



# NAWIC IWD SCHOLARSHIP REPORT 2022

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*"Investigating the Influence of Adverse Interpersonal Experiences (Bullying, Undermining, Gaslighting) on Female Engagement in the Construction Industry: Implications for Apprenticeship Completion and the Progression of Women as Competent and Qualified Tradespersons."*

## **Foreword: *Gabrielle French***

I wish to express my sincere gratitude to NAWIC for affording me the privilege through the International Women's Day Scholarship to engage in a comprehensive exploration of the experiences of women in trades and the impact of the mental-health stressors on their training and remaining in the profession. This opportunity has enabled me to meaningfully contribute to this critical issue.

I extend profound thanks to all participants in this research study. Your keen interest, unwavering support, and the conscientious sharing of your experiences pertaining to your experiences as women apprentices and tradeswomen within male-dominated workplace environments have been pivotal to this endeavour.

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## **Executive Summary**

Despite women's increased representation in the overall workforce, trades and construction remain male dominated industries. Prior studies have noted that the hazardous work environment combined with a culture that can be discriminatory and openly hostile can threaten tradeswomen's health and safety. However little information exists about the gender-based mental stressors affecting female apprentices, cadets and trainees who are new to the industry, whether school leavers or women making a mid-career change.

This research focuses on the gender-related mental stressors that influence women's experiences who undertake trades apprenticeships in the male-dominated industries, with particular emphasis on the construction sector. It aims to understand how gender-related stressors, including bullying, gender discrimination and gaslighting, affect the training and workplace experiences of tradeswomen, how they impact their attainment of trade certification and their stay in the industry.

The central research question asks: "To what extent do mental gender-related stressors like bullying, gender discrimination, and gaslighting affect female participation in male-dominated fields, and how do these stressors influence the completion of apprenticeships and the continued presence of qualified and proficient tradeswomen?"

This research adopted a mixed-method qualitative design and reports on findings from surveys, in-depth interviews, and focus groups. A total of 233 tradeswomen completed an online survey, together with 3 tradeswomen who participated in in-depth interviews and 11 tradeswomen who participated in focus groups. The findings reveal that experiences of bullying, gender discrimination, and gaslighting during apprenticeship training act as deterrents for women seeking to embrace trade roles. This holds substantial implications for achieving gender balance within skilled construction trades, as despite efforts by both government and industry to attract and retain women, men continue to dominate numerically, a trend unparalleled in other sectors.

## Introduction

With the Australian government's infrastructure investment expected to reach AUD 218 billion and annual spending forecast to reach AUD 52 billion by 2023, construction employment is projected to rise by 80,700 (6.8%) by 2025.<sup>1,2</sup> The industry holds a great national economic significance as it contributes nearly AUD 360 billion in revenue, constituting approximately 9% of the gross domestic product annually. As of February 2023, this sector employed about 1,322,100 individuals, constituting 9.6% of the total workforce, making it one of Australia's largest employers.<sup>3</sup> However, the industry has long been grappling with a persistent skills crisis, a challenge that predates the emergence of the COVID-19 pandemic. Recruiting underutilised sources of talent, including women, into the industry has been identified as a promising solution to this problem.<sup>4,5</sup> But despite advancements in women's workforce participation, the construction industry continues to be predominantly male dominated.<sup>6</sup> The presence of women in the construction workforce remains limited, women comprise a 13.3% share of construction employees nationally.<sup>7</sup> Achieving gender parity in leadership positions poses another persistent challenge. Women hold just 18.8% of senior managerial roles and only 4.4% of CEO roles in Australian construction organisations.<sup>8</sup>

Most concerning however, is the lack of women in construction trades. Women only account for less than 3% of construction trades workers across Australia.<sup>9</sup> But, while the statistics of female employment in construction are quite discouraging, the trend in training provides some

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<sup>1</sup> Infrastructure Australia. (2021). <https://www.globalaustralia.gov.au/industries/infrastructure>

<sup>2</sup> National Centre for Vocational Education Research. (2021). <https://www.education.gov.au/jobready/improving-accountability-information-providers>

<sup>3</sup> Australian Government. (2023). *Labour Market Insights, Construction*. <https://labourmarketinsights.gov.au/industries/industry-details?industryCode=E>

<sup>4</sup> Morello, A., Issa, R. R., & Franz, B. (2018). Exploratory study of recruitment and retention of women in the construction industry. *Journal of Professional Issues in Engineering Education and Practice*, 144(2), 04018001.

<sup>5</sup> Baker, M., French, E., & Ali, M. (2021). Insights into ineffectiveness of gender equality and diversity initiatives in project-based organizations. *Journal of Management in Engineering*, 37(3), 04021013.

<sup>6</sup> Baker, M., Ali, M., & Crawford, L. (2023). What do women want? An exploration of workplace attraction and retention factors for women in construction. *International Journal of Construction Management*, 1-11.

<sup>7</sup> Australian Government. (2023). *Labour Market Insights, Construction*.

<sup>8</sup> Workplace Gender Equality Agency (WGEA). (2021). Data Explorer. <https://www.wgea.gov.au/datastatistics/data-explorer>

<sup>9</sup> CSQ. (2018). *Women in Construction: an opportunity lost?* [https://www.csq.org.au/wpcontent/uploads/2018/11/CSQ2531-Women-in-Construction\\_2.pdf](https://www.csq.org.au/wpcontent/uploads/2018/11/CSQ2531-Women-in-Construction_2.pdf)

hope for more women in the industry in the future. Female representation among apprentices of the popular construction trades is rising steadily across Australia, although from a very small base.<sup>10</sup> Policy changes have played a role in influencing apprenticeship rates. Initiatives like the Boosting Apprenticeship Commencements support package yielded increased commencements among older individuals (aged 45+) and those aged 19 and under.<sup>11</sup> What may be an issue, however, is the fact that the female apprentices are significantly less likely to complete their training and remain in the workforce than their male counterparts. Despite substantial investments from both State and Federal governments, the trajectory of apprenticeship completion rates has been steadily downward for years. A notable statistic is that one in three first-year apprentices now terminates their apprenticeship within the initial 12 months.<sup>12,13</sup> The lower completion rates among female construction apprentices is reflecting the broader challenges faced by women working in construction. The effects of COVID-19 further led to a significant surge in suspensions for female apprentices during the initial quarters of 2020, eventually equalizing with male suspensions post Covid.<sup>14</sup>

The need to tackle this gender-segregation of the trades has been raised by many and over many years<sup>15, 16</sup> but it has not yet captured the sustained, high-level attention that this “troublesome” issue attracts.<sup>17</sup>

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<sup>10</sup> CSQ. (2018). *Women in Construction: an opportunity lost?*

[https://www.csq.org.au/wpcontent/uploads/2018/11/CSQ2531-Women-in-Construction\\_2.pdf](https://www.csq.org.au/wpcontent/uploads/2018/11/CSQ2531-Women-in-Construction_2.pdf)

<sup>11</sup> Gilfillan., G. (2016 - 2023). *Statistics and mapping: Trends in apprenticeships and traineeships*, Canberra: Parliamentary Library Briefing Book.

[www.aph.gov.au/About\\_Parliament/Parliamentary\\_Departments/Parliamentary\\_Library/pubs/BriefingBook45p/Apprenticeships](http://www.aph.gov.au/About_Parliament/Parliamentary_Departments/Parliamentary_Library/pubs/BriefingBook45p/Apprenticeships)

<sup>12</sup> Longley., D & Clarke., K. (2022). Unlocking The Potential of Australian apprenticeships. *Social Policy and Research Centre, Brotherhood of St Laurence*.

<sup>13</sup> Construction Industry Training Board. (2019)

<sup>14</sup> Hall, M. (2021). *Apprentices and trainees 2020: Impacts of COVID-19 on training activity*, NCVET.

<https://www.ncver.edu.au/research-and-statistics/publications/all-publications/apprentices-andtrainees-2020-impacts-of-covid-19-on-training-activity>

<sup>15</sup> Wright, T., & Conley, H. (2020). Advancing gender equality in the construction sector through public procurement: Making effective use of responsive regulation. *Economic and Industrial Democracy*, 41(4), 975-996.

<sup>16</sup> Baker, M., & Clegg, S. (2023). Policies and practices of gender-based equality and diversity in Australian project-based organizations. *Project Leadership and Society*, 100087.

<sup>17</sup> Struthers, K., & Strachan, G. (2019). Attracting women into male-dominated trades: Views of young women in Australia. *International Journal for Research in Vocational Education and Training*, 6(1), 1-19.

The barriers to women's employment have been identified at all stages of the employment process, attraction, recruitment and working in the trade.<sup>18</sup> However, the apprenticeship system is very rarely flagged as contributing to this persistent problem.<sup>19</sup> It requires further investigation to understand its role in perpetuating the gender and role segregation prevalent within this sector, as well as the low representation of women in trades.<sup>20</sup>

## Background

### *Construction Apprenticeship Training in Australia*

Despite the prevalence of apprentice-based training in Australia and the considerable funding allocated by governments, apprentice training programs haven't made significant strides forward, as highlighted by Longley and Clarke.<sup>21</sup> Recent investments by the Commonwealth Government, such as the \$2.7 billion expansion of the Boosting Apprenticeship Commencement Program and the \$1.2 billion increase in the Supporting Apprentices and Trainees wage subsidy in 2020, underscore the scale of the investment.<sup>22</sup> State budgets for 2021–22 have also allotted over \$900 million for new apprenticeship initiatives and programs, in addition to those already in operation.<sup>23</sup> However, apprenticeships as a training model continue to underperform across several key metrics, particularly in terms of completion rates, which have shown a downward trend. According to NCVER statistics, of those who commenced their apprenticeship in 2016, only 56.1% completed their course, marking a 1.5% decline from the previous year. In comparison, completion rates stand above 70% in Britain's model and around 75% in Germany's dual-system model.<sup>24</sup> A significant portion (33%) of Australian students who do not complete their

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<sup>18</sup> Baker, M., Ali, M., & Crawford, L. (2023). What do women want? An exploration of workplace attraction and retention factors for women in construction. *International Journal of Construction Management*, 1-11.

<sup>19</sup> Bridges, D., Wulff, E., Krivokapic-Skoko, B., & Bamberry, L. (2022). Girls in trades: tokenism and sexual harassment inside the VET classroom. *Journal of Vocational Education & Training*, 1-19.

<sup>20</sup> Simon, L., & Clarke, K. (2016). Apprenticeships should work for women too! *Education and Training*, 58(6), 578-596.

<sup>21</sup> Longley, D & Clarke, K. (2022). Unlocking The Potential of Australian apprenticeships. *Social Policy and Research Centre, Brotherhood of St Laurence*

<sup>22</sup> National Centre for Vocational Education Research. (2021).

<sup>23</sup> National Centre for Vocational Education Research. (2021).

<sup>24</sup> Longley, D & Clarke, K. (2022). Unlocking The Potential of Australian apprenticeships. *Social Policy and Research Centre, Brotherhood of St Laurence*

apprenticeship, or have their apprenticeship terminated by an employer, do so within their first year.<sup>25</sup>

Achieving a trade qualification holds the potential to empower women both financially and within their careers. These skills are transferable between employers, offering the opportunity for entrepreneurship with uncapped earning potential. For instance, the average salary for a qualified electrician (\$85,000 to \$105,000 per annum) significantly surpasses that of more traditional roles, such as a carer (\$50,000 to \$60,000 per annum). Trade skills provide women agency over their lives and homes, offering practical skills that extend beyond the workplace and fostering a sense of self-sufficiency and accomplishment.

### ***Mental Health in Construction***

The construction industry is a high-risk sector for occupational stress and mental health.<sup>26</sup> A staggering 70% of construction professionals have reported experiencing mental ill-health including occupational stress, anxiety, and depression because of their involvement in the industry.<sup>27</sup> Mental stressors are directly linked to workplace injuries and accidents.<sup>28</sup> Moreover, untreated mental health disorders contribute to suicide among manual (nonmanagerial) construction workers.<sup>29,30</sup> The incidence of suicide in the Australian construction industry is reported to be high, particularly among low-skilled workers. Construction workers were found to be six times more likely to die by suicide than in construction-related accidents.<sup>31</sup> Doran et al. (2015) estimated an annual loss of around AUD 1.57 billion attributed to suicides within the

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<sup>25</sup> Longley., D & Clarke., K. (2022). Unlocking The Potential of Australian apprenticeships. *Social Policy and Research Centre, Brotherhood of St Laurence*

<sup>26</sup> Boschman, J. S., Van der Molen, H. F., Sluiter, J. K., & FringsDresen M. H. W. (2013). Psychosocial work environment and mental health among construction workers, *Appl. Ergon.* 44(5), 748–755.

<sup>27</sup> Chartered Institute of Building. (2006). *Occupational Stress in the Construction Industry*. <https://www.ciob.org/sites/default/files/Occuptaional%20Stress%20in%20Construction.pdf>

<sup>28</sup> Leung, M. Y., Liang, Q., & Olomolaiye, P. (2016). Impact of job stressors and stress on the safety behavior and accidents of construction workers. *Journal of Management in Engineering*, 32(1), 1-10.

<sup>29</sup> Heller, T. S., Hawgood, J. L., & Leo, D. D. (2007). Correlates of suicide in building industry workers, *Arch. Suicide Res.* 11(1), 105–117

<sup>30</sup> Milner, A., Maheen, H., Currier, D., & LaMontagne, A. D. (2017). Male suicide among construction workers in Australia: A qualitative analysis of the major stressors precipitating death. *BMC Public Health*, 17(1), 1–9.

<sup>31</sup> Milner, A., Maheen, H., Currier, D., & LaMontagne, A. D. (2017). Male suicide among construction workers in Australia: A qualitative analysis of the major stressors precipitating death. *BMC Public Health*, 17(1), 1–9.



Australian construction industry.<sup>32</sup> Risk factors including poor organisational management, poor job design and lack of social support have been recognised as potential dangers to workers' psychological and physical well-being.<sup>33</sup>

The recognised impact of stressors on mental health of construction workers, as well as their families and the broader society, has ignited focus on mental health within the construction industry. The need to understand mental stressors has fuelled government bodies, healthcare institutions, and policymakers to develop proactive policies aimed at addressing these stressors and consequently, a significant body of research has been dedicated to investigating mental stressors in the context of the construction industry. In their comprehensive review of literature on mental stressors in the construction industry, Tijani et al. (2020) identified a staggering 49 mental stressors, indicating large sources of mental ill-health in construction.<sup>34</sup> The authors categorised those mental stressors into five different groups based on the nature of the stressor. The groups include: 1) task stressors, 2) personal stressors, 3) physical stressors, and 4) gender-related stressors.<sup>35</sup> The gender-related stressors broadly encompass sexual harassment, gender-based inequality, and restricted job prospects.

Further, lack of organisational support contributes to the organisational stressors of mental health. Organisational support refers to respect, trust and support gained from work colleagues and supervisors.<sup>36</sup> It can also be regarded as an employee's resources in the workplace, which is critical to the employee's emotion, psychological, physical and job satisfaction. Research identified a lack of organisational support as a mental stressor.<sup>37</sup>

Surprisingly, limited research to date focused on the gender-related and a lack of organisational support mental stressors, despite the increased focus on gender diversity in the

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<sup>32</sup> Doran, C. M., Ling, R., Milner, A., & Doran, C. (2015). *The economic cost of suicide and suicide behaviour in the Queensland Construction Industry*. Australia: Mates in Construction.

<sup>33</sup> Cox, T. & Griffiths, A. (2005). *The nature and measurement of work-related stress: Theory and practice. Evolution of human work*. CRS Press.

<sup>34</sup> Tijani, B., Jin, X., & Osei-Kyei, R. (2021). A systematic review of mental stressors in the construction industry. *International Journal of Building Pathology and Adaptation*, 39(2), 433-460.

<sup>35</sup> Tijani, B., Jin, X., & Osei-Kyei, R. (2021). A systematic review of mental stressors in the construction industry. *International Journal of Building Pathology and Adaptation*, 39(2), 433-460.

<sup>36</sup> Leung, M.Y., Liang, Q., & Olomolaiye, P. (2016). Impact of job stressors and stress on the safety behavior and accidents of construction workers. *Journal of Management in Engineering*, 32(1), 1-10.

<sup>37</sup> Leung, M.Y., Liang, Q., & Olomolaiye, P. (2016). Impact of job stressors and stress on the safety behavior and accidents of construction workers. *Journal of Management in Engineering*, 32(1), 1-10.

industry. The prevailing male-dominated culture deeply embedded within the construction sector has given rise to mental stressors that adversely affect the mental well-being of female construction workers.<sup>38</sup> Workers have reported exposure to interpersonal conflict, bullying, sexism, racism, discrimination, and the marginalisation of minority groups, all contributing to poor mental health outcomes.<sup>39,40</sup> This presents a significant concern within the construction sector, as besides causing mental ill-health, it fuels the regretful early departure of female construction workers from the field.<sup>41</sup> The study by Sang et al. (2007) confirmed the negative relationship between gender inequality and mental health issues among female construction workers.<sup>42</sup> Unfortunately, limited research has explored the prevalence of mental stressors affecting women construction workers.<sup>43</sup> Hence, many researchers advocate for extensive and comprehensive research into the issues like sexual harassment and career advancement in order to promote gender equity and foster a more inclusive environment within the industry, in turn helping attract more women to construction.<sup>44,45,46</sup>

### ***Bullying***

Various definitions of bullying tailored to different contexts exist but without a universally agreed upon definition thus far. Nevertheless, a common thread among these definitions is the recognition that bullying involves aggressive, harmful, repetitive behaviors directed at a less powerful individual. Of particular relevance to framing the concept of bullying within apprenticeships is the

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<sup>38</sup> Marshall, N.L. (1990). *Women in the Trades: Final Report of a Survey of Massachusetts Tradeswomen*. Wellesley College, Center for Research on Women.

<sup>39</sup> George, M., & Loosemore, M. (2019). Site operatives' attitudes towards traditional masculinity ideology in the Australian construction industry. *Construction Management and Economics*, 37(8), 419-432.

<sup>40</sup> Goldenhar, L. M., Swanson, N. G., Hurrell, J. J., Jr., Ruder, A., & Deddens, J. (1998). Stressors and adverse outcomes for female construction workers. *Journal of Occupational Health Psychology*, 3(1), 19-32.

<sup>41</sup> Sunindijo, R.Y. & Kamardeen, I. (2017). Work stress is a threat to gender diversity in the construction industry. *Journal of Construction Engineering and Management*, 143(10), 1-11.

<sup>42</sup> Sang, K.J.C., Dainty, A.R.J. & Ison, S.G. (2007). Gender: a risk factor for occupational stress in the architectural profession? *Construction Management and Economics*, 25(12), 1305-1317.

<sup>43</sup> Goldenhar, L. M., Swanson, N. G., Hurrell, J. J., Jr., Ruder, A., & Deddens, J. (1998). Stressors and adverse outcomes for female construction workers. *Journal of Occupational Health Psychology*, 3(1), 19-32.

<sup>44</sup> Goldenhar, L. M., Swanson, N. G., Hurrell, J. J., Jr., Ruder, A., & Deddens, J. (1998). Stressors and adverse outcomes for female construction workers. *Journal of Occupational Health Psychology*, 3(1), 19-32.

<sup>45</sup> Marshall, N.L. (1990). *Women in the Trades: Final Report of a Survey of Massachusetts Tradeswomen*. Wellesley College, Center for Research on Women.

<sup>46</sup> Tijani, B., Jin, X., & Osei-Kyei, R. (2021). A systematic review of mental stressors in the construction industry. *International Journal of Building Pathology and Adaptation*, 39(2), 433-460.

definition presented by Einarsen et al. (2003) pertaining to workplace bullying, which defines it as encompassing actions that harass, offend, socially isolate, or detrimentally impact someone's work duties.

Research investigations into bullying among apprentices is scarce. McCormack et al. (2013) undertook research conducted within the building and construction sector and interviewed several male apprentices. The authors explored the spectrum of negative behaviors experienced by male apprentices and examined the reasons why targets of bullying often do not confront or report their perpetrators. Their findings unveiled several recurring behaviors, including instances of not receiving rightful entitlements such as payments and designated mealtimes, instances where seemingly harmless banter escalated into bullying, and occurrences of harassment and teasing. McCormack et al. (2013) did not probe the prevalence of apprenticeship bullying or the factors that lead to and result from it, and therefore those are fundamental questions that still warrant exploration for a more comprehensive understanding of apprenticeship bullying.<sup>47</sup> In fact, the lack of research into apprenticeship bullying is striking, including the bullying of underrepresented groups like women and LGBTQ community members, considering that apprentices tend to fall within the demographic of young people in the late stages of adolescence or early adulthood, a period commonly linked to instances of bullying.<sup>48,49</sup> This is especially intriguing given that apprenticeships often unfold within hierarchical male-dominated and “macho” workplace environments like construction, where culture is characterised by banter and initiation rites.<sup>50</sup>

For construction apprentices, instances of worksite bullying have been associated with detrimental outcomes such as heightened substance use, compromised mental health leading to

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<sup>47</sup> Einarsen, S., Hoel, H., Zapf, D. & Cooper, C.L. (2003). The concept of bullying at work: the European tradition. In S. Einarsen, H. Hoel, D. Zapf., & Cooper, C. L. (Eds.), *Bullying and emotional abuse in the workplace, international perspectives in research and practice*. Taylor & Francis.

<sup>48</sup> McCormack, D., Djurkovic, N. & Casimir, G. (2013). Workplace bullying: the experiences of building and construction apprentices. *Asia Pacific Journal of Human Resources*, 51(4), 406-420.

<sup>49</sup> NCVER. (2015). *Apprentices and trainees, Australian vocational education and training statistics*. [www.ncver.edu.au/publications/publications/all-publications/apprentices-andtrainees-2015-annual](http://www.ncver.edu.au/publications/publications/all-publications/apprentices-andtrainees-2015-annual).

<sup>50</sup> McCormack, D., Djurkovic, N. & Casimir, G. (2013). Workplace bullying: the experiences of building and construction apprentices. *Asia Pacific Journal of Human Resources*, 51(4), 406-420.

suicidal tendencies, and the adoption of avoidant coping strategies.<sup>51,52</sup> Moreover, these negative experiences correlate with diminished job satisfaction and an increased likelihood of apprenticeship non-completion.<sup>53</sup>

### ***Sexual Harassment***

Sexual harassment and discrimination are prominent in construction industry due to macho culture and trades being seen as jobs for boys, and not girls.<sup>54,55</sup> The definition of sexual harassment is also debated, but it is generally recognised as involving unwanted or unwelcome behaviour, and is intended to be offensive, degrading, intimidating, or hostile.<sup>56</sup> MacIsaac and Domene (2014) found that crude and sexist jokes and comments are directed at women in the trade classroom and those have been identified in the workplace sexual harassment literature as ‘gender harassment’ a type of harassment that ‘expresses insulting, degrading, or contemptuous attitudes about women [including] . . . contempt and hostility’ directed at women because of their gender.<sup>57,58</sup> However, within male-dominated skilled trades, women may not recognise and interpret sexual harassment in line with legal and policy frameworks. This can stem from various factors, including a desire for inclusion, limited awareness of the illegal nature of the offense, or apprehension about not being taken seriously.<sup>59</sup> But sexual harassment has been recognised in the literature as an insidious

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<sup>51</sup> Pidd, K., Duraisingam, V., Roche, A., & Trifonoff, A. (2017). Young construction workers: substance use, mental health, and workplace psychosocial factors. *Adv Dual Diagn*, 10, 155–68

<sup>52</sup> Riggall, M., Skues, J., & Wise, L. (2017). Apprenticeship bullying in the building and construction industry. *Educ Train*, 59, 502–15.

<sup>53</sup> Snell, D., & Hart, A. (2008). Reasons for non-completion and dissatisfaction among apprentices and trainees: a regional case study. *Int J Train Res*, 6, 44–73.

<sup>54</sup> Tijani, B., Jin, X., & Osei-Kyei, R. (2021). A systematic review of mental stressors in the construction industry. *International Journal of Building Pathology and Adaptation*, 39(2), 433-460.

<sup>55</sup> Struthers, K., & Strachan, G. (2019). Attracting women into male-dominated trades: Views of young women in Australia. *International Journal for Research in Vocational Education and Training*, 6(1), 1-19

<sup>56</sup> Charlesworth, S., McDonald, P., & Cerise, S. (2011). Naming and Claiming Workplace Sexual Harassment in Australia. *Australian Journal of Social Issues*, 46(2), 141–161.

<sup>57</sup> Foley, M., O. Sarah, C. Rae, & B. Marian. (2020). I’ll never be one of the boys’: Gender harassment of women working as pilots and automotive tradespeople. *Gender, Work & Organization*, 29(5), 1676-1691

<sup>58</sup> Fitzgerald, L.F., & Cortina, L.M. (2018). *Sexual Harassment in Work Organizations: A View from the Twenty-First Century*. In J. W. White & C. Travis (Eds.), *Handbook on the Psychology of Women*. American Psychological Association.

<sup>59</sup> Denissen, A. (2010b). The Right Tools for the Job: Constructing Gender Meanings and Identities in the Male-Dominated Building Trades. *Human Relations* 63(7), 1051–1069.

problem in male dominated and blue-collar jobs, with women reporting more ‘more prevalent and aggressive forms of sexual conduct’ in these occupations.<sup>60</sup>

Bridges et al. (2022) investigated VET institutions and related barriers that confront tradeswomen apprentices. They found that VET institutions can contribute to normalising the tokenism of women and contributing to gender harassment and segregation in the skilled trades.<sup>61</sup> Research by Johansson, Johansson, and Andersson (2018), investigating the male-dominated field of forestry, revealed that sexual harassment is intricately linked to the way power relations are gendered within the work environment. Women navigating male-dominated industries might find themselves amidst workplaces where harassment is distressingly common and somewhat normalised, fostering an atmosphere of confusion and self-doubt.<sup>62</sup> Instances of embarrassment can also emerge. For instance, a participant in the study conducted by MacIsaac and Domene (2014) was informed that she had been hired as a form of jest, referred to as 'eye candy' for the male colleagues. In such cases, gender and sexual harassment become hidden behind humour, hearsay, and strategic power dynamics designed to reinforce the notion that women do not align with the prevailing work culture.

### ***Gaslighting***

Workplace gaslighting is a form of psychological abuse at work, but despite the growing focus on abuse at work, the research on workplace gaslighting has been scarce.<sup>63</sup> In sociological literature, gaslighting is defined as a strategic effort to erode an individual's grasp on reality, replacing it with an imposed alternative.<sup>64</sup> In essence, in the context of interpersonal relationships, it refers to manipulation by psychological means to cast doubt on an individual's mental soundness.<sup>65</sup>

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<sup>60</sup> Denissen, A. (2010b). The Right Tools for the Job: Constructing Gender Meanings and Identities in the Male-Dominated Building Trades. *Human Relations* 63(7), 298.

<sup>61</sup> Bridges, D., Wulff, E., Krivokapic-Skoko, B., & Bamberry, L. (2022). Girls in trades: tokenism and sexual harassment inside the VET classroom. *Journal of Vocational Education & Training*, 1-19.

<sup>62</sup> Denissen, A. (2010b). The Right Tools for the Job: Constructing Gender Meanings and Identities in the Male-Dominated Building Trades. *Human Relations* 63(7), 1051–1069.

<sup>63</sup> Roberts, T., & Andrews, D. C. (2013). A critical race analysis of the gaslighting against African American teachers' considerations for recruitment and retention. In D. C. Andrews (Ed.), *Contesting the myth of a "post racial" era: The continued significance of race in U.S. Education* (Black Studies and Critical Thinking, pp. 69-94). Peter Lang.

<sup>64</sup> Sweet, P. L. (2019). The sociology of gaslighting. *American Sociological Review*, 84(5), 851-875.

<sup>65</sup> Fordon, K. (2019). Gaslighting. *Women's Studies Quarterly*, 47.

Gaslighting is a manipulative, dishonest behaviour, that thrives in social relationships in work environments.<sup>66,67</sup> A defining characteristic of gaslighting is its ability to subtly influence an individual's emotions, thoughts, or behaviors, often without overt coercion or intimidation.<sup>68</sup> At its core, gaslighters engage in making false statements, denying true statements made by their victim(s), with the specific intention of destabilising them, undermining their confidence and their sense of reality.<sup>69</sup> They create an alternative reality for the gaslightee to secure their compliance with a scheme they might otherwise not have participated in.<sup>70</sup> Sweet (2019) suggested that control through gaslighting is often directed at women within relationships characterised by power imbalances. In her article titled *The Sociology of Gaslighting*, Sweet (2019) reveals how abusers (or gaslighters) mobilise gendered stereotypes; structural vulnerabilities related to race, nationality, and sexuality; and institutional inequalities against victims to erode their realities. These tactics, she states, are gendered in that they rely on the association of femininity with irrationality. Gaslighting can be so subtle, women don't know it's happening. To others, comments can appear innocuous. To the victims, each episode can seem small and almost irrelevant. When they do work out what's going on, many women aren't inclined to react for fear of being singled out as "that woman" rocking the boat.<sup>71</sup>

Further, Torino et al. (2018) describe gaslighting in the form of microaggressions that are subtle, nuanced forms of discrimination that are experienced by racial and ethnic minorities, women, LGBTQIA+ people, religious minorities, individuals with mental illnesses, and people of other historically marginalised groups. Microaggressions can negatively impact one's ability to concentrate, to solve problems, and to learn new material.<sup>72</sup> The microaggressions and gaslighting that trades women and apprentices may face in the workplace and at vocational training

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<sup>66</sup> Abramson, K. (2014). Turning up the lights on gaslighting. *Philosophical Perspectives*, 28(1-30).

<sup>67</sup> Paige, S. (2019). The sociology of gaslighting. *American Sociological Review*, 84(5), 851-875.

<sup>68</sup> Dorpat, T. L. (1996). *Gaslighting, the double whammy, interrogation and other methods of covert control in psychotherapy and analysis*. Jason Aronson, Incorporated

<sup>69</sup> Davis, A., & Ernst, R. (2017). Racial gaslighting. *Politics, Groups, and Identities* 7(4), 1–14.

<sup>70</sup> Roberts, T., & Andrews, D. C. (2013). A critical race analysis of the gaslighting against African American teachers' considerations for recruitment and retention. In D. C. Andrews (Ed.), *Contesting the myth of a "post racial" era: The continued significance of race in U.S. Education* (Black Studies and Critical Thinking, pp. 69-94). Peter Lang.

<sup>71</sup> Sweet, P. L. (2019). The sociology of gaslighting. *American Sociological Review*, 84(5), 851-875.

<sup>72</sup> Torino, G. C., Rivera, D. P., Capodilupo, C. M., Nadal, K. L., & Sue, D. W. (2018). *Microaggression theory: Influence and Implications*. Wiley

institutions, are undermining their ability to learn new skills, become competent in tasks and to perform at the best of their abilities.

## **Research Methodology**

The aim of this research is to develop a deeper understanding of the impacts of bullying, gaslighting and undermining women, in particular apprentices in construction trades.

### ***Research Design***

Qualitative research framework was employed as the primary means of collecting and analysing data to understand female trades women's experiences of training and working in the construction sector. A qualitative approach was chosen for this research design because it enabled the researchers to focus on the way the participants interpret and make sense of their experiences in the context of the construction sector. As a methodology, it also provides an opportunity to deepen our understanding of a given problem.<sup>73</sup> The study is designed to build new evidence that informs researchers across disciplines (construction engineering and management, and gender) and begins to make sense of the evidence base that reinforces the gender imbalances that exist in the construction sector. Most importantly, the study provides an opportunity to represent the voice of tradeswomen and hear their perspectives on their training and career pathways. This qualitative approach involves in-depth, semi-structured interviews which enable the researchers to explore the deep meaning, inside view and initial causes that lie beneath the human behaviours and choices being tested in this research, specifically the perceptions of the construction industry.<sup>74</sup> This qualitative approach also involves focus groups. This research applies a general inductive approach for analysing the data, whereby meaning and concepts are primarily derived from the accounts of participants in the research.<sup>75</sup>

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<sup>73</sup> Queirós, A., Faria, D., & Almeida, F. (2017). Strengths and limitations of qualitative and quantitative research methods. *European Journal of Education Studies*, 3(9), 369-386.

<sup>74</sup> Sechrest, L., & Sidani, S. (1995). Quantitative and qualitative methods: Is there an alternative? *Evaluation and Program Planning*, 18(1), 77-87.

<sup>75</sup> Thomas, G., & James, D. (2006). Reinventing grounded theory: some questions about theory, ground and discovery. *British Educational Research Journal*, 32(6), 767-795.

### ***Data Collection***

Taking into consideration the research questions, this research employed three methods for data collection, specifically a survey, a semi-structured interview, and focus groups. These methods allowed the exploration of different views and inputs from the women who are working in trade roles in construction. The survey mainly captured the qualitative data including demographics.

The interview aimed to explore in more detail the experiences of these women in formal training and on the job. To identify common and overlapping themes in the inputs provided, the interviews were semi-structured with a mix of open-ended and closed-ended questions. The closed-ended questions were mainly to identify the demography of the respondents.

### ***Participants and Sampling***

The participants in this research were selected with the goal of creating a purposeful sample of tradeswomen in the construction industry.

Given the accessibility of respondents through the National Association of Women in Construction (NAWIC) network, convenience sampling was used for the surveys. Convenience sampling is probably the most common sampling strategy, and which involves selecting respondents that are accessible and cost-effective.<sup>76</sup> The purposeful sampling technique was done for the interviews to provide in-depth and detailed information about the subject and research questions. This is a widely used sampling technique to identify and select cases who have the depth of information and at the same time the most effective use of limited resources.<sup>77</sup> A purposeful sampling technique was used to capture the respondents' unique viewpoints but also coming from different backgrounds. In turn, this will allow the discovery of significant patterns and themes across their distinctive practices. This type of sampling also considers the importance of the

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<sup>76</sup> Suri, H. (2011). Purposeful sampling in qualitative research synthesis. *Qualitative Research Journal*, 11(2), 63-75.

<sup>77</sup> Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration And Policy in Mental Health and Mental Health Services Research*, 42, 533-544.



respondent's availability and willingness to participate Bernard (2002), and their ability to communicate experiences and opinions in a manner that is articulate, and reflective.<sup>78</sup>

### ***Survey Design***

A 49-item survey questionnaire (combination of open and closed-ended questions) was designed for the purpose of this study and administered via QuestionPro online survey program (see Appendix 1 for a copy). The survey questions were a mixture of multiple-choice questions and open-ended questions. The questions were provided in a variety of formats to meet the survey's requirements and to keep the participant within the survey to completion.

The survey questionnaire was distributed in 2020 via social media channels and direct mail to databases. NAWIC shared the link to the survey in several posts on their LinkedIn profile page. NAWIC currently has a total of 12,581 followers on LinkedIn. The link was also shared in an email newsletter to the NAWIC members. The survey was also distributed via other relevant industry organisations such as Training and Development Solutions (400 members) and BUSY SISTERS (70 members), *The Tradie Lady Club Australia NZ* (1,600 members), *Tradie Lady Club Support Group* (1000 members), *Lady Tradies and Rocking Chicks* (900 members), *Women in Trades Network* (1,800 members). Each participant completed a consent statement in QuestionPro before continuing to the survey questions (see Appendix 1 for a copy). The survey was confidential and anonymous, and the participants could terminate their participation at any time.

From the total of 350 survey responses received a total of 233 fully completed surveys were used in analysis. The sample included 233 women who were working in the construction industry during the survey or prior to the survey. They ranged in age from 15 years to 54+ years. Participants represented all Australian states, with a small number also coming from New Zealand.

An equal number of respondents were "fully qualified tradeswomen" and "worked in trades or construction on the tools". Both groups had 48 survey respondents and 21.15% of the total account each. In addition, 18.5% of the respondents were fully qualified tradeswomen who no longer worked "on the tools". The main cohort of this study (apprentices, cadets, and trainees) 89

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<sup>78</sup> Palinkas, L. A., Horwitz, S. M., Green, C. A., Wisdom, J. P., Duan, N., & Hoagwood, K. (2015). Purposeful sampling for qualitative data collection and analysis in mixed method implementation research. *Administration And Policy in Mental Health and Mental Health Services Research*, 42, 533-544.

respondents A total of 89 (39%) group of participants consisted of a combined of apprentices, cadets, and trainees. 50% of participants had less than 5 years of experience representing a large portion of trainees and early career participants. The full demographics of survey respondents are provided in Table 1.

**Table 1.** Demographics of survey participants

Demographic variable	Categories	Frequency	%
Age N=229	<ul style="list-style-type: none"> <li>• • 15-24 25-</li> <li>• 34 35-44</li> <li>• 45-54</li> <li>• 54+</li> <li>• Rather not say</li> <li>•</li> </ul>	56 94 52 24 2 1	24.45% 41.05% 22.71% 10.48% 0.87% 0.44%
Current role N=227	<ul style="list-style-type: none"> <li>• • Tradeswoman working in construction on the tools.</li> <li>• Tradeswoman working in construction but no longer on the tools.</li> <li>• Construction apprentice / trainee</li> </ul>	48 34 89	21.15% 14.98% 39.21%
	<ul style="list-style-type: none"> <li>• Non trades women working in construction.</li> <li>• Tradeswomen working in other industry.</li> </ul>	48 8	21.15% 3.52%
Years of experience in construction N=228	<ul style="list-style-type: none"> <li>• 0-5 years</li> <li>• 6-10 years</li> <li>• 11-20 years</li> <li>• 20+ years</li> </ul>	114 65 24 25	50.00% 28.51% 10.53% 10.96%
Location N=220	<ul style="list-style-type: none"> <li>• New South Wales</li> <li>• • Victoria</li> <li>• Queensland</li> <li>• Canberra</li> <li>• Tasmania</li> <li>• South Australia</li> <li>• Western Australia</li> <li>• • The Northern Territory</li> <li>• New Zealand</li> </ul>	30 37 38 22 19 28 32 9 5	13.57% 16.74% 17.19% 9.95% 8.60% 12.67% 14.48% 4.07% 2.26%
Undertaking trade study N=208	<ul style="list-style-type: none"> <li>• Yes</li> <li>• No</li> <li>• Yes, but will be withdrawing</li> </ul>	103 88 17	49.52% 42.31% 8.17%

Apprenticeship year level N=222	• •	Apprentice - 1st Year	44	19.82%
	•	Apprentice - 2nd Year	42	18.92%
	•	Apprentice - 3rd Year	42	18.92%
	•	Apprentice - 4th Year	40	18.02%
	•	Construction Employee - office	11	4.95%
	•	Construction Employee - work sites - not qualified.	1	0.45%
	•	Qualified Tradeswoman	42	18.92%

The total number of respondents to the question about Undertaking Pre-trade Study was 208 and of these 17 (8.17%) now want to withdraw from their course since having exposure to the industry. 103 respondents are completing pre-trade training while 88 respondents were not. Fourth year apprentices / trainees / cadets made up the highest percentage within the apprenticeship cohort at 18.2% (40 respondents). The third-year cohort followed with 19.92% (42 respondents) and the second-year cohort also had 18.92% (42) respondents. First year apprentices followed accordingly with 19.82% (44) respondents.

### ***In-depth Interviews Design***

Employing in-depth interviews is a research technique designed to elicit the participants' individual perspectives on the research topic. In depth interviews are an effective qualitative method for getting people to share their personal feelings, opinions, and experiences. In the context of this research, the objective behind utilising in-depth interviews was to encapsulate tradeswomen's perspectives regarding their training and job experiences. Furthermore, the interviews aimed to understand the impact of negative interpersonal experiences on their mental well-being, gauge their awareness of and access to organisational support systems, and comprehend how these factors influenced their training completion and sustained engagement within the industry. Each interview was thoughtfully designed to last for approximately 45-60 minutes. Considering interviewees' preferences and logistical constraints, all interactions were carried out virtually. Prior to the commencement and recording of interviews, informed consent was obtained.

Three interviews were conducted using the same semi-structured Questionnaire. This approach was chosen to allow flexibility for the participants to elaborate on their responses and for potential additional and ensure the inclusion of any additional crucial insights that might be overlooked with a more structured approach. A semi-structured approach also facilitated in-depth

probing into the interviewee's answers during the interview which ensured that the essence of their inputs was captured. The Interview Questionnaire functioned as an instrument to support the interviews and to focus on engaging the participants in sharing their experiences within the construction industry. Each interview was recorded and transcribed. For a copy of the Focus Groups & Interview Questionnaire, please see Appendix 3.

**Table 2.** Demographics of interviews participants (n=3)

Participant	Gender	Role
Participant Z	Female	Tradeswoman
Participant M	Female	Tradeswoman
Participant J	Female	Tradeswoman

### ***Focus Groups Design***

Focus groups are special forms of group interview, focused on a specific subject and facilitated by a moderator.<sup>79</sup> These groups allow gathering insights into the ideas, attitudes, and perceptions prevalent within a selected sample from the target population when discussing a particular theme. Interaction among research participants is the key generator of data within focus groups. This approach uniquely benefits from the participants' exposure to diverse viewpoints and their subsequent responses to them.<sup>80</sup> This dynamic encourages robust discussions, wherein a remark from one participant can trigger a sequence of reactions from others. It is important to note that focus groups are not designed to achieve consensus; but rather to elicit a range of experiences, views, ideas, and attitudes held by a specific sample of the target population.<sup>81</sup> The selection of small focus groups in this research method, with only female participation, allowed for harnessing the power of group dynamics to provide rich insights into the delicate topic of interpersonal experiences of tradeswomen in construction.

The focus group participants were recruited through a variety of channels, including social media platforms like LinkedIn, Facebook, and Instagram posts, word-of-mouth referrals (where participants brought colleagues), and referrals through professional networks. This diversity in

<sup>79</sup> Chestnutt, I. G., & Robson, K. F. (2001). Focus groups—what are they? *Dental Update*, 28(4), 189-192.

<sup>80</sup> Stewart, D. W., & Shamdasani, P. N. (2014). Focus groups: Theory and practice, 20. Sage publications.

<sup>81</sup> Plummer-D'Amato, P. (2008). Focus group methodology Part 1: Considerations for design. *International Journal of Therapy and Rehabilitation*, 15(2), 69-73.

participant recruitment was deliberate to encourage diverse perspectives and engage a range of viewpoints. Leveraging the collaborative atmosphere of group dynamics, focus groups allow participants to respond to and build upon each other's inputs. A total of eleven participants attended the focus groups. The age of the participants ranged from 16 to 54 years old. All focus groups were recorded and transcribed. See Appendix 3 for Focus Group & Interview Questionnaire. **Table 3.** Focus groups participants (n=11)

Focus Groups	Attended	Role
Focus Group 1	4 x Females	4 x Tradeswoman
Focus Group 2	3 x Females	3 x Tradeswoman
Focus Group 3	4 x Females	4 x Tradeswoman

## Data Analysis

Adhering to a qualitative research approach for this study, qualitative content analysis of the survey questionnaire, interviews and focus group responses was conducted using a data-driven inductive approach to code content into themes. Data were triangulated by (1) examining all possible responses, (2) validating the responses against existing literature sources, and (3) improving the accuracy by leveraging the input of subject matter experts.<sup>82</sup> These responses were then re-examined with these preliminary themes in mind, and either eliminated or verified. Subsequently, these responses were revisited in consideration of the initial themes, leading to their validation or exclusion. This ensured that critical themes were not overlooked, and provisional constructs were included in the investigation and could act as the guide for interpreting the findings.<sup>83</sup>

To ensure the qualitative rigor of the study, the criteria outlined by Lincoln and Guba (credibility, transferability, dependability, and confirmability) were employed as guiding benchmarks. Credibility, which is similar to internal validity in quantitative studies, was established through a comprehensive approach to data collection and analysis. Transferability, similar to external validity, was assured by using direct quotes to illustrate the results. Dependability, akin to the notion of reliability, was achieved by involving a coder who was not involved in the development of the themes. The study's data was triangulated with the use of

<sup>82</sup> Ollerenshaw, J. A., & Creswell, J. W. (2002). Narrative research: A comparison of two restoring data analysis approaches. *Qualitative inquiry*, 8(3), 329-347.

<sup>83</sup> Rowlands, B. H. (2005). Grounded in practice: Using interpretive research to build theory. *Electronic Journal of Business Research Methods*, 3(1), 81-92.

multiple methods which improves the accuracy of the study through the validation of the results against existing research and therefore achieving confirmability.<sup>84</sup> The triangulation included examining all response data (from the surveys, interviews, and focus groups), validating against literature sources, and leveraging the knowledge and inputs of diversity researchers to objectively audit the identified themes and findings.

## Research Results – Survey Findings

The survey was designed through the QuestionPro program online and was distributed from the 9th of July 2022 until 31st of October 2022. The survey contained a total of 49 questions including both qualitative and quantitative questions and captured information regarding participants' demographics. The survey received a total of 1622 views, 350 participants who started the survey with a total of 233 who completed the survey by the closing date of October 31st, 2022. The completion rate of the survey was 66.57 % with an average time of 18 minutes taken to complete the survey. A number of themes emerged from the survey results. These will be discussed below.

### *Theme 1: Attracting women to the trade roles.*

#### *Reasons why women join the industry.*

The highest number of responses overall indicated that women are drawn by the desire to work in non-traditional roles (13.29%), as well as by physically challenging tasks (11.90%) and financial compensation (11.90%). Some expect that a career in construction will offer an opportunity to undertake intellectually challenging tasks (10.36%) and an opportunity for a career change (8.96%).

**Table 4.** The top five reasons that attracted the participants to work in the trades and construction industries.

Order	Reasons	Number of responses
1	The desire to work in a nontraditional role	86

<sup>84</sup> Ollerenshaw, J. A., & Creswell, J. W. (2002). Narrative research: A comparison of two restoring data analysis approaches. *Qualitative inquiry*, 8(3), 329-347.

2	Physically challenging tasks	77
3	Financial compensation	77
4	Intellectually challenging tasks	67
5	Career change opportunity	58

## ***Theme 2: Rating of apprenticeship / training experience***

### *Before and after ratings*

At the beginning of the survey, participants were asked to select words from a given list that indicated how they felt at the START of their training or apprenticeship. Most of the participants commenced their trades apprenticeship / training feeling supported, resilient, happy, hopeful, motivated, and confident. They had high hopes for their trade careers. However, some also felt anxious, isolated, and incompetent. Participants shared that they had hoped for a fulfilling career but were concerned that the ‘on the job’ training offered may not be sufficient to become a competent and qualified tradeswoman. 30% felt that the training was sufficient. However, many were concerned that they did not receive sufficient training with some planning to withdraw from training despite having a training contract in place with an employer.

Towards the end of the survey, participants were asked to select words from the same list that indicated how they felt at the END of their training or apprenticeship. The results below show the difference. The results are based on how many times the words were chosen at each question indicating responses.

**Table 5.** Before and after scores - Change in satisfaction levels from apprenticeship / training.

<b>Feeling</b>	<b>Scores</b>	<b>Feeling</b>	<b>Scores</b>
Competent	+27	Incompetent	-18
Angry	+29	Stressed	-2
Peaceful	+14	Isolated	-19
Motivated	+10	Hopeful	-65
Unmotivated	+6	Depressed	-4
Frustrated	+15	Relaxed	+7

Confident	+21	Resilient	- 2
Withdrawn	+15	Happy	- 19

The highest increases related to Competent and Confidence, indicating that participants felt more of these feelings towards or at the end of their apprenticeship, training, or cadetship. In addition, scores for Incompetent and Isolated also decreased indicating that participants felt less of these feelings towards the end of their training or cadetship. On the other hand, and of concern, was the significant increase of scores of Angry, Frustrated and Withdrawn, while much lower scores were given to Hopeful and Happy. When asked about any regrets about choosing to do a trades apprenticeship, from 140 responses, only 25% expressed a regret, while the majority did not have any regrets.

#### *Experiences with on-the-job training*

The survey participants were asked to select from four options that described an on-the-job training as a cadet, trainee, or apprentice. While the majority of participants expressed their belief or hope of a successful trades career after the training, many participants expressed their concern with inadequate training received.

**Table 6.** On-the-job training perceptions

	Answer	Count	%
	I believe that my training 'on the job' will/did lead to a fulfilling career as a competent tradeswoman.	93	30.39%
	I hope that my training 'on the job' will lead to a fulfilling career but I am concerned that my training is not sufficient to become competent and qualified.	101	33.01%
	I am not being trained at all outside of my RTO and I am very concerned (despite having a training contract in place with my Employer and Registered Training Organisation).	59	19.28%



	I am not being trained at all and I am going to quit (despite having a training contract in place with my Employer and Registered Training Organisation).	53	17.32%
	Total	306	100%

*N=306 participants*

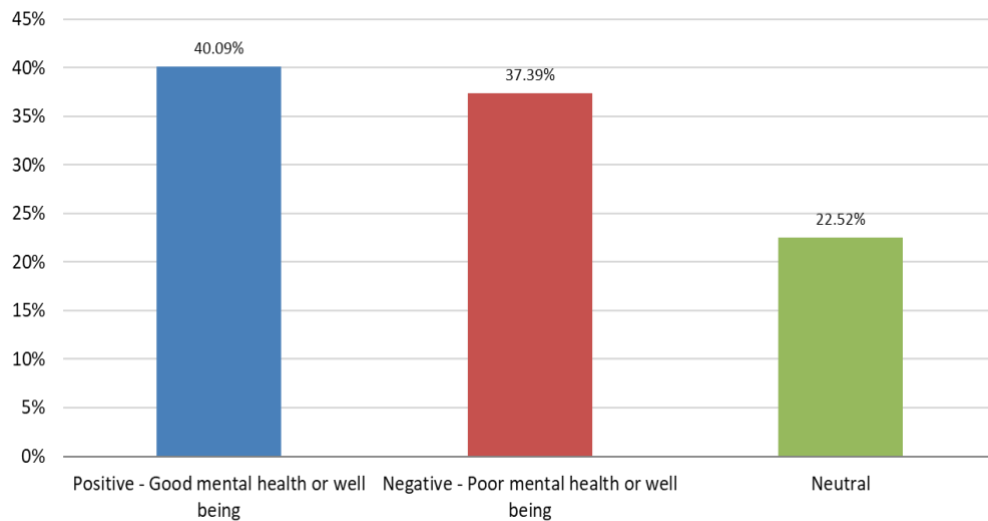
### ***Theme 3: Impact of workplace culture on women trainees and employees***

#### *Positive vs negative impacts on mental health and wellbeing*

40% of participants reported that working in male dominated industry had a positive impact on their mental health. 55% of those reported that their mental health was somewhat better as they gained confidence and skills to work through issues. 35% of those reported their mental health as significantly better due to improved confidence and resilience, reduced stress, and increased income.

On the other hand, 37% reported that working in male dominated industry had a negative impact on their mental health and wellbeing. Of those, 44% reported somewhat worse mental health leading to increased anxiety or depression with increased sick days to cope. 36% reported significantly worse mental health and wellbeing that led to time off to attend to mental health crises. Participants also reported increased work stress, increased depression and depression, loss of confidence, poor diet, and increased alcohol consumption because of the negative experiences (see Figure 1 for more details).

**Figure 1.** Impact of working in male-dominated industry on mental health and wellbeing of women apprentices and tradeswomen.



### *Psychological safety concerns*

When asked whether the participants felt comfortable in asking questions related to their training and learning, the majority (42%) felt that there was a limit to the number of questions they could ask, and they also needed to be mindful who they were asking those questions. Further 10% of participants felt that they could only ask once before they were expected to know things and 6% felt not comfortable asking questions. When asked about reporting their concerns or speaking up during their training, 35% revealed that they were able to speak up about issues but without any action being taken. 13% revealed that they are often shut down when speaking up, 7% were concerned with repercussions from their employers and another 7% were concerned about repercussions from their managers if they decided to speak up. Only 31% of participants felt that they could raise issues and those would be attended to in a timely manner. Majority, 72% of participants reported that they have made complaints about their employer's conduct to their Group Training Organisation, but only 42% reported that those complaints were taken seriously. The rest of the respondents, 26% have not made any complaints.

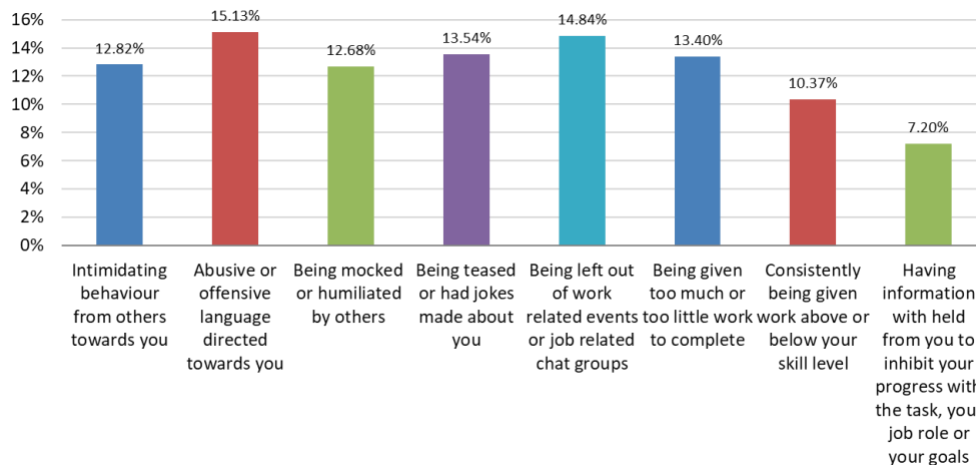
### *Bullying*

When asked about experiencing any bullying behaviours during their apprenticeship / training, the highest response of 15% related to abusive or offensive language directed towards them, 14%

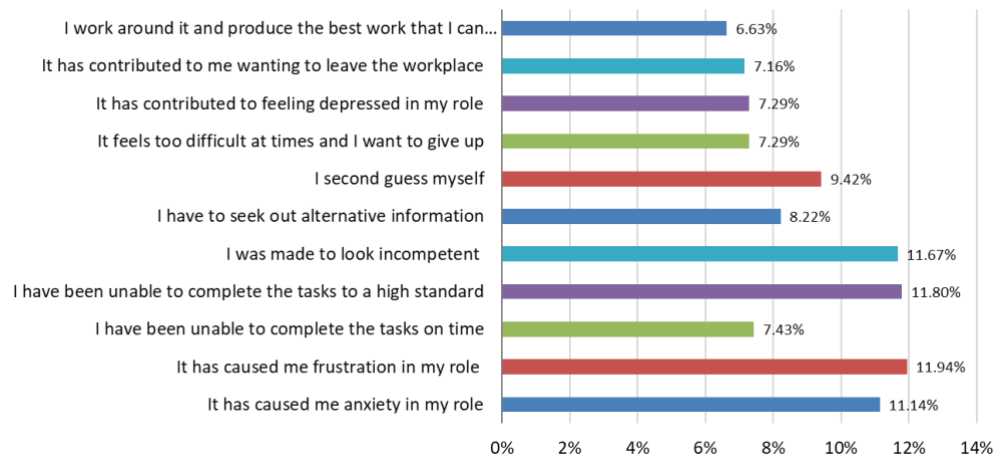
related to being left out of work-related events or job-related chat groups, 12% related to being teased and having jokes made about them, 13% being given too much or too little work, 12% related to being mocked or humiliated by others and 12% related to experiencing intimidating behaviour towards them.

Further, all respondents reported experiencing behaviour of deliberately withholding essential and task related information which is classified as a form of bullying. The impact of this behaviour was reported as causing frustration, making them look incompetent, preventing them from completing the tasks to a high standard, causing anxiety, and second guessing their capabilities (see Figure 2 and 3 for details below).

**Figure 2.** Experienced bullying behaviours at the workplace or RTO during your apprenticeship/cadetship or traineeship.



**Figure 3.** How deliberately withholding essential information impacts mental health and ability to complete daily tasks.

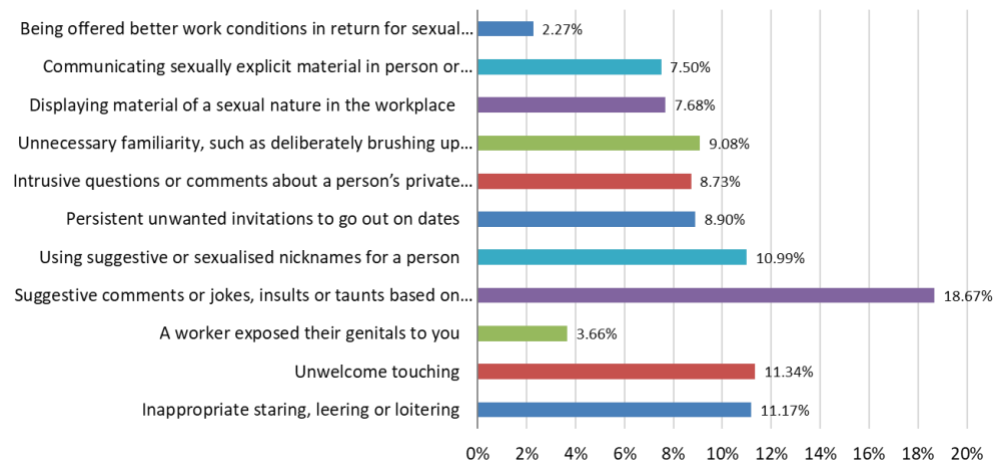


### *Sexual harassment and discrimination*

The highest response with 18% was related to experiences of suggestive comments and insults based on sex, 11% of responses were related to experienced unwelcome touching and inappropriate staring, 10% related to receiving suggestive or sexualised nicknames and 9% related to experienced unnecessary familiarity such as brushing up against a person.

The highest response with 17% was related to being consistently overlooked for suitable tasks and another 17% related to not being given equal access to ‘on the job’ skills training to increase competency. 15% of responses related to witnessing nepotism, i.e., favouritism for family and friends of the boss or manager, 15% related to assumptions of lack of physical capabilities for completing tasks, 14% to being used as an office assistant instead of trade apprentice and further 14% to witnessing others receiving more training despite specifically requesting it (see Figure 4 and 5 for details).

**Figure 4.** Experienced sexual harassment within your workplace during your apprenticeship/cadetship or traineeship



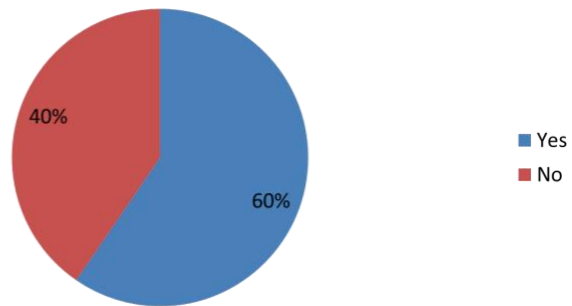
**Figure 5.** Experienced gender discrimination within your workplace during your apprenticeship/cadetship or traineeship.



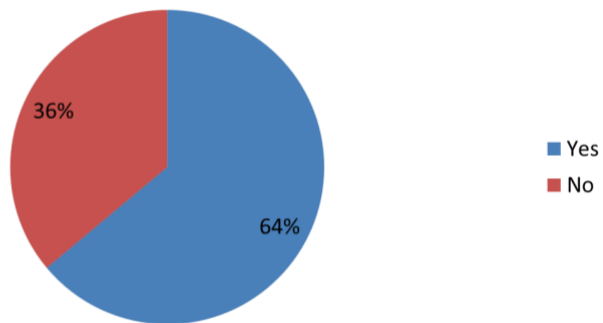
### *Gaslighting*

Majority (66%) of participants reported experiences of being gaslit by a manager or trainer, and the majority (59%) reported that this impacted their ability to complete tasks successfully. Further, the majority (63%) of respondents reported that gaslighting made them consider withdrawing from their training, and only 41% felt they had a neutral third party in their organisation to whom they could report their concerns. 90% of participants felt that they have to prove themselves to the team just because of their gender and 56% felt that they were hired as a female apprentice in order to “tick the gender box” (see Figure 6, 7 and 8 for details).

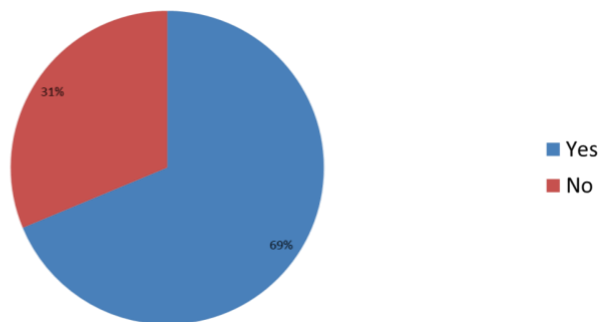
**Figure 6.** Impact of gaslighting in the workplace or at RTO on completing tasks successfully.



**Figure 7.** Does gaslighting impact on considering withdrawing from apprentice training?



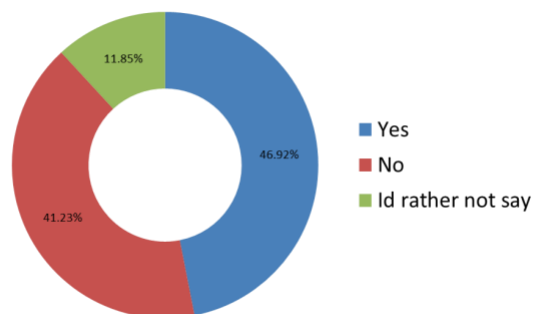
**Figure 8.** Was gaslighting repeated regularly?



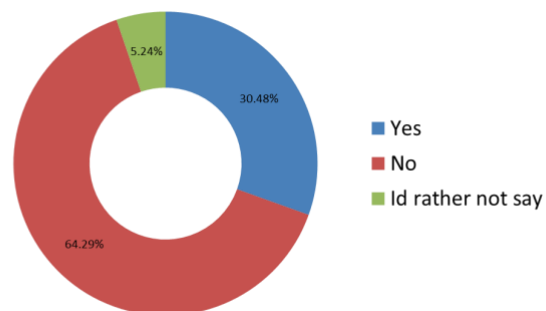
## *Suicide*

Especially concerning is the report of 46% (out of 211) of participants about experiencing new or increased suicidal ideation since working in the trades or construction roles. Further from a total of 233 respondents, 11% restrained from responding to this question. 38% reported knowing a male colleague, 19% reported knowing a female colleague and 9% reported LGBTIQA community member who has experienced with suicidal ideation. In addition, 36% of participants reported knowing a male colleague, 16% reported knowing a female colleague and 10% reported of knowing a LGBTIQA colleague who has passed away by suicide. From a total of 210 respondents, 30% reported that they personally made attempts to end their life during their time in trades and construction industry (see Figure 9 and 10 for details).

**Figure 9.** Experienced new or increased suicidal ideation since working in the trades or construction industry (n=197).



**Figure 10.** Personally made attempts to end their lives during the time in the trades or construction industry (n=210).



### *Coping strategies*

To an open-ended question about some advice, they would give to a young trade apprentice, women revealed their own coping mechanisms in completing their trades training while maintaining a good level of mental health. The advice was very positive and helpful. The majority of participants were advocating for seeking help when needed, asking lots of questions to learn, work hard, do a great job and seek support from other women in the industry, support networks, industry networks, etc. While acknowledging that trades profession can be challenging and testing, the participants were highlighting the importance of staying positive, focusing on the bigger picture and their own long-term vision, not taking things personally, not giving up, and building personal resilience.

Some also suggested to ‘grow thick skin’ and stick up for yourself while escalating issues if needed. See Table 7 for examples of responses.

Similar advice was given to mature career changers to assist them in completing their trade training and maintaining a good level of mental health but with few additions. The main differences were focused on highlighting the valuable life experience that mature women bring to the profession and the industry. Keeping a good physical health and work-life balance was also suggested.

**Table 7.** Samples of advice for a 16-year-old female trade apprentice (school leaver) to assist her to complete her trade while also maintaining a good level of mental health.

Learn from everyone as much as you can but recognise who actually wants you to succeed and supports you (at any level - tradesperson, supervisor).
Have a solid support network. It's tough!
Get a support network. Keep a diary of events.

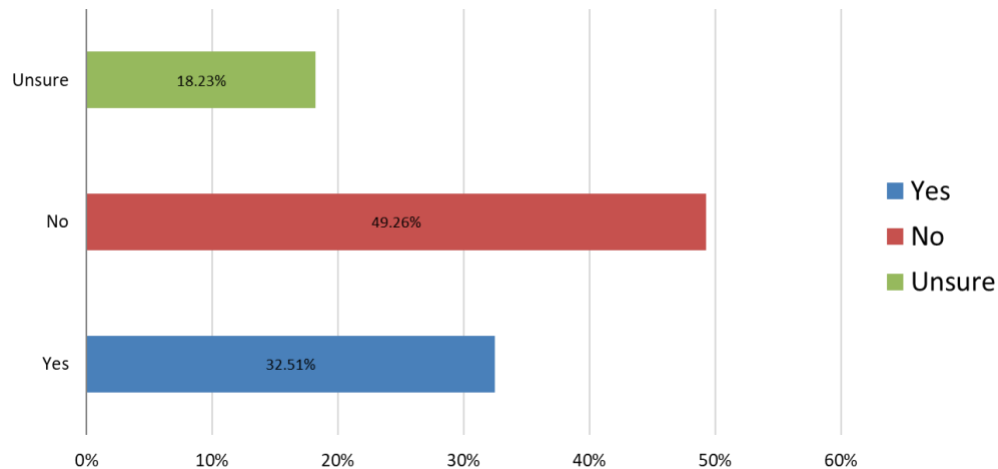


Connect with like-minded people in the trade both men and women. Find men that are supportive of women in the industry and are willing to stand out from their mates.
Set clear Boundaries, the industry will try to take its blood from you. It's important not to let it. Do Not avoid conflict. You do not exist to make others feel better, if you don't agree with something, speak out. The beginning may be rocky, but introduce yourself to everyone, don't let them overlook you as the quiet girl that's just there, make them know your name, make small talk, ask questions. you will very quickly earn their respect and you will learn boatloads through their experience.
Don't let the haters' comments get to you as there will be many at the start. Keep your head down and do your best and you will be fine. Don't be afraid to reach out for help and chat to other women in the industry as you'll find you are not alone if you're struggling.
Network with other female tradies and have a good support network. It's okay to ask for help and if you don't get it right the first time, don't beat yourself up over it. The boys make the same mistakes too.
If you can get access to a therapist, do! The sooner you start to understand yourself more deeply the power other people's thoughts and actions have over you diminishes. I can now recognise my internalised limiting beliefs were slowing down my growth as a carpenter. listen to the subtle messages your body is trying to communicate with you. It will be your best ally in knowing what is right for you.
If you are unhappy at the job you've been hired at, you can change companies. You are not obliged to finish your apprenticeship at one company. Join the NAWIC mentoring program to connect with people who have had similar experiences. Find out who your organisation's EAP is.
Always try your best, never believe that you can't do it, if it's hard asking for help and never never give up! As a girl you will be judged but that's only because you are a threat of showing how awesome you can be and better than the male dominated trade! The world is changing, and you will get your glory.
Don't do it.
Do a vet course and finish school.

### *Support for apprentices / trainees*

When asked about psychological support made available to apprentices / trainees, 49% felt that there was not enough support available, with 18% being unsure of what support was available (see Figure 11).

**Figure 11.** Perceptions of whether there is enough psychological support made available to apprentices.



#### *Continuation with training and in the industry*

When asked about their future career plans, 68% reported likely to complete their apprenticeship, 63% likely to stay with their employer after completing training and 58% likely to work towards owning their own business. A total of 59% (from a total of 203) participants reported that they had expectations of receiving more support. The rest of the participants had no such expectations due to knowing that trades and construction was a ‘man’s world’.

## **Research Results – Interviews and Focus Groups Findings**

A-priori coding scheme was used to guide the coding process based on the interviews and focus groups questionnaires. During this process, new concepts emerged, and additional codes were created, some existing codes were refined. In total, 16 codes were created within five main categories (see Table 8 below). These categories were grouped into two major themes: *Workplace culture in construction* and the *Impact of workplace culture on women trainees and employees*. These themes are discussed in more detail below, supported by a selection of quotes from the data codes.

**Table 8.** Themes, categories and codes from interviews and focus groups data.

Themes	Categories	Codes
Workplace culture in construction	Harmful behaviours	Bullying
		Sexual harassment
		gender discrimination
		Aggression
		Gaslighting
	Poor workplace culture and support	Tokenism
		Unsupportive work culture
		Less women / male-dominated
		Lack of support
		No role models
		Unsupportive supervisors
		Safe workplace
Impact of workplace culture on women trainees and employees	Impact on completion	Completing apprenticeship
		Hard to get in & stay
	Impact on mental health	Psychological issues
	Coping strategies	Coping strategies

### ***Theme 1: Workplace culture in construction***

The findings showed that the construction industry demonstrates harmful behaviors, poor workplace culture, and a lack of support. These were equally experienced by women in their apprentice roles and women at work.

#### ***Harmful behaviours***

In total, 71% of respondents identified harmful behaviors in construction characterized by sexual harassment, abusive comments, aggression/intimidation, gaslighting, and bullying. The findings showed that *trade apprentices* experienced severe harmful behaviors in the form of sexual harassment, abusive comments, aggression, bullying, and gaslighting. On the contrary, bullying and gender discrimination were more commonly experienced by *trade women at work*. Examples of the comments from trade apprentices about sexual harassment:

*But I sort of reached a breaking point when the owner of the company asked me if I wore a bra, that was... interesting. (TWAG1)*

*I had my tongue pierced when I was in the mines, and he was making comments about that and how much older I'd sleep with. (TWJG3)*

*And then I was told that 'They enjoy working with me because they get to look at tits all day''. (TWJG3)*

Alongside experiencing sexual harassment, trade apprentices in construction encountered aggressive comments from their supervisors, and often from their TAFE lecturers.

*Every time I walked into class, he used to say, "Did you bring your ironing board?" (IZ)*

*I got told that I, 'should be in the kitchen making scones not in the workshop with the real boys.' (TWJG3)*

Gaslighting was a common experience shared by women in trade apprentice roles. These came in the form of:

*But as time went on, it became apparent that it was the old boys club. So, I wasn't accepted on the committee, anything that I suggested or wanted to talk about wasn't really valued. (TWBG1)*

*So, very much, 'A female shouldn't be in the workshop'. (TWJG3)*

Sometimes it came from the clients:

*he was like 'I'll speak to a mechanic about it'. I took that as he didn't want to speak to me because I was a female. (TWKG3)*

The findings showed that trade apprentices suffered sexual harassment and sexual assault throughout their entire apprenticeship program. When they started working for companies, they experienced less sexual harassment since they became mentally stronger and could better position themselves as experienced workers. However, what they continued to face at work was bullying and gender discrimination.

*You know, you walk on site, and they say, "Oh there's a girl on site". (TWEG2)*

*They just... wouldn't take me seriously and I was grossly underpaid as well. (IM)*

The term that repeatedly occurred was “having to prove myself”. Despite receiving the same qualifications, trade women had to continuously prove their worth at work.

*Two weeks later, five to six months later, you have to go to a new building site and start all over again to prove yourself. (TWEG2)*

A few of the trade women also experienced sexual harassment on site:

*My boss was in town visiting and he was on the alcohol, on the drinks with a couple of other staff and we were staying in a campsite sort of thing, um, outside of (location), and a couple of them finished drinking at three o'clock in the morning and one of them thought it was a good idea to break into my room... for sexual favours... (IM)*

Overall, women in both trade apprentice and work roles encountered harmful behaviors that took a toll on their mental health. These behaviors sometimes forced the apprentice women to leave halfway through and created a stressful environment for women at work.

#### *Poor workplace culture and support*

The participants were asked about their experiences with workplace culture and support in apprenticeship and at work. The codes that frequently came up were ‘tokenism’, ‘unsupportive supervisor’, ‘absence of women’, and an ‘unsupportive work culture’. In total, 57% of the participants identified their experiences of tokenism in the training and identified recruiting female workers as a numbers game. This is an outcome of gender discrimination in the construction industry. Moreover, often organizations plan to have female tradies on board to receive grants and financial support from the government. Example comment:

*when I was in one role and I was leaving they said to me “You were our female, we’re going to miss you”. They said I was ‘their female’, 'because I was the only one in that department. As the current manager that I am now, the manager there had always said that he wanted a female trainer, so I was that female trainer. I do question whether I was the token female. (TWDG1)*

The participants identified unsupportive supervisors both at training and at work. The majority of supervisors were chauvinistic and cared less about women. Moreover, a formal grievance

procedure was absent. Even when a complaint was filed, the outcome often went in the favour of a male worker. Most of the workplaces lacked a bullying and harassment policy as mentioned by the participants.

*But I'd made comments to bosses and stuff, and they were like, 'It's just their humour', like, nothing was really taken seriously. (TWJG3)*

*If the males are picking on the females, the guys get an "oh, come on boys", like "don't do that, just leave her alone." (IM)*

Furthermore, the participants indicated that very few women could be found in trade apprentice roles. The lack of role models amplified gender discrimination in construction. This made it difficult for apprentice women to find somebody whom they could rely on. On the contrary, the presence of fellow female workers would have provided a safer workplace for apprentice tradies. Examples are:

*There weren't very many of us. (IZ)*

*I had one qualified tradeswoman the whole time I got my trade, so, yeah, not much help. (TWJG3)*

Amongst all these challenges, the participants mentioned some of the resources that would help them in their training journey. They identified a good mentor, family support, supportive colleagues and some appreciation could go a long way in making their journey easier. The participants also talked about the significance of initiatives such as the Elevated Work Platform license, extra tickets, suitable uniforms, and tools. Moreover, the findings showed the importance of an app, or girls' site, or a trade helpline to provide support for women in trade.

*It would be great. A women's trade helpline. Jeez that would be amazing, wouldn't it? (TWGG2)*

## ***Theme 2: Impact of workplace culture on women trainees and employees***

The findings showed the damaging effects of harmful behaviors, poor workplace culture, and support on women trainees and employees in trade. These negatively impacted their apprenticeship completion and their mental health.

### ***Impact on completion***

In total, 74% of the participants stated that it was challenging for them to complete their apprenticeship. Sometimes, the work environment was not supportive. In order to receive incentives, organizations used to take on a large numbers of women, raising unhealthy competition and numerous other issues. These issues coupled with an unsupportive culture led to constant pressure to prove worth which resulted in many trade women leaving their apprenticeships.

Example comments:

*But I definitely feel like they make it a little bit more pressure sometimes where you feel like you need to make sure that you can do everything, just as good as everyone else. (TWHG3)*

*I think a lot of the pressure came, like, 'You should know more, you should be doing more.' (TWJG3)*

The participants highlighted that the work environment can become very toxic in the presence of all white, male management. In such circumstances, the participants felt that they weren't given enough opportunity to learn and practically implement the knowledge. Moreover, the participants indicated that the apprenticeship culture can sometimes become so brutal as to shatter the selfconfidence of the trainees:

*I left being an electrician after doing my apprenticeship because I did not have the confidence to go to another company. (TWHG3)*

*The mines are just a very toxic environment, I never want to let anybody go up there. (TWJG3)*

### ***Impact on mental health***

The findings indicated that the toxic work culture had a serious impact on the participants' mental health both at work and during their time as trainees. The psychological issues experienced by the

trade trainees and employees include workplace stress, depression, anxiety and panic attacks, and burnout. In total, 93% of the participants highlighted psychological stressors in the construction industry.

Workplace stress, depression, and anxiety were common for trainees. They indicated their experiences as mentally damaging. This was instigated by not feeling welcomed or safe on site and could go to a length where they skipped work by asking for a sick certificate. The stress mostly came from not having female colleagues or supportive mentors at the workplace whom the trainees could seek help from. This resulted in an intimidating work environment to the extent that one of the participants became alcoholic.

*Going to a new place where nobody knows you, not knowing who you can ask those sorts of questions to, was a little bit stressful. (TWEG2)*

*...and it made me feel so uncomfortable, but I didn't know who to tell. Like, who was I going to say anything to? (TWHG3)*

The participants mentioned that work-related stress was at times unbearable. They felt burnt out but kept pushing themselves to the edge because they wanted to show a good performance. This was the outcome of being constantly bullied as a woman in a male-dominated industry.

*These new apprentices that are green and going in... they crack. And they... don't know how to handle it... and they don't have the confidence to stand up for themselves... (IM)*

The participants indicated that extremely stressful working conditions prevailed even when they started working for companies which resulted in depression for many employees. Example comment:

*I was struggling with depression and like... it... you don't... um, you don't, um... You kind of put up with things because you're dealing with your own stuff. (IZ)*

### *Coping strategies*

In order to survive in such a harsh workplace, the trainees and employees devised some coping mechanisms. They had to be extremely strong-willed to sustain the negative psychological impacts and continue working in trade. The trainees clung to hope that training was temporary, and better



days would come once they started working. They had to stand up for themselves and believe in themselves to get through.

*But I'm just like, 'Keep going, keep going, you can do it'... (TWKG3)*

*The one I did my apprenticeship (with), and that. I wanted to finish it, but I wasn't happy where I was. So, the only thing to get me through was that I wanted it finished and then. As long as you're qualified, then you can go wherever you want. (TWHG3)*

The participants indicated that it was daunting going into construction sites full of men and being the only female. It was scary to compare themselves with the males and try to be better or on the same page. Their coping strategy was to constantly upskill themselves and become well-equipped to prove as stronger counterparts to fight off any bullying or discrimination. These experiences were equally shared by female trade employees. They had to toughen up and deal with it in order to survive.

*Um, "toughen up" was always our motto, "just deal with it", "don't let it get to you" ... (IZ)*

## **Discussion**

The primary objective of this study was to understand the gender-related mental stressors that impact women undergoing trades apprenticeships within male-dominated industries, particularly focusing on the construction sector. The study sought to comprehend how gender-related stressors, encompassing bullying, gender discrimination, and gaslighting, influence the training and work experiences of tradeswomen. Moreover, it aimed to uncover the influence of these stressors on the acquisition of trade certification and the duration of their engagement in the industry. The central research question asked: "To what extent do mental gender-related stressors like bullying, gender discrimination, and gaslighting affect female participation in male-dominated fields, and how do these stressors influence the completion of apprenticeships and the continued presence of qualified and proficient tradeswomen?"

The research delves deeply into the intricate fabric of workplace culture within trades and the construction industry, revealing a disconcerting range of detrimental behaviours and their

profound implications for women navigating apprenticeship and professional roles. A staggering 71% of respondents shared encounters with harmful behaviours, encompassing sexual harassment, abusive comments, aggression, and bullying. Particularly disconcerting is the significant prevalence of these issues within trade apprenticeships, creating an alarming environment that affects mental health and often forces apprentice women to prematurely abandon their paths. Equally concerning, gender discrimination and bullying remain persistent challenges for women in active roles.

The study not only unveils the distressing prevalence of harmful behaviours but also highlights an overarching workplace culture marked by tokenism, a lack of female representation, and unsupportive supervisors. An unsettling 57% of participants reported experiences of tokenism, a reflection of a gender-biased and unsupportive environment. The dearth of female role models exacerbates these issues, amplifying the struggle of apprentice women. This widespread culture significantly impacts the completion of apprenticeships and casts a shadow on the mental health of women working in the industry, leading to stress, depression, and anxiety.

Amidst these challenges, resilience and determination emerge as crucial coping strategies. Women in the industry turn to self-belief and continuous skill enhancement to navigate the harsh terrain. The study underscores the pressing need for comprehensive changes within the construction industry to foster an inclusive, respectful, and supportive environment for women. In doing so, the industry can not only empower women to succeed but also elevate the entire sector's growth and progress.

## **Conclusion**

In summary, this research highlights the urgent need for transformative change in the trades and construction industry's workplace culture. The prevalence of harmful behaviours and gender bias, as revealed in the findings, highlights a systemic issue that impedes the advancement and wellbeing of women, both in apprentice roles and as active professionals. The industry must take concerted action to create inclusive environments, provide mentorship opportunities, and

implement robust policies against harassment. By doing so, the construction sector can foster an environment that not only empowers women but also drives overall growth and innovation.

## **Recommendations For Industry**

The findings of this study have confirmed that various gender-related mental stressors deter women from pursuing apprenticeships and trade roles within the male-dominated construction industry. Encouragingly, there are signs that female participation in certain construction apprenticeships is gradually on the rise, which could potentially contribute to greater numbers of women entering trade careers. Nonetheless, as long as gender-related mental stressors persist and significant levels of mental health challenges persist, the number of female apprentices and tradeswomen within the construction sector will remain notably limited. The entrenched minimal representation of women in construction trades, currently hovering around 3%, in conjunction with the restricted flow of candidates in the training pipeline, underscores the substantial disparity in achieving a more substantial pool of skilled female professionals in the trades.

However, it is noteworthy that no single sector or organisation has taken the lead in effectively addressing the prevailing gender segregation within male-dominated trades. An isolated, sporadic approach from any particular sector, including the training sector, is unlikely to yield substantial and lasting outcomes. Consistently demonstrating the benefits of increased female involvement in traditionally male-dominated trades, along with ongoing advocacy, will play a major role in building the necessary momentum for transformation in this field. Finding workable solutions for women to successfully enter the construction trades warrants consideration and industry focus. Several potential focal points within these considerations might include:

### ***1. Provision of apprentice support***

The prevalence of mental ill-health in the trades and construction industries (with the increased rate of suicidality in males and depression in females) require extra support at some point during their training. This should be factored into the training structure as a priority, not just to increase the completion rates of students but to ensure that their mental health and wellbeing are a priority whilst they are undertaking training.

Learning Services Support (LSS) workers can be made available to students to assist them to meet their training requirements, particularly if they have a diagnosed condition, however the existence of these support workers is not widely known thus far. Australian Apprenticeship Support Network (AASN) providers (MEGT & MAS National) should be able to guide enquiries to the correct support agency.

## ***2. Changing the structure of apprenticeship incentive payments to employers until the end of the apprenticeship***

The current apprentice ‘incentive’ system is broken. Employers are paid (up to \$28,000 per annum) when apprentices sign on to apprenticeships and they receive payments along the way as apprentices meet set training criteria with the Group Training Organisation. The ‘churn and burn’ of apprentices that some employers go through is unsavoury however there is always another 16-year-old male or career-change-female who would grab that chance at an apprenticeship, and so the cycle continues. In these scenarios it is likely that apprentices are being used as ‘cheap labour’ with no intention of being seen through to apprenticeship completion. This would also inhibit employers from just ‘ticking boxes’ to meet quotas such as mature aged, female, indigenous etc.

## ***3. Valuing the apprentice***

An economic argument for the rationale for how small businesses may treat apprentices in comparison to larger businesses. By nature, it is harder for a small business to compete for competitive jobs in the same way that a large business can. It is almost impossible for a small business to meet the requirements of the market (such as compliance) in order to compete. Using this rationale, it makes economic sense for a small business to VALUE an apprentice, to make them welcome and to train them up well, and to create a sense of loyalty as this loyalty benefits the business economically. Being VALUED is likely to create low absenteeism and higher job satisfaction.

Larger businesses, by nature, are more competitive and require more workers, often for menial and repetitive tasks, perfect for a first-year apprentice. Unless a larger organisation has a clear succession plan for apprentices, there is little incentive for a larger employer to train up apprentices to full capacity. It appears to be more financially viable for a larger business to ‘leave

apprentices to their own devices' on menial tasks, then to take a qualified tradesperson off the tools to train the apprentice thoroughly. Hence you begin the cycle, the 'churn and burn' through apprentices, and just train up the ones that show real initiative or through nepotistic means. These organisations see apprentices as BRINGING VALUE, in the form of cheap labour.

#### ***4. Introduction of resilience training***

The need for Resilience Training for apprentices has been noted in several studies in this research paper including by research conducted on the behalf of Mates in Construction. Course content was discussed in the Focus Groups which could be delivered through the Group Training Organisation alongside the Basic First Aid Training.

#### ***5. Introduction of supervisor training***

Since supervisors are most commonly perceived as the source of bullying behaviours, efforts should be made to provide education and training regarding appropriate supervisory behaviours, particularly in relation to managing the performance of employees.<sup>85</sup>

Further, supervisor support was shown to be particularly important during the first year of work for women in non-traditional occupations and for minimizing negative outcomes of job stressors overall. In addition, supervisors should be required to undertake mandatory working with children checks if they are in contact with or training an apprentice under the age of 18 years old.

#### ***6. Establishing worker psychological health as a core business value***

Training and promotion of 'Psychologically Safe' workplaces and work practices. Create a network or program recognising 'Psychologically Safe' employers that can be promoted to future employees. This workplace training can be used to address microaggressions such as gaslighting in a direct and safe manner.

Organisational policies and procedures should be updated to enhance and compliment training initiatives, ensuring that employee warnings and disciplinary actions are actually implemented and not just tokenistic. Consistent feedback from participants in the research

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<sup>85</sup> Potter, R., Dollard, M., & Tuckey, M. (2016). *Bullying and harassment in Australian workplaces: Results from the Australian Workplace Barometer Project 2014-15*. SafeWork SA.

provided examples of a lack of action from management when tradeswomen did report a serious concern or made a disclosure of sexual assault.

### ***7. Strengthening diversity training initiatives***

To be developed and implemented within the workplace to enhance awareness of implicit biases and how they can impact those from groups and individuals who are not perceived as the dominant group particularly toward women and minorities.

### ***8. Gender based measurements***

- **For Top Tier sites:** Tier 1 & 2 companies keep records of demographics such as total indigenous workers and total apprentices on sites however at the time of writing there were no gender based demographic records being kept. You cannot count that which is not measured.
- **Future Annual Report Writers & Researchers:** While tradeswomen currently make up a small proportion of women in the trades and construction industries it is invaluable that they are included in a gender-based break down in reports on suicide and demographics (not just as “total apprentices” in annual reports.
- **Recommend: Follow Victoria’s Lead** - In effect from 1 January 2022, the Building Equality Policy (BEP) sets apprentice-trainee quotas and mandates four per cent of labour hours to be performed by women.

### ***9. Register of Gender-Conscious Contractors***

Work with various stakeholders to aid the development of a register of Gender-Conscious Contractors as per the Australian Institute of Architects.

## **Recommendations For Apprentices**

### ***1. Find better fit***

Please know that it costs nothing to change employers however the contracts will take time to change over to a new employer. Ensure apprentices, trainees and cadets know that they can change employers if they are not a good ‘fit’.

In some states of Australia, like South Australia, employers can be blacklisted or prohibited from taking on another apprentice if they have been found to be in violation of their contract and there are serious safety concerns.

## **2. Know your rights**

As an apprentice you are well within your rights to making a complaint about your employer, Group Training Organisation, TAFE Lecturers or Australian Apprenticeship Support Network provider and it is completely ok. Your complaints are valid, and you deserve to be treated with respect.

There are many organisations that can help apprentices collate a complaint including free legal services, which vary state by state. Even Fair Work Australia can provide you with free advice from a lawyer over the phone.

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## **Appendix 1. Survey Questionnaire: Designed by Gabrielle French 2022**

### **Demographics**

1. What is your current age group?
  - a. 15-24
  - b. 25-34
  - c. 35-44
  - d. 45-54
  - e. 54 plus
  - f. Rather not say.
2. Are you a female who is currently working in the typically male dominated field of Trades or Construction?
  - a. Yes - Apprenticeship
  - b. Yes - Cadetship
  - c. Yes - Traineeship
  - d. 3. I work in trades and construction; off the tools; in an office or corporate environment but still want to contribute to this research.
  - e. I am fully qualified tradeswoman and work in trades or construction, on the tools.
  - f. I am fully qualified tradeswoman and work in trades or construction, off the tools.
  - g. I am a fully qualified tradeswoman but now work in another industry and have left my trade completely.
3. Are you undertaking a trade pre-apprenticeship at TAFE or similar pre-trade study?
  - a. Yes
  - b. No
  - c. I am but I want to withdraw as I have changed my mind since having exposure to the industry.
4. What year level are you up to for your apprenticeship, cadetship, or traineeship?
  - a. Apprentice - 1st Year
  - b. Apprentice - 2nd Year
  - c. Apprentice - 3rd Year
  - d. Apprentice - 4th Year
  - e. Cadet - 1st Year
  - f. Cadet - 2nd Year
  - g. Cadet - 3rd Year
  - h. Traineeship - 1st Year
  - i. Traineeship - 2nd Year
  - j. Traineeship - 3rd Year
  - k. Construction Employee - office
  - l. Construction Employee - work sites - not qualified
  - m. Qualified Tradeswoman

- n. N/A
5. Which location in Australia or New Zealand did you (or will you) complete your apprenticeship, cadetship, or traineeship in? a. New South Wales
- b. Victoria
  - c. Queensland
  - d. Canberra
  - e. Tasmania
  - f. South Australia
  - g. Western Australia
  - h. The Northern Territory
  - i. South Island - New Zealand
  - j. North Island - New Zealand
  - k. Not Applicable I live in another country.
6. Years of experience in the Trades and Construction industries?
- a. 0-5 years
  - b. 6-10 years
  - c. 11-20 years
  - d. 20 plus years
7. What initially attracted you to working in the Trades and Construction industries? (Choose all that apply to your circumstances)
- a. Your family members work in trades or construction
  - b. Your friends work in trades or construction
  - c. The desire to work in a non-traditional role
  - d. Intellectually challenging tasks
  - e. Physically challenging tasks
  - f. Financial compensation
  - g. Desire to be self employed
  - h. Suggested to you by a career counsellor
  - i. Career change opportunity
  - j. Desire to have an impact on the status of women in trades
  - k. Personal goal to become a tradeswoman
  - l. Other \_\_\_\_\_
8. What words would you use to describe yourself at the START of your apprenticeship, cadetship, or traineeship? Please choose all that apply.
- a. Isolated
  - b. Supported
  - c. Depressed
  - d. Resilient

- e. Anxious
- f. Confident
- g. Withdrawn
- h. Happy
- i. Hopeful
- j. Hopeless
- k. Incompetent
- l. Competent
- m. Angry
- n. Peaceful
- o. Motivated
- p. Unmotivated
- q. Relaxed
- r. Stressed
- s. Satisfied
- t. Frustrated

9. Please pick the statement which best describes your experience with; on the job; training as an apprentice, cadet, or trainee.
- a. I believe that my training, on the job; will/did lead to a fulfilling career as a competent trades woman.
  - b. I hope that my training; on the job; will lead to a fulfilling career but I am concerned that my training is not sufficient to become competent and qualified.
  - c. I am not being trained at all outside of my RTO and I am very concerned (despite having a training contract in place with my Employer and Registered Training Organisation).
  - d. I am not being trained at all and I am going to quit (despite having a training contract in place with my Employer and Registered Training Organisation).
  - e. NA
10. What advice would you give to a 16-year-old female Trade Apprentice (school leaver) to assist her to complete her trade while also maintaining a good level of mental health?
11. What advice would you give to a 45-year-old female Trade Apprentice (career change) to assist her to complete her trade while also maintaining a good level of mental health?
12. Did you have high expectations for your career when you first started your apprenticeship, cadet, or traineeship as a female in a male dominated workplace?
- a. Yes
  - b. No
  - c. Unsure
  - d. NA

### **Psychological Safety - Is it safe to ask questions in your workplace?**

13. Apprentices (trainees or cadets) are predominantly new starters with limited exposure to the trades, are low skilled and in need of guidance (on construction sites, at TAFE and with a new employer). They are EXPECTED to make mistakes, to have questions during the start of their training and to be less productive (which is why the apprenticeship wage is low). Do you feel comfortable asking questions in your workplace? Questions that are a genuine part of your learning process.
- Yes - There are no dumb questions, and I am encouraged to ask questions as it assists my learning.
  - Yes - I ask questions but I cannot ask too many and I have to be careful who I ask.
  - Yes - I can ask a question one time only then I am expected to know.
  - No - I am uncomfortable asking questions and it is discouraged.
  - No - I am uncomfortable asking questions and it is encouraged.
  - No - I have been told that I ask too many questions.
14. Psychologically safe workplaces encourage you to report your concerns (i.e., about training, experiences with other employees, WHS issues) with no negative consequences for speaking up. Do you feel that your workplace is a safe place to report your concerns, or do you fear repercussions for speaking up?
- My workplace is happy for me to speak up about issues, encourages open discussion and acts quickly.
  - I am able to speak up during toolbox meetings or pre-starts within the group, but no action is taken.
  - I am unable to speak up about my concerns as I am often shut down by others.
  - I am unable to speak up about my concerns as I am scared of the repercussions from other employees.
  - I am unable to speak up about my concerns as I am scared of the repercussions from the managers.
  - I have spoken up and I have been threatened for discussing particular topics.
15. Do you believe that your employer participates in lip service and does things by the book only when it serves their interest to do so? I.e., They act with a complete lack of integrity privately however hold you and other employees highly accountable? (Do as I say not as I do!)
- Yes
  - No
  - NA

### **Concerns About Employers, Training and Power Imbalance**

16. Have you made a complaint about your employer conduct to your Group Training Organisation (i.e., NECA, MEGT, PROGRAMMED, TABMA)?

- a. Yes I have actually made a complaint about my employer conduct and the GTO did NOT take it seriously
- b. Yes I have actually made a complaint about my employer conduct and the GTO DID take it seriously
- c. No
- d. NA

17. Do you believe that there is a power imbalance between your employer, your Group Training Organisation (i.e., NECA, MEGT, PROGRAMMED, TABMA) and yourself? I.e., is it in the best interest of the Group Training Organisation to maintain the relationship with your employer, rather than with you, the trainee?

- a. Yes
- b. No
- c. Unsure
- d. NA

18. If your employer was showing wilful misconduct towards you, do you think that your Group Training Organisation (i.e., NECA, MEGT, PROGRAMMED, TABMA) would take your complaint seriously?

- a. Yes
- b. No
- c. Unsure

### **Bullying, Sexual Harassment, Discrimination and Gaslighting**

19. Bullying - Have you experienced any of the following behaviours within your workplace or at your RTO during your apprenticeship/cadetship or traineeship? Please choose all that apply.

- a. Intimidating behaviour from others towards you
- b. Abusive or offensive language directed towards you
- c. Being mocked or humiliated by others
- d. Being teased or had jokes made about you
- e. Being left out of work-related events or job-related chat groups
- f. Being given too much or too little work to complete
- g. Consistently being given work above or below your skill level
- h. Having information withheld from you to inhibit your progress with the task, your job role or your goals

20. Deliberately withholding essential and task related information within the workplace is a form of bullying. If you have experienced this type of behaviour, how has it impacted on your ability to complete your daily tasks? Choose all that apply.

- a. It has caused me anxiety in my role
- b. It has caused me frustration in my role



- c. I have been unable to complete the tasks on time
  - d. I have been unable to complete the tasks to a high standard
  - e. I was made to look incompetent
  - f. I have to seek out alternative information
  - g. I second guess myself
  - h. It feels too difficult at times and I want to give up
  - i. It has contributed to feeling depressed in my role
  - j. It has contributed to me wanting to leave the workplace
  - k. I work around it and produce the best work that I can under the circumstances. 1. NA
21. Sexual Harassment - Have you experienced any of the following behaviours within your workplace during your apprenticeship/cadetship or traineeship? Please choose all that apply.
- Inappropriate staring, leering, or loitering
  - b. Unwelcome touching
  - c. A worker exposed their genitals to you
  - d. Suggestive comments or jokes, insults or taunts based on sex, or sexual gestures
  - e. Using suggestive or sexualised nicknames for a person
  - f. Persistent unwanted invitations to go out on dates
  - g. Intrusive questions or comments about a person's private life or body
  - h. Unnecessary familiarity, such as deliberately brushing up against a person
  - a. Displaying material of a sexual nature in the workplace
  - b. 10. Communicating sexually explicit material in person or through phone calls, online interaction, email, social media, or text messages
  - c. Being offered better work conditions in return for sexual favours
  - d. NA
22. Discrimination - Have you experienced any of the following behaviours with in your workplace during your apprenticeship/cadetship or traineeship? Please choose all that apply.
- a. Witnessing others receive more training despite specifically requesting it for yourself
  - b. Not being given equal access to on the job skills training to increase your competency
  - c. Being used as an office assistant instead of a trade apprentice
  - d. Being consistently overlooked for tasks that you are competent in and want to participate in
  - e. Witnessing nepotism in a similar role to your own - i.e., favouritism for friends or family members of the boss or manager
  - f. Assuming that you are not physically capable of completing a task based solely on your gender
  - g. Assuming that you are never available to work overtime because you are a parent or carer
  - h. NA
23. During your time as an apprentice, cadet or trainee can you recall a time when you were gas lit by a manager, your employer or a trainer?
- a. Yes

- b. No
  - c. NA
24. Did this gaslighting impact on your ability to complete tasks successfully in the workplace or at your Registered Training Organisation?
- a. Yes
  - b. No
  - c. NA
25. Has gas lighting in the workplace ever caused you to consider withdrawing from your training altogether?
- a. Yes
  - b. No
  - c. NA
26. Were any of the negative behaviours that you highlighted repeated regularly? a. Yes
- b. No
  - c. N/A
27. Were you singled out for any of the above behaviours?
- a. Yes
  - b. No
  - c. Unsure
  - d. NA
28. Did you have neutral third party within your organisation to whom you could report your concerns?
- a. Yes
  - b. No
  - c. Unsure \_\_\_\_\_
  - d. NA
29. How satisfied were you with the third party's response to your concerns or complaints? a. Very Unsatisfied
- b. Unsatisfied
  - c. Neutral
  - d. Satisfied
  - e. Very Satisfied

## Gender and the Workplace

30. Have you ever felt the need to work faster or harder than males (in similar roles) in order to feel accepted or to be perceived as competent with in the workplace?
- a. Yes to feel accepted and to be perceived as competent
  - b. Yes to feel accepted
  - c. Yes to be perceived as competent
  - d. No
31. Do you ever feel that you have to prove your worth or your contribution to the team just because of your gender?
- a. Yes however it depends on the team that I am working with
  - b. Yes often
  - c. No
  - d. NA
32. Are gender quotas the best way to increase the number of women in the trades and construction industries?
- a. No
  - b. Yes
  - c. Unsure
33. Do you feel as though you were hired as a female apprentice in order to tick the gender box?
- a. Yes
  - b. No
  - c. NA
34. Do you have any regrets about choosing to do an apprenticeship, cadet, or traineeship?
35. How likely are you to.....?1-30 =Definitely not! 31-70= Unsure71-100=Yes I would!
- a. Complete your Apprenticeship, Cadet, or Traineeship?
  - b. Continue with your current employer once your training is complete?
  - c. Continue with your trade once your training is complete?
  - d. Work towards owning your own business once your training is complete?
  - e. Recommend your current RTO?
  - f. Recommend your current GTO?
  - g. Recommend your Employer as a host for a new female apprentice?
  - h. Recommend that teen girls in high school look to careers in Trades or Construction?
  - i. Recommend a career in Trades or Construction to a woman who wants to shift careers in her 30's?
  - j. Recommend a career in Trades or Construction to a man who want to shift careers in his 30's?

- k. Recommend that your own daughter get an apprenticeship, cadet or traineeship in a Trade or Career?
- l. Recommend that your own son get an apprenticeship, cadet or traineeship in a Trade or Career?

### **Mental Health and Wellbeing**

36. Has working in a male dominated industry impacted your mental health or wellbeing in a positive or a negative way?
- a. Positive - Good mental health or well being
  - b. Negative - Poor mental health or well being
  - c. Neutral
37. If your mental health was impacted in a positive way, how would you rate the impact?
- a. Significantly better mental health - I am a much more confident and resilient person now, full of energy!
  - b. Somewhat better mental health - I know that I can work through future issues if they arise but my confidence gets knocked easily.
  - c. Mildly better mental health - I have noticed a slight increase in my confidence at work d. N/A
38. If your mental health was impacted in a negative way, how would you rate the impact?
- a. Significantly worse mental health - required time off to attend to a mental health crisis
  - b. Somewhat worse mental health - increased anxiety or depression (managed and stable) with increased sick days in order to cope
  - c. Mildly worse mental health - anxious at work but it did not impact your daily tasks d. N/A
39. Please select the ways that working in a male dominated industry has impacted your mental health or wellbeing in a POSITIVE way.
- a. Decreased depression
  - b. Decreased anxiety
  - c. Decreased smoking
  - d. Decreased drinking alcohol
  - e. Decreased recreational drug consumption
  - f. Reduced stress at home
  - g. Reduced stress at work
  - h. Increased confidence
  - i. Eating better meals
  - j. Improved sleeping habits
  - k. Increased income
  - l. Social relationships improved
  - m. Now in a healthy weight range

- n. NA
40. Please select the ways that working in a male dominated industry has impacted your mental health or wellbeing in a NEGATIVE way.
- a. Now in an unhealthy weight range
  - b. Insomnia
  - c. Poor diet
  - d. Less confidence
  - e. Anxiety - increased
  - f. Depression - increased
  - g. Increased stress at work
  - h. Increased stress at home
  - i. Alcohol consumption - increased
  - j. Smoking - increased
  - k. Depression - increased
  - l. Anxiety - Increased
  - m. Suicidal ideation - new or increased in severity
  - n. Recreational drug consumption increased
  - o. NA

**Content Warning - Topics discussing Suicide and Suicidology - Please skip this section if you need to.**

41. Working in the trades and construction industry can impact greatly on ones mental health, irrespective of gender. Long hours, high demands and the hypermasculine nature of competitiveness in the industry can cause psychological havoc. Have you experienced new or increased suicidal ideation since working in the trades or construction industries? Please remember that this is confidential. If you do need to speak to someone about this further, please call Lifeline on 13 11 14, Mates In Construction 1300 642 111, Suicide Call Back Service 1300 659 467, Men's Line 1300 789 978.
- a. Yes
  - b. No
  - c. I'd rather not say
42. Do you know a person in the trades and construction industries who has experienced with suicidal ideation? Please remember that this is confidential. If you do need to speak to someone about this further please call Lifeline on 13 11 14, Mates In Construction 1300 642 111, Suicide Call Back Service 1300 659 467, Men's Line 1300 789 978.
- a. Yes - Female
  - b. Yes - Male
  - c. Yes - LGBTIQA community member

- d. I'd rather not say
  - e. No
43. Do you know a person who was working in the trades and construction industries who has passed away by suicide? Please remember that this is confidential. If you do need to speak to someone about this further please call Lifeline on 13 11 14, Mates In Construction 1300 642 111, Suicide Call Back Service 1300 659 467, Men's Line 1300 789 978.
- a. Yes - Female
  - b. Yes - Male
  - c. Yes - LGBTIQ&#43; community member
  - d. No
  - e. I'd rather not say \_\_\_\_\_
44. During your time in the trades and construction industry, have you noticed new or increasing suicidal ideation within yourself? Please remember that this is confidential. If you do need to speak to someone about this further please call Lifeline on 13 11 14, Mates In Construction 1300 642 111, Suicide Call Back Service 1300 659 467, Men's Line 1300 789 978.
- a. Yes
  - b. No
  - c. I'd rather not say
45. During your time in the trades and construction industry, have you personally made attempts to end your own life? Please remember that this is confidential. If you do need to speak to someone about this further, please call Lifeline on 13 11 14, Mates In Construction 1300 642 111, Suicide Call Back Service 1300 659 467, Men's Line 1300 789 978.
- a. Yes
  - b. No
  - c. I'd rather not say.
46. Do you feel that there is enough psychological support made available to apprentices, cadet, or trainees?
- a. Yes
  - b. No
  - c. Unsure
  - d. NA
47. Has your experience as an apprentice cadet or trainee differed from your initial expectations?
- a. I thought I would get more support from my employer.
  - b. I thought I would get more support from my Lecturers at my RTO.
  - c. I thought I would get more support from my Mentor at my GTO.
  - d. No - I knew it was a man's world and may be hard to fit in.
  - e. No - I knew it was a man's world and I knew how to fit into it.

- f. No, my expectations are just right and I am happy.
  - g. I had no expectations \_\_\_\_\_
  - h. NA
48. What words would you use to describe yourself at the END of your apprenticeship, cadetship, or traineeship? Please choose all that apply.
- a. Isolated
  - b. Supported
  - c. Depressed
  - d. Resilient
  - e. Anxious
  - f. Confident
  - g. Withdrawn
  - h. Happy
  - i. Hopeful
  - j. Incompetent
  - k. Angry
  - l. Peaceful
  - m. Competent
  - n. Motivated
  - o. Relaxed
  - p. Stressed
  - q. Unmotivated
  - r. Frustrated
  - s. Satisfied
  - t. Hopeless \_\_\_\_\_
49. What support & tools do you think would benefit new female apprentices (cadets or trainees) the most?
- a. A free hard copy diary that outlines legal information helps them to keep track of workplace incidents such as bullying to be used at the Fair Work Tribunal.
  - b. A free app that outlines legal information helps them to keep track of workplace incidents such as bullying to be used with at the Fair Work Tribunal.
  - c. A website that brings together psychological and legal services available to assist apprentices which is specific to each state.
  - d. A free support person service where knowledgeable advocates attend meetings with apprentices (to eliminate gaslighting and power plays by employers).
  - e. A free legal service that offers advice specifically for women in the trades and construction industries.
  - f. The option to take legal action against an employer who inhibits or frustrates the career trajectory of women in trades.
  - g. Female trainers and TAFE Lecturers specifically for Trades and Construction courses.

## Appendix 2. Consent Form: Designed by Gabrielle French 2022

### Focus Group and Interview Consent Form

I .....(name), being over the age of 18 years, hereby consent to participate as requested in the focus group for the research project by Gabrielle French about women's experiences in the trades and construction industries, held on Saturday ..... (date).

1. Details of the focus group have been explained to my satisfaction.
2. I agree to audio recording of my information and participation.
3. I understand that:
  - I may not directly benefit from taking part in this research. ○ I am free to withdraw from the project at any time and am free to decline to answer particular questions.
  - While the information gained in this study will be published as explained, I will not be identified, and individual information will remain confidential.
  - Whether I participate or not, or withdraw after participating, will have no effect on any treatment or service that is being provided to me. ○ I may ask that the recording/observation be stopped at any time, and that I may withdraw at any time from the session or the research without disadvantage.
4. I understand that I can contact either the researcher or [insert organisation] with questions about this research via the contact details below.

Gabrielle French, Researcher & Tradeswoman on behalf of the National Association of Women in Construction (NAWIC)

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Anna-Clare Longford – Facilitator – Construction Lecturer Uni SA

AK – Facilitator – The Intelligence Hub: Specialists in Statistics & Strategy

Participant's signature: .....

Date: .....Date of birth: .....



## **Appendix 3. Focus Group & Interview Questions: Designed by Gabrielle French 2022**

### **Introduction Questions – Go around group – Warm Up**

- 1) Name, Occupation/Trade, where did you do your TAFE training, favourite tool in your kit?
- 2) How did you get into trades and construction?
- 3) When you were in high school, do you recall having trades offered to you as a career pathway?
- 4) Have you ever had a female trainer at TAFE (female trades lecturer)?
- 5) How would you rate your apprenticeship experience out of 10? (1 Terrible - 10 Perfect)
- 6) Have you regularly worked with other trades women, or have you primarily worked in all male teams?
- 7) If you have worked with other trades women, how were they to work with?
- 8) Are there any advantages of being the only woman in an all-male team?

### **Transition Question**

- 9) Have you ever experienced “the turn” where male colleagues suddenly stop supporting you, become distant or disagreeable with you? Do you know why this happened? How did you handle this situation?

### **Main Questions**

#### Psychological Safety

Do you understand the term “Psychological Safety” in the context of a workplace or training environment? Please think back to a time where you felt that it was not “psychologically safe” in your workplace – what occurred at that time to make you feel unsafe?

- 1) What did you do to overcome these feelings?
- 2) Do you think that new apprentices (or those new to the trades and construction industry) may require more support to feel psychologically safe?
- 3) What could employers do to assist new workers, young employees, and those in career transitions to feel psychologically safe in their workplace?

- 4) What could training organisations (such as TAFE) do to provide psychological safety for their students, in particular female students?
- 5) Do you think that the completion rate of new apprentices is related in any way to psychological safety in the workplace?
- 6) Do you think that the completion rate of new apprentices is related in any way to psychological safety at TAFE – or your training institution?
- 7) Looking at apprenticeship completion rates – please describe the hypothetical outcome for a career change woman who has a workplace with psychological safe work practices in place.

**Question 1:** Looking at the picture again, what do you think organisations can do to assist trades women to achieve equity with tradesmen in the workplace?

Examples: Ensuring that trades women's suggestions are listened to; providing PPE in women's sizing.

**Question 3:** Do you think that it is fair for organisations to offer trades women extra support if they require it to complete their apprenticeship? Why or why not?

Examples: Flexible start/finish times if they are a primary carer, lighter duties if they become pregnant during their apprenticeship, offering bereavement leave for miscarriages or time off for domestic violence assistance?

**Question 4:** Looking at the woman standing on the equity crate, she has achieved equity with her male counterpart. What do you think assisted her to achieve equity within the trades and construction industries?

- Q4.1 In her workplace or on a job site? Example – Having a pay rate based on merit, having the use of a work vehicle, receiving equal access to training opportunities, being acknowledged as a valued team member, having hiring processes that eliminate bias.
- Q4.2 In her training organisation? Example – Receiving training without gendered jokes, having a class with 50% female students, being offered job opportunities through informal networks at TAFE.
- Q4.3 In her family life? Example – Having access to affordable day care, having a partner who took on 50% of the “mental load”.
- Q4.4 In her social life? Example – Having a supportive network of friends who also work in trades, working on projects together with friends (i.e., renovating homes) Social networks & skills sharing.
- Q4.5 In her personal life? Example – Having a supportive partner, having secure housing, being able to maintain low stress levels.