD	25	11.6
Yes - MBBS	1	0.5
Yes - Masters	4	1.9
Yes - Undergraduate degree	2	0.9
Yes - Diploma	3	1.4
Yes - Other	5	2.3

Table 4**Q4 What is your age?****Note: N=217**

	Number	Percentage
Under 30	38	17.5
30 - 35	50	23.0
36 - 40	43	19.8
41 - 45	35	16.1
46 - 50	17	7.8
51 - 55	15	6.9
56 - 60	12	5.5
61 - 65	4	1.8

Table 5

Q6 Which of the following best describes the field in which you received your highest degree?

	Number
Mathematical Sciences	1
Physical Sciences	7
Chemical Sciences	10
Earth Sciences	15
Environmental Sciences	27
Biological Sciences	35
Agricultural and Veterinary Sciences	4
Information and computing sciences	8
Engineering	11
Technology	1
Medical and health sciences	39
Built environment and design	4
Education	16
Economics	2
Commerce, Management, Tourism and Services	11
Studies in Human Society	7
Psychology and Cognitive Sciences	8
Law and Legal Studies	9
Studies in Creative Arts and Writing	1
Language, Communication and Culture	5
History and Archaeology	1
Philosophy and Religious Studies	1
Other	2

Note: N=225.

Six people reported 2 disciplines and one reported 3 disciplines. Others reported include “innovation” and “social sciences”.

Table 6**Q7 How long have you been in your current position?****Note: N=214**

	Number	Percentage
5 years and less	156	72.9
6 to 10 years	39	18.2
11 to 15 years	13	6.1
16 to 20 years	2	0.9
21 years and more	4	1.9

Table 7**Q8 How would you best describe the area in which you work?****Note: N=216**

	Number	Percentage
Tertiary Education	134	62.0
Consultancy or Professional Services	26	12.0
Government	20	9.3
Health and Medical Services	13	6.0
Industry	5	2.3
Management	4	1.9
ICT	4	1.9
Marketing/Communication/Media	3	1.4
Library and Information Services	3	1.4
Currently seeking employment	2	0.9
Secondary Education	1	0.5
Legal Profession	1	0.5

Table 8**Q9 How would you describe your current position/primary role?****Note: N=216**

	Number	Percentage
Teaching/Research Academic	55	25.5
Research Scientist	35	16.2
Management	27	12.5
Research Focused Academic	22	10.2
Technical Support	18	8.3
Student	14	6.5
Professional Staff or student support or educational support	13	6.0
Clinician	4	1.9
Teaching Focused Academic	4	1.9
Technical Leadership	4	1.9
Other	20	9.3

Table 9**Q10 Are you employed****Note: N=217**

	Number	Percentage
Full time continuing	109	50.2
Part time continuing	21	9.7
Full time fixed term contract	54	24.9
Part time fixed term contract	9	4.1
Casual, sessional or seasonal contract (no leave entitlements)	19	8.8
Contractor/self employed	1	0.5
Scholarship	3	1.4
Other (please specify)	1	0.5

Table 10**Q11 Satisfaction with career progression****Note: N=217**

Level of satisfaction	Number	Percentage
Extremely satisfied	44	20.3
Moderately satisfied	107	49.3
Slightly satisfied	21	9.7
Neither satisfied nor dissatisfied	7	3.2
Slightly dissatisfied	18	8.3
Moderately dissatisfied	14	6.5
Extremely dissatisfied	6	2.7

Table 11**Q12 Satisfaction with current job role****Note: N=217**

Level of satisfaction	Number	Percentage
Extremely satisfied	47	21.7
Moderately satisfied	101	46.5
Slightly satisfied	38	17.4
Neither satisfied nor dissatisfied	3	1.4
Slightly dissatisfied	16	7.4
Moderately dissatisfied	9	4.2
Extremely dissatisfied	3	1.4

Table 12**Q12 Satisfaction with current job role****Note: N=215**

Stage	Number	Percentage
Early career	102	47.4
Mid career	90	41.9
Late career	23	10.7

Table 13

Q14 What has been your most rewarding career stage to date.

Stage	Number
As an undergraduate student	19
As a PhD student	45
As an early career employee	77
As a mid-career employee	50
As a late career employee	12
Other	20

Note: N=223.

One participant did not report. Five participants nominated three most rewarding career stages and one participant nominated three.

Table 14

Q15 Would you say your career path has been?

Note: N=217

Type of career paths	Number
A traditional linear career path, ie undergraduate study followed by post graduate study, doctorate and post doc research	70
A non-traditional career path, with undergraduate and post graduate/PhD study combined with work in other sectors	58
A non-traditional career path with undergraduate and post graduate/PhD study combined with time out of the workforce	17
A non-traditional career path with undergraduate and post graduate/PhD study combined with time out of the workforce, work across sectors and or multiple career pathways	69
Other	3

Table 15

Q16 On average, how many contracted hours per week do you undertake work related to your employment?

Note: N=216

	Number	Percentage
Up to 5 hours	2	0.9
6-10 hours	6	2.8
11-15 hours	8	3.7
16-20 hours	8	3.7
21-30 hours	23	10.6
Greater than 30 hours	21	9.7
35-hour full time working week	148	68.5

Table 16

Q17 In reality on average, how many hours per week do you undertake work related to your employment at home or over weekends in ADDITION to your contracted hours?

Note: N=215

	Number	Percentage
Up to 5 hours	90	41.9
6-10 hours	51	23.7
11-15 hours	34	15.8
16-20 hours	13	6.0
21-30 hours	12	5.6
Greater than 30 hours	15	7.0

Table 17**Q20 What do you value most about your work environment and career?****Note: N=217**

Ranking	Factors	Minimum	Maximum	Mean	SD
1	Intellectually stimulating work	2.00	5.00	4.71	0.58
2	Autonomy and control over work	2.00	5.00	4.60	0.62
3	Interest in the field	2.00	5.00	4.56	0.60
4	Genuine passion for field of study	1.00	5.00	4.55	0.66
5	Intellectual challenge	2.00	5.00	4.54	0.60
6	Contribute to new knowledge	2.00	5.00	4.41	0.74
7	Collegial work environment	1.00	5.00	4.34	0.80
8	Job security	1.00	5.00	4.23	0.98
9	Financial reward	1.00	5.00	3.80	0.83
10	Opportunity to travel	1.00	5.00	3.67	1.01
11	Status of profession	1.00	5.00	3.40	0.87
12	Physical Challenge	1.00	5.00	2.69	0.83
	Other	1.00	5.00	4.25	1.16

Table 18**Q21 Times to move location in the career.****Note: N=217**

Times	Number	Percentage
Never	32	14.8
Once	35	16.1
Twice	34	15.7
Three times	45	20.7
More than three times	71	32.7

Table 19**Q22 What is the most significant reason/s for the move/s?****Note: N=184**

	Number	Percentage
Multiple Reasons	65	35.3
Promotion	20	10.9
Other	19	10.3
Study Area	17	9.2
New position available or more secured jobs	17	9.2
Change in Industry	15	8.2
Better Pay	12	6.5
Academic Grant	12	6.5
Current contract ends	7	3.8

Table 20**Q24 Have any of the moves involved international relocation?****Note: N=213**

	Number	Percentage
Yes	86	40.4
No	127	59.6

Table 21

Q25 Have you ever accessed the following conditions/ workplace benefits in your current position?

Note: N=217

	Yes		No		Not Available		N/A to my work placement / my position	
	No.	%	No.	%	No.	%	No.	%
Study leave (sabbatical)	29	13.6	123	57.7	19	8.9	42	19.7
Protected time for research	32	14.7	89	41.0	34	15.7	59	27.2
Exchange or collaboration program	39	18.2	120	56.1	27	12.6	28	13.1
Funding to attend conferences	161	74.2	40	18.4	11	5.1	5	2.3
Paid parental leave	27	12.4	140	64.5	12	5.5	30	13.8
Unpaid parental leave	21	10.0	148	70.8	9	4.3	31	14.8
Paid maternity Leave	52	24.2	123	57.2	11	5.1	29	13.5
Unpaid maternity Leave	32	15.2	141	66.8	7	3.3	31	14.7
Return to work part time	49	23.1	132	62.3	8	3.8	23	10.8
Childcare	26	12.2	134	62.9	23	10.8	30	14.1
Long Service Leave	24	11.3	151	70.9	12	5.6	26	12.2
Internal Research Grant	87	40.7	77	36.0	15	7.0	35	16.4
Professional development program related to my work	150	70.4	51	23.9	6	2.8	6	2.8
Professional development program in a different area to my work	52	24.5	131	61.8	12	5.7	17	8.0
Time off to undertake or complete a qualification	26	12.2	152	71.4	13	6.1	22	10.3
Mentoring program	102	47.7	90	42.1	13	6.1	9	4.2
Leadership program	81	37.7	114	53.0	12	5.6	8	3.7
Carer's leave	63	29.6	119	55.9	10	4.7	21	9.9
Other	2	0.9	12	5.5	2	0.9	5	2.3

Table 22

Q26 Have you ever taken a period of 6 months or longer away from work anytime during your career?

Note: N=217

	Number	Percentage
Yes	97	44.7
No	114	52.5
Other	6	2.8

Table 23

Q27 How long was the break that you took?

Note: N=105

	Number	Percentage
Up to one year	44	41.9
1 - 2 years	14	13.3
2 - 5 years	11	10.5
More than 5 years	4	3.8
Various / Other	32	30.5

Table 24

Q28 Which best describes your return to work after the break?

Note: N=126

	Percentage
I returned to the same position - full time	29
I returned to the same position but part time	26
I returned to the same employer but to a different position - full time	1
I returned to the same employer but to a different position - part time	3
I returned to the same employer but in a casual / sessional role	3
I did not return to my position. I returned later to a different employer - full time	17
I did not return to my position. I returned later to a different employer - part time	13
I did not return to my position. I returned to a different employer - casual / sessional	10
I returned to multiple employers / sectors	10
Other	14

Table 25**Q29 Which of the following best describes your occupational level?****Note: N=214**

	Number	Percentage
Undergraduate	8	3.7
Postgraduate Student	13	6.1
Postgraduate	10	4.7
Post doctoral	8	3.7
Academic Level A	12	5.6
Academic Level B – Lecturer / Research Fellow	39	18.2
Academic Level C – Senior Lecturer / Senior Research Fellow	23	10.7
Academic Level D – Associate Professor	14	6.5
Academic Level E – Professor	11	5.1
Research Assistant	8	3.7
Operational management	10	4.7
Middle management	14	6.5
Laboratory Manager	2	0.9
Senior Management	12	5.6
Other (please specify)	30	14.0

Table 26**Q30 In your opinion, how do you think your career has progressed compared to?****Note: N=217**

	Number	Percentage
I have progressed at the same level as others who qualified when I did.	54	24.9%
I have progressed more quickly than others who qualified when I did.	49	22.6%
I have progressed more slowly than others who qualified when I did.	83	38.2%
Other (please specify)	31	14.3%

Table 27

Q31 To what extent do you think the following issues have been a factor in your career progression?

**Note: N=217. Min=1 “Definitely like me”,
Max=5 “Definitely not like me”.**

	Mean	Std. Deviation
I am in career/field I have chosen.	1.79	0.87
I work with a single employer.	1.85	1.24
While satisfied and enjoying my role, I would consider other roles and promotions should the opportunity arise.	1.87	1.01
I put myself forward for new opportunities and roles.	2.07	0.90
I am working with an appropriate choice of employer/s.	2.09	1.12
Reason (please specify)	2.11	1.24
I have competing demands for I want a life / work balance.	2.18	1.14
I have priorities other than work.	2.20	1.18
I am prepared, accomplished and ready to apply for promotion / awards.	2.35	0.98
I am prepared to take risks.	2.39	0.94
I am satisfied with the role and level of achievement in my career.	2.65	1.18
My research output compared to others is productive.	2.73	1.10
I am assertive.	2.76	1.25
I have competing demands beyond my control.	2.88	1.34
I have taken a change in career direction.	2.91	1.48
I have taken time out for family reasons.	3.05	1.66
Work I do is invisible / difficult to document in alignment with promotion criterion.	3.06	1.13
I’m not one of the “In-Crowd” in my workplace.	3.07	1.19
I have had multiple career paths by choice.	3.16	1.39
My career accomplishments have been disrupted due to funding.	3.31	1.35
I can self-aggrandise or self-promote.	3.49	1.20
I have taken time out of my career for other reasons.	3.69	1.35
I am personally satisfied and not seeking promotion in my career.	3.74	1.21
I have had multiple career pathways due to circumstances beyond my control.	3.76	1.21
I work with multiple employers by choice.	3.95	1.19

Table 28

Q32 Have you ever been successful in securing a permanent position or promotion?

Note: N=217

	Number	Percentage
Yes	140	64.5
No	19	8.8
I have never applied	27	12.4
Multiple times within an organisation	10	4.6
Multiple times across organisations / sectors	21	9.7

Table 29

Q33 I have been encouraged to apply for promotions by:

Note: N=215

	Number	Percentage
Other colleagues	45	20.9
Supervisor / manager	56	26.0
Senior staff members	20	9.3
Other	16	7.4
None	62	28.8
Significant other	16	7.4

Table 30

Q36 Where do you work?

Note: N=217

	Number	Percentage
Western Sydney University	78	35.9
Macquarie University	7	3.2
University of Sydney	16	7.4
University of Wollongong	31	14.3
Other Australian universities	25	11.5
Universities Overseas	4	1.8
Consultancy companies	16	7.4
Government departments or agencies	8	3.7
Homeward Bound Team member	9	4.1
Other	23	10.6

Table 31

Q32 Have you ever been successful in securing a permanent position or promotion?

		Distribution of participants' level of education and current study.							
		Are you currently studying for a qualification?							Total
		Not studying	PhD	MBBS	Masters	Undergraduate degree	Diploma	Other	
Highest level of education completed	PhD	115	0	0	0	0	2	3	120
	MD	2	1	0	0	0	0	0	3
	Masters by thesis	9	6	0	0	0	0	0	15
	Masters by coursework	18	5	0	1	0	0	0	24
	Undergraduate degree with Hons	12	13	0	0	0	0	0	25
	Undergraduate degree	19	0	0	0	0	0	1	20
	Other	1	0	1	3	2	1	1	9
	Total	176	25	1	4	2	3	5	216

Table 32

Descriptive statistics for factors valued in work environment across three career stages

Note: N=217. Early careers, N=102; mid-careers, N=90; late careers, N=20.

		Mean	SD	Minimum	Maximum
Autonomy and control over working life	Early Careers	4.55	0.65	2.00	5.00
	Mid Careers	4.73	0.49	3.00	5.00
	Late Careers	4.30	0.82	2.00	5.00
Genuine passion for field of study	Early Careers	4.64	0.58	3.00	5.00
	Mid Careers	4.50	0.72	1.00	5.00
	Late Careers	4.30	0.70	3.00	5.00
Job Security	Early Careers	4.14	1.12	1.00	5.00
	Mid Careers	4.28	0.87	1.00	5.00
	Late Careers	4.35	0.71	3.00	5.00
Opportunity to contribute to development of new knowledge	Early Careers	4.42	0.73	2.00	5.00
	Mid Careers	4.43	0.74	2.00	5.00
	Late Careers	4.23	0.81	2.00	5.00
Intellectually stimulating work	Early Careers	4.75	0.52	3.00	5.00
	Mid Careers	4.73	0.56	2.00	5.00
	Late Careers	4.43	0.84	2.00	5.00
Opportunity to travel	Early Careers	3.78	1.05	1.00	5.00
	Mid Careers	3.64	1.01	1.00	5.00
	Late Careers	3.30	0.88	2.00	5.00
Collegial work environment	Early Careers	4.30	0.87	1.00	5.00
	Mid Careers	4.44	0.69	2.00	5.00
	Late Careers	4.04	0.82	2.00	5.00
Status of profession	Early Careers	3.32	0.89	1.00	5.00
	Mid Careers	3.50	0.85	1.00	5.00
	Late Careers	3.26	0.81	2.00	5.00
Financial reward	Early Careers	3.65	0.94	1.00	5.00
	Mid Careers	3.96	0.75	2.00	5.00
	Late Careers	3.78	0.52	3.00	5.00
Intellectual challenge	Early Careers	4.57	0.59	2.00	5.00
	Mid Careers	4.56	0.60	2.00	5.00
	Late Careers	4.30	0.63	3.00	5.00
Interest in the field	Early Careers	4.61	0.57	3.00	5.00
	Mid Careers	4.53	0.62	2.00	5.00
	Late Careers	4.45	0.67	3.00	5.00
Physical challenge	Early Careers	2.71	0.93	1.00	5.00
	Mid Careers	2.67	0.72	1.00	4.00
	Late Careers	2.65	0.78	1.00	4.00
Other	Early Careers	4.17	1.34	1.00	5.00
	Mid Careers	4.29	0.95	3.00	5.00
	Late Careers	5.00	-	5.00	5.00

Table 33

Descriptive statistics for factors valued in work environment across levels of education.

Note: N=217. Below undergraduate, N=9; undergraduates including Hons, N=46; Masters including MD, N=42; PhD, N=120.

		Mean	SD	Minimum	Maximum
Autonomy and control over working life	Below undergraduate	4.44	0.73	3.00	5.00
	Undergraduates including Hons	4.54	0.59	3.00	5.00
	Masters including MD	4.50	0.74	2.00	5.00
	PhD	4.68	0.58	2.00	5.00
Genuine passion for field of study	Below undergraduate	4.22	0.83	3.00	5.00
	Undergraduates including Hons	4.43	0.72	3.00	5.00
	Masters including MD	4.45	0.63	3.00	5.00
	PhD	4.65	0.62	1.00	5.00
Job Security	Below undergraduate	4.11	0.93	2.00	5.00
	Undergraduates including Hons	4.43	0.90	1.00	5.00
	Masters including MD	4.05	0.79	2.00	5.00
	PhD	4.23	1.07	1.00	5.00
Opportunity to contribute to development of new knowledge	Below undergraduate	3.67	1.32	2.00	5.00
	Undergraduates including Hons	4.31	0.70	2.00	5.00
	Masters including MD	4.20	0.75	2.00	5.00
	PhD	4.58	0.63	2.00	5.00
Intellectually stimulating work	Below undergraduate	4.33	0.87	3.00	5.00
	Undergraduates including Hons	4.78	0.42	4.00	5.00
	Masters including MD	4.40	0.83	2.00	5.00
	PhD	4.82	0.44	3.00	5.00
Opportunity to travel	Below undergraduate	3.00	1.22	1.00	5.00
	Undergraduates including Hons	3.75	0.75	2.00	5.00
	Masters including MD	3.21	1.12	1.00	5.00
	PhD	3.86	0.99	1.00	5.00
Collegial work environment	Below undergraduate	4.13	0.83	3.00	5.00
	Undergraduates including Hons	4.40	0.72	3.00	5.00
	Masters including MD	4.33	0.79	2.00	5.00
	PhD	4.33	0.84	1.00	5.00
Status of profession	Below undergraduate	3.22	1.20	1.00	5.00
	Undergraduates including Hons	3.56	0.87	1.00	5.00
	Masters including MD	3.19	0.74	1.00	5.00
	PhD	3.43	0.89	1.00	5.00
Financial reward	Below undergraduate	4.33	0.71	3.00	5.00
	Undergraduates including Hons	3.82	0.96	1.00	5.00
	Masters including MD	3.83	0.85	1.00	5.00
	PhD	3.73	0.77	1.00	5.00
Intellectual challenge	Below undergraduate	4.22	0.83	3.00	5.00
	Undergraduates including Hons	4.48	0.51	4.00	5.00
	Masters including MD	4.38	0.76	2.00	5.00
	PhD	4.64	0.53	3.00	5.00
Interest in the field	Below undergraduate	4.22	1.09	2.00	5.00
	Undergraduates including Hons	4.52	0.55	3.00	5.00
	Masters including MD	4.45	0.63	3.00	5.00
	PhD	4.65	0.55	3.00	5.00
Other	Below undergraduate	-	-	-	-
	Undergraduates including Hons	4.20	1.10	3.00	5.00
	Masters including MD	5.00	0.00	5.00	5.00
	PhD	4.15	1.28	1.00	5.00
Physical challenge	Below undergraduate	2.67	0.87	1.00	4.00
	Undergraduates including Hons	2.76	0.86	1.00	4.00
	Masters including MD	2.45	0.94	1.00	4.00
	PhD	2.76	0.77	1.00	5.00

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