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Frequency and mental health consequences of microaggressions experienced in the day-to-day lives of transgender and gender diverse people

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ABSTRACT

Introduction: Increasingly, it is apparent that in order to understand mental health and well-being, it is necessary to examine the ebb and flow of experiences and emotions across people's day-to-day lives. For transgender and gender diverse (TGD) people, daily life is sometimes punctured by experiences of minority stress (e.g. in the form of microaggressions).

Method: The current daily diary study investigated the frequency and types of microaggressions experienced by TGD people as well as their concurrent and prospective associations with mental health and well-being. Daily surveys measuring microaggressions, gender dysphoria, depressive and anxious symptoms, and self-esteem over the last 24 h were completed by TGD participants ($N=39$) across 10 consecutive days (total of 351 diary entries).

Results: Seventy-four percent of participants experienced some form of microaggression within the 10-day study period, reporting an average of 1 microaggression approximately every other day. Microaggressions were associated with greater feelings of gender dysphoria, depressive and anxious symptoms, and lower self-esteem at the between-person level, while evidence for within-person effects was mixed (with some evidence for significant associations with gender dysphoria and self-esteem for specific microaggression domains). No evidence for prospective associations between microaggressions and mental health were found in the current study.

Discussion: Given the frequency of experiences of microaggressions in TGD people's daily lives, particularly misuse of pronouns, it is critical that healthcare providers are aware of potential effects on mental health and well-being.

KEYWORDS

Dysphoria; mental health; microaggressions; minority stress; transgender

To understand the complexity of mental health and well-being, researchers are increasingly acknowledging that it is vital to examine life as it is lived—that is, to investigate the ebb and flow of experiences and emotions across people's daily lives (Almeida, 2005; Shiffman et al., 2008; Trull & Ebner-Priemer, 2020). For transgender and gender diverse (TGD) people, life is sometimes punctured by experiences of stigma, discrimination, and invalidation (i.e. minority stress; Hendricks & Testa, 2012; Meyer, 2003). In the context of TGD people's daily lives, these experiences may be most likely to take the form of microaggressions, subtle forms of discrimination regularly encountered in daily life that manifest as interpersonal or structural slights (Sue et al.,

2007; Williams, 2020). Prior research has documented the consequences of microaggressions for the mental health and well-being of members of other stigmatized groups, particularly racial and sexual minorities (Nadal, 2019b; Sue, 2010; Wong et al., 2014). However, there is still little ecologically valid research examining the occurrence and consequences of microaggressions in the daily lives of TGD people. Therefore, the present study utilized a daily diary paradigm (Nezlek, 2020) to examine the frequency and types of microaggressions experienced by TGD people in their daily lives as well as their influence on mental health and well-being in the form of gender dysphoria, depressive and anxious symptoms, and self-esteem.

Microaggressions and mental health

Originally conceptualized by Pierce (1970), microaggressions are brief and routine insults, whether intentional or unintentional, that convey denigrating messages toward members of devalued groups. In contrast to ‘macroaggressions,’ which are overt acts of discrimination (e.g. hate crimes), microaggressions are commonplace, small, and often ambiguous (Pierce et al., 1978). As explicit displays of bigotry are socially unacceptable across many contexts, discrimination can proliferate by taking a more covert form that is relatively difficult for targets to detect and substantiate (Barreto & Ellemers, 2015; Sue et al., 2007). These exchanges are thought to be automatic and pervasive enough in daily interactions to be frequently dismissed as innocuous or even well-intentioned (Sue, 2010). For example, compliments toward a person with a migration background about their mastery over the native language may be positively intended but convey hurtful assumptions and condescension. As such, microaggressions may be particularly harmful for mental health and well-being as they highlight and devalue one’s identity across everyday contexts in ways that are relatively ambiguous and potentially difficult to protest (e.g. Solorzano et al., 2000; Williams, 2020).

The empirical literature on microaggressions and mental health has grown steadily over the past two decades (Costa et al., 2023). Microaggressions have primarily been studied in terms of the experiences of racial minorities, although more recent work has begun to investigate the experiences of sexual minorities as well (Nadal, 2019b). For example, one recent meta-analysis (Lui & Quezada, 2019) found 49 studies focused on associations between microaggressions and psychological well-being among racial minorities, but only 15 focused on this topic among lesbian, gay, bisexual, transgender, and queer (LGBTQ) people. In this meta-analysis, small but statistically significant average associations between microaggressions and impaired psychological well-being were found, with the largest associations evident for internalizing problems (e.g. depressive and anxious symptoms). These associations did not appear to differ substantially between microaggressions based on race versus LGBTQ identity. These findings were echoed

in another more recent meta-analysis (Costa et al., 2023), confirming an inverse association between microaggressions and psychological well-being that did not appear to differ by group identity (although microaggressions based on intersectional marginalized identities did appear to be most damaging). Despite growing research on this topic, little work has as yet been conducted specifically with samples of TGD people. In the rare examples when TGD participants are included in such studies, they are generally grouped together with sexual minorities under the broader LGBTQ umbrella, which does not clearly specify or encompass the unique experiences of TGD people (Lui & Quezada, 2019).

Microaggressions in the daily lives of TGD people

TGD people face disproportionate exposure to a range of discriminatory events throughout their lives, even compared to cisgender sexual minority peers (Grant et al., 2011). The majority of TGD people frequently experience overt acts of transphobia (e.g. victimization, harassment) as well as more subtle forms of prejudice (e.g. misgendering, identity non-affirmation) from both strangers and close others (Galupo et al., 2014). Nadal et al. (2012, 2014) were the first to focus specifically on microaggressions in TGD people. Using qualitative methods, they identified and categorized different types of unique TGD microaggressions (e.g. denial of the existence of transphobia) that past conceptual work proposed were important for shaping negative outcomes among this population (Smith et al., 2012). These data informed the development of a novel measure of TGD microaggressions (Gender Identity Microaggressions Scale; GIMS), which features five domains: Denial of gender identity, misuse of pronouns, invasion of bodily privacy, behavioral discomfort, and denial of societal transphobia (Nadal, 2019a). The domains of the GIMS also align with evidence from qualitative research on TGD microaggressions (e.g. Puckett et al., 2023a).

To date, very few studies have utilized the GIMS to understand how different types of microaggressions affect mental health and well-being for TGD people. In one of the few examples, the

GIMS was shown to be associated with poorer mental health in a sample of 292 binary transgender men and women (Casalheira & Choi, 2023). Studies using other measures of microaggressions among TGD samples have also found support for associations with greater negative affect, depressive symptoms, and suicidality (e.g. Austin et al., 2022; Croteau & Morrison, 2023; Parr & Howe, 2019). However, an important limitation of this work is that it has all been cross-sectional, meaning that it does not capture the everyday context of microaggressions in an ecologically valid way. This is relevant for a number of reasons. First, theory on microaggressions emphasizes the everyday nature of these experiences, which are best captured during life as it is lived rather than in a one-off study, sometimes conducted in a university lab (Ong & Burrow, 2017). Second, because microaggressions are subtle and ambiguous slights, they may be especially vulnerable to recall bias over longer periods of time (Ottenstein & Lischetzke, 2020). Third, repeated measures studies, such as daily diaries, allow us to estimate both within- and between-person effects to disentangle the influence of more stable between-person characteristics (i.e. propensity to experience microaggressions, which may be affected by, for example, the ability to “pass” in others’ eyes as cisgender) from fluctuating within-person exposures to daily microaggressions (Curran & Bauer, 2011). For these reasons, an ecological momentary assessment (EMA) approach (e.g. in the form of a daily diary study; Nezlek, 2020), is particularly appropriate for examining microaggressions among TGD people.

While not focused specifically on microaggressions, a few daily diary studies have examined the effects of other forms of minority stress (e.g. rejection, discrimination) on mental health and well-being among TGD people. For example, one recent study (Puckett et al., 2023b) with a sample of 167 TGD people found that participants reported experiencing marginalization (based on an inventory constructed for the study) on approximately 25% of days. At the between-person level, greater average marginalization over the study period of 56 days was related to greater mental health problems, including negative affect and anxious symptoms. Furthermore, at the

within-person level, there were significant concurrent (i.e. same-day) as well as prospective (i.e. next-day) associations between marginalization and mental health problems (although marginalization was not associated with positive affect in any of these models). Similarly, in this study, gender non-affirmation (another form of minority stress) predicted decrements in positive affect among the sample. Another recent study with 38 TGD people (Botelho et al., 2023) found that minority stress, in the form of discrimination and rejection, was associated with greater same-, but not next-day, capability for suicide over the 30-day study period. However, this study did not disentangle between- and within-person effects. Furthermore, participants reported experiencing discrimination and rejection on only 16% of days, which is even lower than what was found in the study by Puckett et al. (2023b). Although these daily diary studies investigated experiences of minority stress, some part of which may be potentially classified as microaggressions, they did not explicitly focus on the concept of microaggressions for TGD people. Because of this, it is unclear if microaggressions differ from other more overt and substantial forms of minority stress, both in terms of their frequency as well as mental health consequences.

The current study

This novel 10-day daily diary study utilized the GIMS (Nadal, 2019a) to explore how microaggressions manifest in the day-to-day lives of TGD people and relate to different aspects of their mental health and well-being. In this study, we aimed to (1) measure the frequency with which different forms of microaggressions were experienced by TGD individuals over the course 10 days and (2) examine concurrent (same-day) and prospective (next-day) associations between microaggressions and mental health and well-being outcomes, including gender dysphoria, anxious and depressive symptoms, and self-esteem. We also aimed to explore unique associations between the various types of microaggressions (categorized into five domains by Nadal, 2019a) and each outcome. Furthermore, we sought to disentangle between- from within-person effects in all our statistical models.

Based on findings from past research (e.g. Cascalheira & Choi, 2023), we hypothesized that at the between-person level, those who tended to report a greater number of microaggressions across the diary period would also tend to report greater gender dysphoria, more depressive and anxious symptoms, and lower self-esteem. At the within-person level, we hypothesized that on days in which TGD participants experienced greater microaggressions, they would also report greater gender dysphoria, depressive and anxious symptoms, and lower self-esteem. Because microaggressions are relatively subtle events, we expected mental health consequences to be apparent in concurrent but not necessarily in prospective analyses.

Method

Participants

The study was conducted in the United Kingdom. Eligible participants over the age of 18 who self-identified as TGD were recruited *via* snowball sampling. Recruitment materials were distributed online and in person using posters and by word of mouth. Financial incentives were also advertised to motivate participants to enroll and comply with each stage of data collection. Participants were compensated £10 for attending an initial online orientation session. Participants received £2 per completed daily diary survey and earned an additional £10 for completing all 10 days. For completing all phases of the study, participants received a total of £40 in remuneration. Compensation was provided at the end of the 10 days following the return of participant diary data.

We included in all analyses 39 participants who completed at least 3 daily diaries (which was all participants in the study). Since the orientation session attendance was encouraged but not strictly mandatory, only 38 of the 39 participants completed the demographics survey in the orientation session ($M_{\text{age}} = 24.71$, $SD_{\text{age}} = 9.33$, age range: 18–53). The current sample was primarily composed of white, non-binary university students from the Southwest of the United Kingdom. Measures for education, employment/student

status, and ethnicity were adopted from the 2011 UK census (Office for National Statistics, 2011). A full summary of results for the demographic variables are presented in Table 1.

Design, materials, and procedure

This study received ethical approval from the University of Exeter Department of Psychology Ethics Committee. Data are not openly available due to risk of identification of individuals from a small population, but code is available upon request. PIEL Survey app (Blue Jay Ventures, 2021) was used to collect the data. Participants registered interest in participating by emailing the research team and were assigned ID codes to anonymize their future responses. They were invited *via* an email link to attend an online orientation session hosted by the research team over Zoom, which consisted of a study overview and a background survey to collect demographic information. Participants were given the option to attend these sessions individually or in a group depending on their preference. Participants were also informed that the study intended to investigate the daily experiences of TGD people. Researchers programmed the app to send an automatic notification to participants' smartphones once every evening at 19:00 for 10 consecutive days, allowing them until midnight to complete the survey. The app prompted them to complete a daily survey about their mental health and well-being as well as social experiences (including encounters with microaggressions) over the last 24h. The study was conducted between January and April 2022, during which there were no specific major impactful events related to TGD identities in media or politics in the UK (aside from ongoing high-level polarization).

Daily measures

For daily diary studies, because participants are asked to complete many different measures repeatedly over the course of many days, which may lead to cognitive burden and fatigue (which can reduce compliance), it is necessary to opt for brief measures (Nezlek, 2020). Therefore, in the daily diaries, during which participants were

Table 1. Sample demographics.

Variable	Number	%
Gender Identity		
Binary Identity	10	26
Transgender woman	6	16
Transgender man	4	11
Non-binary Identity	28	74
Non-binary	20	53
Agender	3	8
Other non-binary	5	13
Ethnicity		
East Asian	1	3
Mixed Race	3	8
White	34	90
Education		
No formal qualifications	0	0
Level 1 (1-4 GCSEs, Scottish Standard Grade or equivalent qualifications)	0	0
Level 2 (5+ GCSEs, Scottish Higher, Scottish Advanced Higher or equivalent qualifications)	3	8
Apprenticeship (England, Wales and Northern Ireland only)	0	0
Level 3 (2 or more A-levels, IB, HNC, HND, SVQ level 4 or equivalent qualifications)	20	53
Level 4 or above (a degree, any professional qualifications or other equivalent higher education qualifications)	13	34
Other qualifications (Other vocational/work related qualifications and non-UK/foreign qualifications)	2	5
Student/Employment Status		
University student	21	55
Full-time employment	5	13
Part-time employment	2	5
Not in employment	6	16
Other	4	11
On Gender-Affirming Hormones		
Yes	13	34
No	25	66
Source of Hormones		
National Health Service (NHS)/ other public healthcare provider	7	54
Private healthcare provider	4	31
Non-prescription (e.g. friends)	1	8
Combination of sources	1	8
Undergone Any Gender-Affirming Medical Intervention		
Yes	7	34
No	31	66
Gender Identity Clinic Patient Status		
On a waiting list	10	27
Currently under GIC care	5	13
Completed or discharged from GIC care	2	5
Never involved in GIC care	21	55

Note. $N=39$ (one participant did not complete the demographic survey, thus $n=38$).

asked to complete a relatively lengthy inventory of microaggressions (the GIMS), for all other constructs we selected two items each from previously validated scales with strong psychometric properties or, in one instance (gender dysphoria), created a new single item with high face validity.

Microaggressions. Daily microaggressions were assessed in the daily surveys using a checklist of 13 items from the Gender Identity Microaggressions Scale (GIMS; Nadal, 2019a), each describing a transphobic microaggression. Participants were asked to select yes or no for each microaggression in the checklist to indicate if it had occurred over the past 24h. A sum score for each day was produced to indicate the total number of the 13

different microaggressions that were experienced each day. Items 10 and 11 from the original GIMS, which query participants about a similar experience, were merged into one item in this study for brevity, forming a total of 13 items compared to 14 in the original GIMS. This new item was, “Someone avoided sitting next to me in a public area because I am transgender/gender diverse.”

For analyses focusing on microaggression domains, the five original domains from the GIMS as specified by Nadal (2019a) were calculated *via* item sums from the overall checklist. Denial of gender identity was composed of 4 items (e.g. “Someone told me that my transgender/gender diverse identity was just a phase”), misuse of pronouns was composed of 2 items

(e.g. “Strangers and acquaintances have called me by the wrong personal pronouns”), invasion of bodily privacy was composed of 3 items (e.g. “Someone wanted to engage in a sexual act with me only because they view transgender/gender diverse people as exotic”), behavioral discomfort was composed of 2 items (e.g. “Someone avoided sitting next to me in a public area because I am transgender/gender diverse”), and denial of societal transphobia was composed of 2 items (e.g. “I was told that I complain too much about societal discrimination against transgender/gender diverse people”).

Gender dysphoria. Participants indicated to what extent they agreed with the statement, “Today, I felt that my overall sense of gender dysphoria was high,” on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree).

Depressive symptoms. Depressive symptoms were assessed using two items from the Brief Symptom Inventory-18 (BSI-18; Derogatis, 2001): “Feeling blue” and “Feelings of worthlessness.” Participants were asked to indicate how much they felt this way over the last 24h on a 5-point scale ranging from 1 (not at all) to 5 (extremely). The items were highly correlated as expected, $r = .76$, $p < .001$, thus they were averaged to produce a depressive symptoms score for each day.

Anxious symptoms. Anxious symptoms were assessed using two items from the BSI-18 (Derogatis, 2001): “Spells of terror or panic” and “Feeling tense or keyed up.” Participants were asked to indicate how much they felt this way over the last 24h on a 5-point scale ranging from 1 (not at all) to 5 (extremely). The items were highly correlated as expected, $r = .65$, $p < .001$, thus they were averaged to produce an anxious symptoms score for each day.

Self-esteem. Daily self-esteem was measured using two items adapted from the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965) in order to refer to the present day: “On the whole, I was satisfied with myself today” and “Today, I wish I could have had more respect for myself” (reverse coded). Participants indicated to what extent they agreed

with these statements on a 7-point scale ranging from 1 (strongly disagree) to 7 (strongly agree). The items were highly correlated as expected, $r = .54$, $p < .001$, thus they were averaged to produce a self-esteem score for each day.

Analytic approach

Descriptive statistics were used to characterize the sample and their experiences, including the occurrence and frequency of microaggressions throughout the study period. To examine associations between microaggressions and mental health and well-being, multilevel models (MLM) were used to analyze the daily data (Level 1) nested within participants (Level 2) in RStudio (Version 4.3) using the lme4 package (Bates et al., 2015). We tested both concurrent and prospective effects of microaggressions on all mental health and well-being outcomes. Concurrent effects were estimated in models entering same-day microaggressions as predictors and mental health and well-being as outcomes. Prospective effects were estimated by computing lagged predictors, that is microaggressions on the previous day ($t - 1$) predicting mental health and well-being outcomes while also adjusting for previous day mental health and well-being. Finally, we also computed models including the separate microaggression domains simultaneously in the same models as predictors to examine their unique contributions to mental health and well-being. Because these analyses of domains were exploratory and many domains already had limited numbers of events experienced across the diary period, we did not test for prospective associations in these models. In all models, we estimated both within- and between-person effects to disentangle the influence of stable between-person characteristics from fluctuating within-person exposures to daily microaggressions (Curran & Bauer, 2011). All models were also adjusted for the potential confounders, age, binary vs. nonbinary gender, and current gender-affirming hormone usage. No participants with at least three diary entries were excluded from the analyses regardless of number of missing or incomplete diary entries, as MLM operates *via* maximum likelihood estimation and therefore provides unbiased estimates even with

missing data. Sample size was determined by resource constraints (Lakens, 2022), but a sensitivity power analysis based on Monte Carlo simulation results presented by Arend and Schäfer (2019) suggested that our study was adequately powered ($1-\beta > .80$) to detect standardized fixed effects of .20 or greater at the within-person level and .49 or greater at the between-person level.

Results

Descriptive statistics

Daily diary entries

On average, participants completed 9 diary entries ($Mdn=9$, $SD=1.24$, range: 5–10). The total number of completed diary entries was 351.

Frequency of microaggressions

Participants reported a total number of 246 microaggressions during the study period. Approximately 74% of participants ($n=29$) experienced at least 1 microaggression within the 10-day study period. On average, participants reported experiencing microaggressions on 38% of study days, experiencing one event approximately every other day on average ($M=1.86$, $SD=1.03$). Misuse of pronouns was the most commonly experienced type of microaggression with a total of 167 incidents, occurring on 34% of study days and at least once for 72% of participants in our sample. See Table 2 for a summary of the rates of microaggressions (stratified by domains) experienced across all TGD participants during the study period.

Table 2. Prevalence of TGD participants' daily experiences of microaggressions.

	Number of incidents (proportion of total)	Total % of days reported on	Proportion of participants who reported at least once
Microaggressions	246	38%	74%
Denial of gender identity	16 (7%)	4%	23%
Misuse of pronouns	167 (68%)	34%	72%
Invasion of bodily privacy	33 (13%)	7%	28%
Behavioral discomfort	4 (2%)	1%	5%
Denial of societal transphobia	26 (11%)	5%	26%

Note. $N=39$. Percentages do not total to 100% due to rounding. The table shows the prevalence of microaggression incidents reported over the 10-day study period stratified by domains.

Multilevel models

In unconditional models (i.e. with no predictors), intraclass correlation coefficients (ICCs) were .54 for gender dysphoria, .56 for depressive symptoms, .62 for anxious symptoms, and .59 for self-esteem. This indicates that between approximately 50-60% of the variance in these daily outcomes was attributable to between-person differences.

Between-person associations of microaggressions and mental health

For each of the outcome variables, there were statistically significant between-person associations with microaggressions after adjusting for individual-level covariates (see Table 3). Specifically, TGD people who tended to report a greater number of microaggressions across the diary period also tended to report greater gender dysphoria, more depressive and anxious symptoms, and lower self-esteem. These effects were robust to adjustment for age, binary vs. nonbinary gender, and current gender-affirming hormone usage.

Within-person concurrent and prospective associations of microaggressions and mental health

Within-person associations with microaggressions were not statistically significant for any of the outcome variables measured concurrently (i.e. on the same day; see Table 3). Furthermore, none of the prospective within-person associations between microaggressions and mental health and well-being outcomes were statistically significant in separate models (see Table 4).

Table 3. Concurrent associations between daily microaggressions and mental health and well-being.

	<i>b</i>	<i>SE</i>	<i>p</i>	95% <i>CI</i>
Gender dysphoria				
Between-person effect	.873	.301	.007	.310, 1.437
Within-person effect	.125	.074	.093	−0.021, .271
Depressive symptoms				
Between-person effect	.600	.231	.014	.167, 1.033
Within-person effect	.055	.053	.295	−0.048, .159
Anxious symptoms				
Between-person effect	.544	.225	.021	.123, .965
Within-person effect	.063	.047	.179	−0.029, .155
Self-esteem				
Between-person effect	−0.624	.292	.040	−1.172, −0.076
Within-person effect	−0.117	.064	.067	−0.241, .008

Note. All models adjusted for nonbinary vs. binary gender identity, current hormone usage (1=yes, 0=no), and age.

Between- and within-person associations of microaggression domains and mental health

Results of exploratory analyses focusing on domains of microaggressions revealed diverging associations with the various mental health and well-being outcomes, with differences for between- and within-person effects (see Table 5). Specifically, at the between-person level, denial of gender identity was significantly associated with greater depressive symptoms while denial of societal transphobia was significantly associated with greater anxious symptoms. That is, people who tended to report a greater number of microaggressions related to denial of gender identity across the diary period also tended to report greater depressive symptoms, while people who tended to report a greater number of microaggressions related to denial of societal transphobia across the diary period also tended to report greater anxious symptoms.

Table 4. Prospective associations between daily microaggressions and mental health and well-being.

	<i>b</i>	<i>SE</i>	<i>p</i>	95% <i>CI</i>
Gender dysphoria				
Between-person effect	.865	.296	.007	.310, 1.404
Within-person lagged effect	.032	.081	.692	−0.129, .190
Depressive symptoms				
Between-person effect	.504	.192	.015	.145, .851
Within-person lagged effect	.060	.058	.301	−0.056, .173
Anxious symptoms				
Between-person effect	.465	.187	.020	.116, .805
Within-person lagged effect	.023	.049	.636	−0.074, .117
Self-esteem				
Between-person effect	−0.467	.255	.079	−0.931, .007
Within-person lagged effect	−0.007	.070	.924	−0.142, .135

Note. All models adjusted for nonbinary vs. binary gender identity, current hormone usage (1=yes, 0=no), age, and lagged effect of outcome (i.e. effect of previous day's outcome value on current outcome).

Table 5. Concurrent associations between microaggression domains and mental health and well-being.

	Gender dysphoria	Depressive symptoms	Anxious symptoms	Self-esteem
	<i>b</i> [95% <i>CI</i>]	<i>b</i> [95% <i>CI</i>]	<i>b</i> [95% <i>CI</i>]	<i>b</i> [95% <i>CI</i>]
Denial of gender identity				
Between-person effect	2.136 [−2.002, 6.268]	3.805* [.960, 6.649]	3.022 [.421, 5.625]	−0.618 [−4.801, 3.567]
Within-person effect	.048 [−0.502, .597]	.204 [−0.193, .602]	.131 [−0.220, .482]	−0.510* [−0.986, −0.033]
Misuse of pronouns				
Between-person effect	.249 [−0.631, 1.132]	.049 [−0.555, .654]	−0.196 [−0.748, .358]	−0.396 [−1.286, .493]
Within-person effect	.328** [.088, .570]	.061 [−0.112, .234]	−0.036 [−0.189, .117]	−0.108 [−0.316, .099]
Invasion of bodily privacy				
Between-person effect	1.482 [−0.512, 3.473]	−0.067 [−1.437, 1.304]	.593 [−0.661, 1.848]	−0.561 [−2.580, 1.460]
Within-person effect	−0.359 [−0.825, .103]	−0.075 [−0.408, −0.256]	.121 [−0.173, .414]	.008 [−0.390, .406]
Behavioral distancing				
Between-person effect	.278 [−7.532, 8.103]	−1.074 [−6.436, 4.289]	−2.974 [−7.880, 1.933]	−1.239 [−9.136, 6.657]
Within-person effect	−0.014 [−1.293, 1.259]	−0.416 [−1.332, .502]	.119 [−0.691, .929]	.318 [−0.781, 1.417]
Denial of societal transphobia				
Between-person effect	2.246 [−0.587, 5.084]	1.920 [−0.027, 3.865]	2.631* [.849, 4.410]	−1.707 [−4.571, 1.157]
Within-person effect	.230 [−0.198, .663]	.135 [−0.157, .427]	.184 [−0.074, .441]	−0.073 [−0.423, .276]

Note. All models adjusted for nonbinary vs. binary gender identity, current hormone usage (1=yes, 0=no), and age.
p* < .05, *p* < .01.

At the within-person level, misuse of pronouns was significantly associated with greater same-day gender dysphoria while denial of gender identity was significantly associated with same-day lower self-esteem. That is, on days in which people experienced a greater number of microaggressions related to misuse of pronouns they also reported greater gender dysphoria, while on days in which people experienced a greater number of microaggressions related to denial of gender identity they also reported lower self-esteem.

Discussion

To our knowledge, this is the first daily diary study to investigate how different types of microaggressions manifest in the daily lives of TGD people and their potential influence on mental health and well-being. Our findings extend the relatively small overall body of TGD microaggressions research and point toward associations between microaggressions and impaired mental health and well-being in TGD people, particularly in between-person associations, which mirror findings from past research (e.g. Cascalheira & Choi, 2023). In contrast to other potentially more overt and severe forms of minority stress for TGD people examined in other studies (e.g. rejection, harassment; Botelho et al., 2023; Puckett et al., 2023a), we found that microaggressions do seem to occur frequently in daily life, which is consistent with their conceptualization as everyday insults/slights. In fact, microaggressions appeared to be relatively commonplace in the daily lives of our TGD participants. Around 74%

of TGD participants reported experiencing some form of microaggression during the 10-day study period, with microaggressions occurring approximately once every other day on average in our sample. The most commonly experienced type of microaggression for TGD people in our study was misuse of pronouns, in line with how such experiences are described by TGD people in qualitative research into their daily experiences (e.g. Galupo et al., 2020; Kerr et al., 2022). This was followed by, in descending order of frequency, invasion of bodily privacy, denial of societal transphobia, and denial of gender identity. Experiences of behavioral discomfort were much less commonly reported in our study, although this may have been due, at least in part, to the fact that we decided to merge two items from the GIMS related to this domain in our survey because of their conceptual overlap.

Consistent with past cross-sectional research (e.g. Cascalheira & Choi, 2023), we did confirm that between-person differences in the frequency of microaggression experiences were significantly associated with between-person differences in all measures of mental health and well-being across the study period, with those experiencing more microaggressions also reporting poorer mental health and well-being on average across the 10 days. Although these between-person associations were robust to the inclusion of covariates capturing binary vs. non-binary gender, current hormone usage, and age, we cannot rule out the possibility that other unmeasured confounders at the individual level (e.g. ability to “pass” in others’ eyes as cisgender) are responsible for the between-person associations we observed.

Turning to specific domains of microaggressions, we found evidence that denial of gender identity and denial of societal transphobia were associated with depressive and anxious symptoms respectively. Although exploratory, these associations are interesting in that denial of gender identity calls into question the validity of a core aspect of the self, potentially leading to an ambivalent or negative self-schema, a risk factor for depression (Segal, 1988). On the other hand, denial of societal transphobia highlights a contrast between the safety of the external social world as objectively experienced by TGD people,

which is frequently marked by the threat of stigma (Hendricks & Testa, 2012), and the way in which others describe that same world to TGD people and, perhaps, expect them to behave within it (see Barreto & Ellemers, 2005 for a similar impact of denial of sexism on women’s anxiety). Therefore, denial of societal transphobia may heighten vigilance and anxious emotions related to threatening experiences that are commonplace in TGD lives. In short, the internal vs. external focus of these two types of identity-threatening denial (of identity vs. societal transphobia) may lead to increases in related but distinct negative emotions (depressive vs. anxious).

At the within-person level, there was mixed evidence for associations of microaggressions with gender dysphoria and self-esteem. While these effects were not statistically significant in overall models, we did find evidence for statistically significant within-person effects of specific domains of microaggressions on these two outcomes at the daily level, in exploratory analyses. Specifically, at the within-person level, misuse of pronouns emerged as a significant predictor of daily gender dysphoria. Interestingly, misuse of pronouns was also the most commonly encountered type of microaggression for TGD participants during the study period. Chronic misgendering is a persistent misclassification of one’s gender identity (e.g. *via* the use of incorrect pronouns or name) and is a prominent daily stressor for TGD people (Puckett et al., 2022), including participants in our study. Incorrect usage of pronouns is psychologically disruptive as it reflects a failure to have one’s social identity accurately recognized and affirmed by others (Doyle, 2022; Swann, 1990) and can exacerbate one’s sense of gender incongruence (McLemore, 2015). Consistent with our findings, TGD participants in qualitative studies have reported that common linguistic triggers (e.g. misuse of pronouns) are responsible for increases in their gender dysphoria and general psychological distress in the moment (Galupo et al., 2020; Kerr et al., 2022).

Furthermore, we found that denial of gender identity at the within-person level emerged as a significant predictor of daily self-esteem. Indeed, interpersonal invalidation is one of the most

common minority stressors experienced by TGD people, particularly for those who identify as non-binary (Matsuno et al., 2022), who made up a substantial proportion of our sample. For instance, 63% of non-binary people have had the legitimacy of their gender identities questioned by others, such as having their identities dismissed as being fake or just a phase (James et al., 2016). Gender identity validation and social affirmation are important for the self-esteem of TGD individuals, as they signify acceptance and respect from the people in their lives (Sevelius, 2013; van den Brink et al., 2020). Furthermore, social affirmation by others may protect self-esteem by building self-concept clarity for TGD people (Doyle et al., 2021). This may further relate to effects of microaggressions on depressive symptoms *via* impaired self-esteem or problematic self-schema, pointing toward the pernicious mental health effects of gender identity denial and lack of social affirmation for TGD people.

In this study, we did not find evidence for prospective associations between microaggressions experienced on one day and any of the mental health and well-being outcomes we examined on the subsequent day. While contrary to evidence for prospective effects of other minority stressors for TGD people (e.g. Puckett et al., 2023b), this is not inconsistent with our hypotheses in that microaggressions are explicitly conceptualized as subtle, everyday experiences whose mental health consequences build up over the course of constant repeated exposure across days, months, and years (Sue et al., 2019). Therefore, the effects of any single experience may be relatively fleeting, but their cumulative burden to mental health remains high.

Implications and future directions

The importance of advancing microaggressions research has been demonstrated by numerous academics, particularly in response to critics that have questioned microaggressions as a psychological construct and focus of research. Specifically, critics have argued that microaggressions lack validity, are not reflective of prejudice, and that supporting research is not scientifically robust (Lilienfeld, 2017; Haidt, 2017). They may also claim that microaggressions are not in fact harmful to mental health

and well-being. Instead, they tend to propose a deficit model that attributes these poor outcomes to constructs

such as neuroticism and oversensitivity, which they believe will be worsened with efforts to educate stigmatized groups about microaggressions (Lilienfeld, 2017). These assertions have been heavily disputed using a wealth of empirical evidence, which demonstrates that microaggressions are real, deleterious, borne from prejudice, and demand action in the form of education and intervention (Williams, 2020). The results of our research further confirm the negative consequences of microaggressions in the lives of TGD people, demonstrating not only differences in mental health and well-being for those exposed to greater as opposed to fewer microaggressions on average, but also increases in gender dysphoria and decreases in self-esteem driven by changes in exposure within TGD people from one day to the next.

Although not examined in the present research, the identities of the perpetrators must be considered, as microaggressions perpetrated by close relational partners (e.g. friends, partners) can be more harmful to the mental health and well-being of TGD people than those perpetrated by strangers (Chang & Chung, 2015). Ingroup microaggressions from other LGB and especially TGD people (a form of lateral violence) can further increase the magnitude of the consequences for mental health and well-being (Tran et al., 2023). Future research might also wish to establish how frequent these microaggressions are in specific settings, such as in the workplace and in healthcare. Even without such specification, the finding that the prevalence of microaggressions was considerably high together with evidence that TGD people have particularly frequent encounters with healthcare providers (Hibbert et al., 2018; Carlile, 2020) suggest that our findings have important clinical implications. In particular, healthcare providers need to be conscious that microaggressions are consequential for TGD people and can exacerbate their dysphoria and other mental health problems. Furthermore, this exacerbation of dysphoria paired with aversion to accessing healthcare could potentially lead to other health risks for TGD people (e.g. privately purchasing hormones that are unsafe for use and not professionally monitored; Metastasio et al., 2018).

As TGD patients often experience microaggressions from healthcare providers themselves, our findings can inform cultural competency training programs to raise practitioners' awareness of microaggressions and their own behaviors, creating a more affirmative environment for TGD patients and improving their therapeutic outcomes (Anzani, 2019). Educational efforts can also be extended to other groups (e.g. family, peers) to raise awareness of microaggressions, their consequences, and reduce stigma, ultimately creating allies who can address microaggressions in their social environment and thereby better support TGD people.

Limitations

One limitation of the current study is the sample size obtained. While we were limited by resource constraints and the relatively small population of TGD people in the region from which we were recruiting (the Southwest of the UK, which is amongst the lowest in all of the UK; Office for National Statistics, 2021), our sensitivity power analysis suggested adequate statistical power to detect standardized fixed effects of .20 or greater at the within-person level and .49 or greater at the between-person level. However, within-person effects that were not statistically significant in overall microaggression models (e.g. for self-esteem) had relatively wide confidence intervals that just crossed zero. Furthermore, the fact that certain domains of microaggressions (i.e. misuse of pronouns, denial of gender identity) did have significant effects at the within-person level suggests that further replication of within-person effects in larger samples is warranted.

Also related to the specificities of the sample, our study included predominantly non-binary people, whose experiences of minority stress and microaggressions may differ in some ways from binary transgender people (Croteau & Morrison, 2023). While we were able to adjust for confounding by binary vs. non-binary identity in our models, we could not test for moderation or stratify effects by group due to sample size limitations. Also, we chose to use the GIMS for this study, which captures general forms of microaggressions relevant to all TGD people, but more

recent work has developed a specific measure relevant to non-binary people, which may capture some experiences (e.g. not being viewed as "trans enough") that the GIMS does not (Croteau & Morrison, 2023).

More broadly, the sample was relatively homogenous, being recruited from one region of the UK, predominantly white, and mostly university students. TGD people with further intersecting marginalized identities (e.g. ethnic minorities, those with lower socioeconomic status) may experience greater levels of minority stress on average than those captured in our sample (Bradford et al., 2013). It is therefore noteworthy just how frequent experiences of microaggressions were in our study, given that it may be in the lower range for TGD people overall.

Conclusion

This daily diary study demonstrates the high prevalence of microaggressions in the day-to-day lives of TGD people. These experiences have a negative impact on the mental health and well-being of TGD individuals and must therefore be acknowledged and mitigated.

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