Academic LGBTQ+ terminology 1900-2021: Increasing variety, increasing inclusivity?¹

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LGBTQ+ labels and terminology in society embed ideological assumptions and affect who gains community support and protection. In academia, terminology is also needed to help define study objects, methods, and goals. Academics therefore need to choose their words to be both precise and appropriate, adjusting to changes in societal language. This article assesses the evolution of LGBTQ+ terminology in the titles and abstracts of academic journal articles since 1900 to identify the main trends. Based on a search of 74 LGBTQ+ terms in Scopus, LGBTQ+ related journal articles have almost continually increased in prevalence since 1900. In parallel, the concept of homosexuality that dominated early research has almost disappeared, being replaced by the word gay or more specific terms, such as lesbian or bisexual. Transexual terminology has also been supplanted by transgender and trans* terminology. At various points in time other LGBTO+ terms have emerged with activist, health professional and academic origins. These include multiple acronyms, inclusive phrases, and activity-specific phrases (e.g., men who have sex with men) that are not used by the LGBTQ+ community. Currently, no terminologies are dominant, with this plurality probably reflecting differing research needs.

Keywords: LGBTQ+; gay; lesbian; transgender; nonbinary; queer; trans*

Introduction

LGBTQ+ labels and terminology are a contentious social issue, with the need for inclusiveness, and respect for the differing wishes of the people labelled (Hall et al., 2019). They also embed ideological assumptions and can therefore be empowering or demeaning (Cameron & Kulick, 2003). Academic LGBTQ+ research is subject to the same pressures, competing with scholarly communication needs for universal, precise and (sometimes) established terminology. Standardised, defined terminology would help with information retrieval, comparability between studies, and gaining wider recognition for key concepts but risks demeaning research subjects by rejecting their identities, becoming outdated as language changes, and creating out-groups that do not fit precise definitions (Eliason, 2014). Whilst sexuality language is extensively studied within an established academic field, supported by the Journal of Language and Sexuality (Motschenbacher, 2021), the issue is relevant to all academics reporting LGBTQ+

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research and therefore needs unpicking from this perspective. In particular, publishing researchers, reviewers and editors need to know which terminologies are currently being used so that they can decide what is appropriate.

From the perspective of the Global North that dominates published academic research, there are five different sources of terminology for LGBTQ+ peoples. First, hostile groups pick insults and other words to describe LGBTQ+ identities and activities. Second, terms have been coined by LGBTQ+ activists and other groups to label their identities, including by reclaiming insults and originally pejorative terms (e.g., queer) and by combining identities through inclusive acronyms. Third, health and social care groups dealing with LGBTQ+ communities have generated phrases for targeted interventions, sometimes focusing on behaviour rather than identity (e.g., men who have sex with men). Fourth, academics have developed terminologies to describe LGBTQ+ groups studied or to focus on individual subsets relevant to a medical treatment. Fifth, concepts and terminologies from outside the Global North have been recognised and translated to some extent. With the partial exception of insults, academics may draw upon all these terminologies to describe research for and about the LGBTQ+ community.

This article assesses the extent to which the main LGBTQ+ terminologies have been used since 1900 in journal articles. A previous paper has investigated 82 LGBTQ+ terms relating to LGBT health but did not track them over time or explore other journals (Lee et al., 2016), so there is a need for wider-ranging investigations in terms of time and discipline. The following research questions guide this study.

- 1. Is academic interest in LGBTQ+ research increasing overall, as reflected by the proportion of journal articles?
- 2. What are the main LGBTQ+ terms used in academic research?
- 3. How has LGBTQ+ terminology in academic research evolved over time?

LGBTQ+ terminology

LGBTQ+ stands for lesbian, gay, bisexual, transgender and queer or questioning and others. The 'plus' is used to signify all gender identities and sexual orientations not specifically covered by the other five initials. It may also be written as LGBTQA, with the A signifying either ally (i.e., supportive) or asexual. Identities are central to LGBTQ+ understandings and activism in the Global North (Monro, 2020) and acronyms like LGBTQ+ reflect a parallel drive towards inclusivity and embracing diversity that occurred relatively recently in the Global North. On the negative side, more inclusive acronyms can also be attractive to institutions as a strategy to avoid addressing the needs of individual subgroups (Spencer & Patterson, 2017). Nevertheless, the LGBTQ+ terminologies used by people to describe themselves vary considerably between communities and age groups, within a single country (e.g., the USA: Blechinger, 2016) and internationally (e.g., David, 2021). Countries may conform to the apparently dominant US terminology and model or maintain existing concepts and words (Campbell et al., 2018; Fotache, 2019). Individuals may also consider their sexuality or gender to be largely irrelevant and prefer to avoid labels (van Lisdonk et al., 2018). Public-facing workers need to learn the main terminologies (Rossi & Lopez, 2017; Yeung et al., 2019) to provide good quality services and avoid pathologizing and mistreating LGBTQ+ individuals.

LGBTQ+ terminology has evolved considerably over the past century, including changed meanings for individual terms and the introductions of new concepts (Ferris, 2006). Gender terminology has been evolving particularly rapidly in recent years, with non-binary, genderqueer, and gender diverse having become common (Thorne et al.,

2019). Some language changes have also arisen through intersections with other identities, such as "same gender loving" as a term within the African-American community (Parks, 2001). The situation is different in the health domain, however, when the focus can be on activities with health implications, rather than identities. This has led to terminology not used by the LGBTQ+ community, such as men who have sex with men (MSM), which was originally designed for AIDS-related health interventions, such as to avoid labelling people with categories that they found stigmatising. The overuse of this term in public health contexts has been criticised for erasing LGBTQ+ identities that may be important to the health or other issues involved, however (Young & Meyer, 2005), and it is important that the terminology used should reflect the salient characteristics investigated, such as behaviour or identity (Timmins & Duncan, 2020). For example, transgender individuals accessing health services can present with unique physical characteristics and psychological needs due to social victimisation, health outcomes due to gender-affirming hormonal therapy, and surgical interventions that can greatly impact the human body and exacerbate the risk of cardiovascular events and mental health complications (Bockting et al., 2013; Hawke et al., 2021; Tollinche et al., 2018).

General terminologies not based on identity, such as sexual and gender minorities, are also sometimes used (Matsuno et al., 2020). This phrase is inclusive, understandable to people unaware of acronyms, and avoids consigning anyone to the "+" part of LGBTQ+. LGBTQ+ individuals may consider the context and purpose of an interaction (e.g., medical, social) when evaluating the acceptability of terminologies used to describe them (Ryan, 2019), so academic and health-related terminology does not necessarily need to conform to their community norms. Nevertheless, general terminologies can still be problematic by hiding important differences within diverse groups and denying participants their chosen identities (Baker & Harris, 2020).

The term homosexual is of particular interest due to its early appearance and continued academic use despite its heteronormative and negative connotations (Cameron & Kulick, 2003; Motschenbacher, 2021). For example, the prominent *Journal of Homosexuality* retains it in its title to convey its lineage although the term is outdated and misleading about the journal's scope (Marinucci, 2019). The word homosexual seems to originate from German in the second half of the nineteenth century (Janssen, 2021) in the context of new sodomy laws and reflecting an increased desire of the state to control reproduction. At a similar time, academics discussed "sexual inversion", investigating possible reasons for homosexuality (Taylor, 1998), but homosexuality has since been employed as a medical category applied by (often unsympathetic) outsiders (Cameron & Kulick, 2003). Before this, the emphasis was on practices rather than the natures of the people employing them. Globally, LGBTQ+ terminologies such as hijra, muxe, and two-spirit (*niizh manidoowag*, see: Ristock, Zoccole & Passante, 2010), a First Nations' term, already existed, however.

As the use of the term homosexual illustrates, academic LGBTQ+ terminologies have historically reflected or promoted many serious errors of understanding. These include classing sections of the community as abnormal or perverted, confusing sexuality with gender, and confusing gender identity with biological sex (Adams, 2015). For example, before the emergence of the term transgender in 1965, the terms transexual or transvestite have been used inappropriately.

The variety of terminologies used for the LGBTQ+ community has potential negative consequences for academic literature searches, especially outside the health domain (where retrieval strategies have been designed: Lee et al., 2016) because relevant information may not be found if it uses a little-known terminology. Even within the healthcare domain, the wide variety of terminology used in electronic health records has

been noted as a problem (Lau et al., 2020). This causes practical problems with the need to describe individuals and groups in the way that they choose. This issue seems to be academic-specific. There are also related challenges in LGBTQ+ collection building in libraries (Graziano, 2016), and in finding and indexing LGBTQ+ related books (Carmichael Jr, 2002). More generally, there often seems to be a lack of health and social care information for the LGBTQ+ community (Rose et al., 2013), which is exacerbated if it is more difficult to find. Whilst a solution is needed that both respects individuals' rights to self-define and health and other societal, literature search, and categorisation needs, the current paper focuses on the terminologies used in the academic domain.

One addition to note in relation to transgender research would be the increasing use of the term trans* (with the asterisk). The term trans* is thought to go beyond previous terminologies of trans or transgender which commonly represent only binary notions of gender such as trans-man or trans-woman who may have very different needs and experiences (Killermann, 2012). Those in favor of the asterisk "argue that it signals greater inclusivity of new gender identities and expressions and better represents a broader community of individuals" (Tompkins, 2014, p. 27) and allows a textual representation of the "capaciousness of the trans* community" (Nicolazzo, 2021, p. 532). The inclusion of the asterisk borrows from the language of online search engines to encompass all identities that do not comply with gender norms or that reflect any other self-defined gender identity that does not align with an assigned birth sex. Ryan (2014) also suggested that the use of this term is common within younger individuals who participate in transgender blogs to be inclusive of all who participate in them. The use of the term in this way is designed to encourage readers to become aware of the various forms of unique identities and lived experiences that those within this broad community have. This has been evident in both general education (Neary, 2018; Russell, 2021) and physical education work (Ferguson & Russell, in press; Sykes & Smith, 2016) to reflect this more nuanced approach to gender studies.

Characterisations of LGBTQ+ research

Although there are many literature reviews of aspects of LGBTQ+ literature, few studies have analysed its overall volume or terminologies, although some have reported tables of terminologies as part of wider analyses (e.g., Eliason, 2014). The main partial exception is a 1950-2007 bibliometric analysis of "medical research about LGBT persons", which found that almost a third was about HIV/AIDS and other sexually transmitted diseases, arguing that other health needs had not been adequately addressed (Snyder, 2011). Another partial exception is a bibliometric analysis of 4,321 citations from core journals in the LGBT studies field 1974-2010 (Antell, 2012). Whilst activist literature was sometimes cited, most citations targeted academic publications, were very interdisciplinary, and particularly drew upon medical papers. Within the field of LGBTQ+ studies, researchers drew upon a wide variety of disciplines but about half of it was about LGBTQ+ issues, at least as evidenced in the references in MSc dissertations at one Canadian university (Graziano, 2018). From a different perspective, a citation analysis of political science research showed that queer theory is marginal overall, with Judith Butler's work being the most influential (Smith & Lee, 2015). The Journal of Homosexuality 1974-1993 has also been investigated, finding a trend for a decrease in empirical research and an increase in historical research (Joyce & Schrader, 1999).

A few other bibliometric articles have analysed narrow topics. Sexual minority parenting research has been argued to often ignore theory and focus too much on applications (Farr, 2017). Same-sex parenting has also been systematically analysed

(Schumm, 2010; Schumm & Crawford, 2019). An analysis of the topics within women's studies has shown that research about sexual minorities forms one of the six constituent clusters of research (Yun et al., 2020). The relative absence of social work research about lesbian and gay needs has also been noted, at least until 2012 (Pelts et al., 2014). These studies illustrate that fine-grained analyses of LGBTQ+ literature can give insights into progress and gaps.

Transgender-related topics have also been investigated from an academic publishing perspective, with disparate findings. There was a steady increase in gender dysphoria research 1970-2011, which were mostly observational case studies and cross-sectional studies or narrative reviews (Eftekhar et al., 2015). A third of Spanish gender dysphoria research 1999-2015 was published in English, its main contexts were psychology and mental health, and it often focused on a few cases (Gómez-Gil et al., 2020). Spanish research about transsexuals 1973-2011 changed from an initial biological determinism perspective to a later incorporation of social context and feminist discourses (Navarro-Perez et al., 2014). Research about transgender health until 2017 mostly covered HIV, health, and discrimination, with the most publishing journal being *The International Journal of Transgenderism* (5%) (Sweileh, 2018). Finally, the most cited transgender research studies did not tend to attract more social media attention (Delli & Livas, 2021).

Methods

The Scopus database was chosen as the data source because of its wider coverage of literature than the Web of Science (Martín-Martín et al., 2021) and its inclusion of a keyword exploration terms. Although Dimensions has even wider coverage (Thelwall, 2018), its document classification seems to be less reliable, which would allow some non-articles to be included in the results. Google Scholar also has wider coverage (Martín-Martín et al., 2021) but does not split articles by document type, which was useful here.

An important limitation of Scopus is that it is not a comprehensive record of academic research, even though it seems to be more comprehensive than any other science-wide source. It is likely to have weak coverage of literature from the first half of the 20th century due to loss of publications over time and disruption caused by two world wars (Thelwall & Sud, 2022). Scopus includes over 95% of MEDLINE titles but has apparently patchy coverage of early literature, for example indexing OLDMEDLINE from 1949 to 1965 (Scopus, 2020). Scopus originally indexed from 1996 but subsequently added earlier articles from reference lists and the records of 36 major publishers (Beatty, 2015). In addition, the close to ubiquitous use of abstracts has occurred only in the past few decades, with 50% of indexed articles first having an abstract in about 1985 (Thelwall & Sud, 2022). Thus, any overall increases in the use of LGBTQ+ terminology over the past half century will be exaggerated. The balance between different terminologies may be influenced similarly by the increasing use of abstracts, however, unless one set is differently likely to be used in abstracts in comparison to titles. The results may also be affected if some terminology is disproportionately likely to be used in the literature not covered by Scopus.

A reasonably comprehensive set of LGBTQ+ query terms was needed to address the research questions. The method used to construct it and the final Scopus query are in Appendix 1. This combined query was used to track the total number of results. Shorter versions of the query were used to count the number of articles containing any given term, or set of related terms, as in the following example.

TITLE-ABS (transexual OR transexualism OR transexualism) AND LANGUAGE("English") AND SRCTYPE(j) AND DOCTYPE(ar) AND NOT SUBJAREA("AGRI") AND NOT SUBJAREA("VETE")

For comparison, the query below was used to count the number of qualifying journal articles in Scopus

LANGUAGE("English") AND SRCTYPE(j) AND DOCTYPE(ar) AND NOT SUBJAREA("AGRI") AND NOT SUBJAREA("VETE")

Results and Discussion

RQ1: Proportion of LGBTQ+ related journal articles

The proportion of Scopus-indexed journal articles matching any of the LGBTQ+ terms (henceforth: LGBTQ+ research) has been increasing from the 1930s to now, although not evenly (Figure 1). Ignoring the spikes in the first half of the last century that may be due to uneven and low journal coverage in Scopus, the overall increase includes a bump between 1982 and 2000, a doubling since 2007 and a particularly rapid increase from 2012 to 2021, the cause of which is unknown. The subject areas, countries and journals of this research are summarised in the Appendix. These results give a positive answer to the first research question. Whilst early increases may be partly due to uneven journal coverage and late 20th century increases may be partly due to in increasing proportion of articles having abstracts (i.e., capturing LGBTQ+ related articles that do not use these terms in their titles), the sharp recent increase seems unlikely to be due to either cause.

As shown in the next section, the Figure 1 bump in LGBTQ+ research between 1982 and 2000 was primarily due to publications using the term homosexual or homosexuality. This may have been due to HIV research, since based on a Scopus query for HIV, the first HIV journal article in Scopus was from 1982 (n=2, both from Morbidity and Mortality Weekly Report), with a rapid increase from 1985 (n=91) to 1998 (n=8874), followed by a slight decrease to 2003 (n=7888) and then a slower increase afterwards. The decrease in research mentioning LGBTQ+ identities before 2003 may therefore be due to a decrease in HIV/AIDs research indexed in Scopus. The rapid increase since about 2010 does not seem to have an equivalent cause and may be due to LGBTQ+ issues becoming recognised in a wider variety of academic research contexts.

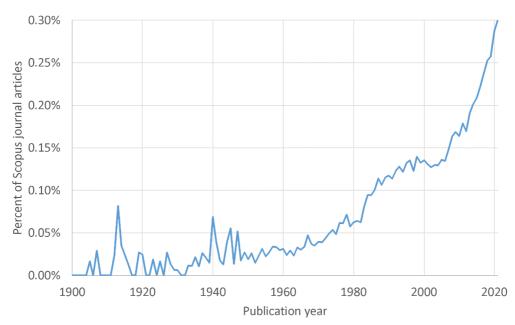


Figure 1. The percentage of Scopus articles matching any of the identified search terms or phrases between 1900 and 2021.

RQ2: LGBTQ+ terms used in academic research

In answer to the second research question, forty-nine LGBTQ+ related terms (counting sets of related words as one term, as shown in Table 1) were found that were included in academic journal article titles or abstracts in Scopus, and that were almost exclusively used in an LGBTQ+ context (partial exception: LGB). This confirms both that a wide range of terms have been used in academic research and that a few terms are common. The figures are a bit misleading from an historical perspective because the coverage of Scopus has expanded annually and has increasingly indexed articles with abstracts, so more recent journal articles dominate the corpus analysed. Moreover, the meaning of some terms has changed over time in parallel with language changes and an increased understanding of the difference between sex and gender (Eliason, 2014).

Table 1. The percentage of Scopus LGBTQ+ articles matching the 49 LGBTQ+ terms selected for analysis. Note that acronyms include their + versions. The percentages are out of all 69403 matching Scopus LGBTQ+ articles.

		Percent of Scopus
		LGBTQ+ journal
Term	Articles	articles
gay	21931	31.60%
homosexua/ity/ities	15177	21.87%
lesbian/ism	14446	20.81%
bisexual/ity	12983	18.71%
men who have sex with men	10216	14.72%
transgender	9302	13.40%
queer	7971	11.49%
gender identity	6206	8.94%
Sexual minority/ies	4188	6.03%
sexual identity	3251	4.68%
LGBT	2926	4.22%

transexual/ism / transsexual/ism / trans-sexual	2405	3.47%
LGBTQ	2214	3.19%
LGB	1663	2.40%
same sex marriage	1130	1.63%
gender dysphoria	921	1.33%
same sex couple	914	1.32%
heterosexism	780	1.12%
sexual and gender minority/ies	767	1.11%
queering	757 757	1.09%
non-heterosexual / nonheterosexual	707	1.02%
same sex relationship	664	0.96%
trans people/ person	457	0.66%
trans female/woman/women	419	0.60%
same sex parents/ing	294	0.42%
gender reassignment	285	0.42%
trans male/man/men	270	0.39%
nonbinary gender/person/people/patient / non-binary	210	0.37/0
person/gender/people/patient	253	0.36%
LGBTI	230	0.33%
gender transition	207	0.30%
gender queer / genderqueer	198	0.29%
GLBT	188	0.27%
same sex attracted	171	0.25%
women who have sex with women	149	0.21%
LGBTIQ	146	0.21%
LGBTQI	123	0.18%
gender transformation	121	0.17%
LGBTQIA	96	0.14%
GLBTQ	63	0.09%
homophile	59	0.09%
gender and sexual diversity	56	0.08%
sex transformation	31	0.04%
sexual dissidents	17	0.02%
same gender loving	15	0.02%
GLBQ	12	0.02%
heteroflexible	11	0.02%
lesbigay	9	0.01%
women loving women	8	0.01%
bicurious	4	0.01%
	•	0.01/0

RQ3: Evolution of terminology over time

The third research question is answered by figures 2 to 5. The most used LGBTQ+ terminology in academia overall was *homosexual/homosexuality* (including plurals) until 1997, and it occurred in at least half of LGBTQ+ journal article titles or abstracts until the mid-1990s (Figure 2). It was overtaken by the positive term *gay*, which was in turn overtaken by *transgender* in 2020. Figure 2 also shows that homosexual terminology has been increasingly replaced by more specific or more general words and seems to be on a disappearing trajectory. As discussed above, the historically dominant term homosexual

has connotations of the era when gay love was illegal and medicalised as deviant and seems to be rarely used inside the LGBTQ+ community. Although the intention behind using it might be scientific objectivity (Luoto & Jonason, 2022), avoiding using the term would usually be a sign of respect, especially for the identities of study participants (Baker & Harris, 2020). Employing terms evidently used within the LGBTQ+ community suggests an in-group perspective or cultural competence rather than an out-group perspective (Matsick et al., in press) or microaggression. In the USA, it associates with negative attitudes in some contexts (McCabe, 2019; Smith et al., 2018) and some organisations consider it to be offensive (e.g., GLAAD, 2022). Thus, study participants might feel demeaned to see that they had participated in an investigation into "homosexuals". Nevertheless, it is reasonable to use the term homosexual for those that self-identify with it and prefer it, such as some older people and also for historical studies or to reflect the terminology used in the context studied (e.g., "How a "hunt for Homosexuals" in 1987 ultimately contributed to a real change in emancipation for gay men serving in the armed forces of the Netherlands": Müller, 2021). It may also be accepted in some parts of the world or be the best available English translation of a local term. Thus, perhaps the default perspective for researchers should be to avoid the term homosexual unless there are special reasons for including it.

Variants of *lesbian*, and *bisexual*, are also common in academia. These arguably represent, with gay, the main acceptable historical sexual orientation labels. All three had been in use for decades but increased in relative frequency from the mid-1980s, presumably replacing homosexual.

From the early 1990s, another common set of terms emerged, representing different word origins and purposes. The phrase *men who have sex with men* emerged in response to the HIV crisis to describe a group of people that would be at high risk of becoming infected if they did not have safe sex. It first appeared in Scopus in 1991 in an Australian article about AIDS and public health (Connell et al., 1991). It originated as a health promotion term that attempts to include all people for whom the safe sex message is most important in the context of AIDS. It avoids the terminology "gay" so that it could include bisexual men and men that would not describe themselves as gay, despite sometime having sex with other men. Using a terminology that would not be used by the target group seems acceptable in this context in the interests of clarity, although MSM has often been inappropriately used (Timmins & Duncan, 2020).

Queer is a reclaimed word (like gay) and a common non-medical term that attempts to be inclusive of different LGBTQ+ identities. It is an activist term that incorporates LGB and other varieties of sexuality and is inclusive of gender nonconformity. Queer in Figure 4 is reported separately to queering, which has a specifically academic interpretation from queer theory (Butler, 2011).

The term *nonbinary* seems to have been used first in the late 2010s and is likely to continue to increase in usage in the near future as academia recognises the concept and incorporates nonbinary people in research designs and projects.

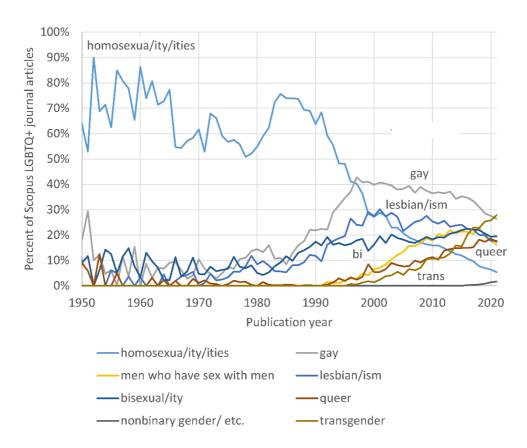


Figure 2. The percentage of Scopus LGBTQ+ articles matching core search terms or phrases between 1950 and 2021.

Terms related to *transsexual* and *transgender* have very different evolutions, with the latter almost completely replacing the former (Figure 3). The term transexual peaked in 1979 but seems to have now almost disappeared. In 1979, 27 of the 44 transexual LGBTQ+ articles were classified by Scopus as Medicine and 19 were Psychology so presumably this was an era learning about the need for medical transitions and the medical steps involved (e.g., one article from 1979 was, "Construction of natural appearing female genitalia in the male transsexual"). The term transexual refers to people with a gender identity different from their birth-assigned sex and seek to transition to align their body with their experienced gender. The term transgender is more general, encompassing all people that experience a gender identity differing from their birth-assigned sex, irrespective of whether they wish to medically transition. It seems likely that the term transgender has largely replaced the term transexual as a more general term, reflecting an improved academic understanding of the situation (although not universally accepted). Phrases like "trans man/woman/person" have also started to be used from 2010, either to avoid the transexual/transgender divide or as a convenient transgender shorthand.

The most logical continuing context for transexual would be in research about medical transitioning. The term transexual is also used in non-human research. For example, in the article, "Testicular inducing steroidogenic cells trigger sex change in groupers", the concept of transgender would be unnecessarily general and the term transexual has a different meaning. It also seems to be used in translated articles from non-English speakers in Scopus (e.g., "From the variability of desire to the variability of gender: some reflections on the increase in female-to-male transsexuality | [Von der variabilität des begehrens zur variabilität des geschlechts 1: einige überlegungen zur

zunahme von frau-zu-mann-transsexualität]", suggesting a potentially outdated translation.

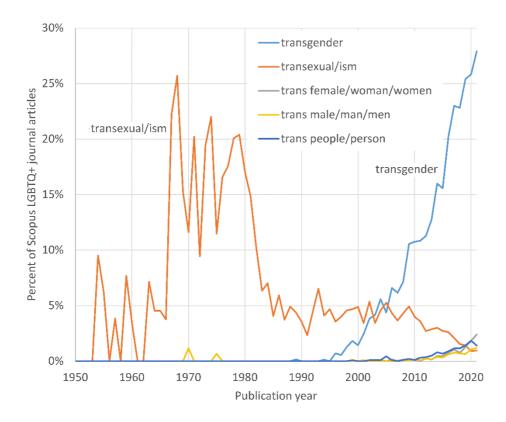


Figure 3. The percentage of Scopus LGBTQ+ articles matching transgender and transsexual search terms or phrases between 1950 and 2021.

Acronyms for the LGBTQ+ community started to appear in Scopus journal articles in 1995 and whilst LGBT has been the most popular for most years, it was overtaken by LGBTQ (incorporating LGBTQ+) in 2018 (Figure 4). The other acronyms are all much less used. The graph shows that no acronym is universal, and that minority acronyms coexist alongside the main ones. The first acronym, LGB, is still common, perhaps for sexuality-related studies that are not specifically relevant to the transgender and nonbinary communities. Presumably, LGBTQ and/or LGBTQ+ are currently replacing LGBT as the most inclusive acronym of choice, with the latter term perhaps eventually disappearing.

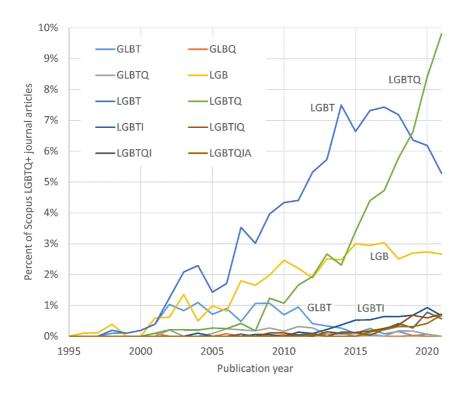


Figure 4. The percentage of Scopus LGBTQ+ articles matching selected initials between 1960 and 2021. The LGB line excludes multiple false matches for different uses of the initials (e.g., Locust Bean Gum).

Of the four phrases identified, sexual minorities (including gender and sexual minorities) is by far the most common (Figure 5). This phrase started to increase in uptake from the mid-1990s and is still rapidly increasing in popularity. The more inclusive version, sexual and gender minorities, began to be adopted in the early 2010s and seems to be rapidly becoming more popular. Its use is probably helped by being a MeSH term (https://id.nlm.nih.gov/mesh/D000072339.html), although the current study ignored the article keywords (unless they also occurred in the title or abstract). These phrases are more inclusive and general than, for example, MSM, but can still be problematic in some contexts (Baker & Harris, 2020). Finally, the two phrases with the terms dissidents and diversity are both relatively rare. Papers about sexual dissidents seem to analyse contexts outside the Global North, such as countries with restrictive sexuality laws. The phrase "gender and sexual diversity" occurs most in the journal *Sex Education*, suggesting a narrow educational context.

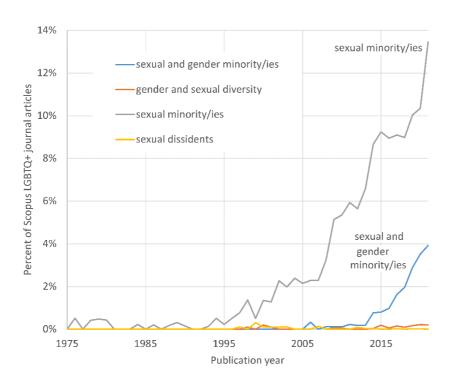


Figure 5. The percentage of Scopus LGBTQ+ articles matching inclusive phrases between 1975 and 2021.

Summary

As a reminder of the main limitations, the results relate only to English language Scopus-indexed journal articles. A substantial proportion of the LGBTQ+ literature may be written in other languages (e.g., Gómez-Gil et al., 2020) and be in other formats, such as books and book chapters, or be in literature not indexed by Scopus, for example because it is more nationally oriented.

The results show that LGBTQ+ research is rapidly increasing in prevalence in academia and that the terminology it uses is plural but evolving. Moreover, it seems to have embraced inclusive terminologies whilst mentions of homosexuality seem to be disappearing, which is a welcome development. These are all very positive trends from an LGBTQ+ perspective and represent a welcome and dramatic turnaround from the initial horrific, sinister, and destructive medicalised and deviance-based engagement of academia with LGBTQ+ identities.

The results also show that academic research employs a variety of terminologies combining specificity (e.g., trans man) and inclusivity (e.g., sexual and gender minorities) with origins in activist labels (e.g., LGBTQ+), health promotion or medical terminology (e.g., men who have sex with men) and academic theories (e.g., queering). Within this, a switch in focus from transexual to transgender terminology is particularly sharp, probably reflecting increased understanding and foregrounding non-medical issues. Clearly, no terminologies are currently dominant, with this plurality reflecting the differing needs of research and mostly an attempt to be supportive and inclusive in the use of appropriate words and phrases.

From a researcher, reviewer and editor perspective, the current plurality of terminology suggests that authors should have flexibility to choose appropriate words to describe the LGBTQ+ communities involved in their studies. Nevertheless, this conclusion is made from a purely numerical perspective, and it is important to understand

any controversy about the use of a lesser-used terminology (e.g., Young & Meyer, 2005) before deciding whether it is appropriate. For the *Journal of Homosexuality*, it has a name that was mainstream at its foundation in 1976 but is no longer seems current, at least in parts the Global North. In the context of academic journals, longevity is a marker of success and so the obsolescence of the name may have positive connotations as well as brand recognition. Many journals seem to retain obsolete names because of this (e.g., *Philosophical Transactions of the Royal Society*, many journals called *Acta...* or *Proceedings of the...*). Since the journal is international and readers can presumably understand from its articles that it is a supportive space, there does not seem to be a pressing need to change its name. In support of this, some LGBTQ+ organisations retain the term in their names (e.g., UK's Campaign for Homosexual Equality; Italy's Circle of Homosexual Culture Mario Mieli; Chile's Movimiento de Integración y Liberación Homosexual; France's Homosexualités et Socialisme). However, a name change might become inevitable if there is community pressure to eradicate outdated terminology with medicalised origins.

From a literature search (information retrieval) perspective, the plurality of terminology used for LGBTQ+ research makes the task of finding relevant literature difficult, and researchers should not assume that currently popular terminology would be used in all recent papers. The terms employed in the Scopus query of the current study might form a starting point for attempts at comprehensive literature searches for LGBTQ+ related issues.

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Appendix 1: Keyword query construction

A query for LGBTQ+ terms was obtained by starting with a set of 82 known terms (Lee et al., 2016), then expanding the list by (a) querying for them in Scopus and examining the list of keywords in the search results page to identify related terms, (b) checking MeSH for related terms, and (c) investigating Thesaurus.com. Each candidate word was assessed in Scopus for irrelevant synonyms or usage. Non-human uses were classed as irrelevant for these purposes. Terms were excluded if they generated many false matches. The term LGB was retained, despite a substantial minority of false matches, because of its importance. Articles matching LGB were manually filtered for irrelevant results.

The following terms were rejected for matching a nontrivial proportion of irrelevant articles: nonbinary, LBG, intersex, intersexual, androgenous, AC-DC, epicene, F2M, "female-to-male", "sex change", "sex reassign", "sex reversal" OR "sex transition" "male-to-female" M2F, gynandrous, hermaphroditic, hijra, monoclinous, MSM (Men

who have Sex with Men), queen, Sapphic, "swing both ways", "third gender", "third sex", "two-spirit". Insults were also excluded since they tend to be existing words and hence ambiguous (e.g., faggot, fruit). In addition, the terms homoerotic and homoeroticism was judged to be out of scope, albeit related to the topic here (e.g., *Proust's cup of tea: Homoeroticism and Victorian culture*). Similarly, heteronormativity and heteronormative were excluded because they sometimes were used in a way that was peripheral to the topic of an article (e.g., "...in the provisional digression from white patriarchal heteronormativity represented in these texts, moments of egalitarianism, intensity, and intimacy between the male and female leads are possible.": Kanjere, 2020). Homophobia and transphobia were excluded for not describing the LGBTQ+ community, albeit being directly related.

The term trans* is a wildcard in Scopus and cannot be used as a query (with or without quotes) because it would match any word starting with trans, such as transform. The term trans on its own also cannot be used as a query because even though it matches trans*, it also matches uses of the word in other contexts, such as "Dietary intake of trans fatty acids and breast cancer risk in 9 European countries" and it has too many matches (308,301 journal articles at the time of checking) to manually filter out the incorrect ones. Thus, it seems that no Scopus query can detect LGBTQ+ articles that only contain the terms trans* or trans. As a partial solution, a range of phrase queries like "trans man", "trans woman" and "trans person" were included that would capture some uses of these terms, including "trans* person". Nevertheless, the terms trans and trans* seem to be often used without a following person-related word (e.g., "Androgynous body ideal among trans and nonbinary individuals") and so some trans*-related articles may have been missed by the queries used if they contained no other LGBTQ+ terminology.

There are at least 800 English-language LGBTQ+ words or phrases (Davis, 2021), and so the above process may have overlooked some. For example, there are many LGBTQ+ subculture slang or evolving terms, such as ace, deadnaming, faghag, Goldilocks, gynosexual, and otter (e.g., www.montclair.edu/lgbtq-center/lgbtq-<u>resources/terminology</u>). There are also entire slang systems, such as Polari (Baker, 2003). Such words all seem likely to be rare in academic publications now since they were not found by the methods used here. They also seem likely to be accompanied by more mainstream terms in journal article titles or abstracts to introduce or contextualise them. Thus, the relatively unambiguous terms found are probably present in most LGBTQ+ research. The most notable current omission may be the word nonbinary (many false matches for mathematical uses), so it is included within phrases instead (e.g., "nonbinary person"), as a partial substitute. The queries probably overlook historical terminology, such as "urnings" (suggested after the article had been written) and "sex perversion" and "sexual deviant", which seem to have changed substantially in meaning over time. The queries also almost certainly overlook relevant identities and concepts used outside the Global North that only appear in a few academic studies. They also do not include intersectional terminology

Some of the queries generated a few non-human results, so the Scopus Veterinary Science and Agricultural and Biological Sciences categories were excluded by adding AND NOT SUBJAREA("AGRI") AND NOT SUBJAREA("VETE") to each Scopus query to further minimise these false matches.

TITLE-ABS(homosexual OR homosexuality OR homosexualities OR heterosexism OR homophile OR "non-heterosexual" OR nonheterosexual OR heteroflexible OR "same gender loving" OR "same sex attracted" OR gay OR "men who have sex with men" OR lesbian OR lesbianism OR "women who have sex with women" OR "women loving women" OR bisexual OR bisexuality OR bicurious OR lesbigay OR "same sex couple"

OR "same sex relationship" OR "same sex parenting" OR "same sex parents" OR "same sex marriage" OR GLBT OR GLBQ OR GLBTQ OR LGB OR LGBT OR LGBTQ OR LGBTI OR LGBTIQ OR LGBTQI OR LGBTQIA OR queer OR queering OR "Sexual minority" OR "Sexual minorities" OR "Sexual Dissidents" OR transgender OR transexual OR transsexual OR trans-sexual OR transexualism OR transsexualism OR "trans female" OR "trans woman" OR "trans women" OR "trans male" OR "trans man" OR "trans men" OR "trans people" OR "trans person" OR "sex transformation" OR "Sexual and Gender Minority" OR "Gender and Sexual Minorities" OR "Gender and Sexual Diversity" OR "sexual identity" OR "gender identity" OR "gender queer" OR genderqueer OR "gender reassignment" OR "gender transformation" OR "gender transition" OR "Gender Dysphoria" OR "nonbinary gender" OR "nonbinary person" OR "nonbinary people" OR "nonbinary patient" OR "non-binary person" OR "non-binary gender" OR "non-binary people" OR "non-binary patient") AND LANGUAGE("English") AND SRCTYPE(j) DOCTYPE(ar) SUBJAREA("AGRI") AND AND NOT AND **NOT** SUBJAREA("VETE")

Appendix 2: LGBTQ+ research publishing background

Overall, 0.15% of Scopus-indexed journal articles mention LGBTQ+ terms. Almost half the world's research mentioning LGBTQ+ terms in its title or abstracts is from the USA (48%), with the UK (9.8%) being a distant second (Figure A1). The four biggest publishers of LGBTQ+ research, USA, UK, Canada and Australia all author an above average share of this research, and there is relatively little from Mainland China, Italy, Germany, France, India and Japan for their amount of Scopus publishing. This could partly reflect their social science and humanities journals being less comprehensively indexed in Scopus, however. The dominance by the USA perhaps reflects a concern that LGBT studies may have taken on a Global North perspective and terminology rather than considering the needs and experiences of the global South (Pérez & Radi, 2020).

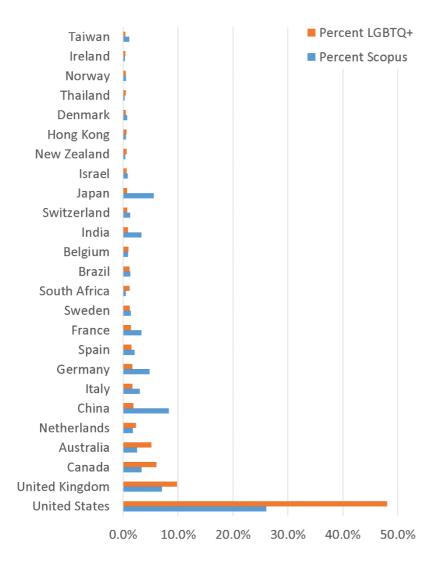


Figure A1. The percentage of Scopus-indexed LGBTQ+ journal articles, as of July 13, 2021, for the 25 countries with the most. Overall Scopus percentages are included for comparison.

Subject areas

LGBTQ+ research is numerically dominated by Medicine and Social Sciences, followed by Psychology and Arts and Humanities (Figure A2). The presence of Medicine is partly due to it being a huge category in Scopus, however. In terms of the proportion of a field's papers being LGBTQ+ research (i.e., the amount of LGBTQ+ research compared to the number of papers overall), Psychology leads the way (1.3%), followed by Social Sciences and Arts and Humanities. Nursing and Medicine also both disproportionately cover LGBTQ+ research.

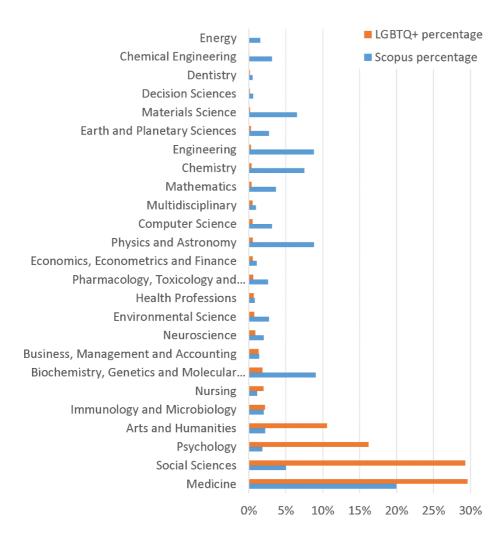


Figure A2. The percentage of Scopus-indexed journal articles that mention an LGBTQ+ term in their titles and abstracts by Scopus broad field (excluding Agriculture and Veterinary), as of July 13, 2021. Overall Scopus percentages are included for comparison.

Main journals

The academic journals publishing the most LGBTQ+ research are LGBTQ+ specialist, AIDS journals, related to sexuality or sexually transmissible diseases, or about public health (Figure A3). Perhaps surprisingly, no general mega-journals (e.g., *PLOS One*, joint 44th with 179 articles) or prestigious general medical journals (e.g., *Lancet*, joint 54th with 130 articles) are in the top 25.

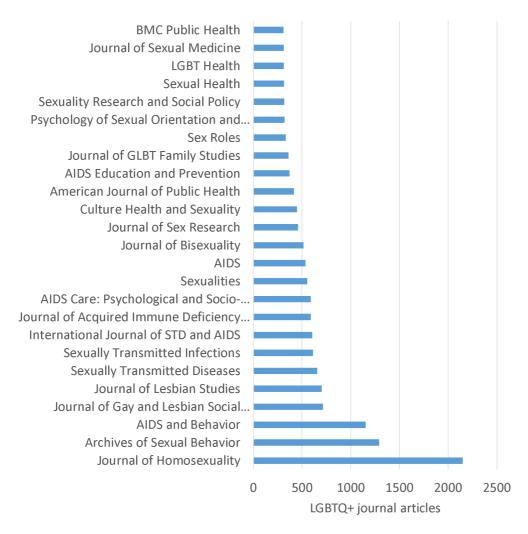


Figure A3. The number of Scopus-indexed journal articles that mention an LGBTQ+ term in their titles and abstracts by publishing journal, as of July 13, 2021, for the 25 journals with the most such articles.