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ORIGINAL RESEARCH

Exploring the Determinants of Quality of Life for LGBTQ + People: Findings from UK Participants in the Global Pride Survey

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Abstract

Introduction Despite recent initiatives to understand and respond better to LGBTQ + lives in the UK, there remains a lack of detailed knowledge about the needs and experiences of the LGBTQ + population at an everyday level, including drivers of quality of life, and its association with mental health.

Methods This paper draws on findings from the UK dataset in the Global Pride survey collected in 2022. Data from 172 individuals aged 19–77 from diverse sexual and gender identities were used to identify and explore the determinants of quality of life at the intersection of both sexual orientation and gender identity.

Results The study identified differences in quality of life and mental health across sexual identity groups. Bisexual women reported higher quality of life than other groups, while sexual diverse individuals and bisexual men experienced greater depressive symptoms. Income, general health, and social support were also important factors associated with quality of life.

Conclusions As a preliminary study, we illustrate the potential future use of intersectionality in gaining a more nuanced approach to understanding the different drivers and differences in the LGBTQ + population and the value in promoting mixed methods research to understand better the quality of life amongst LGBTQ + communities. We highlight theories of liveability to expand our understanding beyond individual and structural factors that cause minority stress.

Policy Implications Evaluation of how effective UK equalities laws and policies are in protecting LGBTQ + people from discrimination and the areas of policy needed to develop and improve their lives requires improved data collection and their use in monitoring and application through an intersectional approach. Nuanced and focused policymaking could allocate resources that addresses health and wellbeing within its wider context and engage the LGBTQ + community to look beyond known factors of exclusion towards identifying what helps people to survive and thrive.

Keywords LGBTQ + research · Quantitative survey · UK · Global Pride

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Introduction

Over the course of several decades, and thanks to the commitment of pioneering human rights activists (see Browne & Nash, 2014; Farmer, 2020), there has been significant legislative progress to advance the Lesbian, Gay, Bisexual, Trans, Queer and Questioning (LGBTQ+)[1]+rights in the UK since 1967, when landmark legislation partially decriminalised male homosexual activity in private (Almack & King, 2019). Legal protection for LGBTQ+people rests with the UK Equality Act 2010. This applies to England, Scotland, and Wales alongside more recent, broadly comparable, anti-discrimination provisions in Northern Ireland, albeit these have developed across different timelines. The Equality Act (HMG, 2010) addresses employment, the provision of public services and specifies a duty to promote positive relations for individuals and groups with 'protected characteristics' which includes 'sexual orientation' and 'gender reassignment' (Crossland, 2016). Other relevant UK legislation addresses family relationships through, the Civil Partnership Act 2004, the Marriage (Same-Sex Couples) Act, 2013 and Adoption and Children Act 2002. Further, there are several provisions within Criminal Law to support redress on hate crime (Criminal Prosecution Service, 2023). In summary, the UK space is continually evolving and given the complexity of LGBTQ+identity politics at both local, regional, and transnational levels, LGBTQ+activists have engaged with solidaristic relationships such as in local government and in the Feminist and Trade Union movement (Hafford-Letchfield et al., 2022a, b; Hines, 2020).

Historically, little has been known about LGBTQ+population that live in the UK. In the past two decades there has been a growth in research, although this has been primarily qualitative (Almack & King, 2019). There remain a lack of large-scale quantitative data and a general invisibility of LGBTQ+people in official statistics and epidemiological research.

The 2021 Census of Households in England and Wales, Northern Ireland and Scotland included the first attempt by the UK Government to collect official data about sexual orientation and gender identity from the population. The Census is the largest household survey in the UK, conducted every ten years. Results from the 2021 Census reported that 3.2 percent of the population identified as Lesbian, Gay, or Bisexual and 0.5 percent of the population identified with a gender identity that differed from the sex assigned to them at birth.

Prior to this, in 2017, the UK Government also conducted a national survey in which it asked people for their views on public services and about their experiences more generally of living with LGBT identities in the UK. The completion of the UK survey was completed voluntarily and achieved 108,000 valid responses. (Government Equalities Office, 2018). Reported findings from the survey so far (see Romanelli et al., 2023) reflects that LGBT respondents were less satisfied with their life than the general UK population and trans respondents demonstrated particularly low scores. These negative experiences were associated with lack of visibility or fear of visibility, ongoing discriminatory incidents including verbal harassment and physical violence, mental health issues and increased vulnerability in employment and other social problems such as homelessness. Lawrence & Taylor (2020) argue that the subsequent *LGBT Action Plan* produced by the UK Government (see House of Commons Library, 2023 for developed plan) represented a significant commitment to LGBTQI+equalities - set out in the context of legislative changes. However, its representation as indicative of progressive change can be misleading. For example, the differential lived realities of a heterogeneous LGBTQ+population and 'differential access to equality based on geopolitical locality and citizenship status' (p602) highlight a lack of intersectional analysis of that data.

These tensions in rights and reality on the ground became exemplified in the Covid-19 pandemic (Westwood et al., 2021a, b; Hafford-Letchfield et al., 2022a; Hudson et al., 2021). LGBTQ+adults experienced poorer psychological wellbeing outcomes than did cisgender heterosexual people, albeit there was an increase in community networking and innovation within communities to actively address gaps (Hafford-Letchfield et al., 2022a). An online survey conducted during the period of active social restrictions during Covid-19 (Stokes et al., 2024) showed that higher levels of life satisfaction were positively associated with social support from family or a special person Whilst family of origin relationships can also be a source of distress, social support from a special person can mitigate these and boost positive psychological wellbeing levels and has significance over and above the general level of social support provided by friends and others. However, having an underlying health condition, depression, anxiety, and stress were associated with a lower level of optimism which negatively impacted on a sense of psychological wellbeing and were higher in individuals under 35 years of age. Stokes et al (2024) highlight the importance of considering both negative and positive wellbeing and the need to make further distinctions between different sexual and gender minority groups.

Despite recent initiatives to understand and respond better to LGBTQ+people in the UK, there remains a lack of detailed knowledge about the lives, needs, and experiences of this population at an everyday level. LGBTQ+research

[1] Different acronyms have been used in this paper to reflect more accurately the population that has been studies/discussed within the source referenced.

has experienced persistent under-funding that has led to poor data and research infrastructure in the UK (Aspinall, 2008). As a result, quantitative research on LGBTQ+populations is mostly derived from small non-representative surveys or studies in specific sub-groups or conducted by pooling all sexual minority subgroups together. The 2010 UK Equality Act improved the collection of sexual orientation information in survey data, but adequate sample sizes to monitor the existence and magnitude of LGBTQ+inequalities remain a challenge. This is partly due to a lack of monitoring for sexual orientation/gender identity in routine public services data collection (Kneale et al., 2020) and for more complex reasons, a reluctance to ask or share (Bjarnadottir et al., 2017). Wider research on LGBTQ+populations has suggested that sexual and gender identity is associated with poorer subjective well-being (Elliott et al., 2015), mental health (King et al., 2008; Wainipitapong et al., 2025; Chakraborty et al., 2011) and dissatisfaction with life (Government Equalities Office, 2018; Romanelli et al., 2023), associated with health inequalities (Kneale et al., 2020; Westwood et al., 2020) minority stress (Jaspal et al., 2023), discrimination, and victimization (Westwood et al., 2015). Less is known about the actual determinants or drivers of quality of life. Few studies have considered potential distinctions of drivers of wellbeing between different sexual and gender minority groups (Kneale et al., 2020; Stokes et al., 2024).

A meta-analysis of 29 datasets on health or care indicators on LGBT+people (Kneale et al., 2020) revealed that (LGB) people experienced poor self-rated health, 1.2 times higher than for heterosexual people. This type of analysis suggests how cumulative health inequalities are potentially a predictor of future mortality (Hatzenbuehler et al., 2017) and poor outcomes for health, disability, (Schuler et al., 2021), and life expectancy (Frisch & Brønnum-Hansen, 2009). Accounting for complexities within sexual and gender identities is also vital to conducting comprehensive research about minority experiences and needs (Almack & King, 2019; Westwood et al., 2015). More research could explore the differences between identities and their intersectionalities (King et al., 2019; Hegarty et al., 2020). Less in known about the actual determinants, or drivers of quality of life at the intersection of sexual and gender identity (Gray & Moore, 2018; Eisenberg et al., 2019). Greater social inclusion has historically focused on identifying manifestations of exclusions and seeking to address them.

Studies have outlined how LGBTQ+individuals are affected by minority stress (Brooks, 1981; Frost & Meyer, 2023). Meyer's minority stress model, originally articulated by Virginia Brooks (1981), has also been expanded to encompass potential protective factors, including social support from family and peers, coping skills, self-acceptance, and positive gender and sexual identity. The model has also been adapted to encompass the stressors and protective factors that trans and gender diverse people experience that shape their health (Tan et al., 2020; Testa et al., 2015). Nevertheless, the minority stress model has also been significantly critiqued for not being able to fully account for intersectional differences within and between LGBTQ+individuals and communities on the grounds of other, significant, sources of social division, such as ethnicity (Bowleg et al., 2003; Ramirez & Paz Galupo, 2019). Researchers in the US have proposed a *Temporal Intersectional Minority Stress* (TIMS) model, which seeks to combine greater diversity and intersectionality and account for changes across the life course (Rivas-Koehl et al., 2023. Meanwhile, other scholars, such as Browne et al (2021) focus on the concept of 'liveability' to examine its epistemological potential for moving beyond legislative inclusion/exclusion which normalises sexual and gender identity and finding out what makes life liveable (see also Butler, 2004). Liveability typically refers to the quality of life in a particular place and its conduciveness to flourishing and in the LGBTQ+context. It extends beyond infrastructure or environment to include social acceptance, legal protections, visibility, safety, community, and freedom of self-expression. Coming from two perspectives, the relationship between liveability and minority stress theory is complex and multidimensional but understanding how they interact in their intersecting theoretical traditions can help explore how both inform, reinforce, or challenge one another.

Indeed, LGBTQ+people's quality of life, which is our focus in this paper, may be refracted through multiple and intersectional dimensions, some of which will be experienced as stressors, whilst others relate to liveability. Drawing out these differences and dimensions would appear to offer the potential for further understanding of the determinants and drivers of quality of life in UK LGBTQ+communities and in broader geo-political/regional contexts.

This paper draws on findings from the UK dataset in the Global Pride survey, (https://goldseninstitute.org/health/global/), a preliminary study developed to explore well-being and health and their determinants in sexual and gender diverse communities across distinct cultural and social contexts with international partners from global settings. The preliminary study considers data from 172 individuals with an age range between 19 to 77 years, from diverse sexual and gender identities. These data were explored to identify and explore the determinants of quality of life at the intersection of both sexual orientation and gender identity.

Methods

Participant Recruitment

Recruitment for the Global Pride Project in the United Kingdom involved a multifaceted approach sampling LGBTQ + adult aged 18 and older. The link to the survey was distributed virtually using a range of methods including: social media (LinkedIn and Twitter); through outreach via LGBTQ + community organisations and their regular newsletter and social media platforms; and to key people working in the field who agreed to distribute via their networks alongside the research team's own networks. In addition, 24 of the participants were recruited through an online research platform, testing a pilot component of the Global Pride Study. (For a more detailed description of the Global Study methods, see Fredriksen-Goldsen et al., Special Issue Introductory article). Inclusion in this study required individuals to complete the UK survey, and be aged 18 or older, and identify as LGBTQ+ (includes lesbian, gay, bisexual, transgender, queer, non-binary, or sexual or gender diverse) adults. Potential participants that did not meet the inclusion criteria were excluded from the study. Human Subjects approval for the global survey was obtained from the University of Washington Institutional Review Board for international dissemination. Further in-country ethical approval to disseminate the survey was given by the Ethics Committee of the University of Surrey in the UK.

Data Collection

Data collection in the UK occurred in 2022 and primarily involved administering a respondent-administered anonymous survey, available online. The survey covered various domains such as health status, access to healthcare, social connectedness, economic security, and demographics. To ensure accessibility and cultural relevance, all study materials were developed with collaborators and translated as needed into multiple languages by licensed translators and underwent thorough review and pilot testing. The online survey was conducted using Qualtrics research survey software (www.qualtrics.com).

Upon accessing the survey, potential participants received a cover letter outlining study details and the elements of informed consent. Participation was voluntary, and participants were offered entry into a raffle and monetary compensation upon survey completion.

Measures

Demographics/Background Characteristics

Age was calculated by subtracting birth year from the year of data collection (2022). Participants were asked to select the sexual identity category that best represented how they identified themselves. For this study, participants' sexual identities were categorized as follows: gay men, lesbian women, bisexual women, bisexual men, and sexual diverse individuals encompassing all other sexual identity categories. Participants were asked "Are you transgender or do you have a transgender history?" Participants were also considered transgender if their current gender did not match their sex assigned at birth. The response to the transgender question was dichotomous. For education, participants were asked "How many years of school, including higher education have you completed?" A dichotomous variable was created to create two groups: secondary school or less (coded as 0) and college or more (coded as 1). Participants were asked if they were currently married or partnered. A dichotomous variable was created to create two groups: married/partnered (coded as 1) and not married or partnered (coded as 0) (single, divorced, etc.).

Income

Participants were asked to select a category that best described their household income before taxes for all of 2021, including income from everyone in the household who contributed. In the United Kingdom, income categories were coded as follows: 1) Less than £12,570, 2) £12,571 to £35,000, 3) £35,001 to £55,000, 4) £55,001 to £75,000, 5) £75,001 to £95,000, 6) £95,001 to £115,000, 7) £115,001 to £135,000, and 8) £135,000 and up.

Depressive Symptomatology

Depressive symptomology was assessed adapting the 6-item Kessler Psychological Distress Scale (K6) (Kessler et al., 2003). Participants were asked "During the past 30 days, about how often did you feel…" nervous, hopeless, restless; or fidgety; relaxed; blue and nothing could cheer you up; that everything was an effort; and worthless. Response options were on a scale of (1) all of the time to (4) none of the time. The items were reverse coded and summed, scores ranging from 0–24 with higher scores suggesting higher psychological distress. (Cronbach's $\alpha = .88$).

General Health

Participants were asked to rate their health on a scale of (1) excellent to (5) poor. General health was reverse coded, so higher values indicated higher self-rated general health. (Ware, 2000).

Quality of Life

Participants were asked to rate their quality of life on a scale of (1) very poor to (5) very good (World Health Organization, 2004).

Social Support

The abbreviated 4-item scale (Gjesfjeld et al., 2008) of MOS-Social Support Scale (Sherbourne & Stewart, 1991) was used to measure multiple dimensions of perceived social support (i.e., tangible, informational, positive social interaction, affectionate). Participants were asked to "Please indicate how often the following type of support is available to you if you need it." Types of support included "someone to help with daily chores if you were sick," "someone to turn to for suggestions about how to deal with a personal problem," "someone to do something enjoyable with," and "someone to love and make you feel wanted." Response options ranged from (1) Never to (5) Very Often. The mean across the four social support items was calculated. (Cronbach's α=.83).

Discrimination

Participants were asked about their lifetime experiences of adverse events using the prompt, "In your lifetime, have you experienced any of the following adverse events? [Check all that apply]." This measure consisted of 24 items, encompassing a range of experiences such as "I was prevented from living in the neighborhood I wanted", "I was verbally insulted (yelled at, criticized, used derogatory terms)", "I was threatened with physical violence, I was punched, kicked, or beaten", "I was attacked sexually", and "I was denied or provided inferior health care." Participants were instructed to check items that applied to them, with each checked item assigned a value of 1 and each unchecked item assigned a value of 0. The scores for all items were then summed, resulting in a summary score ranging from 0 to 24. (Fredriksen-Goldsen & Kim, 2017). (Cronbach's α=.86).

Statistical Analyses

Descriptive statistics examined sexual and gender identity difference across demographic characteristics (age, education, income), health-promoting factors (social support), health risk factors (discrimination, depressive symptomatology, general health), and health outcomes (quality of life). Differences among sexual identity groups were assessed with ANOVA for continuous variables and chi-square for categorical variables, along with pairwise comparisons with Bonferroni correction, a robust and moderately conservative post-hoc test (Lee & Lee, 2018).

To investigate predictors of quality of life in this sample, hierarchical linear regression was employed. This was used to examine the association between demographic and protective and risk factors and quality of life. First, we examined pairwise correlations among key variables to ensure adherence to the assumption of no multicollinearity for subsequent analyses, of which all variables met this condition. Regression models were built in steps to examine the association between sexual and gender identity and quality of life, upon adjustment of risk and protective factors. Model 1 included sexual and gender identity, followed by age, education, and income in the Model 2, discrimination in Model 3, depressive symptomatology and general health in Model 4, and finally social support in Model 5. Adjusted regression coefficients and significance levels were examined to determine the unique contribution of each predictor on quality of life.

To explore the impact of intersecting sexual and gender identities, we conducted additional analyses using four demographic subgroups (LGB cisgender, sexually diverse cisgender, LGB transgender, sexually diverse transgender). However, when we introduced an intersectionality variable to capture both sexual and gender identities, the resulting cell sizes were too small for meaningful analyses. This led to the loss of crucial information, especially within the bisexual groups, and did not yield significant improvements in the model. The results from the preliminary sexual and gender identity intersectional variable analyses are presented in the appendices.

Data analyses were conducted using Stat/SE 17.0. For all parent variables (excluding branching variables) and those not "check all that apply," the missing rate for each of the UK variables was below 5%,

Margins and 95% CIs for each LGBTQ group were obtained after ordinary regression, keeping QOL continuous. We found that the 95% for bisexual women and bisexual men did not overlap. Thus, in the findings, in terms of quality of life, bisexual women reported significantly higher scores than bisexual men and sexual diverse individuals (contrast=0.9, p=.010 & contrast=0.6, p=.024, respectively).

Table 1 Global pride study: background characteristics of UK sample ($n=173$)

Variable	*n*	M/% (95% CI)
Age	172 (range: 19–77)	40.7 (38.5, 42.8)
Sexual identity		
Gay men	44	25.4 (19.5, 32.5)
Lesbian women	37	21.4 (15.9, 28.2)
Bisexual women	32	18.5 (13.4, 25.0)
Bisexual men	11	6.4 (3.5, 11.2)
Sexually diverse	49	28.3 (22.1, 35.5)
Transgender	33	19.2 (13.9, 25.8)
Education		
High school or less	24	13.9 (9.4, 19.9)
Some college or more	149	86.1 (80.1, 90.6)
Relationship status		
Married/partnered	92	53.5 (46.0, 60.9)
Household Income		
Less than £12, 570	18	10.6 (21.5, 34.9)
£12, 571 to £35,000	60	35.3 (15.9, 28.2)
£35,001 to £55,000	37	21.8 (13.4, 25.0)
£55,001 to £75,000	25	14.7 (3.5, 11.2)
More than £75,001	30	17.6 (12.6, 24.2)
Discrimination	173	6.8 (4.5)
Social Support	173	3.9 (1.0)
Depressive symptomatology	173	7.8 (5.8)
General Health	173	3.1 (1.1)
Quality of life	173	3.9 (0.8)

Results

Table 1 displays the demographic characteristics of the study sample. The sample consisted of 172 individuals with an age range from 19 to 77 years, with a mean age of 40.7 years (95% CI: 38.5, 42.8). In terms of sexual identity, the sample comprised 44 gay men (25.4%), 37 lesbian women (21.4%), 32 bisexual women (18.5%), 11 bisexual men (6.4%), and 49 participants who identified themselves as sexually diverse (28.3%). Among the participants, 33 identified themselves as transgender (19.2%). Regarding education, 24 participants (13.9%) had a secondary school education or less, while 149 (86.1%) had completed some further or higher education or more. In terms of relationship status, 92 participants (53.5%) reported being married or partnered. Concerning household income, 18 participants (10.6%) reported earning less than £12,570, 60 (35.3%) reported earning between £12,571 and £35,000, 37 (21.8%) reported earning between £35,001 and £55,000, 25 (14.7%) reported earning between £55,001 and £75,000, and 30 (17.6%) reported earning more than £75,001.

Table 2 displays the results of comparisons of key variables by sexual identity and gender identity. Significant differences were observed in age across different sexual identity groups. Pairwise comparisons using Bonferroni corrections revealed that gay men were notably older than bisexual women (contrast = 13.7, $p<.001$), bisexual men (contrast = 15.6, $p=.007$), and sexual diverse individuals (contrast = 14.5, $p<.001$). We found differences in depressive symptomatology across sexual identity groups, whereby sexual diverse individuals and bisexual men experienced significantly higher levels of depressive symptomatology compared to gay men (see Table 2). In terms of quality of life, bisexual women reported significantly higher scores than bisexual men and sexual diverse individuals (contrast = 0.9, p = .010 & contrast = 0.6, $p=.024$,

Table 2 Key variables by sexual and gender identity

	Total ($n=173$)	Gay men ($n=44$)	Lesbian women ($n=37$)	Bisexual women ($n=32$)	Bisexual men ($n=11$)	Sexual diverse ($n=49$)	Significance test	Transgender ($n=33$)	Cisgender ($n=139$)	Significance test
	M(SD)/% (*n*)	M(SD)/% (*n*)	M(SD)/% (*n*)	M(SD)/% (*n*)	M(SD)/% (*n*)	M(SD)/% (*n*)	*p*	M(SD)/% (*n*)	M(SD)/% (*n*)	*p*
Age	40.7 (14.4)	50.0 (13.3)	42.5 (16.0)	36.3 (12.9)	34.4 (14.9)	35.4 (10.7)	**.000**	36.9 (12.8)	41.4 (14.6)	.107
Education, High school or less	13.9 (24)	13.6 (6)	10.8 (4)	18.8 (6)	36.4 (4)	8.2(4)	.157	15.2 (5)	13.7 (19)	.784
Income							.059			.347
Less than £12,570	10.6 (18)	11.4 (5)	11.1 (4)	10.0 (3)	9.1 (1)	10.2 (5)		9.1 (3)	11.0 (15)	
£12, 571 to £35,000	35.3 (60)	20.5 (9)	30.6 (11)	33.3 (10)	54.6 (6)	49.0 (24)		45.4 (15)	33.1 (45)	
£35,001 to £55,000	21.8 (37)	25.0 (11)	22.2 (8)	13.3 (4)	18.2 (2)	24.5 (12)		24.2 (8)	21.3 (29)	
£55,001 to £75,000	14.7 (25)	15.9 (7)	11.1 (4)	33.3 (10)	0 (0)	8.2 (4)		15.1 (5)	14.7 (20)	
More than £75,001	17.6 (30)	27.3 (12)	25.0 (9)	10.0 (3)	18.2 (2)	8.2 (4)		6.1 (2)	19.9 (27)	
Discrimination	6.8 (4.5)	6.0 (4.4)	7.0 (4.6)	6.2 (3.7)	5.5 (3.9)	8.1 (5.0)	.134	9.7 (4.8)	6.1 (4.2)	**.000**
Social Support	3.9 (1.0)	3.7 (1.0)	3.9 (0.9)	4.1 (0.9)	3.3 (1.4)	3.9 (1.0)	.171	3.8 (1.0)	3.9 (1.0)	.576
Depressive symptomatology	7.8 (5.8)	5.5 (5.1)	7.3 (5.7)	7.4 (5.1)	11 (7.9)	9.7 (5.6)	.003	15.5 (10.3)	11.3 (14.4)	.037
General Health	3.1 (1.1)	3.1 (1.0)	3.3 (1.1)	3.4 (1.0)	3.1 (0.9)	2.7 (1.1)	.065	2.5 (1.1)	3.2 (1.1)	**.001**
Quality of life	3.9 (0.8)	3.8 (0.8)	4.0 (0.7)	4.3 (0.6)	3.4 (1.0)	3.7 (0.9)	**.004**	3.6 (0.9)	3.9 (0.8)	.060

respectively). Additionally, bisexual women reported higher general health compared to sexual diverse individuals (contrast = 0.7, p = .046).

Table 3 presents the results of the hierarchical regression analyses. Bisexual women consistently demonstrated a significantly higher quality of life compared to gay men, which remained after adjusting for covariate (Model 5, fully adjusted model: b = 0.49, SE = 0.16; p = .002). There were trends for higher quality of life among lesbian women, and lower quality of life among bisexual men and sexually diverse people, compared to gay men, but these findings were not statistically significant.

We found a positive, statistically significant association between income and quality of life in all models (ps < .05). In the final model, depressive symptomatology was negatively significantly associated with quality of life (b = –0.06, p < .001), while general health (b = 0.12, p = .041) and social support (b = 0.24, p < .001) were both positively associated with quality of life.

Discussion

The data from this study of 172 individuals, enabled exploration of quality of life at the intersection of both sexual orientation and gender identity. The data revealed differences in quality of life and mental health across sexual identity groups. Bisexual women reported higher quality of life than other groups, while sexual diverse individuals and bisexual men experienced greater depressive symptoms. Income, general health, and social support were also important factors associated with quality of life. This study contributes to a gap in how quantitative data about LGBTQ+ equalities is captured and reported on in the UK, specifically to look at the determinants of quality of life in the UK and more widely to the comparative picture from global data where the Global Pride study has been conducted and reported within this special edition.

We do not yet know enough about the determinants and drivers for quality of life for people in the UK or have strategies and data that enable more meaningful analysis that would allow the modelling of intersectional patterns as has been attempted with this data sample. Systematic reviews and larger scale studies of mental health and LGTBQ+ people consistently find worse mental health among bisexual people than lesbians and gay men (Ross et al., 2017; Salway et al., 2019) and there is some evidence of worse mental health among UK bisexual women compared to lesbians (Colledge et al., 2015). Whilst our finding of improved quality of life and general health among bisexual women is notable, our conclusion on this finding remains tentative as this may be an artefact of the small size and the non-representative sample of the study. It certainly points to potential intersectional differences that warrant further investigation.

For example, bisexual women also reported higher general health compared to sexual diverse individuals' health, so there may be specific factors at play such as gender, fewer opportunities for collective acts, lower resilience

Table 3 Predictors of quality of life

	Model 1		Model 2		Model 3		Model 4		Model 5	
Variables	b (SE)	p	b (SE)	p	b (SE)	p	b (SE)	p	b (SE)	p
Sexual identity (ref = gay men)										
Lesbian women	0.13 (0.19)	.472	0.22 (0.18)	.224	0.22 (0.18)	.212	0.23 (0.15)	.116	0.21 (0.14)	.134
Bisexual women	0.50 (0.19)	**.011**	0.66 (0.20)	**.001**	0.66 (0.20)	**.001**	0.55 (0.17)	**.001**	0.49 (0.16)	**.002**
Bisexual men	−0.44 (0.28)	.114	−0.23 (0.27)	.395	−0.25 (0.27)	.362	−0.10 (0.23)	.656	−0.03 (0.21)	.874
Sexually diverse	−0.01 (0.19)	.967	0.17 (0.20)	.402	0.16 (0.20)	.433	0.20 (0.17)	.226	0.11 (0.16)	.498
Gender identity (ref = cisgender)										
Transgender	−0.24 (0.19)	.225	−0.22 (0.18)	.236	−0.17 (0.19)	.362	−0.06 (0.15)	.721	−0.01 (0.15)	.958
Age	-	-	0.01 (0.00)	.273	0.01 (0.00)	.309	0.00 (0.00)	.344	0.00 (0.00)	.540
Education (ref = high school or less)										
College or more	-	-	0.18 (0.18)	.307	0.20 (0.18)	.262	0.14 (0.15)	.342	0.17 (0.14)	.236
Income (ref = £12,570 and less)										
£12,571 to £35,000	-	-	0.57 (0.21)	**.006**	0.56 (0.21)	**.007**	0.53 (0.17)	**.003**	0.43 (0.16)	**.010**
£35,001 to £55,000	-	-	0.81 (0.22)	**.000**	0.78 (0.22)	**.001**	0.59 (0.18)	**.002**	0.50 (0.18)	**.005**
£55,001 to £75,000	-	-	0.79 (0.24)	**.001**	0.77 (0.24)	**.002**	0.57 (0.20)	**.007**	0.49 (0.19)	**.013**
£75,001 and up	-	-	1.09 (0.23)	**.000**	1.07 (0.24)	**.000**	0.67 (0.20)	**.001**	0.52 (0.19)	**.009**
Discrimination	-	-	-	-	−0.01 (0.01)	.417	0.00 (0.01)	.911	−0.01 (0.01)	.623
Depressive symptomatology	-	-	-	-	-	-	−0.07 (0.01)	**.000**	−0.06 (0.01)	**.000**
General health	-	-	-	-	-	-	0.13 (0.06)	**.021**	0.12 (0.05)	**.041**
Social support	-	-	-	-	-	-	-	-	0.24 (0.06)	**.000**
R^2	.102		.256		.263		.495		.553	
Change in R^2	-		.156	**.000**	.003	.417	.233	**.000**	.057	**.000**

or self-compassion, which lack nuance here, in relation to other diverse drivers of quality of life.

The availability of social support has been linked to a wide range of beneficial effects (for example, reducing the risk of mental health difficulties; improved overall quality of life and reducing the likelihood of developing physical health problems). Yet more work is needed to understand the multiple dimensions of perceived social support and associated beneficial effects of the different dimensions. It has also been suggested that social support is a distinct concept from social network - not all members of someone's social network will be people who could be said to be available to provide social support (Hawthorne et al., 2020) – this may be particularly pertinent for older LGBTQ+people who, comparative to their heterosexual peers, may have weaker kinship ties which friendship and community networks do not counterbalance (Green, 2016; Lottmann & King, 2022).

Overall, there is some evidence in our results for the notion of minority stress. Clearly, some participants had more depressive symptoms, which were negatively associated with quality of life. Moreover, income was positively associated with quality of life and also points to the importance of economic capital and quality of life; the UK has a persistent social class system and in 2022 was dealing with the legacy of a period of austerity as well as the Covid-19 pandemic. In this respect, theoretically, we concur with findings from the US about the need for a greater focus on intersectionality and differences within and between LGBTQ+communities (Bowleg et al., 2003; Ramirez & Paz Galupo, 2019) and a further reminder that these may change and transform over time (Rivas-Koehl et al., 2023). Moreover, linking such a dynamic and intersectional notion of minority stress with a more pronounced focus on 'livability' (Browne et al., 2021) would arguably enable findings, such as those in our study, to offer a more fine-grained and nuanced understanding of why quality of life differs amongst LGBTQ+communities in the UK and how that may be transformed in the future. For example, lliveability is inherently temporal—it can shift depending on age, mobility, social or political changes and an individual can make changes as a form of adaptability or resistance. Whilst a cross-sectional survey, like Global Pride, is useful, this could be followed up with qualitative research, perhaps including more creative methods such as peer led co-designed studies, to explore these differences and diversities, without losing sight of the cumulative impact of multiple life stressors. Drawing on lliveability also enables a focus on collective forms of resistance and community formation (e.g., activist spaces and kinship networks). It emphasizes how people create liveable worlds despite individual and structural hostility and gives emphasis to a more agentic lens which highlights not only the stressors, but what helps people to survive and thrive (Chan and Mak, 2021). Indeed, as others have argued when comparing bisexual ageing in the UK to the US (Jen and Jones, 2019), intersectional differences have longer cultural and historical heritages and legacies and require more in-depth approaches and analysis.

Limitations

Although the Global Pride survey in the UK has highlighted differences, it still requires more detailed examination and understanding. That said, we do think that the conceptualization of quality of life in terms of stressors and livability offers potential. This was a preliminary study within a larger global survey which enabled us to explore quality of life amongst LGBTQ+people in the UK. The findings are tentative and highlight the need for more representative surveys and in-depth qualitative studies in the future. As indicated earlier, introducing the intersectionality variable to capture both sexual and gender identities, the resulting cell sizes were too small for meaningful analyses and led to the loss of crucial information, especially within the bisexual groups.

Conclusion

This article reports on the UK data from the Global Pride survey. Whilst there has been considerable research on LGBTQ+lives in the UK, there has been less using large-scale quantitative data compounded by a general invisibility of LGBTQ+people in official statistics and epidemiological research. The UK has considerable equalities laws and policies that supposedly protect LGBTQ+people from discrimination and thereby seeks to improve their lives. Our focus has been on exploring the determinants of quality of life which is therefore pertinent. The data which we have analysed does suggest that there are differences, although these are tentative due to the sample size and especially in the case of bisexual women indicates the need for further enquiry. In discussing these, we have highlighted that a combination of intersectional factors may be at play – which suggest that theoretically intersectional minority stress and questions of liveability are combined in quite complex and multi-dimensional ways and this could provide an indication for future research. There is value in promoting mixed methods rresearch to understand better the quality of life amongst LGBTQ+communities and the application of theories of liveability can be used to expand our understanding beyond individual and structural factors that cause minority stress. Finally, there are policy implications for using these types of analyses to evaluate how effective UK equalities laws and policies are in protecting LGBTQ+people from

discrimination and how improved data collection and its use in monitoring and application through an intersectional approach can inform which areas of policy are needed to develop and improve LGBTQ+lives. Nuanced and focused policymaking could allocate resources that addresses health and wellbeing within its wider context and engage the LGBTQ+community to look beyond known factors of exclusion towards identifying what helps people to survive and thrive.

Future Directions for Research

More work is needed to understand the multiple dimensions of perceived social support and associated beneficial effects of the different dimensions. A larger study which develops and learns from this preliminary study is indicated combined with other methods such as qualitative ones which could be used to better understand the detail behind the findings reported, for example the significance of gender as a social determinant. These could be useful to benchmark cross-sectional surveys against national and even global benchmarks that have explored factors such as income, social status, gender, culture, and social environments and how these interact with gender identity and sexual orientation and their role in exacerbating and more importantly transforming known inequities for LGBTQ+populations. It is well documented that LGBTQ+individuals face challenges such as poverty, homelessness, and limited access to supportive networks and healthcare. Having more accurate data on how these intersect with different identities, backgrounds and lifecourse trajectories would inform more inclusive policymaking that focuses on health promotion and targeting of resources on the broader health and wellbeing needs of different LGBTQ+populations (see Mulé et al., 2009). Research that enable representation, knowledge, and prioritisation of LGBTQ+inequalities also requires greater involvement of LGBTQ+communities in the definition of problems and hence design, methodologies, analyses and iteration of findings.

Appendix: Sexual and gender identity intersectional analyses

Table 4 Global Pride study: background characteristics of United Kingdom sample ($n=173$)

Variable	*n*	M or % (95% CI)
Age	172 (range: 19–77)	40.7 (38.5, 42.8)
Sexual X gender identity		
LGB cisgender	117	68.0 (61.6, 75.6)
Sexually diverse cisgender	22	12.8 (8.5, 19.7)
LGB transgender	6	3.5 (1.6, 7.6)
Sexually diverse transgender	24	15.7 (11.0, 22.0)
Education		
High school or less	24	13.9 (9.4, 19.9)
Some college or more	149	86.1 (80.1, 90.6)
Relationship status		
Married/partnered	92	53.5 (46.0, 60.9)
Household Income		
Less than £12, 570	18	10.6 (21.5, 34.9)
£12, 571 to £35,000	60	35.3 (15.9, 28.2)
£35,001 to £55,000	37	21.8 (13.4, 25.0)
£55,001 to £75,000	25	14.7 (3.5, 11.2)
More than £75,001	30	17.6 (12.6, 24.2)

Table 5 Key variables by sexual and gender identity

	Total (n=172)	LGB X cisgender (n=117)	Sexually diverse X cisgender (n=22)	LGB X transgender (n=6)	Sexually diverse X transgender (n=27)	Significance test
	M (SD) or % (n)	M (SD) or % (n)	M (SD) or % (n)	M (SD) or % (n)	M (SD) or % (n)	p
Age	40.5 (12.4)	43.1 (15.1)	32.7 (7.6)	33.4 (15.6)	37.7 (12.3)	**.005**
Education, College or more	86.1 (148)	84.6 (99)	95.5 (18.9)	66.7 (4)	88.9 (24)	.275
Income						.217
Less than £12,570	10.7 (18.0)	10.5 (12)	13.6 (3)	16.7 (1)	7.4 (2)	
£12, 571 to £35,000	35.5 (60.0)	29.8 (34)	50.0 (11)	33.3 (2)	48.2 (13)	
£35,001 to £55,000	21.9 (37.0)	21.1 (24)	22.7 (5)	16.7 (1)	25.9 (7)	
£55,001 to £75,000	25.0 (14.8)	17.5 (20)	0.0 (0)	16.7 (1)	14.8 (4)	
More than £75,001	29.0 (17.2)	21.1 (24)	13.6 (3)	16.7 (1)	3.7 (1)	
Depressive symptomatology	7.8 (5.8)	6.8 (5.6)	10.0 (5.7)	12.5 (6.8)	9.4 (5.7)	**.005**
General health	3.1 (1.1)	3.2 (1.1)	3.0 (1.0)	2.7 (1.0)	1.5 (1.2)	**.008**
Discrimination	6.8 (4.5)	6.2 (4.2)	5.9 (4.1)	8.5 (4.1)	9.9 (4.9)	**.000**
Social Support	3.9 (1.0)	3.8 (1.0)	4.1 (0.9)	3.5 (1.1)	3.8 (1.0)	.546
Quality of life	3.9 (0.8)	4.0 (0.8)	3.8 (0.9)	3.3 (0.5)	3.7 (1.0)	.135

Post hoc analysis:

Sexually diverse cisgender is significantly younger than LGB cisgender (contract=-10.3, p=.010)

Sexually diverse transgender significantly lower general health than LGB cisgender (contrast=-0.77, p=.006)

Sexually diverse transgender significantly more discrimination than LGB cisgender (contrast=3.8, p=.000)

Sexually diverse trans significantly more discrimination than LGB trans (contrast=4.1, p=.008)

Table 6 Hierarchical regression of quality of life, sexual and gender identity combined

	Model 1		Model 2		Model 3		Model 4		Model 5	
Variables	b (SE)	p	b (SE)	p	b (SE)	p	b (SE)	p	b (SE)	p
Sexual identity X gender identity (ref=LGB cisgender)										
Sexually diverse cisgender	-0.22 (0.19)	.262	-0.12 (0.19)	.513	-0.14 (0.19)	.470	0.02 (0.16)	.907	-0.13 (0.15)	.392
LGB transgender	-0.66 (0.35)	.061	-0.55 (0.33)	.097	-0.53 (0.33)	.114	-0.18 (0.28)	.531	-0.17 (0.26)	.510
Sexually diverse transgender	-0.34 (0.18)	.064	-0.26 (0.17)	.132	-0.23 (0.18)	.212	-0.07 (0.15)	.659	-0.09 (0.14)	.5551
Age	-	-	0.00 (0.00)	.976	0.00 (0.00)	.916	0.00 (0.00)	.055	-0.01 (0.00)	.125
Education (ref=high school or less)										
College or more	-	-	0.22 (0.18)	.244	0.24 (0.19)	.203	0.16 (0.16)	.0292	0.19 (0.15)	.202
Income (ref=£12,570 and less)										
£12,571 to £35,000	-	-	0.55 (0.21)	**.010**	0.54 (0.21)	**.013**	0.51 (0.18)	**.004**	0.41 (0.17)	**.015**
£35,001 to £55,000	-	-	0.78 (0.23)	**.001**	0.75 (0.23)	**.001**	0.57 (0.19)	**.004**	0.47 (0.18)	**.011**
£55,001 to £75,000	-	-	0.93 (0.25)	**.000**	0.75 (0.25)	**.000**	0.67 (0.21)	**.002**	0.57 (0.20)	**.005**
£75,001 and up	-	-	1.07 (0.24)	**.000**	0.91 (0.25)	**.000**	0.64 (0.21)	**.003**	0.47 (0.20)	**.019**
Discrimination/victimization	-	-	-	-	1.04 (0.24)	.418	0.00 (0.01)	**.982**	-0.02 (0.01)	.624
Depressive symptomatology	-	-	-	-	-	-	-0.07 (0.01)	**.000**	-0.05 (0.01)	**.000**
General health	-	-	-	-	-	-	0.15 (0.06)	**.012**	0.12 (0.05)	**.025**
Social support	-	-	-	-	-	-	-	-	0.27 (0.06)	**.000**
R^2	.041		.189		.192		.449		.520	
Change in R^2	-		.148	**.000**	.003	.418	.257	**.000**	.007	**.000**

Survey text

Are you LGBTQ (lesbian, gay, bisexual, transgender, queer, non-binary, or sexual or gender diverse)?

We need your help with a ground-breaking project, the Global Pride Study. In collaboration with more than 40 scholars from across the globe, our goal is to gather information to address health and well-being holistically in LGBTQ adults, including quality of life, physical and mental health, and economic and social lives

Please click here to complete a confidential and anonymous on-line questionnaire

Please keep in mind your participation in the project is completely voluntary

If you have any questions about the project, please contact us at GlobalPride@uw.edu or visit our website here: GlobalPrideStudy.org

Help us spread the word to make this project a success!

Authors Contribution All authors of this paper were involved in its development. AK, KA, RJ and THL led research recruitment and data collection. CJ conducted the data analysis with input from LB, AK and DK. THL led the development of the paper with contributions from AK, KA, LB, RJ and DK. All team members commented on and approved the final paper.

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Data Availability The Global Pride Study data/materials cannot be shared publicly due to data non-disclosure requirements and agreements.

Code Availability Not applicable.

Declarations

Conflicts of Interest/competing Interests The authors report no conflict of interest or competing interests. Protocols for this study were approved by the Committee for the Protection of Human Subjects by the University of Washington with implied consent included in the study materials.

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