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Access to inclusive public-toilet options and the wellbeing of trans and gender diverse employees: Novel evidence from a large Australian workplace survey

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ABSTRACT

Background: Inclusive public-toilet access by trans and gender diverse (TGD) individuals has been the subject of intense public and legislative debate. This study offers first-time evidence on the associations between TGD people's ability to use toilets of choice and access all-gender toilets within the workplace and their health and wellbeing.

Methods: We analyze data from TGD respondents to the 2024 Australian Workplace Equality Index Employee Survey ($n = 1020$). The focal explanatory variables capture respondent-reported freedom to use toilets of choice and availability of all-gender toilets at work (range: 1–5). The outcome variable is a composite index of employee wellbeing (range: 0–100). We model their relationships using random-intercept multilevel regression models adjusted for an encompassing set of individual- and employer-level confounds.

Results: Having access to toilets of choice ($\beta = 6.54$; 95%CI: 5.41,7.6) and all-gender toilets ($\beta = 3.02$; 95%CI: 1.99,4.05) exhibited large and statistically significant effects on TGD employee wellbeing. These relationships were apparent among binary and non-binary trans employees, and across employee-wellbeing domains.

Conclusions: Appropriate access to public-toilet facilities must be incorporated within ongoing policy efforts to improve the wellbeing of TGD individuals and redress entrenched health disparities for this population. This includes guidelines being currently developed by the World Health Organization.

KEYWORDS

All-gender toilets; Australia; gender diversity; gender identity; inclusive health; survey research; workplaces

Background

Over the past years, access to public toilets by trans and gender diverse (TGD) individuals has been the subject of heated social and political commentary (Hassan, 2023; Katy & Xavier, 2024) as well as substantial legislative change (Horne et al., 2022; Jones, 2024). Key debates in this space have revolved about TGD people's rights—or lack thereof—to utilize public restrooms that align with their identified gender (rather than their sex assigned at birth or gender presentation), and the actual or potential availability of 'all-gender' or 'gender-neutral' toilets that may accommodate people of all genders (Gillig et al., 2024; Huff et al., 2023). Discussions have focused on public restrooms located within educational environments—including primary, secondary, and higher-education institutions (DeChants et al., 2024; Price-Feeney et al., 2021; Seelman, 2016; Weinhardt et al., 2017), but also apply to restrooms located within other public spaces—most notably, workplaces (Gillig et al., 2024). Since the 2016 North Carolina HB2 "bathroom bill", legislation in the U.S. and elsewhere has progressively enshrined TGD people's access to toilet options that respect and align with their gender . However, recent geo-political developments—including the incoming Trump

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administration in the U.S.—have prompted commentators to predict a stall or even reversion of TGD rights in this domain.

Safety, health and wellbeing aspects are often invoked by those who advocate for TGD people's access to toilets of choice, and for the introduction of all-gender toilets that accommodate this population (Davis, 2020; Schuster et al., 2016). Gender-inclusive toilet access is often presented as an important factor boosting TGD individuals' wellbeing, and an avenue to reduce the substantial and entrenched documented health disparities between cisgender and TGD people (Goldsen et al., 2022; Lefevor et al., 2019). As the World Health Organization (WHO) notes, access to appropriate sanitation facilities is a basic human right that is necessary to foster individual and societal health, yet the most vulnerable and disadvantaged social groups often face restrictions in accessing suitable sanitation facilities (United Nations International Children's Emergency Fund & World Health Organization [UNICEF & WHO], 2020).

Several mechanisms have been argued to link inclusive public-toilet options to the health and wellbeing of TGD people. Minority-stress perspectives (Frost & Meyer, 2023) underscore how TGD people face unique day-to-day stressors due to stigma and discrimination targeting their identities, which ultimately depletes their health. Restricted bathroom access can be conceptualized as an additional day-to-day stressor faced by TGD people—one that compounds with other daily stressors that they experience. For example, emerging literature illustrates how public toilets can be a site for violence, aggression and hostility overall, but particularly so for the TGD population (Price-Feeney et al., 2021; Wang et al., 2024). This body of work shows that physical and verbal victimization of TGD people within public toilets is a common occurrence (Herman, 2013). For example, a U.S. study reported that 58% of TGD young people had lifetime experiences of being prevented or discouraged from using toilets (Price-Feeney et al., 2021), whereas another study from China estimated that approximately 1 in 10 TGD people had ever experienced abuse within a public bathroom (Wang et al., 2024). This situation may occur most frequently where gender-neutral toilet options are not available, and where TGD people are forced to use toilets that match their sex assigned at birth—which often does not align with their gender presentation. Other studies also draw attention to inappropriate public-restroom facilities to manage menstruation for some TGD people (for a review, see Bigalky et al., 2024). For example, a recent study documented the multiple challenges experienced by TGD people in India when navigating menstruation management within public bathrooms—which constituted a major stressor (Dubey et al., 2024).

The actual, perceived or potential interpersonal conflict and abuse TGD people experience when accessing public toilets can also lead to situational avoidance and the ensuing withholding of bodily functions, which bears negative outcomes on mental and physical health (Bigalky et al., 2024; DeChants et al., 2024; Herman, 2013; Schuster et al., 2016). In this regard, a 2021 U.S. study found that 49% of TGD young people avoided public toilets due to safety concerns, with 67% of them indicating they "held it" when needing to use the toilet and 38% abstaining from drinking or eating to minimize use (DeChants et al., 2024). In contrast, gender-inclusive toilet features and utilization options can exert positive effects on TGD individuals' wellbeing through symbolic means. The presence of all-gender toilets and the ability to use gendered toilets of choice signify that TGD people are being recognized and accepted, while their absence contributes to identity erasure and institutional invalidation (Bauer et al., 2009; Namaste, 2000). This form of social and institutional affirmation can be a source of mental wellbeing for TGD individuals (Bauer et al., 2009; Namaste, 2000). Furthermore, non-inclusive policies within public environments (e.g. educational institutions or workplaces)—including policies pertaining to toilets—may encourage TGD people to hide their identities and remain "closeted", a status that is typically correlated with lower health and wellbeing within sexuality- and gender diverse populations (Osmetti & Allen, 2024; Rentería et al., 2023).

Despite these persuasive arguments and the intensity of public debate, academic scholarship that empirically connects inclusive public-toilet

options for TGD individuals to their health and wellbeing is lacking. A search of the literature yielded only a handful of quantitative studies on the topic. Based on samples of children and in relation to toilets located within educational settings, three U.S. studies documented significant negative health effects associated with non-inclusive treatment of TGD youth. An early analysis reported that feeling unsafe in bathrooms was associated with increased anxiety symptoms (Weinhardt et al., 2017), while more recent research revealed that public-bathroom avoidance and bathroom discrimination were related to anxiety and depressive symptoms, suicide ideation, and suicide attempts (DeChants et al., 2024; Price-Feeney et al., 2021). Analyses of samples of TGD adults within non-educational contexts are scarcer, with only two studies identified in our search. Results from a Chinese study indicated that avoiding public restrooms and receiving abuse within these settings was associated with increased levels of anxiety, depression, post-traumatic stress, suicidality, and self-harm (Wang et al., 2024). Similar findings were reported using a South Korean sample (Lee et al., 2021), with bathroom-avoidance behaviors and victimization experiences increasing the prevalence of depressive symptoms among TGD individuals.

Notwithstanding the timeliness and significance of these pioneer studies, the available evidence base remains limited in several important ways. For instance, existing research has largely focused on children, young people and educational settings, neglecting other important sites for public-toilet utilization. The present study shifts the focus to workplaces, which have received no scholarly attention. This is a significant omission, as workplaces are locations in which adults spend a significant portion of their day-to-day lives, as well as a key site for the socio-economic exclusion of TGD people (Öztürk, 2024; Ozturk & Tatli, 2016; Perales et al., 2022). Further, most of the available literature is qualitative in nature, relies on small samples, and comes from just three countries (China, South Korea and the U.S.). These shortcomings preclude broader generalization of the cumulative results, making it difficult to fully incorporate these findings into public debate and policy development. The present study contributes to filling these knowledge gaps by empirically examining how access to toilets of choice and the availability of all-gender toilets at work influence the workplace wellbeing of TGD employees. To accomplish this, we leverage unique, high-quality Australian data from a large sample of TGD employees and multilevel regression models. Our findings bear important lessons for policy and practice, and have the potential to inform ongoing public debates.

The Australian context

In Australia, where the present study is based, only a handful of studies have addressed public-toilet use by TGD people, focusing chiefly on educational institutions. Similar to the international literature, these studies have documented experiences of bullying, violence and invalidation by TGD individuals accessing public bathrooms (see e.g. Francis et al., 2022; Jones et al., 2016).

Within Australia, the legal rights of TGD people to access toilets of choice and public organizations' responsibilities to house all-gender toilet facilities remain unclear and a matter of debate. The Australian National Construction Code (NCC) dictates the design of public buildings, setting the required health, safety, accessibility, and sustainability standards (Australian Building Codes Board [ABCB], 2022). This includes the design principles underpinning public bathrooms. The NCC (ABCB, 2022) states that "*suitable sanitary facilities for personal hygiene must be provided in a convenient location […] appropriate to the number and gender of the occupants*" (F4P1). However, it subsequently designates toilets as 'female', 'male' or 'unisex accessible', and refers to users based on their sex rather than their gender (F4D4).

In 2024, the ABCB (2024b) proposed changes to the NCC, partially based on public consultation. Their change proposal identified ambiguities within the 2022 NCC code and proposed consistent use of 'gender' over 'sex' language. This change would align with Australia's Sex Discrimination Act 1984, which protects people from discrimination and/or unfair treatment on the basis of their gender identity, and would effectively serve to legally enable TGD people to use toilets

of choice (Mulcahy, 2024). The proposal also suggested changes that would enable practitioners to provide all-gender bathrooms—alongside male, female, and accessible bathrooms—thereby "recognising the diverse needs of individuals beyond the binary concept of gender" (ABCB, 2024a). A new version of the NCC is expected to be released in 2025, underscoring the timeliness of the present study.

Materials and methods

Dataset and sample

This study received ethical clearance from The University of Queensland (2022/HE000069). Data come from the 2024 AWEI Employee Survey, a large cross-sectional survey managed by ACON Health—Australia's largest not-for-profit organization focusing on Lesbian, Gay, Bisexual, Trans and Queer (LGBTQ+) community health. The 2024 Australian Workplace Equality Index (AWEI) Employee Survey is designed to document the impact of LGBTQ+ inclusion initiatives on organizations and their employees, and was collected through an online questionnaire issued to employees within participating organizations. The latter include member organizations of the Pride in Diversity network and other organizations choosing to participate. To maximize the number of LGBTQ+ respondents, the survey relied on a volunteer non-probability sampling design. The overall sample comprises 42,218 individuals working in 172 organizations across a wide array of employment sectors. The analyses within the present study are conducted on a subsample of TGD respondents with non-missing data on the focal employee-wellbeing and toilet-access measures. Missing data on the covariates was non-existent due to the survey's inclusion of Prefer not to Respond (PNTR) residual response options. Our final analytic sample encompasses 1090 TGD employees working in 146 organizations—a larger number than in many similar studies (see e.g. Eisenberg et al., 2021; Lee et al., 2021; Perales et al., 2022; Weinhardt et al., 2017). Of note, given the AWEI Employee Survey's scope, the sample includes TGD people who were employed for wages by formal employers, thereby excluding the self-employed and those in informal forms of employment.

Measures

Employee wellbeing

The outcome variable of interest is a composite index of employee wellbeing that has been successfully deployed in previous studies (Perales, 2022; Perales et al., 2022; Perales et al., 2024). Despite a lack of agreement in the theoretical literature on what precisely constitutes employee wellbeing, most approaches recognize the importance of dimensions such as workplace, psychological, and subjective wellbeing (Page & Vella-Brodrick, 2009; Wijngaards et al., 2022; Zheng et al., 2015). The employee-wellbeing index leveraged within the present study taps on these different dimensions, including workplace wellbeing (as captured by feelings of productivity and engagement with one's job), psychological wellbeing (as captured by feelings of safety, acceptance, and belonging in the workplace), and subjective wellbeing (as captured by feelings of being mentally well at work).

Specifically, the index combines respondents' agreement with six statements pertaining to their feelings of workplace inclusion and belongingness: (1) "I feel mentally well at work", (2) "I feel safe and included within my immediate team", (3) "I feel I can be myself at work", (4) "I feel productive at work", (5) "I feel engaged with the organization and my work", and (6) "I feel a sense of belonging here". Agreement was rated on a Likert scale ranging from (1) "Strongly disagree" to (5) "Strongly agree" and 99.9% of respondents provided responses to all six items. Item scores were first averaged and then added up into a composite index. To ease interpretability, the composite-index scores were subsequently transformed to range from 0 (lowest wellbeing) to 100 (highest wellbeing) using the following linear transformation: $index\ score = (average\ item\ score - 1) \times 20$. While—to our knowledge—this measure has not yet been formally validated, the resulting scale featured optimal statistical properties. These included high internal consistency (Cronbach Alpha = 0.93) and scale unidimensionality [principal component analysis yielded only one factor with an eigenvalue above one (4.4) explaining 73% of the variance].

Access to toilets. The focal explanatory variables are two self-reported measures capturing the degree to which inclusive workplace toilet options are available to TGD employees. Both

measures come from a questionnaire module in which respondents were presented with the following prompt: "*Thinking about your current organisation, and your gender diversity and/or trans experience, please indicate your level of agreement with the following statements*". The first measure captures TGD employees' perceived ability to access toilets of choice, and is based on the following item: "*There is freedom to use toilets of choice*". The second measure considered availability of all-gender toilets to TGD employees through the following item: "*There is availability of 'all-gender' or 'gender-neutral' toilets*". For both measures, response options were on a Likert scale ranging from (1) "Strongly disagree" to (5) "Strongly agree". These measures enter the models as continuous-level variables.

Control variables. To minimize the risk of omitted-variable bias, an array of individual- and employer-level control variables were added to the multivariable models. These covariates are akin to those deployed in previous studies of employee wellbeing (Perales, 2022; Perales et al., 2022; Perales et al., 2024), and include respondents' gender experience (non-binary trans, binary trans, other gender diversity), sex assigned at birth (male, female, other sex term/PNTR), age group (<35 years, 35–54 years, 55+ years), ethnic-minority self-identification (yes, no, PNTR), Indigenous self-identification (yes, no, PNTR), disability (yes, no, PNTR), neurodiversity (yes, no, PNTR), religious identification (yes, no, PNTR), place of residence (urban, rural), job level (executive, management, regular employee), job tenure (<1 year, 1–3 years, 4–6 years, 7–10 years, >10 years), contract type (full-time, part-time, other contract type), and employer sector (public, private, not-for-profit), size (<500 employees, 500–2000 employees, >2001–8000 employees, >8000 employees), and industry (12 major groups from the Australian and New Zealand Standard Classification of Occupations).

Analytic approach

To analyze the relationships between TGD employees' wellbeing (outcome) and workplace toilet access (explanatory variables), we employ linear random-intercept multilevel regression models (Raudenbush & Bryk, 2002). This modeling approach yields coefficient and standard errors that appropriately account for the hierarchical structure of the 2024 AWEI Employee Survey (employees nested within organizations). Our base specifications can be expressed as follows:

$$W_{io} = \alpha_o + \beta L_{io} + \gamma C_{io} + e_{io} \quad (1)$$

Subscripts i and o denote individuals and organizations, respectively; W denotes the employee-wellbeing index, T denotes either of the explanatory variables capturing toilet access, C denotes a set of model controls, α denotes a random intercept allowed to vary across organizations and assumed to be orthogonal to the regressors, e denotes the individual-level error term, and β and γ are estimated model parameters. To prevent any bias stemming from their conceptual and empirical proximity, we fit separate models for each of the two toilet-access focal explanatory variables.

To consider potential heterogeneity in the relationships of interest, we conduct two additional analyses examining whether the associations between the toilet-access variables and TGD employee wellbeing vary by (a) employees' gender experience (binary trans vs. non-binary trans) and (b) dimensions of employee wellbeing (mental wellbeing, safety/inclusion, authenticity, productivity, engagement, and belonging). All analyses were conducted using Stata 17.0 software. Statistical significance is reported at the conventional 5% and 1% levels.

Results

Descriptive statistics

Table A1 within the Supplementary Online Materials shows that a majority of respondents within the analytic sample are non-binary (52.8%), assigned female at birth (52.7%), younger than 35 years (57.9%), ethnic majority (74.3%), non-indigenous (90.2%), non-religious (82.1%), and urban residents (87.6%). consistent with previous evidence on TGD populations, disability (45.6%) and neurodiversity (58.8%) rates are higher than in the general population. Concerning employment characteristics, respondents tend to work full-time (75.4%) as regular employees (84.9%) for large (33.8%) or very large (47.5%)

organizations within the public sector (60.3%). a variety of employment durations and industry sectors is apparent within the sample. Average employee wellbeing was 69.1 (out of 100), with a standard deviation (SD) of 23.9. Average agreement (from 1 to 5) was 2.8 (28.2% 'agree' or 'strongly agree'; SD = 1.4) for the toilet-of-choice variable and 3.3 (47.2% 'agree' or 'strongly agree'; SD = 1.2) for the all-gender-toilet variable.

Base multivariate models

Abridged results from base random-intercept multilevel regression models adjusted for the covariates are presented in Table 1. Model 1 shows that each one-unit increase in the explanatory variable capturing freedom to use toilets of choice is associated with a 6.54 increase in the employee-wellbeing index ($p < 0.01$; 95% CI: 5.41,7.66). Similarly, Model 2 indicates that unit increases in the explanatory variable capturing the availability of all-gender toilets are associated with a 3.02 increase in the employee-wellbeing index ($p < 0.01$; 95% CI: 1.99,4.05). The magnitude of these associations is seemingly large. For example, differences in the employee-wellbeing index between respondents reporting strong agreement and those reporting strong disagreement in the toilet-of-choice explanatory variable amount to 26.2 units—or 109% of the sample's SD in employee wellbeing. For the all-gender-toilet variable, the analogous figures are 12.1 units and 51% of the SD.

While not focal to the present study, and largely consistent with earlier studies (Perales, 2022; Perales et al., 2022; Perales et al., 2024), the model parameters on the control variables indicated that wellbeing levels were significantly higher among employees who were binary trans, assigned female at birth, ethnic majority, religious, non-disabled, non-neurodivergent, urban based, and newer to their jobs.

Table 1. Coefficients (95% confidence intervals) from random-intercept multilevel regression models of TGD employee wellbeing (range: 0–100), abridged results.

	Model			
Explanatory variables	1	2	3	4
Access to toilets				
Freedom to use toilets of choice	6.54** (5.41,7.66)		5.37** (3.89,6.84)	
Availability of all-gender toilets		3.02** (1.99,4.05)		2.40** (0.99,3.82)
Gender experience *(reference: Non–binary trans)*				
Binary trans	−0.30 (−3.79,3.19)	3.65* (0.09,7.20)	−17.63** (−28.41,−6.86)	3.02 (−4.75,10.80)
Interactions terms				
Binary trans × Freedom to use toilets of choice			4.76** (1.94,7.57)	
Binary trans × Availability of all-gender toilets				0.24 (−2.16,2.65)
Control variables[a]	Yes	Yes	Yes	Yes
N (observations)	1090	1090	1090	1090
N (organizations)	146	146	146	146
R^2 (overall)	0.195	0.123	0.203	0.126

Notes: 2024 Australian Workplace Equality Index Employee Survey. Unstandardized coefficients from random-intercept regression models. Full sets of model coefficients are available from Appendix Table A2 within the Supplementary Online Materials. Statistical significance: *$p < 0.05$, **$p < 0.01$.

[a]Control variables include respondents' gender experience, sex assigned at birth, age group, ethnic minority, indigenous self-identification, disability, neurodiversity, religious identification, place of residence, job level, job tenure, contract type, and employer sector, size, and industry.

Additional specifications

Additional analyses were conducted to unveil potential heterogeneity in the base relationships reported above. Models 3 and 4 in Table 1 leverage interaction terms to examine association disparities by employees' gender experience. The results revealed an interactive effect between being binary trans (compared to non-binary trans) and the toilet-access explanatory variable (Model 3: $\beta = 4.76$; $p < 0.01$; 95% CI: 1.94,7.57), but not for the all-gender-toilet variable (Model 4: $\beta = 0.24$; $p > 0.05$; 95% CI: −2.16,2.65). The pattern of results is easier to interpret through visual inspection of the marginal effects presented in Figure 1. The graphs show that access to toilets of choice and availability of all-gender toilets positively influence employee wellbeing for both binary and non-binary trans respondents. However, the magnitude of the dose-response relationship for access to toilets of choice is larger for binary than non-binary trans respondents. These results may suggest that, for binary trans people, being allowed to access toilets of choice more strongly signifies that their gender identities are validated. Conversely, it is possible that binary trans people who are forced to use bathrooms that do not align with their gender identity—and

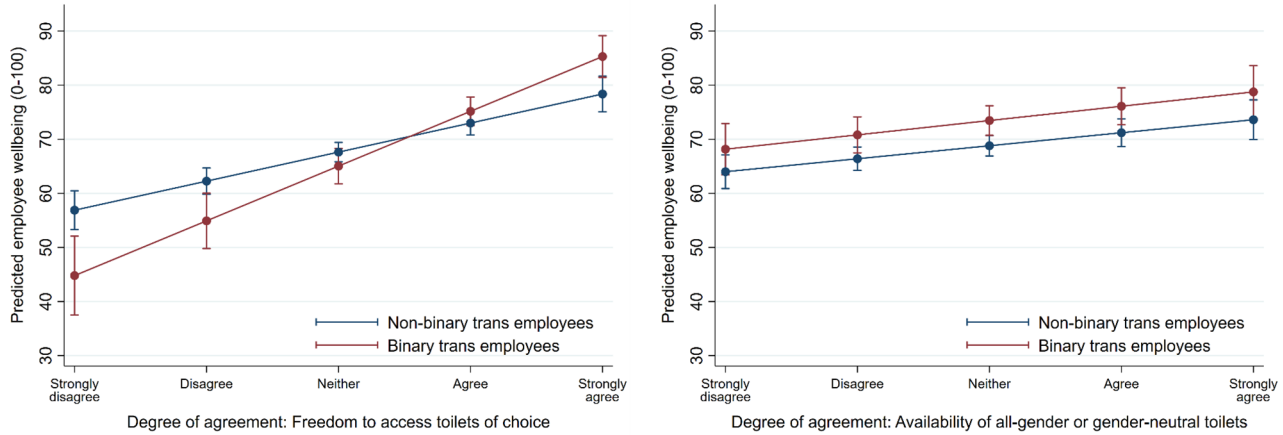

Figure 1. Predicted employee-wellbeing index score, by access to toilets of choice (left panel) or availability of all-gender toilets (right panel) and gender experience. *Notes*: 2024 Australian Workplace Equality Index Employee Survey. Marginal effects holding the model covariates at their actual values and integrating over the random effects. Results from random-intercept regression models shown in Model 3 within Table 1 (left panel) and Model 4 within Table 1 (right panel). Whiskers denote 95% confidence intervals.

Table 2. Coefficients (95% confidence intervals) from random-intercept multilevel regression models of different dimensions of TGD employee wellbeing (range: 1–5), abridged results.

	Dimension of employee wellbeing					
Explanatory variables	Mental wellbeing	Safety and inclusion	Authenticity	Productivity	Engagement	Belonging
Panel A						
Freedom to use toilets of choice	0.26** (0.21,0.31)	0.25** (0.19,0.30)	0.34** (0.28,0.40)	0.28** (0.23,0.34)	0.19** (0.14,0.24)	0.25** (0.20,0.30)
Control variables[a]	Yes	Yes	Yes	Yes	Yes	Yes
N (observations)	1090	1090	1090	1090	1090	1089
N (organizations)	146	146	146	146	146	146
R^2 (overall)	0.172	0.142	0.196	0.153	0.118	0.149
Panel B						
Availability of all-gender toilets	0.11** (0.07,0.15)	0.12** (0.07,0.17)	0.17** (0.11,0.22)	0.14** (0.09,0.19)	0.09** (0.04,0.13)	0.11** (0.06,0.16)
Control variables[a]	Yes	Yes	Yes	Yes	Yes	Yes
N (observations)	1090	1090	1090	1090	1090	1089
N (organizations)	146	146	146	146	146	146
R^2 (overall)	0.104	0.101	0.124	0.099	0.085	0.097

Notes: 2024 Australian Workplace Equality Index Employee Survey. Unstandardized coefficients and 95% confidence intervals from random-intercept regression models. Statistical significance: *$p<0.05$, **$p<0.01$.

[a]Control variables include respondents' gender experience, sex assigned at birth, age group, ethnic minority, indigenous self-identification, disability, neurodiversity, religious identification, place of residence, job level, job tenure, contract type, and employer sector, size, and industry.

thus, in many cases, gender expression—may be disproportionately exposed to hostility and abuse.

A second set of additional analyses compared the impact of inclusivity in public-toilet options for TGD people on different domains of employee wellbeing (in their original 1 to 5 metric). The results, presented in Table 2, indicate that the positive effects stemming from being able to access toilets of choice are apparent across wellbeing domains, including—in order of effect magnitude—authenticity ($\beta=0.34$; $p<0.01$; 95% CI: 0.28,0.40), productivity ($\beta=0.28$; $p<0.01$; 95% CI: 0.23,0.34), mental wellbeing ($\beta=0.26$; $p<0.01$; 95% CI: 0.21,0.31), safety and inclusion ($\beta=0.25$; $p<0.01$; 95% CI: 0.19,0.30), belonging ($\beta=0.25$; $p<0.01$; 95% CI: 0.20,0.30) and engagement ($\beta=0.19$; $p<0.01$; 95% CI: 0.14,0.24). Likewise, the wellbeing premium associated with having access to all-gender toilets was apparent across all items, being most pronounced for authenticity ($\beta=0.17$; $p<0.01$; 95% CI: 0.11,0.22), productivity ($\beta=0.14$; $p<0.01$; 95% CI: 0.09,0.19), and safety and inclusion ($\beta=0.12$; $p<0.01$; 95% CI: 0.07,0.17).

Discussion

In the midst of public debate and legislative reconsideration (Hassan, 2023; Horne et al., 2022; Jones, 2024; Katy & Xavier, 2024), public-toilet access for

TGD populations has become a heated and contested issue. Within this context, understanding its health implications is paramount. Using a unique, high-quality Australian survey and multilevel regression models, this study contributed to building a much-needed evidence base. Specifically, our analyses offered first-time evidence of positive relationships between inclusive-toilet options at work and TGD employee wellbeing.

Discussion of key findings

Key findings indicated that TGD employees who are able to use toilets of choice and who have access to all-gender facilities exhibit significantly higher levels of workplace wellbeing. The magnitude of these associations was sizeable, particularly for the toilet-of-choice variable and for binary trans respondents. Our results are thus consistent with minority-stress theory (Frost & Meyer, 2023), suggesting that—for TGD people—inclusive toilets can reduce day-to-day stressors, reinforce self-acceptance and authenticity, and mitigate harassment. These findings also complement and expand an emerging body of work unveiling positive associations between safe and unrestricted access to public toilets and the health and wellbeing of TGD individuals. Previous studies—focusing largely on youth samples and educational settings—had documented inverse relationships between inclusive access to public toilets and anxiety and depressive symptoms, self-harm and suicidality among TGD people (DeChants et al., 2024; Lee et al., 2021; Price-Feeney et al., 2021; Wang et al., 2024; Weinhardt et al., 2017).

Our results expand the evidence base by revealing comparable associations within another important domain of social and economic life: the workplace. Importantly, the analyses also revealed that the positive employee-wellbeing premium stemming from inclusive access to workplace toilets was not restricted to specific gender-diversity groups or domains of employee wellbeing. Rather, we observed relatively uniform benefits on both binary trans and non-binary trans employees, and across domains of employee wellbeing. This pattern of results underscores the value of investments in inclusive-toilet options as a means to improve wellbeing among TGD populations in a global rather than localized manner. Nevertheless, the results revealed comparatively larger estimated effects on authenticity, productivity, and safety—suggesting that these domains disproportionately drive the observed increments in overall TGD employee wellbeing (Bauer et al., 2009; DeChants et al., 2024; Price-Feeney et al., 2021; Wang et al., 2024).

Study limitations and avenues for further research

Despite the novel nature of the present study and the timeliness of its findings, limitations exist. These limitations point to avenues for refinement and rescoping in future research. Firstly, the AWEI Employee Survey relies on a non-probability survey design, which means that the reported inferential statistics must be interpreted with caution. This sampling approach is desirable to attract greater numbers of LGBTQ+ respondents and remains common practice in studies focusing on sexual and gender minorities (DeChants et al., 2024; Eisenberg et al., 2021; Lee et al., 2021; Perales et al., 2022; Price-Feeney et al., 2021; Seelman, 2016; Weinhardt et al., 2017). However, nonrandom survey participation of employers and/or employees with certain characteristics may skew some of the reported results. For example, if the organizations represented within the survey are positively selected on the basis of their commitment of LGBTQ+ diversity and inclusion, our analyses might underestimate the wellbeing benefits of inclusive-toilet options (Perales, 2022; Perales et al., 2022).

Secondly, our multivariable models are adjusted for an encompassing set of individual- and organization-level covariates, and account for unobserved organization-level heterogeneity through the inclusion of employer-specific random intercepts. However, the cross-sectional nature of the data and the possibility of omitted-variable bias, sample selection, and reverse causality (e.g. employers offering inclusive-toilet options being more likely to attract or retain TGD employees with greater wellbeing) mean that our results are to be taken as associational rather than causal. Third, our analyses are not designed to elucidate the specific mechanisms linking inclusive public-toilet access to TGD

wellbeing (e.g. lower victimization levels, ability to fulfill bodily functions, or the symbolic power of inclusive workplace features). Altogether, these study limitations call for further studies that (a) leverage probability samples, (b) deploy longitudinal data and causal methods, and (c) further investigate the underlying mechanisms.

Implications for policy and practice

Notwithstanding the need for additional research in this space, our findings bear important implications for policy and practice, and hold the potential to inform ongoing public debate. Critically, the results reported here bolster arguments in favor of intensifying legislative and institutional efforts to widen public-toilet options for TGD people as a means to fostering their social inclusion and wellbeing levels. Based on the evidence offered here, relevant policy levels should include national-, state- and employer-level provisions that facilitate public-toilet use based on individuals' gender identity (rather than sex assigned at birth), as well as the systematic revision of building codes to foster the design and implementation of all-gender (or gender-neutral) public restrooms (Gillig et al., 2024; Huff et al., 2023). While our results call for optimism in the potential for these interventions to increase the wellbeing of TGD employees, barriers to implementation must be appropriately addressed—chiefly, stigmatizing and exclusionary peer attitudes toward gender diverse individuals and their use of public spaces (Gillig et al., 2024; Lewis et al., 2024). In this regard, organizational-level diversity training programs and awareness campaigns, as well as suitable change-management strategies, are paramount to preempt any backslash stemming from policy changes (Boskey et al., 2018; Perales, 2022; Perales et al., 2022).

Conclusion

On December 18, 2023, the WHO announced it had begun the development of a guideline on the health of TGD people (WHO, 2023), noting the urgent need to close entrenched health disparities between cisgender and TGD populations (Goldsen et al., 2022; Lefevor et al., 2019). Our research underscores the need for appropriate access to public-toilet facilities to be considered within these efforts, alongside other significant issues affecting TGD populations—such as healthcare access (Watkinson et al., 2024) and inclusive-language use (Perales et al., 2022). Indeed, the WHO's failure to incorporate TGD issues within their most authoritative publication on access to sanitation (UNICEF & WHO, 2020) is an alarming omission. With recent geo-political developments threatening to strip away hard-earned TGD rights, it is now more important than ever to demonstrate the significant health-and-wellbeing benefits stemming from gender-inclusive policies and practices.

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Author contributions

FP conceptualized the study, analyzed the data, and drafted the initial iteration of the manuscript. MG reviewed the literature and critically edited the manuscript. NE provided practical and policy insights and critically edited the manuscript.

Ethical approval

This study received ethical clearance from The University of Queensland (2022/HE000069). The 2024 AWEI Employee Survey received ethics clearance from ACON Health ethics board.

Consent form

All survey respondents provided informed consent to participate in the survey.

Disclosure statement

Francisco Perales and Mai Giang report no conflicts of interest. Nicki Elkin would like to disclose working at ACON Health (a not-for-profit organization committed to diversity and inclusion in the workplace), which collected the Australian Workplace Equality Index Survey data used in this study. This role, however, has no bearing on the objectiveness of their contributions toward the present study.

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Data availability statement

The data used within this article belong to ACON Health (https://www.acon.org.au/), from which access can be requested. Provision of access is at the discretion of ACON Health. All syntax code required to replicate the analysis can be obtained from the corresponding author upon request.

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