GAP BETWEEN POLICY AND PRACTICE A KEY OBSTACLE TO GENDER EQUITY IN STEM

2018 WOMEN IN STEM PROFESSIONS SURVEY REPORT
Professionals Australia (formerly the Association of Professional Engineers, Scientists and Managers, Australia) represents over 23,000 professionals from across the STEM professions including engineers, scientists, managers, veterinarians, surveyors, information technology professionals and pharmacists throughout Australia.

Professionals Australia members are employed across all sectors of the Australian economy. This includes all tiers of government and in a diverse range of industries throughout the private and public sectors including Roads, Rail, Water, Electricity, Information Technology, Telecommunications, Consulting Services, Laboratories, Research, Surveying, Construction, Retail Pharmacy, Mining, Oil, Collieries and Manufacturing.

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ISSN 1834-6545 (Online)
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While we are seeing a growing commitment to gender equality in STEM (Science, Technology, Engineering and Mathematics), female participation in many STEM fields remains low. Women in STEM are under-represented at senior and management levels and over-represented at less senior levels, their retirement earnings are on average significantly less than those of their male counterparts and substantial gender pay disparities persist.

The 2018 Women in the STEM Professions Survey provides valuable insight into factors affecting women’s participation, progression and pay in the STEM workforce. While the survey shows that career experiences vary widely from organisation to organisation and many positive experiences were reported, it also highlights how far we still have to go to ensure that professional workplaces are equitable, family-friendly and safe. Despite demand for STEM skills and the difficulties that employers face in recruiting and retaining key STEM staff, the survey reveals that strategies to attract, develop and retain women professionals may be hampered by cultural barriers, inflexible working practices, systemic bias in advancement and inequities in remuneration. While women have made considerable inroads into STEM fields over the past three decades, workplace policy and practices have been slow to catch up.

The survey found that there were multiple factors impacting the gender pay gap and attrition from the STEM workforce but the clearest contributors were failures firstly to put in place proper diversity and anti-discrimination policies, and secondly, to implement the strategies and management accountabilities to give effect to diversity and anti-discrimination policies which then allowed workplace culture to override policy intent. Around half of the respondents indicated that their workplace currently did not have formal policies in place to promote diversity or deal with discrimination, and even where policies were in place, significant gaps between policy and practice were widespread. Women reported difficulty in accessing relevant provisions and where they were utilised, there was often a career penalty attached. In addition, there were instances of policies in workplaces that directly or indirectly discriminated against female STEM professionals with the examples cited by respondents mainly in the area of part-time work. For many, their experience was that an organisation’s stated commitment to diversity and non-discrimination was “all talk”.

As long as workplace practices operate to entrench systemic bias, and workplace culture continues to impede female STEM professionals’ access to development opportunities and core working conditions that support diversity, the types of obstacles highlighted by respondents in this survey will persist. Unless the contributing factors set out in this report are addressed, these practices will continue to undermine progress toward pay equity, equal access to progression and advancement, women’s economic security in retirement, greater rates of participation of women in non-traditional STEM fields, women’s proper representation across all levels of seniority and the retention of women in the STEM professions over the longer-term.

This report shows us the serious consequences of the gap between diversity policy and practice and concludes with a set of 30 recommendations to help assist with closing the gap.
“Around half of the respondents indicated that their workplace currently did not have formal policies in place to promote diversity or deal with discrimination, and even where policies were in place, significant gaps between policy and practice were widespread. Women reported difficulty in accessing relevant provisions and where they were utilised, there was often a career penalty attached ... For many, their experience was that an organisation’s stated commitment to diversity and non-discrimination was ‘all talk’.”
Welcome to the 2018 Women in STEM Professions Survey Report.

This report is set out in two parts.

The first part of the report looks at the current state of play of gender and diversity in the STEM workforce with reference to data from a range of sources including the Chief Scientist’s Office¹, the Workplace Gender Equality Agency² and our own surveys³ in these key areas:

- the low participation rates of women in many STEM fields;
- attrition from the STEM workforce;
- occupational segregation within the STEM workforce (the concentration of women at less senior levels and under-representation at senior and management levels);
- the gender pay gap in STEM; and
- retirement savings.

The second part of the report looks at factors at the workplace level that contribute to the current state of play in STEM with reference to the Women in STEM Survey data across the following areas:

- bias in career-building activities (including lack of access to professional development, role models and mentoring);
- working part-time;
- career disruption;
- workplace culture;
- unconscious bias in decision-making and recruitment;
- discrimination and sexual harassment; and
- gender stereotyping.

We have included comments from our survey respondents wherever possible to help illustrate first-hand the career experiences of professional women in the STEM workforce.
“The business talks about work/life balance, but it’s all talk. If your manager doesn’t support work/life balance or flexible work arrangements, then they just say no. There’s no negotiation possible, contrary to corporate policy that management communicates so vocally.”

“I work in government and we have performance development programs and a whole range of these things but it is all talk. High-level directors and CEOs have KPIs to meet, they want to just tick the boxes due to workloads.”
KEY FINDINGS

GAP BETWEEN POLICY AND IMPLEMENTATION
35.7 per cent said they did not believe the employer had strategies in place to actually implement policies relating to diversity and discrimination.

CAREER DISRUPTION
68.5 per cent of survey respondents said taking maternity leave had been detrimental to their career.

CAREER PENALTY ATTACHED TO WORKING PART-TIME
48.0 per cent said they believed working part-time had negatively impacted their career.

ATTRITION FROM THE STEM WORKFORCE
33.8 per cent of respondents in the 25 to 35 age group said they were intending to leave their profession within 5 years.

GENDER PAY GAP
32.2 per cent of respondents did not believe they received equal compensation for work of equal value.

WOMEN’S ECONOMIC SECURITY
50.9 per cent of respondents said a career break had seriously reduced their retirement savings.
Sexual Harassment
26.7 per cent reported that they had been sexually harassed in the course of their employment.

Bias in Career-Building Activities
23.5 per cent said they were unnecessarily prevented from undertaking training and professional development due to working part-time.

Gender-Based Discrimination
51.3 per cent reported having been directly discriminated against on the basis of gender during the course of their employment.

Unconscious Bias in Decision-Making and Recruitment
43.1 per cent said unconscious bias was embedded in their organisation’s decision-making processes.
45.2 per cent said unconscious bias was embedded in their organisation’s recruitment practices.

Gender Stereotyping and Workplace Culture
39.6 per cent said that in their workplace, advice or information of a technical nature was less likely to be listened to if provided by a woman than a man.
36.5 per cent said they were seen as less professional as they had commitments outside work.

Refer to Appendix 1 for a full summary of results.
THE CURRENT STATE OF PLAY

“The leadership of the organisation I work for is made up mostly of same type (background/ experience) - there’s been a small shift in gender over the last few years. Whilst there’s talk of ‘change’ and moving to a more modern model, there’s no real change in behaviours.”

“The industry I work in has traditionally been an old boys’ club but it is slowly changing with an increase in roles for women - but not enough and I am still considered a novelty.”

UNDER-REPRESENTATION OF WOMEN IN STEM

The Office of the Chief Scientist’s 2016 report *Australia’s STEM Workforce* shows that women are under-represented as a proportion of qualified STEM graduates, as a proportion of STEM staff in the workforce and as a proportion of employees in higher-paid positions. Those key findings are included in this report to document the extent of the under-representation of women in STEM.

The second part of this report sets out our findings on the factors that contribute to this under-representation and possible solutions to help address it.

Key findings of gender breakdown in STEM from the Office of the Chief Scientist’s *Australia’s STEM Workforce*:

- Only 16 per cent of the qualified STEM population are women.⁵
- Across all sectors, women represent only 27 per cent of the STEM workforce.⁶
- Among those women who are both qualified and employed in STEM roles, representation in higher-paid roles remains low. Only 12 per cent of women in STEM fall into the top income bracket (above $104,000), while 32 per cent of males are employed in this bracket.⁷
- The number of women with tertiary qualifications in STEM is increasing, rising by 23 per cent between 2006 and 2011. However, the number of women with tertiary qualifications outside of STEM increased by 31.0 per cent over the same period, suggesting that despite the increase STEM is still falling behind other fields.⁸
- The gender distribution of tertiary qualifications differs significantly by field with some fields performing better than others. Women account for 48 per cent of the qualified population in science, 40 per cent in mathematics and 30 per cent in agricultural and environmental science. Conversely, women comprise only 25 per cent of those with post-secondary IT qualifications and 6 per cent of those with engineering qualifications.⁹
- Gender distribution also differs greatly based on industry. Women account for only 12 per cent of the STEM workforce in construction, 17 per cent in mining, 19 per cent in utilities and ICT and 21 per cent of professional, scientific and technical services. However, women are better represented in health care at 60 per cent and education and training at 41 per cent.¹⁰
**ATTRITION OF WOMEN FROM THE STEM PROFESSIONS**

Encouraging greater numbers of women and girls to take on STEM subjects at school and driving greater participation is absolutely critical to developing a sustainable STEM workforce and building capacity for the future, but numerical equality is not a solution in itself - the second half of the equation is addressing the attrition of women from the STEM workforce once they get there.

Women are generally under-represented in STEM fields and attrition at mid-career stage means that the sector is losing valuable female talent.

The greater our understanding of the factors that contribute to women considering leaving their profession and the impacts of women leaving STEM, the better placed we are to take an evidence-based approach to addressing the "leaky pipeline" and develop strategies and policy settings that will ensure employers have access to the broadest pool of high-quality STEM talent. To that end, the survey looked at factors contributing to women considering leaving the profession and the costs to an organisation when women leave the STEM workforce.

"Women work twice as hard for half the recognition in my experience which leads to high drop-out rates resulting in a loss to society of many professionals."

"I have lost faith in the industry to seriously address gender-based discrimination despite the plethora of gender policies and sympathetic language. I can name many issues that women in technical positions face constantly and that are never adequately addressed, even in the organisations that profess to have sound gender programs."

**FIGURE 1: TIME EXPECTED TO REMAIN IN CURRENT PROFESSION (%)**

<table>
<thead>
<tr>
<th>Time Expected to Remain</th>
<th>Public sector</th>
<th>Private sector</th>
<th>Other Sectors</th>
<th>All</th>
</tr>
</thead>
<tbody>
<tr>
<td>Less than 1 year</td>
<td>4.2%</td>
<td>4.9%</td>
<td>3.8%</td>
<td>4.3%</td>
</tr>
<tr>
<td>1 to less than 3 years</td>
<td>10.9%</td>
<td>14.8%</td>
<td>13.4%</td>
<td>12.4%</td>
</tr>
<tr>
<td>3 to less than 5 years</td>
<td>10.5%</td>
<td>13.4%</td>
<td>12.6%</td>
<td>12.6%</td>
</tr>
<tr>
<td>5 to less than 10 years</td>
<td>11.8%</td>
<td>15.8%</td>
<td>16.6%</td>
<td>15.8%</td>
</tr>
<tr>
<td>10 years or more</td>
<td>54.7%</td>
<td>46.3%</td>
<td>47.4%</td>
<td>49.5%</td>
</tr>
</tbody>
</table>

31.0 per cent of respondents expected to have left their profession within five years. This figure was slightly lower for public sector respondents (25.7 per cent compared to 32.7 for the private sector).
**Reason for leaving profession**
Dissatisfaction and frustration with a range of workplace practices including lack of career advancement, pay and conditions, lack of professional recognition and lack of opportunity to gain experience or undertake increased challenges were factors contributing to women considering leaving their profession for both women with and without children.

Of those who expected to leave their profession in the next five years, the top six reasons overall were:

- lack of career advancement - selected by 46.2 per cent of all respondents;
- for better pay and conditions - selected by 40.5 per cent of respondents;
- for better work/life balance - selected by 38.0 per cent of respondents;
- for increased challenges - selected by 32.8 per cent of respondents;
- for a change or to gain experience - selected by 31.7 per cent of respondents; and
- for greater professional recognition or status - selected by 26.0 per cent of respondents.

**Caregiver responsibilities as a factor in women leaving STEM**
The top six factors contributing to women considering leaving their profession were the same for women with and without children though the extent to which they were a factor varied. Gaining a better work/life balance was the top factor contributing to women with children intending to leave the profession. Lack of career advancement was the top factor contributing to women without children intending to leave the profession. These findings are significant because quite clearly a range of factors including but not limited to a lack of work/life balance are contributing to women considering leaving the profession.

**FIGURE 2: FACTORS INFLUENCING EXPECTATION TO LEAVE PROFESSION FOR WOMEN WITH AND WITHOUT CHILDREN (%)**
IMPACT ON ORGANISATION

While women leaving the STEM workforce is in general terms widely accepted as a waste of talent, the survey asked respondents to identify the types of loss to their organisation were they to leave their current employer.

Respondents selected loss of knowledge, loss of people skills and loss of technical skills to the organisation as the top three costs to their employer if they chose to leave. The results were ranked as follows:

**TABLE 1: OUTCOMES EXPECTED WHEN FEMALE STEM PROFESSIONALS LEAVE EMPLOYER**

<table>
<thead>
<tr>
<th>Cost</th>
<th>Response %</th>
</tr>
</thead>
<tbody>
<tr>
<td>Loss of knowledge to the organisation</td>
<td>59.1</td>
</tr>
<tr>
<td>Loss of people skills to the organisation</td>
<td>54.4</td>
</tr>
<tr>
<td>Loss of technical skills to the organisation</td>
<td>54.0</td>
</tr>
<tr>
<td>Loss of innovative capability for organisation</td>
<td>30.3</td>
</tr>
<tr>
<td>Waste of organisation’s investment in professional development</td>
<td>24.3</td>
</tr>
<tr>
<td>Reduced management capability in the organisation</td>
<td>22.6</td>
</tr>
<tr>
<td>Cost of retraining to move into another field</td>
<td>20.8</td>
</tr>
<tr>
<td>Reduced profit/bottom line for the organisation</td>
<td>11.4</td>
</tr>
</tbody>
</table>

AGE-BASED ATTRITION

ENGINEERING

- The Professionals Australia Engineers Employment and Remuneration Report found that 13.1 per cent of the female workforce dropped out between the 20-29 and 30-39 age brackets, compared with a drop of only 1.4 per cent for the male workforce - confirming substantial attrition of the female workforce beyond the 20-29 age bracket.
- Only 30.0 per cent of female engineer respondents were aged over 40, compared to 42.6 per cent of their male counterparts.
- Only 14.0 per cent of female respondents indicated that they had worked as an engineer for over 20 years compared with 32.1 per cent of male respondents. These data confirm Engineers Australia findings: “The transition probability for women aged 25 to 34 years falls to 81 per cent, reflecting an increase to 17 per cent from 6 per cent [aged 15 to 24] in the probability of women in this age group retiring from the labour force ... The probability of being employed increases back to about 90 per cent in the 35 to 44 years and 45 to 54 years groups but remains lower than the corresponding probabilities for men.”

**FIGURE 3 – DISTRIBUTION OF MALE AND FEMALE ENGINEER RESPONDENTS BY AGE (%)**
SCIENCE

The Professional Scientists Employment and Remuneration Report found a disparity in the age profiles of female and male scientists. After peaking at 28.0 per cent in the 30-35 years age bracket, the number of female scientists falls steadily. In contrast, the age profile of male scientists peaks in the 35-40 age bracket, and beyond that, falls gradually up to retirement age. 62.3 per cent of female respondents compared with 80.7 per cent of male respondents were over 35 years of age. 26.7 per cent of female respondents were aged over 45 compared with 48.8 per cent of male respondents.

FIGURE 4 – DISTRIBUTION OF MALE AND FEMALE SCIENTIST RESPONDENTS BY AGE (%)

ICT

2016 Census data on ICT workforce participation by gender shows a comparative drop off rate of 3.9 per cent compared to 0.8 per cent for female and males from the 30-34 to the 35-40 age brackets (from 21.7 per cent to 17.8 per cent for females and 20.7 to 19.9 per cent for males). These data suggest that there is greater attrition of females than males at this point in the ICT workforce.

FIGURE 5 – DISTRIBUTION OF MALE AND FEMALE IT WORKERS BY AGE (%)
COMMENTS ON ATTRITION

- In everything I do, I’m constantly met with resistance. At 38 years of age, I’m tiring of this exercise and have developed too much self-respect to continue the fruitless battle. If you wonder why middle-aged women are leaving the industry, this is my reason.

- I personally will be leaving my field to actively seek an improved work life balance. We are understaffed, cannot get leave and requests are not prioritised as you “only work part time anyway”.

- I watched a certain personality type - aggressive and self-promoting - being the only personality type rewarded within the organisation. Others who did not have this type of personality (male or female) felt like there was no chance for progression within that culture and as a result many employees were leaving the organisation.

- Discrimination, bullying, hardship and non-flexibility have caused burn-out; I’m ready to leave my profession.

- Once I returned to my profession I was told to either work full-time or get out! I had to leave my occupation and find a lesser paying role. It took me approximately 10 years to make up the difference in pay scale and responsibility.
OCCUPATIONAL SEGREGATION WITHIN THE STEM WORKFORCE

37.6 per cent in the Women in STEM survey said there was a concentration of female STEM professionals in roles of less responsibility in their workplace.

40.1 per cent said there were more female than male STEM professionals in lower paid roles or sections in their workplace.

Occupational segregation is a key issue in STEM because it shows how systemic biases operate to create differential labour participation patterns for males and females and how these patterns can operate to disadvantage women in the STEM workforce. It is a key factor in the gender pay gap in STEM outlined in more detail in the next section of this report.

37.6 per cent in the Women in STEM survey said there was a concentration of female STEM professionals in roles of less responsibility in their workplace.

40.1 per cent said there were more female than male STEM professionals in lower paid roles or sections in their workplace.

ENGINEERING

The 2017 Professionals Australia Professional Engineers Employment and Remuneration Report found a clear difference in the distribution of male and female respondents across levels, with males being more likely to be employed at higher levels of responsibility and females more likely to be employed at less senior responsibility levels. 50.0 per cent of female respondents reported being employed at levels 1 or 2, and only 26.0 per cent were employed at levels 4 or above. By comparison, only 27.2 per cent of men are engaged at the lower 2 levels, while 42.4 per cent are employed at levels 4 and above.

FIGURE 6 - GENDER-BASED WORKFORCE DISTRIBUTION ACROSS RESPONSIBILITY LEVELS (%) - ENGINEERING

Occupational segregation was also evident by years of experience. The majority of female respondents reported having fewer than six years’ experience, and only 14.0 per cent indicated that they had worked as an engineer for over 20 years. By comparison, the largest groups of male respondents reported having 10 to 20 years of experience and 32.2 per cent reported that they had worked as an engineer for over 20 years.
SCIENCE

The 2017 Professional Scientists Australia Employment and Remuneration Report found that the incidence of female respondents was greater at Levels 1 to 3 in comparison with their male respondents, and in comparatively fewer numbers at Levels 4 to Above Level 5 suggesting they are over-represented at Levels 1, 2 and 3, and under-represented at Levels 4, 5 and above level 5 in the broader workforce.

**FIGURE 7 - GENDER-BASED WORKFORCE DISTRIBUTION ACROSS RESPONSIBILITY LEVELS (%) - SCIENCE**

Female respondents were found in greater numbers than their male counterparts up to 15 years’ experience and at comparatively lower numbers at 15 to more than 30 years’ experience. The percentage of female respondents of the workforce dropped from 23.8 to 10.8 per cent beyond 15 years’ experience.

ICT

While sample size means any conclusions drawn from this data need to be treated with caution, the 2017 Professionals Australia IT Employment and Remuneration survey confirmed a concentration of women in lower levels of responsibility and the under-representation of women at more senior levels in the survey population.

**FIGURE 8 - GENDER-BASED WORKFORCE DISTRIBUTION ACROSS RESPONSIBILITY LEVELS (%) - IT**
“I have seen people in my workplace asked to take a demotion in order to access flex time provisions rather than allow a senior person access to part-time hours when caring for family members.”

“While part-time/flexible arrangements are offered, it is very clear that these are only available to women at low levels of the organisation.”

OVER-REPRESENTATION OF WOMEN PROFESSIONALS IN ROLES WITH LESS RESPONSIBILITY

The concentration of women who work part-time in less senior roles and the underutilisation of the skills of those opting for part-time work were significant issues for respondents to the Women in STEM Survey. Many commented that part-time or flexible work arrangements were only available in lower-paid less senior roles.

60.3 per cent of respondents said that professional women in their workplace often took up less challenging work roles so they could accommodate family/carer responsibilities.

47.6 per cent said underemployment - defined as engagement in roles which underutilise their professional skills and judgement - was a problem in their workplace.

COMMENTS

- I am working at a level lower with much lower pay than I did before I had children and have no potential for advancement in my current workplace.
- To be able to have flexible working arrangements I made the move from a management position in industry to a lower level position in Government.
- I see that when colleagues want to raise a family, it makes them less likely to be considered for managerial positions when of childbearing age or they are expected to drop back from managerial duties after having children.
“I was informed that my manager position could not be offered as a part-time role - even though the workplace policies stated that this was an option for employment, I was informed that it was not available.”

UNDER-REPRESENTATION OF WOMEN IN SENIOR, MANAGEMENT AND LEADERSHIP ROLES

The lack of role models, lack of women in senior roles and lack of access to senior roles for women were reported by respondents as detrimentally impacting their career advancement. Survey respondents reported being offered demotion on their return to work from parental leave as a way of accommodating their carer responsibilities – confirming the operation of systemic bias against the advancement of women with carer responsibilities. Survey responses also showed that women self-select out of senior, management or leadership roles as a way of balancing their work and family commitments. These factors operate to reinforce gendered historic work patterns whereby females were concentrated in lower-paid roles with less responsibility working part-time, and males worked full-time in more senior roles with greater responsibility.

60.6 per cent said there were fewer female than male STEM professionals in senior management roles in their workplace.

56.0 per cent of respondents said that the lack of role models had significantly or moderately impeded their career advancement.

57.6 per cent said the lack of women in senior roles had negatively impacted their progress.

55.7 per cent said lack of access to senior roles for women had detrimentally impeded their career advancement.

COMMENTS

- Men seem to be considered for management or executive opportunities, women very, very rarely get considered at all.

- I missed out on a managerial promotion that was given to a male counterpart who was less qualified and experienced (the director stated that he wanted a male in the role).

- I see the lack of women in senior roles as the biggest issue as there are no role models and no women to pull up more women.
GENDER PAY GAP IN STEM

Australia’s Chief Scientist Alan Finkel AO said of the gender pay gap in STEM: “The pay gap between men and women revealed in [the STEM workforce] is significant, it is longstanding and it is unacceptable.”

Equal pay was nominated by Women in STEM Survey respondents as the issue facing professional women that should be the highest priority for government and industry to address.

Workplace Gender Equality Agency (WGEA) data shows a gender pay gap of 22.6 per cent in the Professional, Scientific and Technical Services industry. Professionals Australia’s remuneration reports show gender pay gaps of 11.0, 12.4 and 20.2 per cent in engineering, science and ICT respectively.

The Professionals Australia Employment and Remuneration reports found that gender pay gaps in engineering, science and ICT can be attributed to a range of systemic biases that give rise to concentration of female respondents in less senior roles and under-representation at senior levels. There is also evidence to suggest the attrition of females from the workforce beyond the ages of around 30 to 35 is likely to be a contributing factor (refer to age-based attrition section of Attrition of women from the STEM professions).

Among those women who are both qualified and employed in STEM roles, representation in higher-paid roles remains low. Only 12 per cent of women in STEM fall into the top income bracket (above $104,000), while 32 per cent of males are employed in this bracket.
“I’ve experienced unequal compensation first hand. Male engineers were provided with a car, I was not. When I left in disgust after being told I would not get a car, they replaced me with two male engineers - both of whom got cars.”

GENDER PAY GAP IN ENGINEERING

Research suggests a serious gender pay gap persists in engineering. 2016 Census data regarding engineering professionals in full-time roles showed a higher concentration of males in higher pay brackets. Females were 30.9 per cent less likely to report wages in the top two pay brackets, and 52.3 per cent less likely to occupy the highest pay bracket.

The 2017 Professionals Australia Employment and Remuneration survey confirmed differential male and female earnings for engineers with male respondents’ base salaries averaging $113,222 while female respondents’ base salaries averaged $101,238, confirming a pay differential of 11.0 per cent.

When comparing like-for-like roles based on years of experience or level of responsibility, no clear pay gap was observed. The survey data did confirm that the pay differential could be attributed to occupational segregation in the survey population – that is, a concentration of female respondents in less senior roles and the under-representation of females at senior levels. In looking at female representation at different responsibility levels, the survey found a clear difference in the distribution of male and female respondents across levels of responsibility, with males being more likely to be employed at higher levels of responsibility and females more likely to be employed at less senior responsibility levels. 50.0 per cent of female respondents reported being employed at levels 1 or 2, and only 26.0 per cent were employed at levels 4 or above. By comparison, only 27.2 per cent of men were engaged at the lower two levels, while 42.4 were employed at levels 4 and above.

Occupational segregation was also evident by years of experience. The majority of female respondents reported having fewer than six years’ experience, and only 14.0 per cent indicated that they had worked as an engineer for over 20 years. By comparison, the largest groups of male respondents reported having 10 to 20 years of experience, and 32.2 per cent reported that they had worked as an engineer for over 20 years.

Previous research has found a clear disparity in the age profiles of male and female engineers with a sharp decline in the number of female engineers beyond the 20-29 age bracket and 15 per cent of female engineers aged over 40 compared with 43 per cent of males. 17

The Professionals Australia survey confirmed these findings in the following ways:

(1) there was a steady fall in the age profile of women beyond the 20-29 age bracket. The percentage of female engineers dropped by 13.1 per cent between the 20-29 and 30-39 age brackets compared with a percentage decline of 1.4 per cent for male engineers; and

(2) the proportion of females aged over 40 is significantly less than that of the male engineering workforce. Our survey found that only 30.0 per cent of female engineer respondents were aged over 40, compared to 42.6 per cent of their male counterparts (refer also to the age-based attribution section in Attrition of women from the STEM professions).
Taking maternity leave has impacted my career progression opportunities. It affects the 9 months leading up to the birth due to the employer knowing you are about to be absent from work, you are then absent for 12 months, and then it affects you upon your return. During my recent period of maternity leave, I experienced 3 pay reviews (at annual intervals) that were directly impacted by my pregnancy and 12 months of maternity leave. So 12 months leave can set you back three years in pay progression/increases. In my experience, this pay gap cannot be closed/made up unless you change employer and negotiate a better salary package.”

GENDER PAY GAP IN SCIENCE

Research suggests a serious gender pay gap persists in science though the extent of the gap depends on the field. Office of the Chief Scientist research confirms that:

- without exception, females were less likely than males to be in the top pay bracket;
- females were more likely than males to be in the middle pay bracket with the exception of the Biological, Agricultural and Environmental sciences at the Graduate level; and
- without exception, females were more likely than males to be in the lower pay bracket.

### TABLE 2 - PERCENTAGE OF MALES AND FEMALES IN TOP PAY BRACKET BY GENDER*

<table>
<thead>
<tr>
<th>Field of science</th>
<th>Percentage in top bracket Graduates</th>
<th>Percentage in top bracket Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Physics and Astronomy</td>
<td>30</td>
<td>11</td>
</tr>
<tr>
<td>Chemical sciences</td>
<td>27</td>
<td>10</td>
</tr>
<tr>
<td>Earth sciences</td>
<td>53</td>
<td>27</td>
</tr>
<tr>
<td>Biological sciences</td>
<td>18</td>
<td>6</td>
</tr>
<tr>
<td>Agricultural sciences</td>
<td>17</td>
<td>5</td>
</tr>
<tr>
<td>Environmental sciences</td>
<td>19</td>
<td>8</td>
</tr>
</tbody>
</table>

### TABLE 3 - PERCENTAGE OF MALES AND FEMALES IN MIDDLE PAY BRACKET BY GENDER**

<table>
<thead>
<tr>
<th>Field of science</th>
<th>Percentage in middle bracket Graduates</th>
<th>Percentage in middle bracket Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Physics and Astronomy</td>
<td>49</td>
<td>52</td>
</tr>
<tr>
<td>Chemical sciences</td>
<td>55</td>
<td>57</td>
</tr>
<tr>
<td>Earth sciences</td>
<td>37</td>
<td>51</td>
</tr>
<tr>
<td>Biological sciences</td>
<td>58</td>
<td>53</td>
</tr>
<tr>
<td>Agricultural sciences</td>
<td>60</td>
<td>52</td>
</tr>
<tr>
<td>Environmental sciences</td>
<td>66</td>
<td>62</td>
</tr>
</tbody>
</table>

### TABLE 4 - PERCENTAGE OF MALES AND FEMALES IN THE LOWER PAY BRACKET***

<table>
<thead>
<tr>
<th>Field of science</th>
<th>Percentage in lower bracket Graduates</th>
<th>Percentage in lower bracket Doctorate</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Male</td>
<td>Female</td>
</tr>
<tr>
<td>Physics and Astronomy</td>
<td>21</td>
<td>37</td>
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<tr>
<td>Chemical sciences</td>
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<tr>
<td>Earth sciences</td>
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<td>21</td>
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<tr>
<td>Biological sciences</td>
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<tr>
<td>Agricultural sciences</td>
<td>23</td>
<td>43</td>
</tr>
<tr>
<td>Environmental sciences</td>
<td>16</td>
<td>30</td>
</tr>
</tbody>
</table>

*Top pay bracket – Greater than $104,000
**Middle pay bracket – Between $41,600 and $103,999
***Lower pay bracket – Less than $41,599
These data confirm that female scientists are more likely to be over-represented in the lower pay brackets and under-represented in the higher pay brackets at both Graduate and Doctorate levels.

The 2017 Professional Scientists Employment and Remuneration Report confirmed differential male and female earnings for scientists with male respondents’ base salaries averaging $118,196 while female respondents’ base salaries averaged $103,484, confirming a pay differential of 12.4 per cent.

In relation to levels of responsibility, average base salaries were lower for female respondents than their male counterparts at and above Level 3. The data confirmed a level of pay disparity but not a clear gender pay gap in like-for-like roles across responsibility levels. Female respondents were found in greater proportion at Levels 1 to 3 in comparison with their male respondents, and in comparatively fewer numbers at Levels 4 to Above Level 5 suggesting they are over-represented at Levels 1, 2 and 3, and under-represented at Levels 4, 5 and 6.

In relation to years of experience, with the exception of respondents with less than 5 years’ experience, average base salaries and total packages were lower for females across years of experience. The clearest pay disparity was evident at 10 to 15 years’ experience and more than 30 years’ experience. Female respondents were found in greater proportion than their male counterparts up to 15 years’ experience and at comparatively lower numbers at 15 to more than 30 years’ experience. The percentage of female respondents of the workforce dropped from 23.8 to 10.8 per cent beyond 15 years’ experience.

The Professionals Australia survey also found a disparity in the age profiles of female and male scientists. After peaking at 28.0 per cent in the 30-35 years age bracket, the age profile for female scientists falls steadily. In contrast, the age profile of male scientists peaks in the 35-40 age bracket, and after that falls gradually up to retirement age. 62.3 per cent of female respondents compared with 80.7 per cent of male respondents were over 35 years of age. 26.7 per cent of female respondents were aged over 45 compared with 48.8 per cent of male respondents (refer also to the age-based attribution section in *Attrition of women from the STEM professions*).

The gender pay gap in science can be attributed to a concentration of female respondents in less senior roles, under-representation at senior levels, a concentration of female respondents in roles requiring fewer years of experience and the attrition of female scientists from the workforce beyond age 35.

The Professional Scientists Australia survey also found evidence of a gender pay gap in both the enabling and life sciences with the disparity greater in the “hard” sciences. In the “soft” sciences, female respondents earned 90.9 per cent of male respondents’ earnings and in the “hard” sciences, female respondents earned 86.7 per cent of male respondents’ earnings.
GENDER PAY GAP IN IT

WGEA Gender Equality data shows a gender pay gap of 19.3 per cent in the Information Media and Telecommunications industry. Deloitte research shows that average earnings continue to be lower for women in the ICT workforce than for men, with an average pay gap of around 20.0 per cent.

Census data regarding ICT professionals in full-time roles showed a higher concentration of males in higher pay brackets. Females were 27.7 per cent less likely to report wages in the top two pay brackets, and 45.8 per cent less likely to occupy the highest pay bracket.

The Professionals Australia survey confirmed these findings with male respondents’ base salaries averaging $100,000 while female respondents’ base salaries averaged $79,848, confirming a pay differential of 20.2 per cent.

The gap identified in the survey can be attributed to a lack of female respondents at higher levels of responsibility, where remuneration is typically also higher. The absence of female respondents in these roles was particularly pronounced in the 2017 survey, with no female respondents beyond level 3/SFIA level 5, despite 19 per cent of male respondents falling into these categories. While the sample size means these results need to be treated with caution, the findings suggest that the concentration of women in lower levels of responsibility and the under-representation of women at more senior levels are likely to be factors contributing to the gender pay gap in ICT.

Age-based attrition is also likely to be a factor contributing to the gender pay gap in IT (refer also to the age-based attribution section in Attrition of women from the STEM professions).

The data and findings set out in this section and in the previous Occupational segregation section are from the Professionals Australia Employment and Remuneration Survey Reports available from the website at http://www.professionalsaustralia.org.au/financial-edge/salary-survey-reports/
Differential Retirement Savings for Women in the STEM Workforce

“Not getting paid equally in the early/mid-part of my career will have the biggest impact on my retirement savings. I was vaguely aware I wasn’t paid enough at the time - but had never really thought through the long-term impact. Even though I get paid well now, I will never ‘catch up’.”

“My retirement savings are compromised by my low pay rate. Only employees who worked full-time regular hours seemed to be able to negotiate a better pay rate.”

WGEA data show comparatively lower retirement savings for females than their male counterparts. According to the WGEA, the average retirement balances at time of retirement age (64 years) in 2013-14 were $292,510 for men and $138,154 for women. The factors contributing to lower annual superannuation contributions are industrial and occupational segregation, the gender pay gap in male-dominated industries, unpaid carer responsibilities that impact workforce participation and in turn lifetime earnings and retirement savings and women are more likely to work in part-time or casual employment.

Those research findings are included in this report to document the extent of the under-representation of women in STEM.

The second part of this report presents our findings on the factors that contribute to the differential in retirement earnings in STEM and possible solutions to help address it.

50.9 per cent of our Women in STEM Survey respondents said a career break had seriously reduced their retirement savings.

52.4 per cent said working part-time had reduced their retirement savings.

47.3 per cent said access to more flexible work arrangements and therefore full-time work would have meant a reduced impact on their retirement savings.
CONTRIBUTING FACTORS

BIAS IN CAREER-BUILDING ACTIVITIES

While research shows that women are no less committed to their careers than men, that women are just as likely to have a career plan as men and that women are just as eager to attain seniority as men\(^2\), bias in career building activities was reported as widespread by survey respondents. Some of the systemic biases in career building activities were particularly blunt:

- I have been told I would not be given management training while working part-time as part-time workers will not be given supervisory roles.
- I was literally told I was not allowed to attend a weekly networking lunch because I was female and [there were] “no girls allowed”.

Of those who had been promoted in the previous 12 months, only half were actively encouraged by their manager to apply for promotion.

FIGURE 10 - PERCENTAGE OF RESPONDENTS ENCOURAGED/NOT ENCOURAGED TO APPLY FOR PROMOTION BY MANAGER (%)

"My past employer developed a program to support women into management positions, I was a team leader and the only female in my group and the only female in a team leader role. I was very forthcoming in stating what my career aspirations were and how my manager could support me - but nothing ever happened, it was all lip service. I was knocked back on all my study requests whilst the boys were approved. Very frustrating."
16.5 per cent of survey respondents said their employer was rarely or never proactive in ensuring that men and women had equal opportunity to career advancement.

**FIGURE 11 - HOW OFTEN EMPLOYER IS PROACTIVE IN ENSURING EQUAL OPPORTUNITIES FOR PROGRESS (%)**

![Bar chart showing the distribution of responses on how often the employer is proactive in ensuring equal opportunities for progress.](image)

12.5 per cent of survey respondents said their employer rarely or never ensured that career-building opportunities were allocated based on merit.

**FIGURE 12 - HOW OFTEN CAREER-BUILDING OPPORTUNITIES WERE ALLOCATED BASED ON MERIT (%)**

![Bar chart showing the distribution of responses on how often career-building opportunities were allocated based on merit.](image)
LACK OF ACCESS TO PROFESSIONAL DEVELOPMENT

23.5 per cent said they were unnecessarily prevented from undertaking training and professional development due to working part-time.

61.5 per cent said the impact on personal or family time prevented them from commencing or completing professional development.

COMMENTS

- Being a mother does not mean I am any less competent at my role than the fathers in the workplace. But I seem to be not given a go at learning new skills and offered opportunities less skilled and qualified male colleagues take on. I feel my contribution to the workplace is not valued and is seen as less important than my male counterparts.

- I was told I was not allowed to supervise staff because I was part-time.

- I never get given any interesting work or any challenging tasks that will help me to progress. I have been prevented from attending training, even when it falls on my working days, on the basis that other people will have more opportunity to use the outcomes of the training as they work more hours.

- I will be skipped over for training or simply not told if I don’t happen to be at work that day.

- I’ve been allocated menial work/leftover work because I am part-time. This means I miss out on important projects which affects my resume, and I then miss out on further opportunities.

- With a lack of females in senior professional engineering roles, career advancement and role models predominantly depend on male mentors.

- My manager was threatened by my performance and even intentionally excluded me from being involved in networking and career development opportunities.

- I have ended up doing a variety of small jobs to fit around family responsibilities and thus I now have no depth on any one field - that is what they promote on. The organisation does tend to groom people for promotion but I am not on the list.
“You are often the only woman in a room of 20 to 30 people in meetings and there is a lack of females in senior roles to provide mentoring or even just inspiration.”

LACK OF ACCESS TO ROLE MODELS

Survey respondents noted that a lack of role models and the lack of women both in the workplace and in senior roles were issues that impacted them. Respondents also noted that women in senior roles were not necessarily always positive role models and that in male-dominated workplaces and professions, career support and advancement for women could often depend on positive male role models.

56.0 per cent said a lack of role models was a significant or moderate obstacle to their career advancement.

41.2 per cent said a lack of other women in the workplace was an obstacle to their career advancement.

57.6 per cent said a lack of women in senior roles was an obstacle to their career advancement.

COMMENTS ON ROLE MODELS

- There are few women in very senior positions and quite a few of those have been terrible examples.
- I recently realised that because I have lacked female role models in management positions I sub-consciously believed that I couldn’t have those management roles. If I was in a bigger centre or a non-STEM field maybe I would have had a different experience and therefore felt differently.
- I think more needs to be done in schools to attract girls into STEM professions. A lot of young women do not have role models that they can look up to within the STEM area and I think it is a matter of ‘you can’t be what you can’t see’ so many capable young girls do not even consider STEM lines of work. If more young women are attracted to the professions, the percentage of women undertaking the roles will increase and therefore the perception and culture will change over time.
- With a lack of females in senior professional engineering roles, career advancement and role models predominantly depend on male mentors.
- I have been fortunate to have very supportive senior male role models and was encouraged to take on new opportunities.
- I have only had one female manager in my working life and she did nothing to demonstrate good leadership. I often find that women in management positions in this industry behave like the men to get ahead.
- I see the lack of women in senior roles as the biggest issue as there are no role models and no women to pull up more women.
- There is a lack of female role models in more senior roles which makes it more difficult to see myself in a more senior role and also to find someone to ask for advice.
- The lack of women role models and lack of women in senior roles have definitely had an effect on my career advancement. It is important to have a role model and a network to communicate with, to consult and seek advice occasionally.
- On one occasion another women ostracised me because there was only room for one woman in the group.
- Women in positions of power not supporting other women has been an issue for me.
LACK OF ACCESS TO MENTORING

Many survey respondents noted that both male and female mentors could provide valuable career support. Some observed that mentoring could be used by mentors to either replicate or challenge embedded practices and culture but this did not necessarily hold across gender lines - that is, female mentors did not necessarily challenge negative or gendered workplace practices, and conversely, male mentors could be very supportive of women’s career advancement. Others noted the professional isolation that STEM women can feel working in what can be male-dominated fields, industries and workplaces and the important role mentors can play in helping overcome this isolation.

15.7 per cent said they had engaged in formal mentoring activities in the previous 12 months.
38.2 per cent said they had engaged in informal mentoring activities in the previous 12 months.
61.1 per cent said mentoring would assist in maintaining or progressing their career over the next five years.
24.5 per cent said mentoring in their workplace was informal and often after hours making it less accessible for them.

COMMENTS ON MENTORING

• Often there is no clear roadmap for how to progress and often the rationale for promotion was not evident. Without any clear role models or mentors the support network within an organisation is limited.
• With the right kind of mentoring or training I believe I will be able to achieve so much more and enjoy my work more.
• Having a senior female professional mentorship - e.g. assuring me that I have done enough and encouraging me to apply for new roles - is vital.
• Discrimination has been less direct. I have directly approached my managers, HR and other mentors within the business to address the issues and seek advice. These have been informal conversations.
• I was one of the first female engineers in my organisation, so there were no women in senior roles at that time. However, I have never felt I needed specifically female mentors or examples. I had strong male mentors and carved a career path through strong performance.
• With a lack of females in senior professional engineering roles, career advancement and role models predominantly depend on male mentors.
• The white male founder of the other company would take the young white, urban Australian men (at least three I was aware of over about 18 months), mentor them, give them more opportunities and favour them for the best projects and professional development opportunities over women or minorities when they weren’t necessarily the best person in the pool of candidates for this.
• Problem is workplace is a mates and boys club so informal networking and mentoring wasn’t available to me. And I hate rugby and golf.

“For me the biggest impact is the sense of isolation/exclusion due to being female and not being part of the dominant (male) group. [It] causes lack of networking, mentoring, sponsorship, coaching opportunities that others access based on who they know and their contacts. It means also that there are fewer role models or examples of career options and different styles that can be emulated or learned from - I only see male managers and how they operate.”
CAREER PENALTY ATTACHED TO WORKING PART-TIME

“My employer has allowed me to work on part-time work arrangements but this is frowned upon and makes me feel like I have been given a special privilege.”

“One company I worked for claimed to support part-time work, yet the projects I was given were below my capabilities and I was told that they didn’t believe I could service my previous style of project on a four-day week.”

“The employer’s attitude makes all the difference. A lot will say they support part-time work, but don’t follow through with actions that represent what they are saying.”

After equal pay, flexible work arrangements and work/life balance were nominated by Women in STEM Survey respondents as the most important issues facing professional women.

The 2017 Professionals Australia Employment and Remuneration Reports in engineering, science and IT confirmed a clear difference in the distribution of males and females by employment status with females significantly less likely to be employed full-time and more likely to be employed part-time than males.
While gaining access to part-time work and flexible work arrangements can help women balance their work and family responsibilities, the arrangements can also be a means of entrenching discriminatory work practices and structural bias against those who have primary caregiver responsibilities. The survey confirmed that utilising flexible or part-time working hours could result in a narrowing of choice, limiting of opportunities and the reinforcement of discriminatory historic work patterns such as the concentration of women in roles and occupations with less responsibility and seniority. Survey responses showed that women may also self-select out of senior, management or leadership roles because flexible work arrangements are not available at senior levels. The survey found that even where positive workplace policies around flexible work arrangements existed, cultural issues within workplaces meant that accessing these provisions could be difficult. A number of respondents also commented that they had a full-time workload in spite of being paid for part-time hours.

61.5 per cent said balancing work/life responsibilities was a significant or moderate barrier to their career advancement.

48.0 per cent said they believed working part-time had negatively impacted their career.

30.3 per cent said they were unnecessarily prevented from undertaking certain types of work because they worked part-time.

22.3 per cent said they had been sidelined for promotion because they worked part-time.

28.5 per cent said their employer did not currently provide flexible working hours.

34.6 per cent said lack of access to flexible work arrangements was a significant or moderate obstacle to career advancement.

37.6 per cent said they had not approached their manager regarding working fewer hours for fear of being treated adversely.

72.2 per cent agreed or strongly agreed promotions in their workplace were generally drawn from those working full-time.

24.5 per cent said they were seen as not pulling their weight because they used flexible work arrangements.

20.4 per cent of respondents said that management in their workplace thinks that work/life balance is only relevant for women with children.

**COMMENTS**

- The impression of workers when you work part-time is that you’re not putting in as much as others in the workplace.

- Generally, working part-time does not mean part-time workload.

- Managers expect 0.8FTE employees to complete a full workload then you’re marked down in performance reviews when full-time workload is not achieved.

- I don’t see good work/life balance or flexibility with higher levels so don’t apply for them as it’s too stressful to manage the work with family commitments - it’s not worth it.

- Flexibility to manage family and work commitments is a primary barrier as you are not seen as committed or serious if you request flexibility.

- I’ve been told I am not allowed to work on certain projects because the client wants engineers available 40 hours per week minimum. I’ve been allocated menial/leftover work because I am part time - this means I’m missing out on important projects and further opportunities and this affects my resume.

- I felt like I was being judged as unprofessional because I was part-time.
CAREER DISRUPTION AND RETURN TO WORK

Research confirms that traditional approaches to career advancement which value a full-time uninterrupted career trajectory can disadvantage women because they are more likely to work part-time and take career breaks to accommodate carer responsibilities. The survey confirmed these findings with respondents reporting that career breaks can have a significant negative impact on advancement opportunities. The complexity and seniority of the projects women were allocated on return to work after a career break was often significantly less/lower than the type of work they were undertaking prior to the break and the project work they were offered was often more menial and did not provide opportunities for development. Very often flexible work arrangements were only available in roles with less seniority, and some women self-selected out of senior roles as a way of balancing their work/life responsibilities. Respondents reported the widely held misconceptions that women don’t want senior, management and leadership roles and that women with children don’t want a career. Comments also suggested that the career penalty attached to having a family for females did not work in reverse with males becoming a parent often rewarded with promotion and greater job opportunities.

“There is a difference between flexible working arrangements being available, and flexible working arrangements being accessible/realistic.”

“Since coming back to work after mat leave (going from full-time to part-time) there has been a big shift in the type of work I am given. Previously I used to run substantial, complex projects and now I’m given small tasks.”

68.5 per cent of survey respondents said taking maternity leave had been detrimental to their career.

23.4 per cent said they had been sidelined for promotion because they had taken a career break.

Only 12.4 per cent said their employer currently provided support for reintegration into the workplace after a career break.
COMMENTS

- My career path was hindered by maternity leave and by me becoming primary carer and working part-time. My momentum slowed, I became less competitive and opportunities were lost.
- I see the senior leaders in our business roles filling all the senior roles with who they know. I’ve seen plenty of people devalue a woman’s contribution after they have had children, they rarely get positions of responsibility after having maternity leave, nor are they allowed to find flexible work arrangements that would allow them to contribute in a valuable way. It’s like they suddenly have lost all their skills when they take maternity leave.
- I felt out of touch and went backwards in my career.
- I was getting overlooked for interesting and technical projects.
- I am a working female STEM professional. I have been negatively impacted for taking a career break and being the primary carer for my children. I currently work part-time and have flexible working arrangements. I am working at a level lower with much lower pay than I did before I had children and have no potential for advancement in my current workplace. I am finding it extremely difficult to return to a management position in industry, i.e. the position I held prior to having children. I am not challenging myself or working to my full potential - the trade-off is flexible working arrangements.
- Lack of job opportunities has been the major issue to advancing my career as a part-time female engineer. The main concern is that I repeatedly miss out on working on the good projects and regularly get assigned menial work.
- While the flexible work arrangements exist, they are not widely accepted or used.
- I had a manager that after promoting all my contemporaries off the entry-level rung denied me a promotion after seven years at the bottom. The only thing my colleagues and I could work out was that my friends got their promotions within a month of their wife having a baby.
- Becoming a parent for me was seen as being able to spend less time at work. The opposite reaction was observed in the same situation with my husband with him being seen as more responsible and given more professional responsibility and promotions after becoming a parent.

Comments also suggested that professional isolation was an issue for respondents on maternity leave.

- There were no keep in touch arrangements. I was not able to access work emails or communications unless colleagues forwarded information to my personal email account.
- I felt out of touch, went backwards in my career and felt out of place.
- Out of sight, out of mind. People forget about you when you’re away.

In addition to providing project work that offered the opportunity to develop rather than less responsible less challenging work, and options such as flexible work arrangements at senior levels, respondents suggested that keep in touch arrangements, not deactivating email accounts, providing a handover period, notification of team and organisational changes, an email letting people know of an individual’s return to work, their work days, and their role scope as well as time to get back up-to-speed were practical ways to support reintegration back into the workforce.
**WORKPLACE CULTURE AND ‘ROCKING THE BOAT’**

The survey confirmed that a range of practices, double standards and failure to properly implement diversity and anti-discrimination policies often created or embedded workplace cultures that directly or indirectly excluded, marginalised or created obstacles to career advancement for female STEM professionals.

It could be that a manager didn’t approve conversion to part-time hours even though there was a policy in place to support it. It could be that as soon as women accessed flexible arrangements they were denied the opportunity to work on high-level projects, that the performance pay system failed to recognise strong performance solely on the basis that an individual did not work full-time, that women were assumed to be less serious about their STEM careers or were sidelined for promotion, training or networking opportunities when they didn’t work full-time and/or took on carer responsibilities.

It could be that advancement was based on rewarding only those that worked full-time and/or worked long hours, that sexist, ageist or racist jokes were condoned or left unchallenged, that women felt excluded from a “boy’s club”, that women were stereotyped as less professional where they had commitments outside work, that professional/behavioural standards were differentially applied in the workplace or that women’s technical expertise was taken less seriously than that of their male colleagues.

Whatever the way workplace culture operated to disadvantage women working in STEM fields, one of the central issues highlighted by the survey was that individuals who challenge workplace culture can, not surprisingly, incur significant career pushback.

This finding makes it clear why the solution to a lack of gender equity in the workplace is not simply a matter of women calling out sexist behaviours and that changing workplace culture cannot be left up to individuals because, as respondents put it, “challenging the status quo” or “rocking the boat” can be “career limiting”. Effectively implementing gender equity initiatives in the workplace and changing the workplace practices and systems referred to as workplace culture needs to be about policy, strategy and most importantly, management accountability.

Reviewing and addressing gender equity in STEM workplaces necessarily involves asking questions about the policies that should be in place to positively impact gender discrimination and diversity in the workplace, the policies already in place that might directly or indirectly discriminate against women, the strategies for actually implementing diversity in the organisation, the areas where workplace culture might compromise implementation of diversity policy, the rewards and incentives that need to be in place for changing workplace culture and the ways in which managers are held accountable for policy implementation.

“Speaking out or challenging the status quo can be career limiting.”
52.5 per cent agreed or strongly agreed that their organisation genuinely encourages work and life/family balance; 29.4 per cent disagreed or strongly disagreed.

51.9 per cent said their employer had formal policies in place to deal with discrimination and 45.7 per cent said there were formal policies to promote diversity but 35.7 per cent said their employer did not have strategies in place to actually implement the policies.

44.5 per cent said their employer had good work/life balance policies but the culture of the organisation did not support it.

61.2 per cent agreed that their immediate manager genuinely encouraged work and life/family balance. 19.7 per cent said their immediate manager did not.

Of those considering leaving their current employer, workplace, occupation or industry, culture was a factor for 18.8 per cent of respondents.

38.3 per cent said they were seen as less professional as they had commitments outside work.

37.6 per cent said they were seen as less professional because they could not work long hours.

29.8 per cent said they were seen as less professional because they were not available to attend after hours meetings.

38.6 per cent said the number of hours they had to work limited their capacity to balance work and life/family.

22.4 per cent said unnecessary inflexibility at work limited their capacity to balance work and life/family.

COMMENTS ON ROCKING THE BOAT

• My employer pays men approximately 20% more than women who undertake exactly the same role (full-time equivalent pay rate). The women tend not to complain because they are worried they might lose their access to flexible work arrangements which are at the “manager’s discretion”. In my experience it is hard to find an employer who allows truly flexible working arrangements in the private sector, so when you find one, there can be a conscious decision not to “rock the boat” to negotiate higher pay.

• I missed out on a managerial promotion that was given to a male counterpart who was less qualified and experienced (the director stated that he wanted a male in the role). If I raise this formally I’m worried that the action will only worsen the situation.

• My manager made sexist and racist jokes, including showing/tagging in Facebook sexist videos. I had had enough one day and told him he was being sexist, and that as manager he should be setting a better example for the rest of the team. I told him he was lucky that I didn’t take formal action. I had the courage to tell him that day, because I had already secured a new position with another company and given my resignation - until then I couldn’t afford to rock the boat.

COMMENTS ON WORKPLACE CULTURE AS AN OBSTACLE TO DIVERSITY/INCLUSION

• Despite departmental policies that flexible working arrangements are not to be used to disadvantage workers, these are policies on paper only and have no bearing on the real world.

• The root problem is workplace cultures that put value in working long hours.

• Employees who start early (and) finish late are seen as best. Part-timers are seen as less valuable and given work with less potential kudos.

• Work/life balance is too often just lip-service.

• While the flexible work arrangements exist, they are not widely accepted and used. Meetings are held on days I am not there and I am not given minutes or a briefing of what I have missed.

• There is a feeling that as a woman you are required to ‘prove’ that you are competent in your role whereas for male counterparts their competence is taken at face value.

• There were double standards for treatment of male and female employees (i.e. the boss would reprimand women for swearing but not men).
UNCONSCIOUS BIAS IN DECISION-MAKING AND RECRUITMENT

The most widely experienced form of unconscious bias reported by respondents was in-group bias (which causes individuals to be more comfortable with and favour people like themselves).

46.0 per cent said unconscious bias was embedded in their organisation’s workplace culture.

43.1 per cent said unconscious bias was embedded in their organisation’s decision-making processes.

45.2 per cent said unconscious bias was embedded in their organisation’s recruitment practices.

59.0 per cent agreed or strongly agreed that in their occupation, women have to prove themselves where men are assumed to be capable.

40.4 per cent disagreed or strongly disagreed that clients respected the professional opinion or advice of men and women equally.

26.7 per cent of respondents said they had negotiated their own salaries. Only 30.9 per cent were confident doing so.

“I once went to a meeting of my boss’s level of people and his boss. There were two newcomers and both were called Robert. The big boss said in jest that that he was planning to have all new Chief Engineers being called Robert. I said quickly that I was changing my name. I then had a couple of people try to defend him that it was just a joke and not prejudice but it was obvious that he was appointing people like himself.”

COMMENTS

• My manager prefers to hire men that suit his personality type and culture rather than others. This was highlighted when the technical person on the interview panel said that the interviewee knew nothing due to their answer but my manager still shortlisted them and brought them in. The technical person has been left off the next interview panel for our new roles even though they are for senior technical jobs.”

• My current manager unconsciously excludes the women in the team and colleagues show that they think the women can only do administrative tasks.

• Women leaving work to deal with children issues is stigmatised but men seem to be able to come and go with impunity.

• Mostly I’ve experienced anchoring bias - completely illogical assumptions about women.

• I was told that the head office would never put a woman in as another company director because they had done it once before and it didn’t work out very well.

• When I first started I was told that I was the first female engineer and that they had had a female apprentice who had not worked out.
“At the beginning of my career, I applied to work on a project with more responsibility and requiring more technical involvement overseas and was told ‘to leave this task for the boys.’”

DISCRIMINATION

Over half of the respondents (51.3 per cent) reported having been directly discriminated against in the course of their employment on the basis of gender.

Of those that reported they had experienced discrimination, only 21.4 per cent of respondents had sought advice on dealing with the matter. A disturbing 17.5 per cent left their workplace and 54.4 per cent took no action at all.

FIGURE 16 - RESPONSES TO DISCRIMINATION (%)

<table>
<thead>
<tr>
<th>Action</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>Did not take any action</td>
<td>54.4</td>
</tr>
<tr>
<td>Dealt with the matter informally</td>
<td>30.8</td>
</tr>
<tr>
<td>Sought advice</td>
<td>21.4</td>
</tr>
<tr>
<td>Used a complaints process</td>
<td>10.3</td>
</tr>
<tr>
<td>Left workplace</td>
<td>17.5</td>
</tr>
<tr>
<td>Other</td>
<td>4.5</td>
</tr>
</tbody>
</table>

 COMMENTS

• I’m often treated differently to my male colleague - simpler projects, less fieldwork, lengthier explanations - all of which has eroded my confidence.

• The attitude I faced once I announced I was pregnant was that I was basically dead to the company. I was cut out of basically everything and statements from all camps along the lines of “if you come back” were constant.

• Usually attempting to address an issue simply results in not having a contract re-offered when the term expires.

• Gender bias is just being driven underground. When I first joined the workforce you soon know who did not like females in the workforce. Now they are clever enough to hide it so as to not get into trouble but they still hold those views.

• A male who worked for a supplier company would receive emails from me but direct his replies to my (male) boss.

• It wasn’t serious discrimination though people in my research lab tend to patronise me or not take my suggestions seriously because they consider me to be inexperienced. The number of times my suggestions have been later successfully implemented suggests that I know what I’m talking about but I often have to fight for the credit.
Indirect discrimination arising from performance pay and development policies for part-timers

While the survey found that implementation of anti-discrimination and diversity policies was a key issue for many respondents, it is worth noting the survey found that a failure to review existing policies for potential indirect discrimination was also a significant obstacle to gender equity in STEM workplaces.

Most of the examples of indirect discrimination provided by respondents in relation to obstacles to career advancement and equal pay related to policies around performance pay and training for part-timers.

COMMENTS

- My annual performance review result was downgraded from the highest level to a lower level as it is policy that no-one in a part-time role is to receive above a “meets expectations” result. This has directly impacted my earning potential because the performance review result is used to determine pay rise and bonus payments.

- My pay bonus was decreased as I was working part-time. I was informed that because I worked part-time I could not achieve a top tier work output. I challenged this and the Manager changed his basis for my lower ranked work output. No further pay bonus was offered.

- The organisation offers scholarships for further training, but this is not offered to anyone working less than 0.5FTE.
26.8 per cent of respondents reported that they had been sexually harassed in the course of their employment.

Of those that reported they had experienced sexual harassment, only 15.0 per cent of respondents had sought advice on dealing with the matter. A disturbing 12.7 per cent left their workplace and 46.7 per cent took no action at all.

Of those that had been sexually harassed at work, 79.1 per cent said they experienced the harassment in the early stage of their career; 42.9 per cent said they experienced sexual harassment in the mid-stage of their career and 8.0 per cent said they experienced sexual harassment at the established senior professional level.

**FIGURE 17 - RESPONSES TO SEXUAL HARASSMENT**

- Did not take any action: 46.7%
- Dealt with the matter informally: 35.9%
- Sought advice: 15.0%
- Used a complaints process: 18.2%
- Left workplace: 12.7%
- Other: 5.0%

**COMMENTS**

- Having construction workers stare you up and down, dismiss what you say and yell out in front of everyone on site ‘you’re beautiful’ is humiliating. The reaction of other people when I describe these situations - including my team leader and fellow staff - that ‘Aww… they must have thought you were hot’ made me feel isolated, that no-one understood how humiliating it is being reduced to the way you look when you have studied engineering and worked hard in your field.

- The pattern was always to move the complaining female on, not deal with the offending male, but they had nowhere else to put a female engineer. My training and promotion prospects dried up.

- Current practice where a male in a leadership role is found to be sexually harassing/bullying/discriminating against a team member is to move the team member away from the leader to prevent further detrimental behaviour. The problem is never addressed, the boys just look after their friends.

- We had a senior manager who was well-known for his sexual discrimination and bullying against female professionals. I don’t think he ever physically assaulted anyone, but his bullying caused many female staff (including me) to leave over the years. He was finally removed from his post for “other” reasons.

- One of the electricians harassed me outside of work hours. I reported him to our boss and he was removed from the department. This happened when I was a vacation student.

- During my early years, the other engineers and men of senior positions from conferences would comment on how attractive I was for an engineer. One of the men who was in a senior position commented on my physical attributes such as my eyes, lips, hair and asked my ethnicity because I was too attractive. I left the conference as quickly as I could. He made me feel very uncomfortable and I felt helpless since he was well known in the industry.

- Was it worth making an official complaint? No, that would just be another long drawn out painful stressful process which I had seen others go through in that organisation.

- The culture against women in my workplace has resulted complaints not being taken seriously and being used against women down the track when we apply for promotions or new jobs.

- Complaining has not been effective. Also it’s risky.
GENDER STEREOTYPES THAT UNDERMINE RESPECT AND RECOGNITION

Respondents reported widespread gender stereotyping that negatively impacted their opportunities for advancement, undermined their credibility in the workplace and, contrary to research which has found otherwise, suggested they were less professional, less committed, less capable of handling complex projects and less serious about their careers than male STEM professionals.

“I was treated like my brain fell out after I had my child.”

39.6 per cent said that in their workplace, advice or information of a technical nature was less likely to be listened to if provided by a woman than a man.

18.8 per cent highlighted the historical stereotyping of STEM roles as better suited to males as one of their top three issues that needed to be addressed.

37.1 per cent of respondents said they felt like they had to “become one of the boys” if they wanted to “fit into” their workplace.

Only 33.3 per cent agreed or strongly agreed that clients respect the professional opinion or advice of men and women equally; 40.4 per cent disagreed.

While there is no evidence that women are less committed to their careers once they have carer responsibilities, respondents reported assumptions being made about their commitment when they returned to the workforce after a career break to have a child.

COMMENTS ON WORK ALLOCATED TO WOMEN WITH CAREGIVER RESPONSIBILITIES

- Since coming back to work after mat leave (going from full time to part time) there has been a big shift in the type of work I am given. Previously I used to run substantial, complex projects, now I’m given small tasks.

- My employer changed the type of project work I was working on without consulting me because they didn’t think I could service my job working four days a week.

- Returning to work on a part-time basis was difficult, as I was the only person in the team on such an arrangement, and I had to really push to be given interesting work. It was as if returning from maternity leave you wouldn’t be as serious about your job.

- Flexibility to manage family and work commitments is a primary barrier to career advancement as you are not seen as committed or serious if you request flexibility.
It should also be noted that not all the stereotyping issues reported arose from women’s responsibilities as primary caregivers but from assumptions about gender roles.

**COMMENTS ON GENDER STEREOTYPING IN STEM**

- There are still men out there who think that we don’t know what we are doing or are less qualified to make technical decisions because we are female.

- As a young female it is always expected that I will take minutes in meetings even when a male with equivalent (or less) experience than me is also in the meeting. I also get asked to do the admin tasks that no other engineer in my team (all others are male) would ever be asked to do.

- I have witnessed people very much assuming I am a secretary rather than the project manager just because I am a woman.

- I have heard toilet facilities being used many times as a reason not to hire a woman because where will she urinate if out in the field.

- There have been many instances of staff members asking opinions of others before undertaking direction from me and people not taking advice unless confirmed by other male team members.

- I’m often treated differently to my male colleague - simpler projects, less fieldwork and lengthier explanations.
RECOMMENDATIONS ARISING FROM THE REPORT FINDINGS

This report shows that as well as encouraging more women into the STEM professions, the challenge is to remove the obstacles and barriers which operate as disincentives to remaining in the STEM workforce. To do this, there is a need to put proper diversity and anti-discrimination policies in place and then properly implement them. To be effective, it is critical that management accountabilities are in place to incentivise change and to address workplace culture and practices that get in the way of making equitable, family-friendly and safe STEM workplaces a reality.

The 2018 Survey of Women in the STEM Professions found a complex set of interrelated factors which prevented respondents from being able to fully contribute in a valuable and meaningful way - even where an organisation had strong diversity and anti-discrimination policies in place. Our key recommendations to address the gap between policy and practice are as follows.

At the policy level:

1. ensure appropriate diversity, anti-discrimination and sexual harassment policies are in place, that these policies comply with relevant workplace and discrimination legislation and that existing policies are reviewed for potential direct and indirect discrimination;

2. ensure diversity and inclusiveness policies are effectively promulgated as part of the organisation’s core values - if diversity and anti-discrimination are not a priority at the policy level and prioritised by the leadership group, they won’t be a priority for managers and staff; and

3. ensure diversity issues in the workplace are articulated and understood in terms of the removal of obstacles to merit-based advancement and recruiting and retaining the best talent - not as positive discrimination, tokenism or preferential treatment which undermine individuals and respect for the recruitment process.

At the strategic and operational levels:

4. put in place the strategies and management accountabilities to give effect to diversity and anti-discrimination policies so workplace culture does not override policy intent. As with any process of changing workplace culture, organisation-wide policies need to be in place and incentives and rewards aligned with these policies and part of managers’ performance indicators;

5. gather and monitor data on progress against gender equity policies including identifying over- and under-representation of women in particular areas or roles of the organisation that may indicate gendered occupational or role segregation within the organisation;

6. monitor and manage resistance to change that may range from passive resistance, denial, claiming the organisation is a meritocracy and doesn’t need to change to more active forms of pushback;

7. ensure resources for changing procedures and ways of working are available as needed; and

8. conduct confidential exit interviews to better understand whether gendered workplace practices are a factor in staff attrition.
To address bias in career-building activities:

9. review workplace practices for bias in career building activities for women and those not working full-time. This includes ensuring access to training and development opportunities including management training, access to ‘stretch’ projects, formal and informal mentoring and opportunities for networking. Track and measure outcomes in career development practices; and

10. ensure positive senior male and female role models and mentors are in place and available.

To address the career penalties that can apply when working part-time:

11. develop options for part-time and flexible work at senior, management and leadership levels;

12. provide a process for review of management approvals/refusals for women requesting part-time work or access to flexible work arrangements after a career break;

13. ensure performance pay systems do not exclude incentives and rewards for those in part-time work arrangements;

14. ensure workload and performance indicators are adjusted for part-time status;

15. ensure promotion, recognition and reward are not solely linked with those doing long/full-time working hours; and

16. ensure the leadership and management team model good work/life balance.

To address the disadvantage that can arise from taking a career break:

17. ensure pay reviews do not create extended disadvantage for women taking a career break - that is, no recognition or reward in the year preceding and year following maternity leave;

18. ensure compliance with return to work rights after a career break including the right to return to the same job as well as keep-in-touch arrangements and support for reintegration into the workforce on return to work;25 and

19. put in place measures that support those on a career break including keep-in-touch arrangements, not deactivating email accounts, providing a handover period and notification of team and organisational changes, and on return to work, project work that provides challenges, debriefings where meetings occur on non-work days and time to get back up-to-speed on return.

To address unconscious bias in decision-making and recruitment:

20. review recruitment practices for unconscious bias including advertising roles as available on a part-time basis and/or with flexible hours available;

21. ensure accountability in recruitment processes and training in identifying unconscious biases where needed and ensure language used is gender-neutral. Track and measure outcomes within hiring practices.

To address gender discrimination and sexual harassment:

22. ensure individuals are not expected to “call out” discrimination and sexist behaviours and practices without a broader strategy for organisation-wide cultural change in place. This approach encourages backlash against individuals and simply leads to women leaving the workplace and/or contracts not being renewed;

23. ensure sexual harassment complaints procedure is transparent, objective and administered by trained personnel;

24. ensure an appeal process is in place;

25. ensure removing the person being harassed from the area is not seen as a solution and that the individual investigating the complaint is at arms length from the person about whom the complaint is being made;

26. ensure there is no penalty for an individual raising a complaint; and

27. ensure sexual harassment policies are working for the people they are meant to protect and monitor whether the reporting mechanisms are working.

To address gender stereotyping:

28. ensure stereotypical assumptions of women with and without caregiver responsibilities as less serious about their careers or less suited to work in STEM fields are called out/not condoned and do not impact advancement opportunities or create bias in recruitment, promotion and development;

29. ensure women do not disproportionately undertake administration or support activities; and

30. ensure the technical expertise of women is respected at the leadership and management levels and not second-guessed at operational level.

Further information

Stemming the Tide: Addressing the attrition of women from the STEM workforce

For a free guide to implementing a strategy to address the attrition of women from the STEM workforce, please visit http://www.professionalsaustralia.org.au/professional-women/wp-content/uploads/sites/48/2014/03/Stemming-the-Tide-publication-email-version.pdf or email genderanddiversity@professionalsaustralia.org.au with Stemming the Tide in the subject line and your name and organisation in the body of the email.
ABOUT THE SURVEY

The 2018 Women in the STEM Professions Survey (formerly the Women in Professions Survey) has been produced since 2000. The survey provides valuable insight into the workforce experience of female technical professionals working in STEM fields. The purpose of the survey was to detail some of the factors which contribute to women’s under-representation in the STEM professions, to explore professional women’s career experiences as part of the STEM workforce and ensure the needs of women in the STEM professions can be recognised in the development of policy by government, industry and professional associations.

Sample characteristics

- Engineers were the biggest single profession to respond to the survey at 42.0 per cent of respondents, followed by scientists at 39.7 per cent (including those trained in pharmacy, mathematics and veterinary science). Computing/ICT professionals represented 3.6 per cent of respondents, while Business professionals comprised 5.1 per cent of respondents. 9.6 per cent of respondents nominated other STEM professions.

- Respondents were most likely to hold a Bachelor Degree, with or without Honours, as their highest qualification (50.0 per cent). By comparison 21.1 per cent of respondents held a Masters Degree and 16.4 per cent had earned a Doctorate/PhD. Other qualifications and no qualification was the highest qualification for only 12.5 per cent of respondents.

- Most respondents were employed full-time as employees (65.8 per cent) while 17.2 per cent were employed as part-time employees. Only 5.5 per cent were employed as casual employees.

- The private sector accounted for 48.9 per cent of respondents, while the public sector accounted for 34.4 per cent of respondents. The remainder worked in other sectors, such as not-for-profits.

- Respondents were much more likely to work for a large employer (69.7 per cent), classified as employing 200 or more people.

- The industries most represented in the survey were consulting & technical services (17.1 per cent), education and training (8.7 per cent), roads (8.5 per cent), and water, sewerage and drainage (6.9 per cent). 10.4 per cent of respondents reported being employed in an industry not listed in the survey.

- The split between respondents with and without children was fairly even - 48.6 per cent did not have children and 51.4 per cent did have children.

- The median age of respondents was 37 years old, with a lower quartile of 29 years old and an upper quartile of 46 years old.

FIGURE 18 - PROFESSION BREAKDOWN (%)
Survey methodology

During March and April of 2018 Professionals Australia conducted a survey of female STEM professionals regarding their experiences in the workforce. Respondents were invited to participate in the 69-question survey using direct e-mails and social media. Participation was incentivised by offering respondents the option of entering a competition to win a cash prize of $500. All female members of the association were invited to participate, as well as female STEM professionals the organisation had interacted with through various campaigns and promotions. Anyone connected with the association or related professional organisations through social media had an invitation to complete the survey sent to them explicitly indicating the survey’s target was female STEM professionals.

A total of 1953 usable responses were collected over the two-month period. All responses were screened to ensure no individual had submitted more than one response using a combination of data points provided while answering the questionnaire and competition entry. Participants were not required to answer all questions in the survey to be included in the analysis, and only questions used as logic gates for progression through the survey were treated as compulsory. Respondents are included in all analyses where they provided the minimum amount of data required. As a result, the number of respondents included in each analysis will differ.

The survey contained a range of quantitative and qualitative questions.

Information on the pay of STEM professionals and their distribution across various levels of responsibility has been compiled from other Professionals Australia reports.

Report preparation

This report was compiled by Dr. Kim Rickard, BA, PhD, Mr. Alex Crowther, BSc (Hons), MSc and Mr. Stephen Gargano, BComm.
**APPENDIX 1 - SUMMARY OF RESULTS**

**Gap between policy and implementation**
- 45.7 per cent said their workplace currently had formal policies in place to promote diversity.
- 51.9 per cent said their workplace currently had formal policies in place to deal with discrimination.
- 35.7 per cent said they did not believe the employer had strategies in place to actually implement policies relating to diversity and discrimination.
- 44.5 per cent agreed or strongly agreed that their employer had good work/life balance policies but the culture of the organisation did not support it.

**Career penalty attached to working part-time**
- 30.3 per cent said they were unnecessarily prevented from undertaking certain types of projects because they worked part-time.
- 22.3 per cent said they had been sidelined for promotion because they worked part-time.
- 60.3 per cent of respondents said that professional women in their workplace often took up less challenging work roles so they could accommodate family/carer responsibilities.
- 47.6 per cent said underemployment – defined as engagement in roles which underutilise their professional skills and judgement – was a problem in their workplace.
- 72.2 per cent agreed or strongly agreed promotions in their workplace were generally drawn from those working full-time.
- 61.5 per cent said balancing work/life responsibilities significantly or moderately impeded their career advancement.
- 48.0 per cent said they believed working part-time had negatively impacted their career.
- 28.5 per cent said their employer did not currently provide flexible working hours.
- 31 per cent said they had not approached their manager regarding working fewer hours and of those 37.6 per cent said they had not done so for fear of being treated adversely by management.
- 24.5 per cent agreed or strongly agreed they were seen as not pulling their weight because they used flexible work arrangements.
- 20.4 per cent of respondents said that management in their workplace thinks that work/life balance is only relevant for women with children.

**Gender pay gap**
- 32.2 per cent of respondents did not believe they received equal compensation for work of equal value.

**Attrition from the STEM workforce**
- 33.8 per cent of respondents in the 25 to 35 age group said they were intending to leave their profession within 5 years.
- Respondents reported the top three impacts of them leaving their workplace would be loss of knowledge, loss of people skills and loss of technical skills to the organisation.

**Women’s economic security**
- 50.9 per cent of respondents said a career break had seriously reduced their retirement savings.
- 52.1 per cent said working part-time had reduced their retirement savings.

**Bias in career-building activities**
- 16.5 per cent said their employer was rarely or never proactive in ensuring that men and women had equal opportunity to career advancement.
- 23.5 per cent said they were unnecessarily prevented from undertaking training and professional development due to working part-time.
- 12.5 per cent said that in their workplace, career-building opportunities were rarely or never allocated based on merit.
- Of those who had been promoted in the previous 12 months, only 54.5 per cent said their manager actively encouraged them to apply for promotion.
- 56.0 per cent said a lack of role models was a significant or moderate obstacle to their career advancement.
- 41.2 per cent said a lack of other women in the workplace was an obstacle to their career advancement.
- 57.6 per cent said a lack of women in senior roles was an obstacle to their career advancement.
- 15.7 per cent said they had engaged in formal mentoring activities in the previous 12 months.
- 38.2 per cent said they had engaged in informal mentoring activities in the previous 12 months.
- 61.1 per cent said mentoring would assist in maintaining or progressing their career over the next five years.
- 24.5 per cent said mentoring in their workplace was informal and often after hours making it less accessible for them.
Discrimination

• 51.3 per cent reported having been directly discriminated against on the basis of gender during the course of their employment.

• Of those that reported they had experienced discrimination, only 21.4 per cent of respondents had sought advice on dealing with the matter. A concerning 17.5 per cent left their workplace as a result of the harassment and 54.4 per cent took no action at all.

• The indirect discrimination arising out of performance pay and professional development policies that disadvantaged part-timers was also found to be a factor contributing to discrimination.

Sexual harassment

• 26.7 per cent reported that they had been sexually harassed in the course of their employment. 35.9 per cent dealt with the matter informally, 12.7 per cent left the workplace as a result and 46.7 per cent did not take any action.

• Of the 26.7 per cent, 79.1 per cent experienced the harassment in their early career stage.

Career disruption

• 68.5 per cent of survey respondents said taking maternity leave had been detrimental to their career.

• 23.4 per cent said they had been sidelined for promotion because they had taken a career break.

• Only 12.4 per cent said their employer currently provided support for reintegration into the workplace after a career break.

Unconscious bias in decision-making and recruitment

• The most widely experienced form of unconscious bias was in-group bias (in which people are more comfortable with and favour people like themselves).

• 46.0 per cent said unconscious bias was embedded in their organisation’s workplace culture.

• 43.1 per cent said unconscious bias was embedded in their organisation’s decision-making processes.

• 45.2 per cent said unconscious bias was embedded in their organisation’s recruitment practices.

Workplace culture

• 59.0 per cent agreed or strongly agreed that in their occupation, women have to prove themselves, where men are assumed to be capable.

• Only 33.3 per cent agreed or strongly agreed that clients respect the professional opinion or advice of men and women equally; 23.1 per cent disagreed.

• 36.5 per cent said they were seen as less professional as they had commitments outside work.

• 35.0 per cent said they were seen as less professional because they could not work long hours.

• 37.8 per cent said they were seen as less professional because they were not available to attend after hours meetings.

• 52.5 per cent agreed or strongly agreed that their organisation genuinely encourages work and life/family balance; 23.6 per cent disagreed or strongly disagreed.

Most important issues facing professional women (in order of importance)

• Equal pay (51.0%)

• Flexible work arrangements and work/life balance (45.5%)

• Issues facing women in male dominated industries and occupations (25.5%)

• Career development and training (25.3%)

• Job security (24.3%)

• Access to high-quality affordable childcare (22.8%)

• Discrimination and harassment (22.7%)

• Recruitment and retention of women in their profession (20.7%)

• Women’s responsibility for the majority of unpaid care (19.7%)

• Addressing issues around the attrition of women from the STEM workforce (19.1%)

• Paid parental and maternity leave (18.9%)

• Historical stereotyping of STEM roles as better suited to males (18.8%)

• Excessive hours of work (15.0%)

• Safe working environment (12.3%)

• Economic security for women in retirement (11.9%)

• Domestic violence leave (5.3%)

• Other (3.7%)
ENDNOTES


11. Respondents could select more than one response.


26. For the purposes of this survey, the Mathematics field was subsumed under the Science profession.