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Diverging Trajectories?

Educational Stratification and Life Opportunities of LGB Adolescents

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ABSTRACT

Sexual orientation has increasingly gained attention in public debate and sociological research, not least because the share of individuals who identify and openly report as LGB(TQIA*) is steadily growing. Yet, educational inequalities, one of the main roots of social stratification, remains understudied among LGB people. Existing literature has primarily focused on the United States, leaving cross-national differences largely unexplored, and is often constrained by data limitations that hinder the study of the mechanisms through which sexual orientation shapes educational outcomes and life opportunities. The aim of this dissertation is to examine the relationship between sexual orientation, educational outcomes and life opportunities, with particular attention to changes over time and across cohorts. Beyond documenting differences, it investigates the mechanisms behind educational “premium”, the role of different social contexts, and how educational advantages or penalties translate into later-life outcomes. Most of the analyses focused on the UK as longitudinal (UKHLS) and cohort studies (MCS, BCS70, Next Steps) data collecting information on sexual orientation for this country are publicly available. One chapter offers a cross-country comparative perspective using a non-representative dataset (FRA EU LGBTQI II study). The empirical chapters explore: (1) the sexual identity development of LGB people in Europe, focusing on age at self-disclosure and at first coming out; (2) the educational outcomes of UK adolescents (i.e., grades, subject choices, and expectations of entering university) and the mechanisms through which the interaction of gender and sexual identity shapes them; (3) how the educational “premium” of LGB people have changed across cohorts in the UK and how changes in their family and school environments help explain these shifts; and (4) the disparities in partnership outcomes (i.e., union formation and timing to first coresidential partnerships) by sexual identity and education among adult UK people. Together with the theoretical chapters, this dissertation as a whole contributes to rethinking education as a central dimension in the stratification of LGBTQIA* lives and in shaping broader life chances.

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INTRODUCTION

Sexual orientation remains an understudied dimension in demographic and quantitative social research, despite the increasing visibility and social recognition of the Lesbian Gay Bisexual Trans* Queer Intersex Asexual (LGBTQIA*) community. This gap is particularly striking in consideration of the extensive evidence that sexual orientation significantly shapes individuals' social experiences, life chances, and exposure to inequality (Badgett et al., 2021). To trace the roots of these inequalities, this thesis explores how sexual orientation intersects with educational attainment to shape individuals' adult opportunities and outcomes.

For much of modern Western history, following the cultural dominance of the Church, non-heterosexual behaviours were pathologized, and individuals who did not conform to heterosexuality were marginalized and stigmatized due to prevailing cultural norms (Bullough, 1979; Klein et al., 1985). As a result, *homosexuality* was primarily studied as a medical and psychological issue until 1973, when the American Psychiatric Association removed it from the list of mental disorders in the second edition of the “*Diagnostic and Statistical Manual*” (DSM) (Drescher, 2015). More recently, with the contribution of the reflections of feminist movements (Badgett, 1995) and the rise of LGBTQIA* rights movements (Digoix, 2020a), social scientists have increasingly embraced research on sexual orientation and sexuality.

Quantitative social research has been slow to incorporate sexual orientation as a dimension of analysis. While demographers have long been interested in sexuality in relation to fertility and reproduction, sexuality understood as sexual orientation has rarely been examined in terms of its broader social consequences (Baumle, 2013). Yet, as Compton (2013:257) notes, “sexual orientation does have an effect on demographic processes and [individuals'] life outcomes”. It is reasonable to suppose that sexual orientation shapes key life-course behaviours and decisions, such as family formation, fertility, employment, and educational trajectories, so that the life-course trajectories for non-heterosexual people may systematically diverge from those of heterosexual peers. Since same-sex couples are not fertile, for instance, childbearing and parenthood depend heavily on the legal framework (Patterson, 2013; Waaldijk, 2020). Similarly, non-heterosexual individuals may select jobs (Plug & Berkhout, 2004; Zindel & De Vries, 2024) or academic tracks (Hughes, 2018a; Lehtonen, 2010) based on the perceived inclusiveness towards non-heterosexuality of their work or study environments. In this sense, sexual orientation cannot be reduced to private sexual behaviour (Coleman, 1987) but must also be understood as a social identity, shaped by processes of categorization, self-definition, and interpersonal interaction (Cox & Gallois,

1996). Addressing the social and demographic dynamics through which sexual orientation exerts influence, and their evolution over time, is crucial to understanding the trajectories and opportunities of non-heterosexual individuals.

In the last decades, sociological research has shown that sexual orientation influences multiple domains of life, including employment, income, family formation, and education (Badgett et al., 2021; Denier & Waite, 2019; Meyer, 2003; Mittleman, 2022; Reczek, 2020). Evidence indicates, for example, that gay men tend to earn less than heterosexual men, while lesbian women tend to earn more (Black et al., 2003; Drydakis, 2022); that same-sex couples are less likely to marry and face higher risk of divorce (Andersson et al., 2006; Cortina & Festy, 2020); and that educational trajectories also diverge, with gay men and older cohorts of lesbian women often achieving higher educational attainments than heterosexual men (Mittleman, 2022).

Despite these findings, little is known about how sexual orientation stratifies educational outcomes outside the United States, the mechanisms underlying this relationship, whether and how such mechanisms have evolved over time, and whether educational advantages can subsequently influence adult outcomes or buffer against disadvantages. To address this gap, this dissertation empirically investigates the relationship between education and sexual orientation, with a particular focus on sexual identity and educational outcomes within the European context. Specifically, it examines how sexual orientation shapes the educational choices and achievements of LGB(TQIA*) students and how these patterns, embedded within broader social structures, may have changed across cohorts, influencing adult outcomes and the life-course trajectories of non-heterosexual people. More broadly, this study offers insights into the roots of inequality in adulthood, by exploring the contextual (spatial and temporal) and identity-based (gender and mono- vs. bi-sexuality) heterogeneities.

The relevance and significance of this research are supported by three main considerations. First, educational transitions are a central mechanism of social stratification. While each life transition generates opportunities and constraints that influence subsequent stages (Elder et al., 2003), educational transitions are particularly relevant for subsequent outcomes since they occur early in life and strongly determine later outcomes such as employment, earnings, and well-being (Breen & Goldthorpe, 1997; Kerckhoff et al., 2001). Conventional explanations of educational inequality often emphasize differences in school quality or resources (Borman & Dowling, 2010; Downey et al., 2004). These may be less directly relevant to LGB(TQIA*) students, but other mechanisms, such as stigma, biased teacher evaluations, and self-selection into specific tracks or fields of study (Birkett et al., 2009; Hughes, 2018a; Lehtonen, 2010; Mittleman, 2019; Pearson et al., 2007; Sansone &

Carpenter, 2020), are particularly salient. Investigating these dynamics allows this study to position sexual orientation as a factor of social stratification, offering a new and different point of view on traditional approaches to educational inequality.

Second, the interplay between gender and sexual identity provides a unique lens for understanding educational stratification. Sexual orientation and gender are deeply intertwined: sexual orientation is often perceived as a “gendered phenomenon” insofar as it challenges conventional gender role expectations and stereotypes (Henry & Steiger, 2022; Pascoe, 2007). To fully capture the life-course implications of sexual orientation (Carpenter, 2015), it is therefore necessary to consider gender and sexuality as mutually (re)produced in everyday interactions. This approach enables sexual orientation to be a powerful tool to disentangle the mechanisms through which gender (and gender norms particularly) influence educational outcomes among students. Examining gendered variation within sexual orientation (and vice versa) advances theoretical understandings of educational stratification, moving beyond binary conceptions of gender to recognize the interconnectedness of gender norms, sexuality, and sexual orientation.

Third, focusing on European contexts allows for the exploration of contextual variability. Research on the relationship between sexual orientation and education has been limited to the United States, and findings may not generalize to other institutional and cultural settings. Descriptive evidence from Europe suggests that the relationship between sexual identity and educational attainment varies across settings (Aksoy et al., 2018; Sabia et al., 2017; Waite et al., 2020), but these studies often lack covariates. By systematically investigating patterns across European countries and cohorts, this dissertation contributes to identifying when and how sexual orientation functions as a stratification factor, while also illuminating the cultural variability in the meanings and consequences of gender and sexual identities.

Building on these theoretical considerations, this dissertation combines conceptual discussions with empirical analyses to examine how sexual orientation intersects with education in shaping life-course outcomes. Specifically, the thesis consists of two conceptual and theoretical chapters, followed by four empirical analyses.

The first chapter, “*Framing the topic: Sexual orientation and educational (in)equalities*”, introduces the theoretical foundations of the dissertation by reviewing the main theories related to educational inequality and the study of sexual orientation. It then summarizes key insights from existing research on LGB inequalities in education and discusses the mechanisms that have been proposed to explain differences in educational attainment. Building on this discussion, the chapter advances the argument for why and how sexual

orientation may shape educational outcomes and develops the theoretical framework that underpins the thesis.

The second chapter, *“Methodological issues in studying the LGBTQIA* population”*, addresses the conceptual and methodological challenges of conducting quantitative research on LGBTQIA* people. It discusses the terminology employed throughout the dissertation, and examines issues of measurement, estimation, and the broader implications of non-heterosexuality for research design and analysis.

The third chapter, *“The demography of sexual identity development and disclosure in Europe”*, offers a systematic exploration of when LGB individuals across Europe recognize and disclose their sexual identity. Using the 2019 EU LGBTI II Survey, it examines the age at self-disclosure and first coming out, and how these vary across cohorts, countries, and sexual identities. By documenting these patterns, it provides insights on the development of sexual identity and its heterogeneities in Europe and offers an essential empirical foundation for understanding sexual orientation as a stratification factor.

The fourth chapter, *“Educational Outcomes of UK LGB and Heterosexual Adolescents: Exploring Gendered Differences and Mechanisms”*, investigates how sexual orientation shapes educational achievements and aspirations in the UK. Using data from the Millennium Cohort Study, it compares grades, subject choices, and university expectations of heterosexual and LGB students aged 16 to 18. The chapter provides the first evidence on the relationship between education and sexual identity in a cohort of young LGB students in the UK and highlights the complex interplay between sexual identity and gender in shaping educational outcomes.

The fifth chapter, *“LGB Students’ Educational Premium in Context: Mechanisms and Change across Two UK Birth Cohorts”*, examines the school and family environments of LGB adolescents across two birth cohorts and investigates whether the relationship between sexual identity and educational outcomes has changed over time. Drawing on two birth cohorts from the UK Household Longitudinal Study, the chapter examines how the interplay of sexual identity, gender, and contextual factors shapes the mechanisms underlying LGB educational inequalities, offering new insights into how these mechanisms operate and why educational advantages may vary across cohorts.

The sixth chapter, *“Partnership Disparities between UK LGB and Heterosexual Adults: Chances and Educational Gradients”*, examines whether LGB individuals differ from heterosexual peers in partnership outcomes in the UK. The chapter also investigates the role of educational attainment in shaping these outcomes. Drawing on longitudinal data from the UK Household Longitudinal Study, the chapter examines differences in partnership likelihood

and timing of first co-residential unions across sexual identities, education levels, and cohorts. These findings provide a nuanced understanding of how sexual identity shapes adult partnership dynamics, and how educational attainment is associated with these patterns.

Throughout this thesis, I use the acronym LGBTQIA* when discussing broader conceptual issues, to acknowledge that the mechanisms examined are rooted in heteronormativity and may extend to diverse sexual and gender identities. In some theoretical frameworks, I refer to LGB(TQIA*) to indicate that theories developed primarily on lesbian, gay, or bisexual populations may also apply to other LGBTQIA* individuals. However, due to data availability and sample size constraints in large-scale surveys, the empirical analyses focus on a more limited set of identities and primarily distinguish between lesbian, gay and bisexual individuals (hereafter, LGB). The use of the term LGB in empirical chapters should therefore be understood as reflecting data limitations rather than a conceptual exclusion of the wider LGBTQIA* population.

Overall, this dissertation aims to provide a comprehensive understanding of how sexual orientation intersects with educational outcomes in the UK. By combining theoretical insights with rigorous empirical analysis, it offers new evidence on sexual orientation as a dimension of social stratification, examining how it interacts with contextual changes and contributes to the persistence of inequalities into adulthood.

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CHAPTER 1.

FRAMING THE TOPIC: SEXUAL ORIENTATION AND EDUCATIONAL (IN)EQUALITIES

Empirical research on Lesbian, Gay, Bisexual, Transgender and non-binary, Queer, Intersexual and Asexual (LGBTQIA*¹) people was scarce until the last couple of decades (Beattie et al., 2021; Pearson & Wilkinson, 2018; Renn, 2010). The inclusion of measures of sexual identity in large-scale representative surveys has allowed research to quantify differences in socioeconomic outcomes between heterosexual and non-heterosexual people (Badgett et al., 2021; Fischer et al., 2022). As a result, empirical evidence on sexual orientation has steadily increased, suggesting that sexual identity may have a non-negligible impact on a variety of sociological and demographic outcomes (Baumle, 2013), including educational outcomes.

Research on the school experiences of non-heterosexual students (Birkett et al., 2009; C. S. Carpenter, 2009; Pearson et al., 2007) highlights several difficulties, including stigma and emotional distress (McBrien & Rutigliano, 2022). However, findings on educational attainment are mixed. Some studies show that certain LGBTQIA* individuals - particularly gay men - are more likely to earn tertiary degrees compared to heterosexual peers (Black et al., 2000; Mittleman, 2022). These findings hold for lesbian women only in older cohorts, while for bisexual women they hold only in some countries (Boertien et al., 2023; Mittleman, 2022). Moreover, differences in educational attainment occurred by sexual identities' disclosure, stability, and lifecourse timing (McQuillan, 2017; Ueno et al., 2013; Walsemann et al., 2014; Watson et al., 2015). Hence, outcomes vary by personal characteristics, cohort and country.

Despite this growing body of research, several LGBTQIA* identities remain comparatively understudied within the field of Sociology of Education (Pearson & Wilkinson, 2018) and many of the questions remain unanswered. For instance, it is not clear (1) how sexual orientation is similar (or how it differs) from ascribed factors in working as a stratification factor, (2) what is the potential influence of education in shaping diverging life trajectories or moderating discrimination, and, finally, (3) which are the heterogeneities of these effects both at the individual-level (by identities) and at the relational- and contextual level.

¹ In this chapter, I will use LGBTQIA* terminology for theoretical purposes, as I believe many arguments may extend to identities beyond LGB, including the transgender and non-binary populations. Nevertheless, due to data limitations, the empirical analyses in subsequent chapters will primarily focus on LGB identities.

To begin addressing these questions, before delving into empirical evidence, it is first necessary to engage in theoretical building to frame subsequent insights within a broader conceptual framework. Accordingly, this chapter is structured as follows: I will start by introducing the core theoretical perspectives that inform this thesis. Then I will review existing research, highlighting key findings as well as notable gaps and limitations, and finally propose a unifying framework to better understand the relationship between education and sexual orientation.

1.1 THEORIES OF REFERENCE

The association between sexual orientation and educational choices is not immediately straightforward. Why sexual orientation should stratify education or, why lesbian, gay or bisexual pupils should end in different educational paths than their peers?

To build a theoretical framework that addresses this question, I draw on two sets of literatures: general theories of educational stratification and lifecourse perspective and theories focused on sexual identity and minority stress.

1.1.1 EDUCATIONAL STRATIFICATION AND RATIONALITY-BASED MODELS

Although education is often viewed as a means for equal opportunity, studies across Western countries consistently demonstrate persistent inequalities in educational outcomes based on ascribed characteristics—particularly social class, gender, and race/ethnicity (Breen & Goldthorpe, 1997; Lefranc et al., 2008; Shavit & Blossfeld, 1993). These inequalities, often referred to as “*inequality of opportunity*” (Van De Werfhorst & Mijs, 2010), manifest both *vertically* (differences in attained levels of education) and *horizontally* (differences in field of study). They result from both structural barriers (e.g., *tracking*) and individual choices, making theories of action useful for partially understanding educational stratification.

Rational Choice Theory (RCT) is one of the most widely used models in this domain. It conceptualizes educational careers as a sequence of decisions based on a cost-benefit analysis of each alternative. This analysis incorporates perceived costs, expected success, and the utility of each path for the individual and their family (Breen & Goldthorpe, 1997), often formalized through the mechanism of Relative Risk Aversion (RRA). While widely applied (Beekhoven et al., 2002; Breen et al., 2014), RCT assumes full rationality and underestimates the impact of structural and psychological constraints (Boudon, 2003).

The Lifecourse Perspective offers a more nuanced approach by embedding students’ decisions within a series of biographical transitions shaped by social roles and contextual constraints (Pallas, 2003). It recognizes that choices are influenced by both external conditions (e.g., social norms, contextual constraints) and individual preferences which

depend on social identities and roles that are shaped through past experiences future expectations and the interplay between various life domains they are nested in (Carpenter, 2015).

The Theory of Conjunctural Action (TCA) expands this perspective by emphasizing that choices are not merely reactions to structural constraints, and that the relationship between individual agency and structure is not necessarily unidirectional. Choices are shaped by how individuals interpret their social environment and imagine possible futures. TCA thus allows for agency, as well as creative or disruptive actions in response to constraints (Johnson-Hanks et al., 2011).

Taken together, the lifecourse and TCA frameworks provide a rich, context-sensitive understanding of educational choices that accommodates both rational and non-rational processes. However, to explain patterns specific to LGBTQIA* youth, we must go further by exploring how non-heterosexual identities are experienced, and how stigma, both individual and structural, shapes perception and choice within educational pathways.

1.1.2 STRUCTURAL STIGMA AND MINORITY STRESS THEORY

Structural stigma refers to societal-level conditions, norms, and institutional policies that constrain the lives of stigmatized groups (Hatzenbuehler & Link, 2014). Originally applied to racial discrimination, it has been extended to the LGBTQIA* population as well (Hatzenbuehler, 2016). Unlike individual or interpersonal stigma, structural stigma affects entire groups regardless of whether individuals experience direct discrimination. It shapes the cultural environment, influencing how LGBTQIA* people perceive opportunities, internalize expectations, and make decisions, even in seemingly neutral settings. In educational settings, this can manifest through curricula that assume heterosexuality and limited or unequal support structures. As such, it operates as a contextual moderator of psychological processes, deepening our understanding of how identity and stigma intersect in shaping life outcomes.

Similarly, at the individual level, minority stress theory² (Meyer, 1995, 2003) posits that non-heterosexual individuals face unique stressors stemming from the conflict between their sexual orientation and dominant cultural norms. These include not only direct discrimination but also subjective responses to societal narratives and expectations such as perceived stigma and internalized homophobia. Such stressors can strongly influence decision-making of LGBTQIA* people, including students in their educational careers (Beattie et al., 2021).

² While “*Minority Stress Theory*” is only briefly mentioned here, it will be explored in more detail in Chapter 2, as part of the discussion on the social implications of non-heterosexuality.

These broader theories help to shed light on how LGBTQIA* individuals perceive and respond to their social environments. Notably, they recognise that similar situations can lead to different responses, cautioning against assumptions of uniform effects across LGBTQIA* identities.

Building on these insights, we now turn to the literature on LGB(TQIA*) stratification in education, examining how sexual orientation may contribute to different educational outcomes for LGB(TQIA*) individuals.

1.2 EDUCATION AS A DISADVANTAGE FOR THE LGBTQIA* POPULATION?

Educational systems play a dual role in preparing adolescents for the transition to adulthood. They not only teach essential skills and knowledge for the job market but also social norms and values (Van De Werfhorst, 2014). However, despite the ideal of promoting equal opportunities for all, educational attainment is often stratified by factors other than individual merit (Palmisano et al., 2022). Education remains one of the primary channels through which social inequality continues to be reproduced (Brennan et al., 2013; Elo, 2009; Kerckhoff et al., 2001; Van De Werfhorst, 2014).

In a world that is still strongly heteronormative, LGBTQIA* students may face unique disadvantages within schools, which could be a challenging environment for them to navigate (Pearson & Wilkinson, 2018). Frequent discrimination, exclusion and judgment potentially impact the educational outcomes of LGBTQIA* individuals (Mcbrien & Rutigliano, 2022) and contribute to the emergence of mechanisms of differentiation and stratification in adult trajectories (Pearson & Wilkinson, 2017). While understanding these dynamics is fundamental to unravelling the disparities in life trajectories (Pallas, 2003), previous research on the relationship between sexual orientation and education revealed more nuanced patterns, that cannot be reduced solely to disadvantage.

On one hand, research on educational experiences of non-heterosexual pupils has found a higher likelihood of experiencing stigma and emotional distress among LGBTQIA* students in high school compared to heterosexual students (Mcbrien & Rutigliano, 2022; Pearson et al., 2007) and “systematically different [...] experiences” (Carpenter, 2009:702) in terms of satisfaction, social networks and extracurricular activities at university. On the other hand, research on educational attainment highlights the existence of a sort of “*educational premium*” for (some) non-heterosexual respondents. Gay men, in particular, were consistently found more likely to hold tertiary degrees compared to heterosexual men (Mittleman, 2022).

1.2.1 INSIGHTS FROM PREVIOUS LITERATURE ON LGB EDUCATIONAL PREMIUMS

Early quantitative research generally found that individuals in same-sex couples had higher educational attainment across several countries, including Canada, France, Norway, Sweden, the UK, and the US (Andersson et al., 2006; Arabsheibani et al., 2005; D. Black et al., 2000; Laurent & Mihoubi, 2012; Verbakel, 2013; Waite & Denier, 2015). However, these studies were limited to partnered individuals, as they relied on comparisons between same-sex and different-sex couples. Such samples may allow for research questions pertaining to the partnership sphere, but they are inherently limited to people in relationships, thereby excluding by design single individuals (Fischer et al., 2022), and may differ systematically from them in terms of socioeconomic resources (Carpenter & Gates, 2008).

Subsequent studies using measures of sexual identity- typically distinguishing *bisexual*, *gay/lesbian*, and occasionally “*other*” identities - revealed more nuanced patterns. In the US, bisexual men and women were found to have lower educational attainment than their heterosexual peers (Mittleman, 2022; Mollborn & Everett, 2015). In Germany, LGB individuals showed a general educational advantage (de Vries et al., 2020), whereas in Australia and Canada, bisexual individuals had lower attainment - except for bisexual men in the UK (Sabia et al., 2017; Waite et al., 2020). Other UK-based studies have found bisexual individuals to be more educated than both heterosexual and gay/lesbian individuals (Aksoy et al., 2018), or have shown no significant differences when controlling for age (Uhrig, 2015).

Overall, while an educational premium is often observed for gay and lesbian individuals, findings for bisexual people are more inconsistent and appear to vary across national contexts and, particularly for lesbian women, across cohorts. Additionally, two studies exploring identities beyond LGB found that asexual individuals had lower educational attainment (controlling for covariates), while queer individuals (without controls) had higher attainment (S. K. Goldberg et al., 2020; Poston & Bauble, 2010).

In sum, the idea of a general educational advantage among LGB people is more difficult to sustain once results are disaggregated by gender, identity, cohort, and national context. The recurring evidence of both between- and within-group differences highlights the complexity of the relationship between sexual identity and educational attainment, and the need for more detailed, intersectional research.

1.2.2 PROPOSED MECHANISMS FOR DIFFERENCES IN EDUCATIONAL CHOICES BY SEXUAL IDENTITY

Previous research has proposed several mechanisms to explain differences in educational attainment by sexual identity.

A first set of explanations points at the role of “selective disclosure” of sexual identities (Barrett et al., 2002; Barrett & Pollack, 2005). Individuals from more privileged socioeconomic backgrounds have greater access to economic and social resources and operate within environments that may be more tolerant than those of individuals from lower socioeconomic backgrounds (Mollborn & Everett, 2015). These factors can increase both the likelihood of attaining higher levels of education and of identifying as LGB (Barrett & Pollack, 2005). As such, this explanation may reflect a spurious association between sexual identity and educational attainment, or point to reverse causality, whereby greater academic success facilitates acknowledgment and disclosure of sexual orientation (Barrett et al., 2002).

A second set of explanations, known as the “*best-boy in the world hypothesis*” (Pachankis & Hatzenbuehler, 2013), posits that LGBTQIA* people - particularly men - seek to validate their identities and find approval from parents, peers, and teachers through academic performance in contexts where non-heterosexual identities are stigmatized. Even though this hypothesis can apply to all LGBTQIA* groups, the hypothesis has been primarily used to explain the higher educational attainment of non-heterosexual men. Arguably, non-heterosexual identities are particularly incompatible with hegemonic norms about masculinity (Mittleman, 2022), which can make academic effort an effective strategy for non-heterosexual men to derive self-worth in an easily accessible domain and simultaneously divert stigmatic attention from their identities (Mittleman, 2022; Pachankis & Hatzenbuehler, 2013).

A third explanation, which could be designated as the “*status attainment hypothesis*”, suggests that LGBTQIA* individuals invest in education as a strategy to escape discriminatory environments and access universities that they perceived as more tolerant and inclusive (Barrett & Pollack, 2005; Mollborn & Everett, 2015; Taulke-Johnson, 2010). Education is also viewed as a buffer against future discrimination, offering credentials to anticipate potential discrimination in the hiring process and self-selecting out of certain occupations that tend to exhibit higher levels of discrimination (Black et al., 2003; Finnigan, 2020; Zindel & De Vries, 2024).

Beyond these general mechanisms, Mittleman (2022) introduces an additional explanation. The study proposes that educational attainment differences between contemporary cohorts of gay boys and lesbian girls could be attributed to gendered educational expectations about school performance and non-adherence to hegemonic gender norms. Lesbian students may feel less compelled to conform to the “female-high-achiever” and “good girl” stereotypes, which can lead to both lower rewards and higher sanctions from teachers (Mittleman, 2022).

Conversely, gay students who distance themselves from hegemonic masculinity may avoid the associated costs of masculinity and receive higher rewards from teachers (Mittleman, 2022; Pachankis & Hatzenbuehler, 2013).

While these explanations offer valuable insights, they remain limited in scope, being often universal, ahistorical, and decontextualized, and they fail to fully capture the diverse experiences of LGBTQIA* (Beattie et al., 2021; Greathouse et al., 2018; Mittleman, 2022; Murdock & Bolch, 2005). Theories on LGBTQIA* life courses often emphasize that to fully account for stratification based on sexual orientation, it is necessary to consider heterogeneities in the development and meaning of sexual identities as well as the way in which they are experienced by the single individual (McQuillan, 2017; Meyer, 2003; Ueno et al., 2013). Yet the same theories continue to be centred on gay men, offering little explanation for the disparities affecting other identities, such as bisexual people, lesbian girls, or younger cohorts, especially outside the United States.

As a result, in the following section, I will take a step back from these explanations and try to develop a new theoretical framework. This framework will draw upon insights from various perspectives and build upon the mechanisms previously discussed, aiming to provide a comprehensive understanding of the relationship between sexual orientation and education, as well as variations across diverse geographical, social, and temporal contexts.

1.3 THEORETICAL FRAMEWORK

As Sigle (2021) argues, there is an urgent need for theoretical frameworks that better reflect the lives of marginalized groups. Yet, demography and sociology still rely on sex/gender role models that treat gender as a static individual-level trait (Ferree, 2010; Sigle, 2021), overlooking how gender - and, by extension, sexuality - is shaped through interaction and embedded in institutional structures (Choo & Ferree, 2010; West & Zimmerman, 1987).

Building on the mechanisms and theories discussed in the previous sections, I will attempt to provide a framework which explains how sexual orientation may shape educational choices while accounting for variations by gender, sexual identity, and social context.

1.3.1 SEXUAL ORIENTATION AS A STRATIFYING FACTOR: FROM SOCIAL IDENTITY TO SOCIAL POSITION

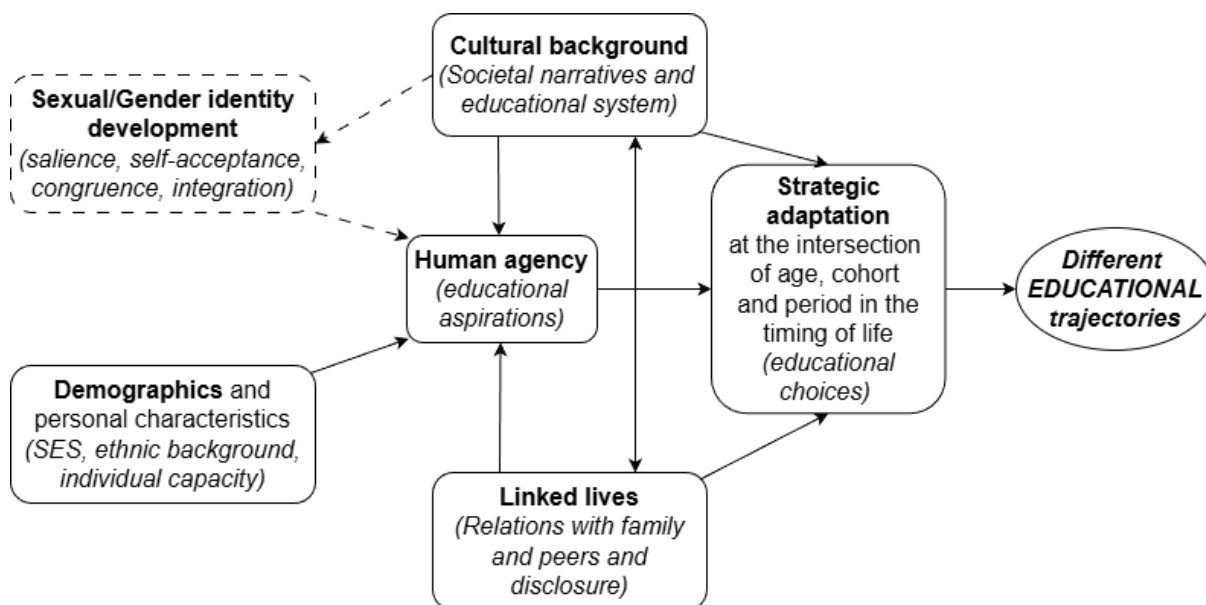
Sexual orientation can be considered as a stratifying factor in education for two main reasons. First, many LGBTQIA* individuals begin developing their sexual identities during adolescence - the same period when key educational transitions take place (Hall et al., 2021). Second, from a life course perspective, educational choices are shaped not only by

formal constraints, but also by social identities and aspirations formed through experience and context (Carpenter, 2015; Pallas, 2003). In this light, sexual identity can shape educational decisions and outcomes in ways similar to more “*traditional*” ascribed factors, contributing - consciously or not - to divergent trajectories in their life courses.

Building on this insight, a life-course perspective highlights how social identities and individual experiences unfold over time in an intertwining way. These processes shape agency and educational trajectories within broader social and institutional structures. In this context, what appears as an individual choice is not solely the product of intra-individual mechanisms such as self-efficacy or motivation, but rather the outcome of a complex structure in which multiple factors interact.

Figure 1 illustrates how this logic applies to the educational trajectories of LGBTQIA* students, showing that human agency and educational aspirations are shaped by sexual identity development, demographic characteristics, and the relational and institutional contexts in which students are embedded. These factors interact to shape strategic adaptations at key educational transitions across age, cohort, and historical period. In this regard, educational choices of LGBTQIA* students should be understood as dependent on intersections of identities, demographics (Meyer, 2003; Squire & Mobley, 2015), and social contexts over which individuals have limited control (Giele & Elder, 1998).

Figure 1: Mechanisms of decision-making of LGBTQIA* students based on their social positioning. Applying Theory of Conjunctural action and life course perspective to the process of educational choices of LGBTQIA* students.



Adaptation from (Giele & Elder, 1998)

To refine the life-course logic, we can simplify the interrelated dimensions in Figure 1 by recognizing that social identity emerges from occupying a social position, defined as a place in society shaped by structural and relational factors. The next paragraph brings these perspectives together, showing how the dimensions in Figure 1 can inform a conceptualization of sexual orientation as a social position that, in turn, shapes LGBTQIA* decision-making.

1.3.2 MECHANISMS IN CONTEXT: A THREE-LEVEL FRAMEWORK

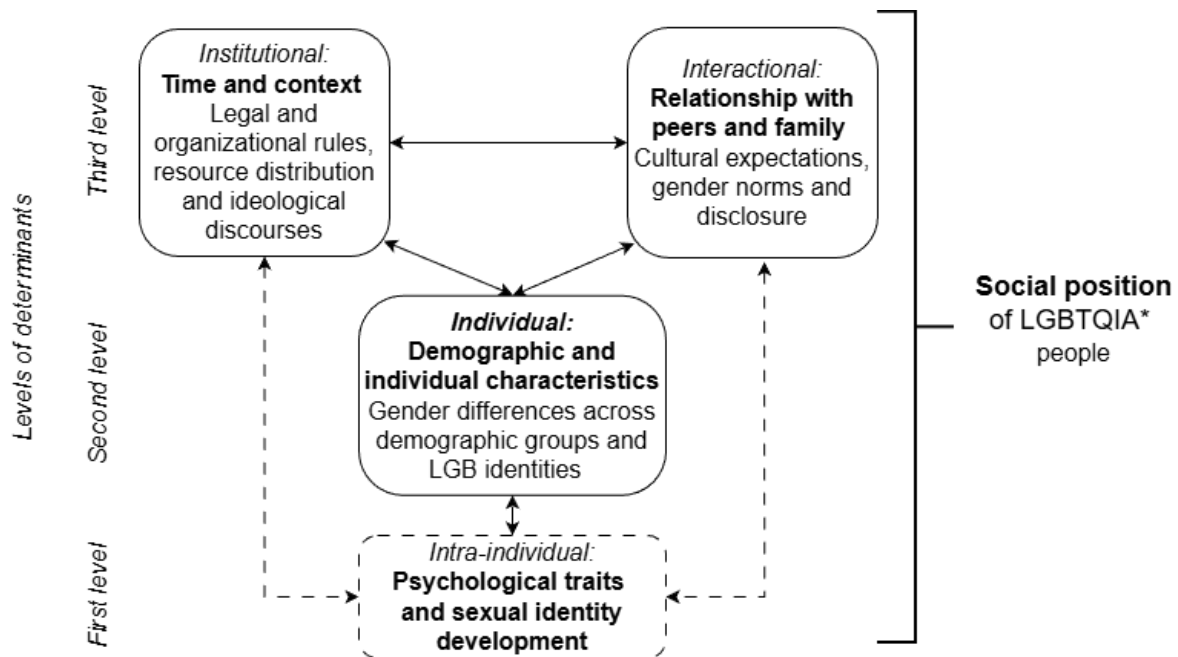
Following Beattie et al. (2021), I propose a theoretical framework that conceptualizes sexual orientation as a social position. Building on the dimensions illustrated in Figure 1, this framework translates them into analytically distinct levels of determinants (Figure 2), which collectively create each student's social position. This social position, emerging from the interaction of structural and relational constraints, in turn shapes educational trajectories.

Looking at Figure 2, the first level includes individual psychological factors, which sociology can only address theoretically (Beattie et al., 2021). These involve motivations such as self-worth, resource accumulation, and discrimination avoidance—key mechanisms in explaining educational advantages among LGB individuals (Barrett & Pollack, 2005; Mittleman, 2022; Pachankis & Hatzenbuehler, 2013). Perceptions of relationships, disclosure levels, and presumed heterosexuality act as psychological stressors or buffers, influencing school experiences and motivation (Beattie et al., 2021; Meyer, 2003). Open identification, in contrast, can increase exposure to bullying, reducing engagement and achievement (Pearson et al., 2007).

The second level reflects group-level differences in demographics and identities. For example, LGB boys and girls face different normative pressures linked to gender (Mittleman, 2022), bisexual individuals encounter distinct stereotypes (Mize, 2016), and sexual identity intersects with ethnicity, class, and age in ways that shape outcomes.

The third level concerns relational and contextual factors. LGB individuals are embedded in relational networks and respond to social feedback from family, peers, and broader environments (Campbell & Perales, 2022). Contextual support or rejection can affect identity formation and educational engagement (Campbell & Perales, 2022; Murdock & Bolch, 2005). Additionally, cohort effects, evolving legal frameworks, and shifting societal attitudes toward LGBTQIA* people reshape how identity and context interact over time (Carpenter, 2015; Dunlap, 2016; Flores, 2014). Finally, living in more heterosexist or inclusive contexts may strongly influence educational outcomes (Beattie et al., 2021).

Figure 2: Conceptualization of sexual orientation as a social position shaped by three level of determinants.



I argue that by explicitly distinguishing between different levels of explanation, we can move from broad, universal explanations to specific identity- and context-based situations and back to general interpretations. This approach enables us to shift across levels of abstraction and better apply explanations to diverse experiences.

Educational choices, from this perspective, emerge within social positions shaped by identities, relationships, contexts, and historical moments (Figure 2). These positions structure individuals' understanding of the world and interact with mechanisms guiding decision-making. By integrating these elements, the framework captures how variation in identity, gender, and context influences educational trajectories.

1.3.3 WITHIN-GROUP DIFFERENCES: GENDER AND SEXUAL IDENTITIES

While the theoretical framework proposed integrates the determinants shaping LGBTQIA* students' social positions, it is important to closely examine how within-group differences, particularly across genders and across sexual identities, may influence educational outcomes. The hypotheses proposed by previous literature either do not explicitly engage with gender differences within LGB populations or focus primarily on gay men, excluding other identities (Barrett et al., 2002; Barrett & Pollack, 2005; Pachankis & Hatzenbuehler, 2013). Nonetheless, there are strong theoretical reasons to expect gender and sexual identities - particularly bisexuality - to shape educational processes in distinct ways, either

moderating the relationship between sexual identity and educational outcomes, or through distinct mechanisms.

LGB women and men are subject to different forms of social pressure and stigma (Mize & Manago, 2018), which shapes social narratives, relationships with parents and peers, and processes of sexual identity development (Doan & Mize, 2020; Hall et al., 2021; Littleton, 1996; Munro et al., 2019). Furthermore, education itself is a gendered institution, with different social meanings and expected returns for men and women (Kalmijn, 2013; Torche, 2011; Van Bavel et al., 2018). As a result, similar mechanisms – such as parental expectations, school engagement, or coping responses to stigma – may operate differently for LGB women and men. For instance, Mittleman (2022) argues that for gay men, educational achievement may function as a compensatory or protective strategy in response to stigma, as distancing oneself from stereotypes associated with boys' underperformance in school can be socially rewarded (Pachankis & Hatzenbuehler, 2013). By contrast, lesbian women may face the constraints of the “good girl” stereotype, with potential sanctions for deviating from expected gendered norms of behaviour and achievement (Mittleman, 2019).

Existing research further suggests that stereotypes surrounding bisexual individuals are often more negative or qualitatively different from those affecting gay men (Mize & Manago, 2018). Bisexual individuals may additionally face challenges related to invisibility or identity invalidation, which could further shape their educational experiences, particularly when sexual identity disclosure occurs early in adolescence. Importantly, these gendered processes are also likely to vary across cohorts, in line with changing norms around gender roles, sexuality, and education (Baams et al., 2025; Dunlap, 2016).

This thesis does not propose separate theoretical frameworks for lesbian women and bisexual people, as it treats social positioning (Figure 2) as a central explanatory concept for differences in educational experiences and outcomes among LGBTQIA* people. Accordingly, the empirical chapters will try to assess whether the mechanisms proposed in the literature operate similarly across combinations of gender and sexual identity groups, offering tentative interpretations where patterns diverge. Although this approach allows for identifying gender-specific patterns within the proposed framework, the available data do not permit a full causal disentanglement of the underlying mechanisms, which remains an important objective for future research.

1.4 LIMITATIONS

The main limitations of this theoretical framework lie in its application to empirical research. First, the scarcity of comprehensive datasets that include variables on sexual

orientation and identity restricts the ability to control for a wide range of contextual and relational factors. As a result, it becomes difficult to examine the simultaneous influence of individual, contextual, and interpersonal dimensions.

Second, the framework depends in part on intra-individual mechanisms—such as identity development and psychological responses—which are difficult to observe directly. This is particularly challenging when studying sexual orientation, which, unlike other ascribed characteristics, is not fixed at birth and may evolve or vary over time. While proxy indicators can be used, these mechanisms remain largely theoretical in sociological research, raising concerns about endogeneity and reverse causality.

Finally, many of the mechanisms underpinning this framework originate from literature primarily focused on gay men. Applying them across the full spectrum of sexual identities may require new or adapted mechanisms to more accurately reflect the diversity of LGBTQIA* experiences.

1.5 CONCLUSION

Despite a consistent body of literature focused on gender in education and social stratification research, the scarce attention to theoretical perspectives on sexual orientation is puzzling (Pearson & Wilkinson, 2018). To address this gap, this chapter proposed a theoretical framework that captures how educational choices among LGBTQIA* individuals are shaped by complex, intersecting factors. Drawing on insights from both sociology and psychology, the framework conceptualizes sexual orientation not merely as an identity, but as a social position shaped by multi-level determinants, ranging from individual psychological traits to demographic characteristics and broader social and institutional contexts.

By distinguishing between different levels of influence, the framework accounts for variation within the LGBTQIA* population and helps reconcile divergent empirical findings. In doing so, it supports a move beyond universal explanations toward more nuanced, identity- and context-sensitive understandings of educational stratification. More broadly, this chapter underscores the value of theoretically grounded approaches that recognize the complexity and heterogeneity of lived experience, offering a scalable and inclusive contribution to the study of educational decision-making among LGBTQIA* individuals.

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CHAPTER 2.

METHODOLOGICAL ISSUES DEALING WITH THE LGBTQIA* POPULATION

Sexual orientation is a complex trait of social identity (Cox & Gallois, 1996), shaped by an interplay of environmental, prenatal, and biological factors, that are not yet fully understood (Roselli, 2018; Saewyc, 2011; Wang et al., 2019). While the etiological debate lies beyond the scope of this study, the scientific community widely agrees on the fact that sexual orientation is not chosen and generally develops in early childhood (Bell et al., 1981; Roselli, 2018; Sell, 1997).

Based on these theoretical and empirical considerations, sexual orientation can be regarded as an ascribed characteristic - comparable to gender, race/ethnicity, or social class - yet one that retains distinctive features. First, unlike traditional ascribed traits, sexual orientation typically undergoes processes of internal recognition and external disclosure. These processes have been widely theorized and studied in literature as “sexual identity development”. Early models conceptualized this development as a linear process (Coleman, 1982) beginning with awareness of same-sex attraction, progressing through internalized stigma and “identity confusion”, and culminating in LGB identity acceptance. More recent evidence, however, emphasizes the nonlinearity of this development. Individual trajectories vary substantially according to social context, gender, age, racial and ethnic background, and interpersonal relationships (Baams et al., 2025; Dunlap, 2016; Saewyc, 2011; Savin-Williams & Diamond, 2000). Second, since sexual orientation is an internal and “non-visible” trait (D’Augelli, 1994) awareness of sexual orientation may not coincide with its disclosure. Finally, increasing evidence points to the fact that sexual orientation could be fluid and change over time (Hu & Denier, 2023; Mittleman, 2023).

These heterogeneities with “*traditional*” ascribed factors raise some methodological concerns, mainly about reverse causality. One could argue indeed that exposure to “*progressive*” college environments spurs LGB identification rather than the reverse (Fine, 2015). This reverse causality hypothesis is not implausible: while literature suggests that sexual orientation awareness usually emerges in adolescence, and that this awareness and disclosure are occurring at progressively earlier ages among younger cohorts (Baams et al., 2025; Dunlap, 2016; Saewyc, 2011), there may be still “*latecomers*” who come out during or after college. While one could argue that latecomers - those who realize or disclose their LGBTQIA* identity later - tend to make earlier educational decisions under the assumption of heterosexuality and thus have limited impact on analyses, a more significant challenge concerns individuals who conceal their LGBTQIA* identity yet still navigate educational

settings while accounting for it. Although concealing their identity can facilitate navigation of educational institutions (Beattie et al., 2021:11), it can also generate psychological distress and negatively impact academic outcomes. Consequently, methodological designs must account for and be aware of the limitations posed by underreporting or non-disclosure of sexual orientation. Failing to do so may lead to biased estimates and incomplete understanding of how sexual orientation intersects with educational attainment.

While these concerns highlight important endogeneity issues, the primary aim of this thesis is not to debate whether higher education “*makes*” someone non-heterosexual, but to document the educational outcomes of LGB people, and the potential differences and inequalities they face. Rather than asking whether sexual orientation is “*a choice*”, I will focus on how social environments shape identity and, in turn, educational and life-course outcomes. In line with this, the next sections examine dimensions and terminology for studying LGB people and survey strategies for studying the LGBTQIA* population, with special attention to the methodological challenges of disclosure and concealment and their sociological implications.

2.1 DIMENSIONS AND TERMINOLOGY

This section provides a brief overview of the vocabulary useful for navigating the field of LGBTQIA* studies and define the terms used in this thesis. This discussion is inspired by Beattie et al. (2021), who emphasize the importance of theoretically-grounded definitions of sexual orientation to enhance research quality and avoid misunderstandings stemming from the everyday use of these terms.

Table 1 presents essential terminology drawn from the EIGE glossary¹, ILGA Europe Glossary², UC Davis LGBTQIA Resource Center Glossary³ and Mishel’s (2019) empirical study on sexual orientation measurement. The terms are grouped into two domains: (1) aspects of identity and self-perception (e.g., sex, gender, gender identity), and (2) romantic and sexual attraction (e.g., sexual behaviour, attraction, and identity). Since this thesis focuses specifically on sexual orientation, the second group of terms is the most relevant. Indeed, while gender will be used as a central stratifying characteristic and its intersection with sexual orientation will be explored, the analysis will be limited to cisgender individuals due to data constraints. Moreover, this choice would reduce the complexity of interpretation given that the life course mechanisms of trans* and gender-diverse people will likely differ

¹ See the glossary at: <https://eige.europa.eu/publications-resources/thesaurus> (last access: 18/07/2025)

² See the glossary at: <https://www.ilga-europe.org/about-us/who-we-are/glossary/> (last access: 18/07/2025)

³ See the glossary at: <https://lgbtqia.ucdavis.edu/educated/glossary> (last access: 25/07/2025)

from those of cisgender individuals, even if the latter identify as LGBTQIA* (Dugan et al., 2012).

Table 1: Basic vocabulary related to the field of LGBTQIA* research.

Referred to...	Term	Labels / alternatives	Scientific definition
Characteristics related to self, self-perception and identity	Gender	man / woman / non-binary	Social attributes and opportunities associated with being female or male
	Sex	male / female / intersex	Biological and physiological characteristics that define humans as female or male
	Gender identity	cis-gender / trans-gender	Each person's deeply felt internal and individual experience of gender
	Gender expression	masculine / feminine / androgynous	People's manifestation of their gender identity
Terms related to romantic and sexual interest in others	Sexual behaviour	homosexual or heterosexual intercourse	Having sexual intercourses with men, women, or both
	Sexual attraction	same-sex / opposite-sex / both sexes mono- / bi-directed	Having a sexual attraction to the same sex, other sex or both sexes
	Sexual identity	homo- / hetero- / bi-sexual ...	One's self-conception as a homosexual, bisexual, or heterosexual person

Note: Personal elaboration on EIGE glossary, ILGA Europe Glossary, UC Davis LGBTQIA Resource Center Glossary and Mishel (2019).

In general, sexual orientation is commonly defined as an “*erotic inclination toward people of one or more genders*” (Saewyc, 2011:257), yet the concept is not that straightforward. From Table 1, we can see how the concept itself involves three main elements: sexual behaviour, sexual attraction, and sexual identity. Moreover, Beattie and colleagues (2021) identify four theoretical dimensions that shape how sexual orientation influences life experiences and outcomes. These are: salience, which is the degree to which sexual orientation is central to one's self-concept-, congruence, which consist in the alignment between attraction, behaviour, and identity, self-acceptance, meaning how positively one

evaluates their sexual identity, and finally stability, which refers to the consistency of one's sexual identity over time.

Table 2: Terminology for non-heterosexual people (personal elaboration)

Term	Definition	In this thesis...
Lesbian women Gay men	Refers to individuals who experience only (or mostly) same-sex attraction and/or identify themselves as lesbian women or gay men.	Used to indicate specifically gay men and lesbian women.
Bisexual women/men	Refers to individuals who experience attraction to more than one gender and identify as bisexual.	Used to indicate specifically bisexual people.
LGB people	Acronym for lesbian, gay, and bisexual. Refers collectively to individuals who identify with any of these orientations.	Used to refer to all three categories simultaneously.
Queer / non-heterosexual person⁴	Umbrella term for individuals who do not identify as completely heterosexual. Encompasses a range of sexual orientations (and gender identities).	Used to refer to a non-heterosexual person without presuming their specific sexual orientation (or gender identity).
LGBTQIA* people	Umbrella acronym for lesbian, gay, bisexual, transgender, queer, intersex, asexual, and other sexual or gender diverse identities.	Used to refer to all non-heterosexual and non-cisgender identities collectively.
Homosexual person	To indicate people who have sex and experience attraction to the same-sex and identify themselves as either lesbian women or gay men.	Usually avoided since too much related to the medical field.
Pansexual person	Refers to individuals who are emotionally and/or sexually attracted to others regardless of gender.	Not used (generally) due to data limitations.
Asexual person	Refers to individuals who experience little or no sexual attraction or desire for partnered sexuality.	Not used (generally) due to data limitations.
SOGIE	An acronym that stands for Sexual Orientation, Gender Identity and Expression.	Not used (generally) due to data limitations and limited everyday usage.

Note: Personal elaboration on EIGE glossary, ILGA Europe Glossary, UC Davis LGBTQIA Resource Center Glossary.

⁴ While the term non-heterosexual is widely used in sociological literature, it was not included in the glossaries I consulted. Nonetheless, I have included it in the table, as I will use it throughout the thesis in a similar way to the term queer. However, it remains unclear whether non-heterosexual necessarily includes gender-diverse individuals.

Although these dimensions are not directly measurable in this study, they offer a valuable interpretive framework. For example, higher salience may influence educational decisions, such as choosing inclusive environments or resisting gendered expectations (Lehtonen, 2010; Squire & Mobley, 2015). Low congruence is linked to psychological stress and can affect academic trajectories (Meyer, 2003). Low self-acceptance may lead to concealment and poorer academic and mental health outcomes (Beattie et al., 2021). Finally, instability complicates causal analysis and may be associated with different coping strategies and outcomes (Pearson & Wilkinson, 2017; Walsemann et al., 2014).

Having clarified these differences, I will now focus specifically on the terminology relating to sexual orientation. Table 2 summarises the terms commonly used to describe non-heterosexual individuals, distinguishing between specific labels (e.g., *gay*, *bisexual*) and umbrella terms (e.g., *LGBTQIA**, *queer*).

Throughout this thesis, I will avoid using these terms as subjects, preferring to use them as adjectives. Furthermore, I will limit the terms used to those highlighted, as I believe they are the best choice in terms of scientific robustness and inclusivity, while some other specifications (e.g., *asexual people*) are outside the scope of this research.

2.2 MEASUREMENT: THREE GENERATIONS OF SURVEYING LGBTQIA POPULATION

As discussed earlier, sexual orientation can be conceptualized and measured in terms of sexual identity, attraction, and behaviour. However, these aspects do not always align (Mishel, 2019). For instance, an individual may identify as heterosexual despite having same-sex attractions or having same-sex sexual experiences, or vice versa. While no single method is universally accepted, this project primarily uses sexual identity as a measure of sexual orientation. This choice reflects its widespread use in sociological and demographic research on the LGBTQIA* population, as well as its relevance to the internal psychological processes hypothesised to influence educational outcomes.

Sexual identity has been surveyed in different ways over different decades, shaped by evolving tools, shifting social norms, and changing data availability. Broadly, we can identify three generations of studies and surveys addressing LGBTQIA* populations.

The first generation of studies focused on couples, identifying “*same-sex*” versus “*different-sex*” relationships based on the reported sex/gender of respondents and their partners. While these studies were pioneering, they captured only a limited segment of the LGBTQIA* population - namely, those in cohabiting relationships, and willing to disclose, as illustrated in Figure A4 in the Appendix - thereby excluding single people and resulting in an underestimation of the LGBTQIA* population (Fischer, 2016; Fischer et al., 2022). These

approaches not only inferred sexual orientation indirectly but also constrained the scope of research questions, focusing mainly on family and household dynamics.

The second generation introduced self-reported survey measures, allowing individuals to define their sexual orientation through questions about their sexual behaviour, attraction, or identity (Mishel, 2019). While some scholars advocated for a more continuous rather than categorical understanding of sexuality (Savin-Williams, 2016), tools like the Kinsey Scale (Kinsey et al., 1948), Storms' Model (1980), and the "*Klein Sexual Orientation Grid*" (1985) - which conceptualized sexual orientation beyond binary categories (see Figures A1-A3 in the Appendix) - were hardly ever used in large-scale surveys. Instead, national and representative surveys began incorporating questions on sexual identity, limiting the options to Heterosexual/Straight, Lesbian, Gay, and Bisexual (see Figure A5). Despite these limitations, this shift marked a significant step forward in visibility and inclusion, enabling broader participation and more comprehensive surveying of the LGBTQIA* population.

A third generation of research is now emerging, with some surveys expanding response options to include identities beyond LGB - such as asexual, pansexual, and queer - and incorporating questions on gender identity to include and survey trans* and gender diverse people. Examples include national surveys like the "*Quality-of-Life survey*" conducted by Statistic Norway and the non-representative "*The EU LGBTIQ Survey III (2023)*" by the EU Fundamental Rights Agency (see Figure A6). These developments are promising, but they remain limited in scope, geographic coverage, or representativeness (Fischer et al., 2022).

Overall, coverage remains a major issue when surveying the LGBTQIA* population (Kühne et al., 2019). On one hand, national censuses and large-scale surveys have increasingly begun to ask about sexual orientation, improving representativeness and reducing self-selection bias (Fischer et al., 2022). On the other hand, these gains are uneven. Many countries still lack official statistics, and privacy concerns often prevent the inclusion of such questions in representative surveys, limiting the study of the LGBTQIA* population and hindering meaningful cross-national comparisons (Bell, 2017).

2.3 NUMBERS AND PREVALENCE: A HIDDEN POPULATION?

Understanding the size and characteristics of the LGBTQIA* population is a crucial first step when examining inequalities affecting non-heterosexual individuals. However, despite the methodological advances outlined above, estimates of this population remain sparse and are likely still conservative.

Several factors contribute to this underestimation: the persistence of social desirability bias, especially among men; the lack of standardized, inclusive survey questions; and the inherent

fluidity of sexual and gender identities (G. J. Gates, 2015). Even the phrasing of survey items can affect response patterns (Elliott et al., 2019; Mishel, 2019), particularly in questions about same-sex behaviour or attraction (Silva & Whaley, 2018). Selection bias further complicates interpretation. Individuals who are “*out of the closet*”, politically engaged, or connected to LGBTQIA* networks may be more likely to report their sexual identity in surveys, while “*closeted*” or “*questioning*” individuals may remain invisible in survey data (Elliott et al., 2019).

Table 3: Prevalence of LGB(TQIA*) identification in selected surveys and studies (Personal elaboration).

Country	Year	Dataset/Institute	% LGB	Note
Australia	2012	Hilda	3.00%	Wilson et al. (2020)
	2014	GSS	3.15%	Wilson et al. (2020)
	2016	Hilda	4.01%	Wilson et al. (2020)
Canada	2019-2021	CCHS	4.40%	Data retrieved from Statistic Canada
Germany	2017	SOEP	1.90%	Kroh et al. (2017)
Italy	2011	ISTAT	2.40%	Specific survey on homosexual people
	2023	Ipsos	6.00%	Estimates of private company
UK	2012	UKHLS	1.77%	Third wave, first time asking about sexual orientation
	2021	ONS	3.20%	Census data
	2023	APS	3.80%	Data retrieved from ONS
US	2023	Gallup	7.60%	Estimates of private company
	2025	Gallup	9.30%	Estimates of private company

Table 3 presents reported rates of LGB identification from various surveys and studies across selected countries and years, illustrating the wide variation in prevalence estimates depending on the dataset and methodology. For example, in Australia, reported LGB identification rose from 3.0% in the 2012 HILDA survey to over 4.0% in 2016. In contrast, Germany’s 2017 SOEP data reported only 1.9% LGB identification. Canada and the UK show relatively consistent figures around 3-4%, with a notable increase in estimates data from 1.77% (UKHLS 2012) to 3.8% in 2023. Italy shows stark differences between public (ISTAT, 2.4%) and private (Ipsos, 6%) sources, probably reflecting different survey design and sampling strategies. The United States presents some of the highest estimates, with Gallup reporting a rise from 7.6% in 2023 to 9.3% in 2025.

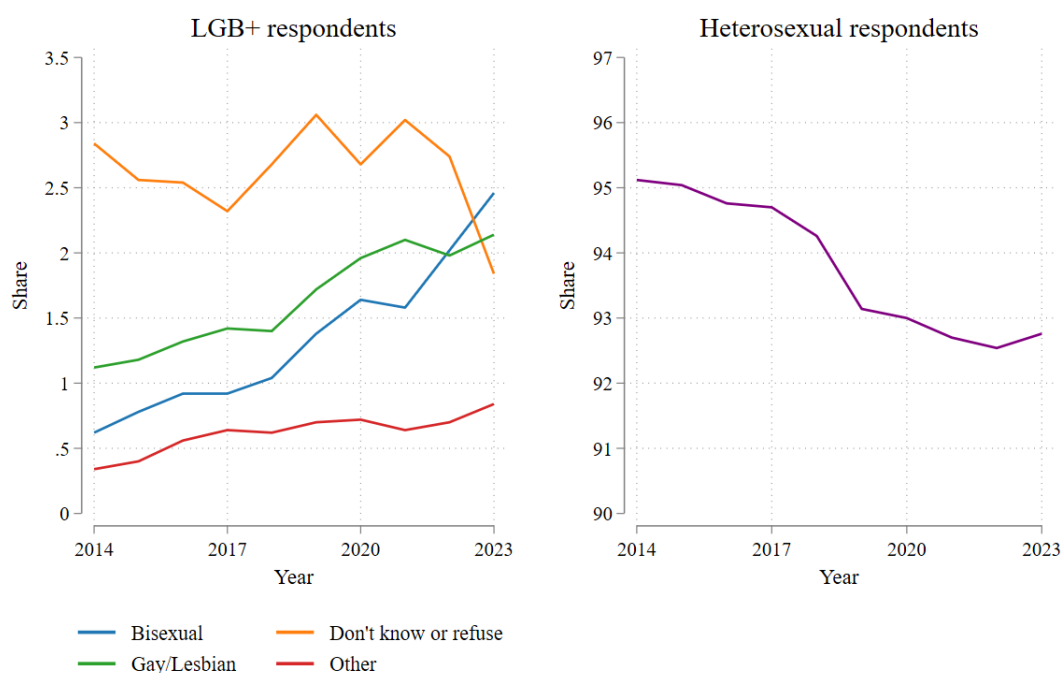
Overall, it is interesting to note that, regardless of country-specificities, the rates presented by censuses or official statistical offices tend to be lower than those presented by private

companies, non-representative studies or youth-focused surveys (Gates, 2014). These numbers illustrate how measurement choices – including survey mode, sample design, question wording, and cultural context – can significantly shape reported rates of LGB identification and estimates of the LGBTQIA* population.

2.3.1 INCREASING AND INCREASINGLY EQUAL?

Despite ongoing challenges with data quality and estimation, recent figures from official sources can offer valuable insights into the size and characteristics of the LGBTQIA* population. A notable example is the UK, which has recently begun to include questions on sexual orientation in population-level surveys and censuses.

Figure 1: Estimates of the LGB+ and heterosexual population in the UK by year (APS, 2014-2023).



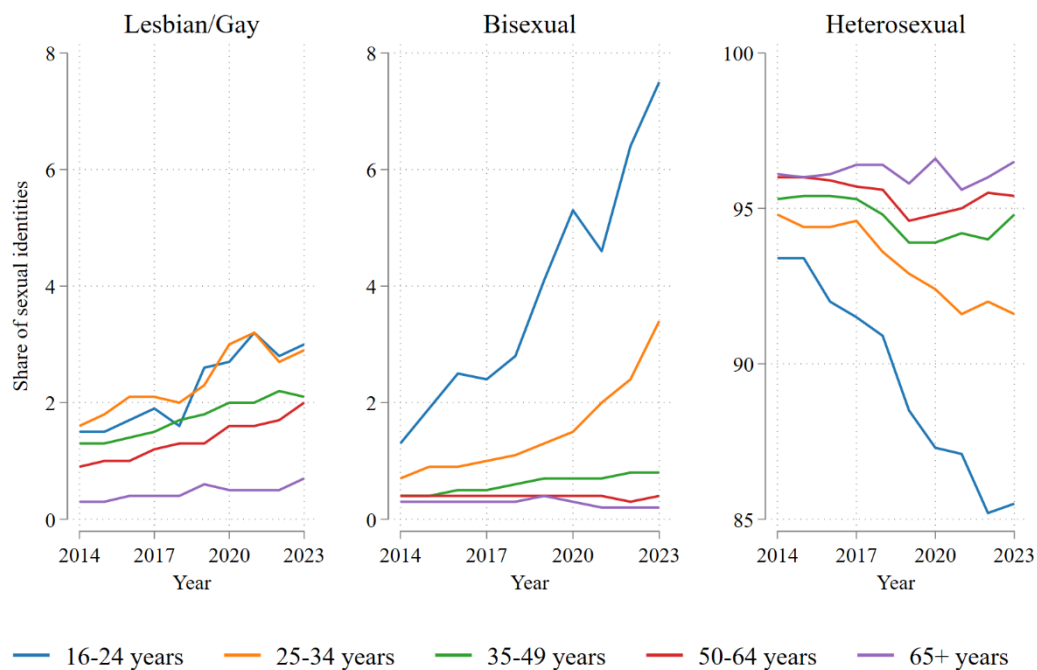
Note: Own analyses.

In 2021, the UK Census, administered by the Office for National Statistics (ONS), collected - for the first time - data on sexual identity from the entire adult population aged 16 and over. In addition, since 2012, the ONS has produced annual estimates of sexual identity using data from the Annual Population Survey (APS), covering the household population aged 16 and above. Drawing on both Census data and my own analyses of APS estimates from 2014 to 2023, it is possible to identify key trends and patterns in the size and development of the

LGBTQIA* population in the UK, which will be the population of interest in three of the four empirical papers included in this thesis.

According to the 2021 Census (Table 3), 3.2% of adults in England and Wales identified as lesbian, gay, or bisexual. Meanwhile, APS data (Figure 1) suggest that the proportion of individuals identifying as lesbian or gay has slightly increased over the past decade, with a particularly notable rise among those identifying as bisexual. At the same time, the proportion identifying as heterosexual has steadily declined.

Figure 2: Estimates of the Lesbian/Gay, Bisexual and Heterosexual population in the UK by age group and year (APS, 2014-2023).



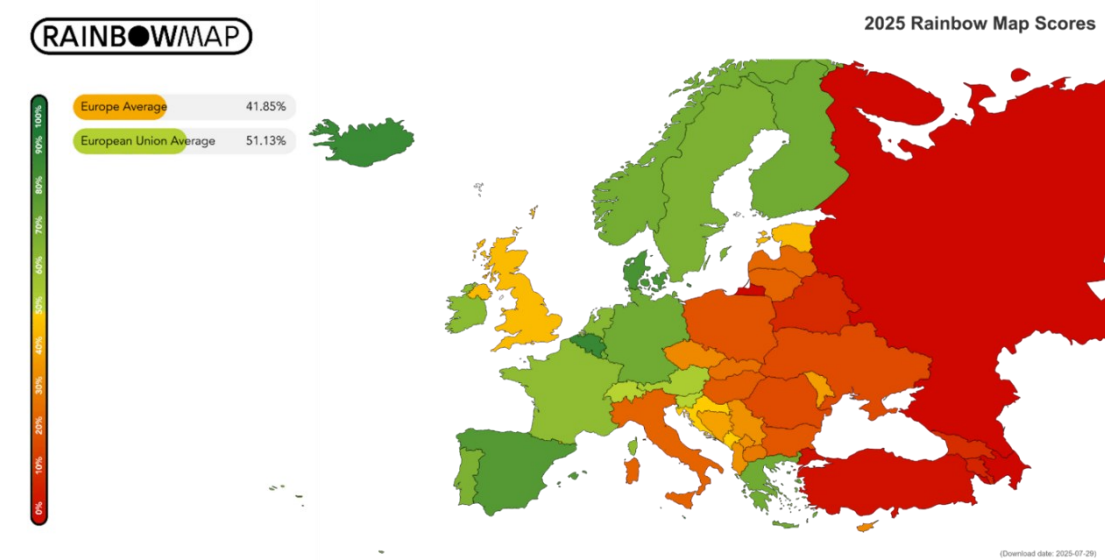
Note: Own analyses.

Cross-generational differences are particularly striking. As shown in Figure 2, much of this change is driven by younger cohorts - particularly the 16-24 age group - who are significantly more likely to identify as bisexual and significantly less to identify as heterosexual. This change is visible also in the 25-34 age group, though to a lesser extent. Differently, the increase in lesbian or gay identification is around 1 percentage point among the youngest. This pattern is consistent with evidence from other countries, which shows that younger generations are coming out earlier and at higher rates than older age groups (Baams et al., 2025; Dunlap, 2016) as discussed also in Chapter 3, and that they are more likely to identify

themselves as bisexual, particularly younger women (Bridges & Moore, 2018; England et al., 2016).

This generational shift reflects, in part, improved data quality enabled by more inclusive survey questions and a reduced influence of social desirability bias. However, it also indicates a genuine increase in the proportion of individuals identifying as LGBTQIA*, a trend that warrants growing scholarly and policy attention. While these higher rates of identification may be facilitated by greater societal acceptance (Dotti Sani & Quaranta, 2020), legal advances (Waldijk, 2020), and the increasing visibility of queer identities (Hillier et al., 2012), they should not be misinterpreted as signs of full social equality. Higher visibility, legal advancements and symbolic recognition often coexist with persistent social and structural inequalities.

Figure 3: The “Rainbow Map” 2025. Rank of European countries by legal and policy support for LGBTI rights.



Note: Scores range from 0% (no protections, in red) to 100% (full equality, in green). The ranking includes 49 countries.

(Source: ILGA-Europe, accessible at: <https://rainbowmap.ilga-europe.org>)

LGBTQIA* individuals continue to face structural disadvantages across key domains, including healthcare access and mental health outcomes (Ayhan et al., 2020; Liu & Reczek, 2021), family formation and parental rights (Reczek, 2020; Waldijk, 2020), and labour market outcomes such as hiring discrimination, occupational segregation, and wage gaps (Badgett et al., 2021; Zindel & De Vries, 2024). These inequalities are not always evident in aggregate

data but become visible through differential outcomes across the life course. A snapshot of current conditions in Europe is provided by ILGA-Europe's annual "Rainbow Map" (Figure 3), which shows that most countries outside Western Europe offer limited legal and policy protection for LGBTI people.

Taken together, these patterns highlight the need for research that not only tracks changes in visibility and self-identification but also critically examines the structural barriers that persist (Badgett et al., 2021; Reczek, 2020). Building on this, the final paragraph of this chapter turns to the social implications of non-heterosexuality as dimensions that affect not only how sexual identities are lived and experienced, but also how they are reported, categorized, and interpreted in social research.

2.4 SOCIAL IMPLICATIONS OF NON-HETEROSEXUALITY

Understanding the lived experience of LGBTQIA* individuals requires attention to how sexual orientation functions as a socially significant category. Besides being less visible than other stratification factors, non-heterosexuality still shapes how individuals are perceived, how they navigate social contexts, and the decisions they make. Even when concealed, sexual orientation can profoundly influence one's social identity and life course (Beattie et al., 2021; Meyer, 2003). In this sense, sexual orientation is not only a personal characteristic but a socially structured source of potential vulnerability and inequality.

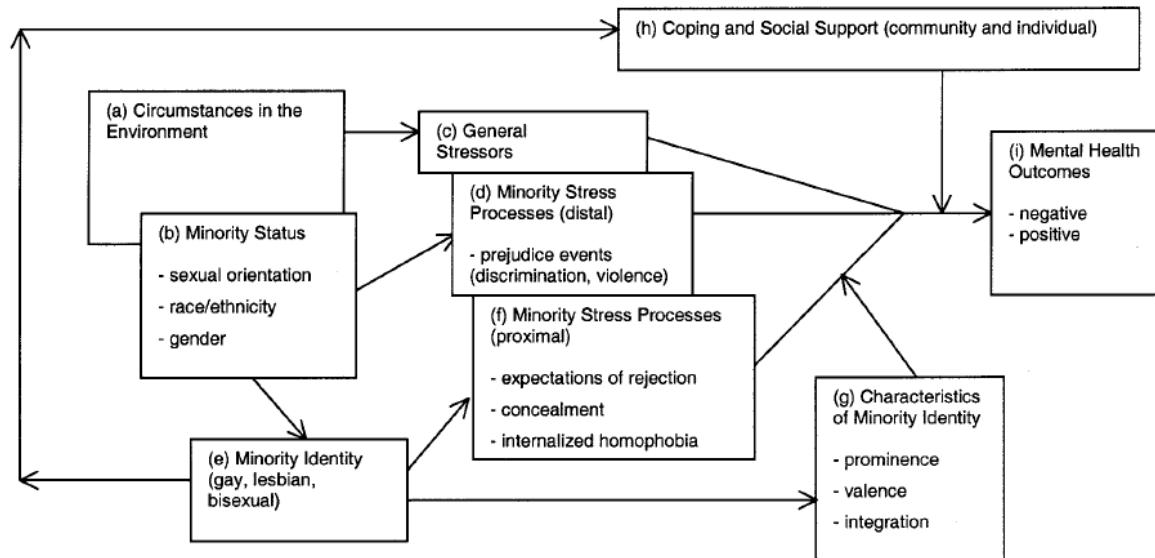
This section explores some social implications of non-heterosexuality, focusing on the ways in which it becomes relevant in social interactions. The aim is to understand not only how societal pressures shape the lives of LGBTQIA* people, but also the related methodological consequences in particular how these pressures influence disclosure patterns and categorization practices, further complicating empirical research on sexual orientation.

2.4.1 MINORITY SPECIFIC STRESSORS

According to Meyer's (1995) minority stress theory, non-heterosexual individuals are subject not only to general life stressors but also to additional stressors that arise specifically from their sexual orientation. These minority stressors, namely internalized homophobia, perceived stigma, and external discrimination, originate from the conflict between personal identity and dominant heteronormative societal norms (Meyer, 2003).

While external discrimination is relatively visible and more readily acknowledged, internalized homophobia and perceived stigma are more subjective and vary across individuals. Internalized homophobia refers to the internalization of society's negative attitudes towards one's own sexual identity, whereas perceived stigma involves the anticipation of rejection, judgment, or exclusion based on that identity.

Figure 4: Minority stress processes of influence on mental health in the LGB population.



Source: Meyer, 2003:679

Although these stressors stem from broader social structures, their impact depends on how individuals interpret and integrate their sexual orientation into their overall sense of self (Beattie et al., 2021; Meyer, 2003). As Figure 4 illustrates, these processes can influence key life decisions through the interaction between these stressors and the various dimensions of sexual identity. While Meyer's (2003) specific example pertains to mental health, similar dynamics may also affect educational outcomes and trajectories.

As such, internalized stressors may contribute to divergent educational outcomes - and ultimately, to unequal adult life opportunities - even among individuals with otherwise comparable opportunity structures. Although internal psychological processes are difficult to capture fully within a sociological framework, examining the social narratives that shape them remains essential for understanding how non-heterosexuality can influence life course decisions. This brings us to a second social implication of non-heterosexuality: the role of coming out.

2.4.2 COMING OUT PROCESS

The process of coming out offers another example of how societal pressures shape the lived realities of non-heterosexual individuals. Contrary to the idea of a single, defining moment, coming out is an ongoing and often recursive process that unfolds across different social

contexts and relationships (Alonzo & Buttitta, 2019). While disclosure can bring psychological relief and affirm one's identity, it is frequently accompanied by fear and uncertainty, particularly within the family context (Carnelley et al., 2011).

Anticipated stigma, fear of discrimination, and concerns about losing social or economic advantages may lead individuals to delay or avoid disclosure altogether (Beattie et al., 2021; Fine, 2015; Silva & Whaley, 2018). Concealment is shaped by broader cultural expectations and dominant negative attitudes toward non-heterosexuality, which influence both self-perception and interpersonal dynamics (Alonzo & Buttitta, 2019; Campbell & Perales, 2022). Men, in particular, are often subject to stronger social sanctions due to prevailing masculinity norms, resulting in higher rates of underreporting compared to women and identity concealment (Mishel, 2019; Pascoe, 2007).

In this light, coming out is not merely a personal milestone but also a deeply social process embedded in structural conditions. Variation in how and when individuals disclose their sexual identity affects their exposure to stigma and discrimination, with related consequences for mental health, social support, and educational opportunities and outcomes.

2.4.3 INTERSECTIONALITY

Originally introduced by Crenshaw (1989) to highlight the compounded discrimination faced by women of colour, intersectionality offers a crucial lens for understanding how sexual orientation interacts with other social categories to shape the lived experiences of LGBTQIA* people. Non-heterosexual individuals often do not experience their sexual identity in isolation, but rather, these identities intersect with other aspects of their identities, such as race, class, age and gender, shaping the specific challenges and forms of discrimination they encounter.

For instance, educational penalties experienced by lesbian women (Fine, 2015; Mollborn & Everett, 2015) may reflect not only homophobia but also entrenched gender norms (Littleton, 1996; Mittleman, 2019, 2022). Gender also plays a critical role in shaping how individuals identify and disclose their sexuality (Caprinali & Vitali, 2025). Surveys consistently show that women are more likely to self-identify as non-heterosexual (England et al., 2016; Mishel, 2019), likely due to persistent gender norms surrounding masculinity and sexuality (Silva & Whaley, 2018). Similarly, experiences of non-heterosexuality can also vary significantly by class (Kasprowski, 2024) and ethnicity (Squire & Mobley, 2015; Whitfield et al., 2014), affecting not only the that form discrimination takes but also decisions around disclosure (Barrett & Pollack, 2005; Martos et al., 2015).

Experiences within the LGBTQIA* umbrella are also far from uniform (S. K. Goldberg et al., 2020; Greathouse et al., 2018; Harrison & Buhman, 2024; Mize, 2016; Poston & Baumle, 2010). Discrimination differs significantly by specific sexual or gender identities, with important social and methodological implications. Trans* and gender-diverse individuals face stronger penalties in the labour market (Carpenter et al., 2022), a higher risk of suicidality (McNeil et al., 2017) and enhanced discriminations accessing healthcare (Feldman et al., 2021), but they are also frequently excluded from surveys, making their experiences less visible and under-researched (Stacey, 2024). Similarly, asexuality challenges dominant assumptions about sexuality but remains largely neglected in academic research (Poston & Baumle, 2010). Queer identities, because of their fluidity and resistance to classification, are also underrepresented in quantitative studies (S. K. Goldberg et al., 2020; Greathouse et al., 2018). Bisexual individuals, meanwhile, often face erasure, invisibility, and unique stereotypes (Mize & Manago, 2018), face wage penalties (Mize, 2016) and growing health disadvantages (Liu & Reczek, 2021), which are frequently overlooked.

In this context, adopting an intersectional perspective is not only essential for capturing the complexity of LGBTQIA* lives; it is also analytically necessary. It reveals layered forms of disadvantage and informs a more accurate and critical interpretation of analyses and findings.

2.5 CONCLUSIONS

This chapter has outlined the key methodological challenges involved in studying the LGBTQIA* population, emphasizing both conceptual and technical issues. While measuring sexual orientation remains complex and context-dependent, significant improvements have been made in recent decades. Available data suggest that the proportion of individuals identifying as LGBTQIA* is increasing among younger cohorts, nevertheless discrimination remains a persistent aspect of their everyday lives.

Theories of minority stress and coming out processes have revealed how sexual orientation interacts with social structures, shaping individuals' experiences and influencing their life trajectories. Additionally, the discussion on intersectionality has shown that who gets counted - and how - depends not only on available tools but also on broader social norms, disclosure patterns, and intersecting identities such as gender, race, and class.

As research in this field continues to evolve, greater sensitivity to diversity within the LGBTQIA* population—especially beyond LGB categories—will be essential for producing more inclusive and meaningful knowledge. At present, recognizing the mechanisms that shape both measurement and visibility is critical not only for improving data collection but also for accurately interpreting existing data and findings.

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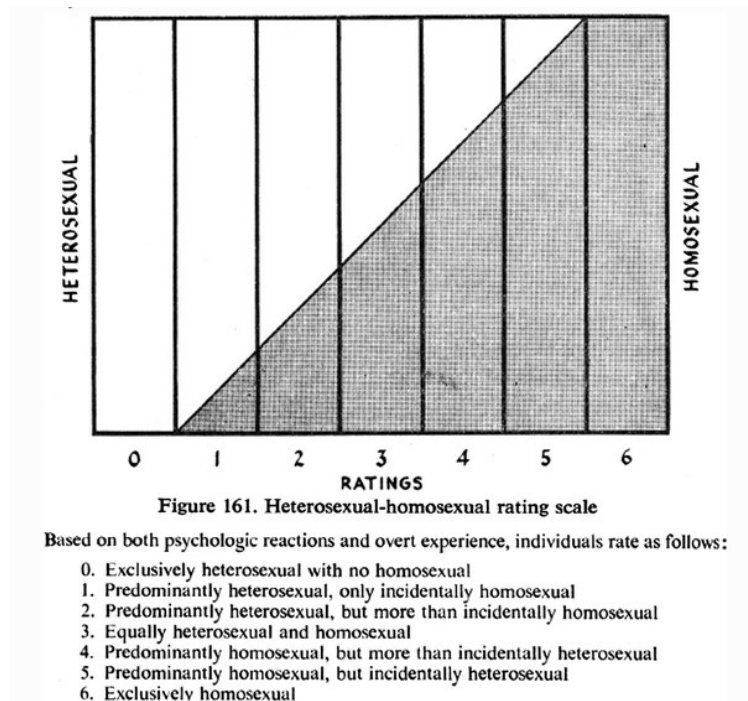
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APPENDIX

Figure A1: Alfred Kinsey's sexual orientation scale (0 *heterosexuality* - 6 *homosexuality*).



(Source: Kinsey et al., 1948)

Figure A2: Fritz Klein's sexual orientation grid.

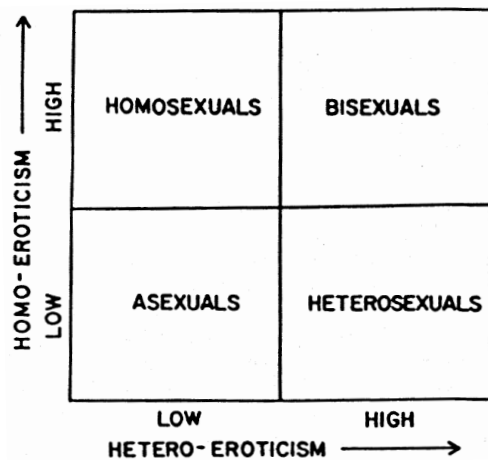
	Klein Variable	Present	Past	Ideal
A	Sexual Attraction			
B	Sexual Behavior			
C	Sexual Fantasies			
D	Emotional Preference (whom you love and like)			
E	Socialize With (men vs. women)			
F	Lifestyle (sexual orientation of people with whom you spend time)			
G	Self-Identification			

Definitions of rating scale values

Value	Scale for A – E	Scale for F – G
1	Other sex only	Heterosexual only
2	Other sex mostly	Heterosexual mostly
3	Other sex somewhat more	Heterosexual somewhat more
4	Both sexes equally	Heterosexual/homosexual equally
5	Same sex somewhat more	Homosexual somewhat more
6	Same sex mostly	Homosexual mostly
7	Same sex only	Homosexual only

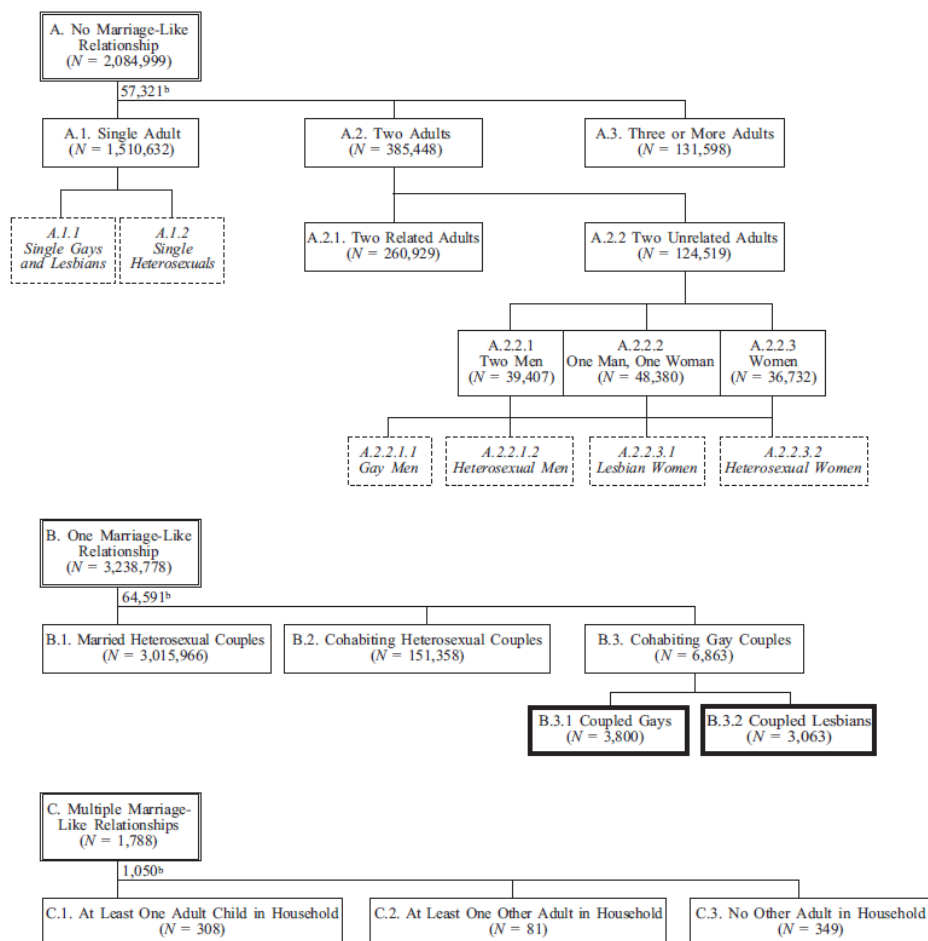
(Source: Klein et al., 1985)

Figure A3: Michael Storms' two dimensional sexual orientation model



(Source: Storms, 1980)

Figure A4: Classification of types of household and individuals that could be analysed through census data.



(Source: Black et al., 2000)

Figure A5: Measure of sexual orientation identity by some English-Speaking Countries. Specifically the Australian Bureau of Statistics, Statistics Canada, Stats New Zealand and UK Census 2021.

Question	Answer Options	Source
How do you describe your sexual orientation? Please [tick/mark/select] one box:	☐ Straight (heterosexual) ☐ Gay or lesbian ☐ Bisexual ☐ I use a different term (please specify) ☐ Don't know ☐ Prefer not to answer	Australian Bureau of Statistics (2021)
What is your sexual orientation? Would you say you are:	☐ Heterosexual ☐ Lesbian or gay ☐ Bisexual ☐ Or please specify your sexual orientation (free-text)	Statistics Canada (2021)
Which of the following options best describes how you think of yourself?	☐ Heterosexual or straight ☐ Gay or lesbian ☐ Bisexual ☐ Other, please state ____ ☐ Don't know ☐ Prefer not to say	Stats New Zealand (2019)
Which of the following best describes your sexual orientation? This question is voluntary.	☐ Straight or Heterosexual ☐ Gay or Lesbian ☐ Bisexual ☐ Other sexual orientation (free-text)	United Kingdom: 2021 Census of England and Wales; 2022 Census of Scotland (Office of National Statistics, 2016)

(Source: Report “*Measuring Sex, Gender Identity, and Sexual Orientation*”. Table 5A-2 pag. 102. Available at: <https://doi.org/10.17226/26424>)

Figure A6: Measure of sexual orientation identity

A6	
	ASK ALL
	Please select the answer that best matches your sexual orientation.
	SINGLE RESPONSE
1	Lesbian
2	Gay
3	Bisexual
4	Pansexual
5	Asexual
6	Heterosexual/Straight
7	Other, please specify [INSERT OPEN TEXT RESPONSE FIELD – MAX 30 CHARACTERS]
-99	Don't know

(Source: “*The EU LGBTIQ Survey III*” (2023) Questionnaire. Page 7. Available at: https://search.gesis.org/research_data/ZA8853)

CHAPTER 3.

THE DEMOGRAPHY OF SEXUAL IDENTITY DEVELOPMENT AND DISCLOSURE AMONG LGB PEOPLE IN EUROPE¹

ABSTRACT

BACKGROUND

Despite a non-negligible share of youth in Europe identifying as lesbian, gay, bisexual, or queer, we know little about the demography behind the development and disclosure of one's sexual identity, particularly regarding their timing and their variation by LGBTQIA identity. This limited understanding hinders the use of sexual orientation as a predictor in social sciences.

OBJECTIVE

We provide descriptive evidence on the demography of sexual identity development and disclosure among LGB people in Europe. We focus on age at self-disclosure and age at first coming out to others and describe differences across European countries, birth cohorts, and between lesbian, gay, and bisexual individuals.

METHODS

We use the 2019 EU LGBTI II Survey data administered by the European Union Agency for Fundamental Rights and employ descriptive statistics, t-test, and survival analyses to investigate age at self-disclosure and first coming out.

RESULTS

The age at self-disclosure has remained stable across successive cohorts of LGB people in Europe, whereas the age at coming out to others has decreased considerably. Accordingly, the gap between age at self-disclosure and age at coming out to others has reduced across cohorts. However, longer age gaps are consistently observed among LGB men across all cohorts and countries. Age at self-disclosure varies considerably across Europe, being highest in Central European countries and lowest in Eastern European countries.

CONTRIBUTION

This contribution offers the first systematic description of the age at self-disclosure and coming out in Europe and how they vary according to LGB identity, cohort, and country.

¹ This chapter is coauthored with Prof. Agnese Vitali and was published in 2025 in “*Demographic Research*” (open access): <https://doi.org/10.4054/DemRes.2025.52.5>
Anna Caprinali contributed to the conceptualisation, methodology, formal analysis, writing of the original draft, review and editing, and visualisation of this chapter. Agnese Vitali contributed to the conceptualization, the review, and the supervision of this chapter.

3.1 INTRODUCTION

The recent inclusion of questions aimed at measuring respondents' sexual identity in European surveys such as the German Socio-Economic Panel, the UK Household Longitudinal Survey, the UK 2021 Census, the Millennium Cohort Study, Statistics Norway's Quality of Life survey, and the Swedish National Public Health Survey, is bound to give rise to a new stream of research on the demographic outcomes of non- heterosexual individuals, frequently in comparison to heterosexual individuals (Badgett, Carpenter, and Sansone 2021). A small but growing literature has started to analyse their labour market outcomes (Aksoy, Carpenter, and Frank 2018; Buser, Geijtenbeek, and Plug 2018; Flage 2019), health outcomes (Liu and Reczek 2021), educational attainment (Boertien, Perales, and Pessin 2024; Mittleman 2022), and family formation and fertility (Boertien, Perales, and Pessin 2024; Caprinali, Vitali, and Cortina 2023; Evertsson and Boye 2018; Ophir, Boertien, and Vidal 2023).

While sexual orientation is becoming recognised in stratification research as a determinant of life chances (Badgett, Carpenter, and Sansone 2021), we still know little about sexual identity milestones (i.e., pivotal experiences and/or events in the personal journey of self-discovery of sexual orientation and/or gender identity; see Martos, Nezhad, and Meyer 2015). In particular, we know little about the age at which individuals fully acknowledge their sexual identity through self-disclosure; i.e., the age when Lesbian Gay Bisexual Transgender Queer/Questioning Intersex Asexual (LGBTQIA) individuals first identify as such, and the age at first coming out to others. Knowledge of these processes, their variation by LGBTQIA identity and across countries is key to fully understanding the mechanisms driving the associations between sexual identity and a range of demographic and socioeconomic outcomes. Indeed, sexual orientation - unlike more 'traditional' stratification factors - is not predetermined at birth but rather developed or discovered over time (Saewyc 2011) and can be fluid over the life course (Hu and Denier 2023). Understanding the timing of sexual identity milestones is therefore necessary to disentangle and better understand the role of sexual orientation in stratifying socioeconomic outcomes. The age at which individuals recognize and acknowledge their sexual identity can shape key life decisions, such as educational or career choices. For instance, Beattie, Van Dyke, and Hagaman (2021) highlight how the timing of identity development significantly influences mental health, self-acceptance, and academic outcomes, which may in turn affect broader socioeconomic trajectories. Earlier acknowledgment may allow LGB individuals to adapt more readily to societal expectations. Similarly, coming out is salient because it exposes individuals to potential discrimination, bullying, and judgment (Hall, Dawes, and Plocek 2021). Coming out

earlier may therefore limit LGB people's access to opportunities and resources in a discriminatory environment, reinforcing socioeconomic disparities.

Our study investigates heterogeneities in sexual identity development among lesbian, gay, bisexual (LGB) individuals in Europe, focusing on age at self-disclosure and age at first coming out, two critical turning points in the lives of LGBTQIA people. These two ages mark the moments when LGB people start to take their sexual identity into account when making choices and become (more openly) vulnerable to discrimination, bullying, and judgement, all impacting their life chances. Building on the theoretical framework introduced in Chapter 1, these milestones are conceptualized as key moments that vary by and depend on the social positioning of LGB people, determined by the interrelation of demographic characteristics (gender, sexual identity and cohort) and contextual environments (country). In this regards, we aim to describe variation in the age at self-disclosure and coming out by LGBTQIA identity, cohort, and country (RQ1) and to understand whether and how these heterogeneities overlap and are intertwined (RQ2).

The study draws on the stream of literature focused on “sexual orientation development” (Saewyc 2011), which views sexual orientation as a progressive developmental process based on patterns of attraction and behaviour (Hall, Dawes, and Plocek 2021). Previous literature based on the USA has mainly focused on identifying the “developmental milestones” and their order and common paths, in order to create stage-sequential models of sexual orientation development. This research also highlights significant heterogeneity in milestone timing based on demographic characteristics (Martos, Nezhad, and Meyer 2015): gay boys tend to have earlier milestones than girls and bisexual people, and younger LGB cohorts experience earlier milestones and a reduced gender gap in age at self-disclosure (Dunlap 2016; Hall, Dawes, and Plocek 2021; Savin-Williams and Diamond 2000).

We hypothesise similar differences in demographic aspects (gender and age) in Europe. Bisexual people tend to face more stigma than gay men and lesbian women (Mize and Manago 2018); accordingly, and in line with the US literature, we expect them to discover their sexual identity and disclose it to others later than their gay/lesbian peers (H1). As younger cohorts have grown up in more tolerant and inclusive societies (Dunlap 2016), we expect younger cohorts to both discover their sexual identity and come out to others earlier than older cohorts (H2). Finally, for Europe we expect to also find differences across countries. Agreement among the general population that gays as lesbians should be free to live their lives as they wish varies considerably across countries (Dotti Sani and Quaranta 2020) and different countries offer a considerably different set of rights to LGB couples, ranging from equal rights to marriage and filiation as for opposite-sex couples (e.g., Netherlands,

Scandinavian countries, Spain) to none or alternative forms of marriage and no filiation (e.g., Italy, Poland, Hungary). We rely on country of residence to gain insight into how cultural differences might similarly matter in Europe and hypothesise that people living in countries that legalised same-sex marriage earlier - where attitudes toward LGB people are generally more positive - might discover their sexual identity and come out earlier than others (H3).

3.2 DATA AND METHODS

We used the 2019 EU LGBTI II Survey data promoted by the European Union Agency for Fundamental Rights (FRA). This survey investigates the experiences and opinions of lesbian, gay, bisexual, transgender, and intersex (LGBTI) individuals living in Member States of the European Union (EU), including the UK, Northern Macedonia, and Serbia. Respondents participated on a voluntary basis due to the lack of a reliable sampling frame for the LGBTI population in Europe. To reduce bias, multiple recruitment channels were used and FRA calculated weights to compensate for misrepresentation in different strata of the target population. More information on the survey, sampling, and weights is available in the technical report released by FRA (FRA, 2020) and in the GESIS data repository.

To date, the FRA survey is the largest (N = 139,799) and most comprehensive study on the LGB population in Europe. While non-representative, these data allow for comparisons across contexts defined by heterogeneous norms and attitudes toward the LGB population across European countries.

We employed descriptive statistics and t-test analyses to determine the statistical significance of differences between groups, and survival analyses to describe the time to self-disclosure and disclosure to others. The sample comprises self-identified LGB individuals; hence all respondents experienced the event of self-disclosure. We exclude respondents who declared the age at self-disclosure after the age at first coming out (N = 398).

We used survival analyses to account for potential selection bias at younger ages, which arises when the average age at self-disclosure for younger cohorts is underestimated due to the exclusion of individuals who self-disclose at older ages. To address this, we restricted the sample to individuals who self-disclosed before age 25. This cut-off aligns with the survey design, where the youngest respondents fall into the 18-25 age range. By setting the cut-off at 25, we ensure comparability between younger cohorts (aged 15-24 at the time of self-disclosure) and older groups, which were similarly restricted to those self-disclosing by age 25. Respondents enter the risk of self-disclosure at birth, and those who had not disclosed by the time of the survey are right-censored.

3.2.1 VARIABLES

We measured age at self-disclosure and age at first coming out on the basis of the following survey questions: ‘How old were you when you realised for the first time you are/you first told somebody you are [respondent category - Lesbian women, Gay men, Bisexual women, Bisexual men]?’ We then computed the gap between the two ages (age at first coming out to others - age at self-disclosure). If respondents were categorized as ‘transgender’ they were asked the same questions but about self-disclosure of their gender identity and first coming out as a transgender person; for consistency, we excluded these observations and included only cisgender LGB participants.

As main independent variables we used sexual identity (Gay man, Lesbian woman, Bisexual man, Bisexual woman), cohort (calculated using age groups), and country of residence.

3.2.2 DATA LIMITATIONS AND SAMPLE DESCRIPTION

Age at self-disclosure and age at first coming out were asked retrospectively, hence the answers may be imprecise, especially among older respondents. Similarly, the cross-sectional nature of the survey limits our ability to account for the fluidity of sexual orientation over the life course.

In the absence of a sampling frame for the LGB population in Europe, respondents are selected, and the sample cannot assure representativeness of the population of interest (i.e., the European LGB population). The majority of respondents are gay men, representing 50% of the sample, while the smallest group is bisexual men, 6% of the sample. Sixty-two per cent of the sample is less than 30 years old. Accordingly, the number of respondents in older age categories is small, especially among bisexual groups, impeding running three-way analyses. When observing the distribution of identities by birth cohort, more than the 50% of bisexual people are in the 1995-2004 cohort with bisexual girls outnumbering lesbian women in the youngest cohorts, while gay men have the highest frequencies and are more evenly distributed across cohorts. Also, the geographical distribution of respondents is skewed, with the majority of respondents living in the most populated European countries, particularly in Spain. To partially correct for these selection problems, we used weights in the analyses.

3.3 RESULTS

On average, LGB people in Europe discover their sexual identity shortly before their 16th birthday and come out at about 20 years old. This implies that, on average, they disclose to others about 4 years after acknowledging their sexual identity. Eight per cent of the sample

reported never having come out to anyone. Table 1 reports descriptive statistics by sexual identity and t-test.

Gay men self-disclose their LGB identity at least 3 years earlier than lesbian women and bisexuals. While the mean age at self-disclosure for gay men is about 14 years of age, all the others have mean ages above 16. With the exception of bisexual men - who tend to disclose to others later (mean = 21.74) - all other LGB identities come out to others around age 20. Remarkably, bisexual and lesbian women have the shortest gap between self-disclosure and coming out and gay men the longest. On average, women acknowledge being LGB later than gay men but come out earlier (confirmed by the t- test). Lesbian women also have the highest rate of disclosure to others (97.74%), while bisexual men have the lowest, with only 77.18% of bisexual men reporting having come out to someone. This may be related to the stigma surrounding bisexual people and is in line with previous literature (Doan and Mize 2020).

Table 1: Mean age at self-disclosure, at first coming out with others and self-disclosure/coming-out age gap by LGB sexual identity, with t-test (FRA, 2019).

	Age at self-disclosure	Age at first coming out	Age gap (in years)	% of respondents who have come out
Sexual identity	Mean (standard deviation)			
Gay men	13.91 (5.06)	20.04 (6.15)	6.22 (5.87)	95.62
Lesbian women	16.72 (6.66)	20.48 (6.81)	3.79 (5.39)	97.74
Bisexual men	16.85 (7.04)	21.74 (8.55)	5.49 (7.02)	77.18
Bisexual women	17.20 (6.84)	20.00 (7.41)	2.97 (5.03)	91.99
Total	15.72 (6.37)	20.37 (7.00)	4.88 (5.94)	91.97

T test	Gap in years (P-value)		
Gay men vs. all	-3.02 (p < 0.001)	- 0.58 (p < 0.001)	2.31 (p < 0.001)
Gay/Lesbian vs. bisexual	- 2.20 (p < 0.001)	- 0.51 (p < 0.001)	1.43 (p < 0.001)
LGB men vs. LGB women	- 2.16 (p < 0.001)	- 0.25 (p < 0.001)	2.66 (p < 0.001)

To investigate the cohort-related results, we conducted survival analyses, restricting the sample to individuals who self-disclosed before age 25 to ensure reliability. The mean age at self-disclosure does not differ significantly between cohorts, typically occurring (on average) when respondents are around 14 years old. However, the mean age at first disclosure to others drops significantly for younger cohorts (see Figure 1).

Evidence indicates that regardless of a similar age at self-disclosure, younger people tend to come out earlier and at a higher rate than older LGB respondents. Relatedly, the gap between the age at self-disclosure and the age at coming out with others is much smaller among younger groups.

Figure 1: Kaplan Meier survival curves - Age at self-disclosure and first coming out by birth cohorts among people who self-disclose their LGB identity before reaching 25 years of age (FRA, 2019).

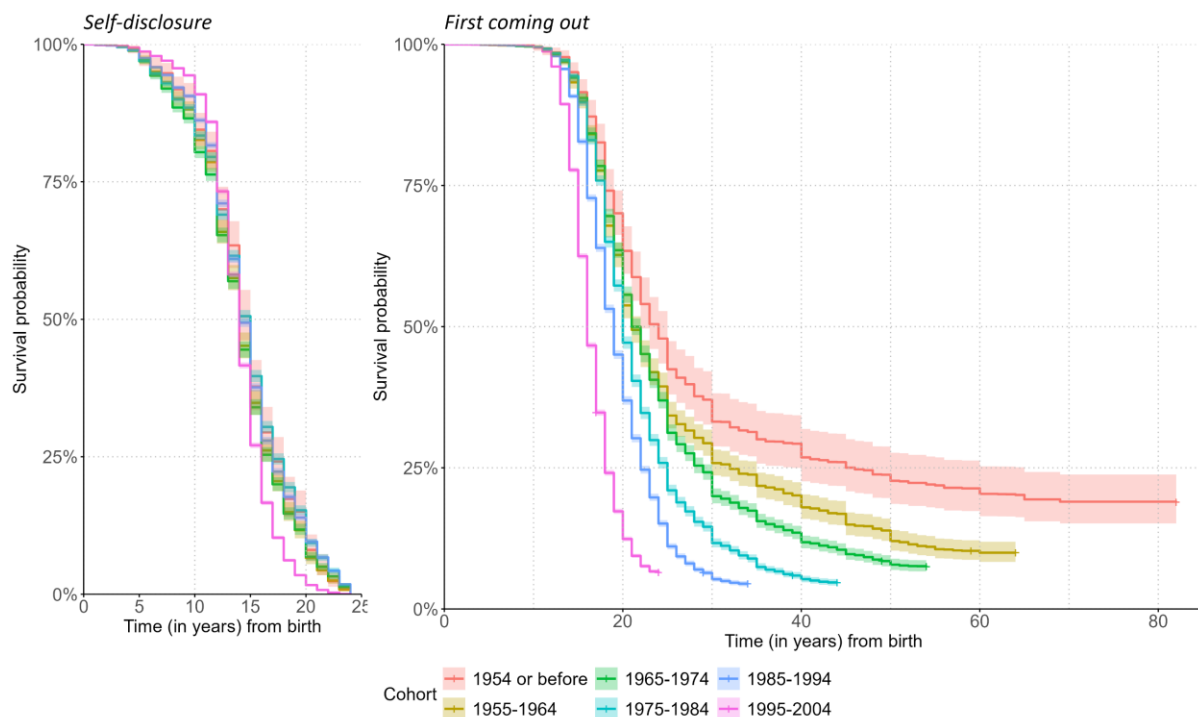


Table 2 shows a great heterogeneity across countries in terms of the three outcomes. For age at self-disclosure, countries with a mean age higher than the European average are predominantly from Nordic and Central Europe, including Germany, the Netherlands, France, Denmark, and Belgium, with the sole exceptions of Portugal and Hungary. In contrast, countries with lower mean compared to the European average include the three Baltic countries (Estonia, Latvia, and Lithuania), Eastern Europe and the Balkans (Slovakia, Slovenia, Serbia, Croatia, Bulgaria, and Romania), Southern Europe (Greece and Cyprus), the United Kingdom and Ireland. These clusters themselves mask a considerable internal heterogeneity.

Additional insights emerge when we relate these findings to the timing and extent of coming out across countries. For instance, in several Eastern European countries the average age at self-disclosure is below 15 years old. However, these same countries have the lowest rates of individuals coming out to anyone (90% or less) overall. Conversely, some of the countries with the highest average age at first coming out - i.e., Italy, Portugal, and Greece - also exhibit long gaps (over 5 years) between self-disclosure and coming out. Denmark and the Netherlands, where the mean age at coming out is also among the highest, stand out as they show the highest proportions of individuals who have come out to others.

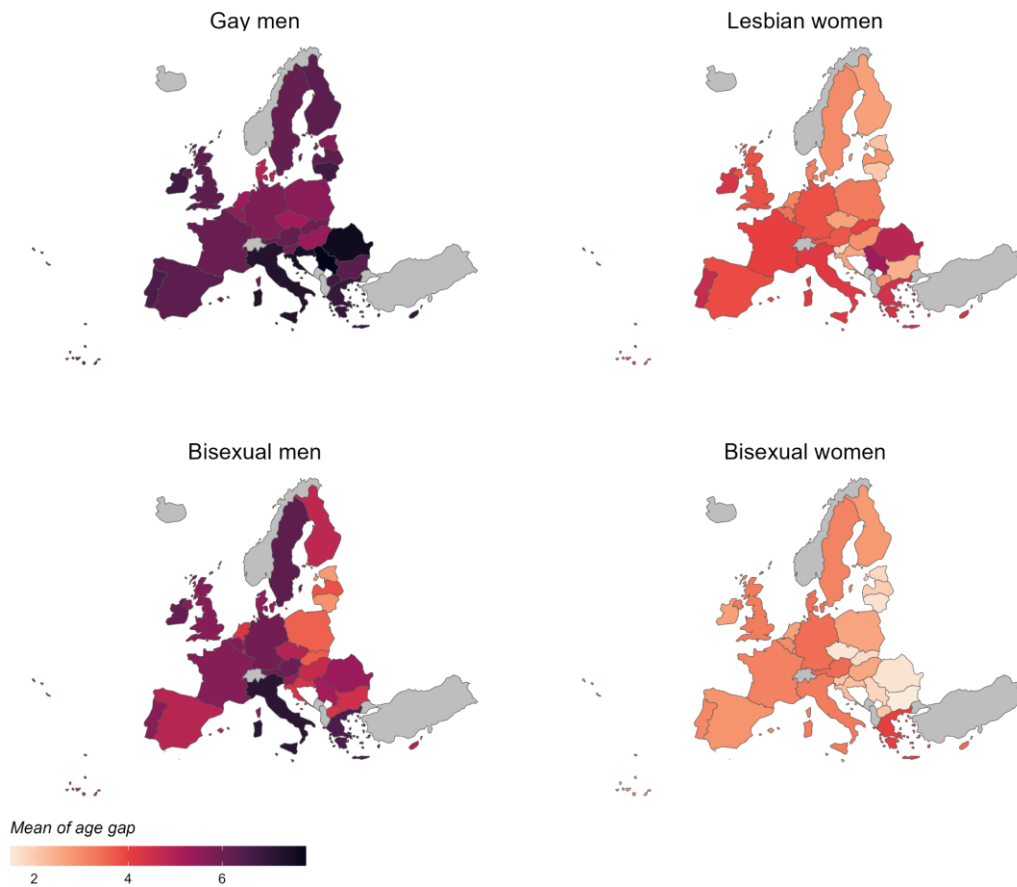
Table 2: Mean age at self-disclosure, at first coming out and self-disclosure/coming-out age gap by country of residence. Ranking sorted by ascending mean age at self-disclosure (FRA, 2019).

Country of residence	Age at self-disclosure	Age at first coming out	Age gap (in years)	% of respondents who have come out
	Mean (standard deviation)			
Lithuania	14.32 (4.40)	18.14 (5.30)	3.87 (5.10)	83.19
Croatia	14.51 (5.11)	19.24 (5.23)	4.86 (5.16)	90.58
Estonia	14.69 (4.35)	18.33 (5.28)	3.66 (4.31)	89.84
Cyprus	14.70 (5.18)	20.02 (5.81)	5.35 (5.80)	90.90
Slovenia	14.78 (4.49)	18.93 (4.94)	4.20 (4.63)	91.05
Latvia	14.84 (4.72)	18.83 (5.01)	4.15 (4.50)	89.32
Bulgaria	14.94 (4.28)	18.96 (5.35)	4.23 (4.88)	85.82
Serbia	14.94 (5.33)	20.31 (6.02)	5.62 (5.95)	89.54
United Kingdom	14.98 (6.52)	19.60 (7.66)	4.94 (6.41)	93.18
North Macedonia	15.12 (4.73)	19.56 (5.20)	4.60 (5.24)	84.55
Slovakia	15.15 (5.14)	19.25 (5.89)	4.26 (4.94)	91.06
Ireland	15.26 (6.12)	20.10 (7.10)	5.19 (6.04)	92.85
Greece	15.29 (6.04)	20.81 (6.73)	5.65 (6.33)	92.28
Romania	15.34 (5.46)	20.44 (7.03)	5.39 (6.62)	86.67
Malta	15.36 (6.09)	19.69 (6.65)	4.50 (5.82)	92.09
Finland	15.49 (6.60)	19.97 (6.78)	4.52 (5.42)	94.55
Austria	15.55 (6.42)	20.54 (7.03)	5.04 (5.85)	92.39
Czech Republic	15.64 (5.38)	19.40 (6.27)	3.95 (5.21)	89.80
Poland	15.65 (5.32)	19.76 (5.77)	4.23 (4.74)	90.91
Spain	15.73 (6.58)	20.33 (6.85)	4.79 (5.86)	94.36
Sweden	15.85 (7.04)	20.43 (7.36)	4.92 (6.16)	92.92
Italy	15.88 (6.93)	21.36 (7.39)	5.71 (6.61)	91.45
Germany	15.97 (6.39)	20.62 (7.08)	4.88 (5.85)	92.28
Portugal	16.17 (7.00)	21.14 (7.20)	5.22 (6.17)	91.40
Netherlands	16.19 (6.41)	20.17 (6.85)	4.09 (5.33)	94.70
France	16.21 (6.71)	20.81 (7.15)	4.91 (6.01)	92.12
Luxembourg	16.32 (6.11)	20.80 (7.03)	4.44 (5.53)	94.60
Denmark	16.49 (6.50)	20.63 (7.06)	4.30 (5.34)	94.12
Belgium	16.53 (7.06)	20.81 (7.23)	4.55 (5.98)	94.07
Hungary	16.62 (6.42)	20.58 (6.88)	4.13 (5.20)	89.89
Total (EU30)	15.72 (6.37)	20.37 (7.00)	4.88 (5.94)	91.90

Note: Values in bold are statistically different from the aggregate mean of all European countries according to the t-test (p-value < 0.001).

Comparing age gaps between countries accounting also for sexual identity (Figure 2), some of the largest gaps are observed in Italy and Romania for all identities except bisexual women. Yet Figure 2 clearly shows how age gap by sexual identity is larger among gay and bisexual men and smaller among lesbian and bisexual women (as shown in Table 1) across all countries, regardless of the singular mean age at self-disclosure and mean age at coming out by country. Thus, regardless of country variation and with very few exceptions, the distribution of the age gap is gendered.

Figure 2: Mean age gap (in years) between self-disclosure and first coming out by country and sexual identity (FRA, 2019).



A similar gendered pattern is observed when looking at the age gap by sexual identity and cohorts in Figure 3.

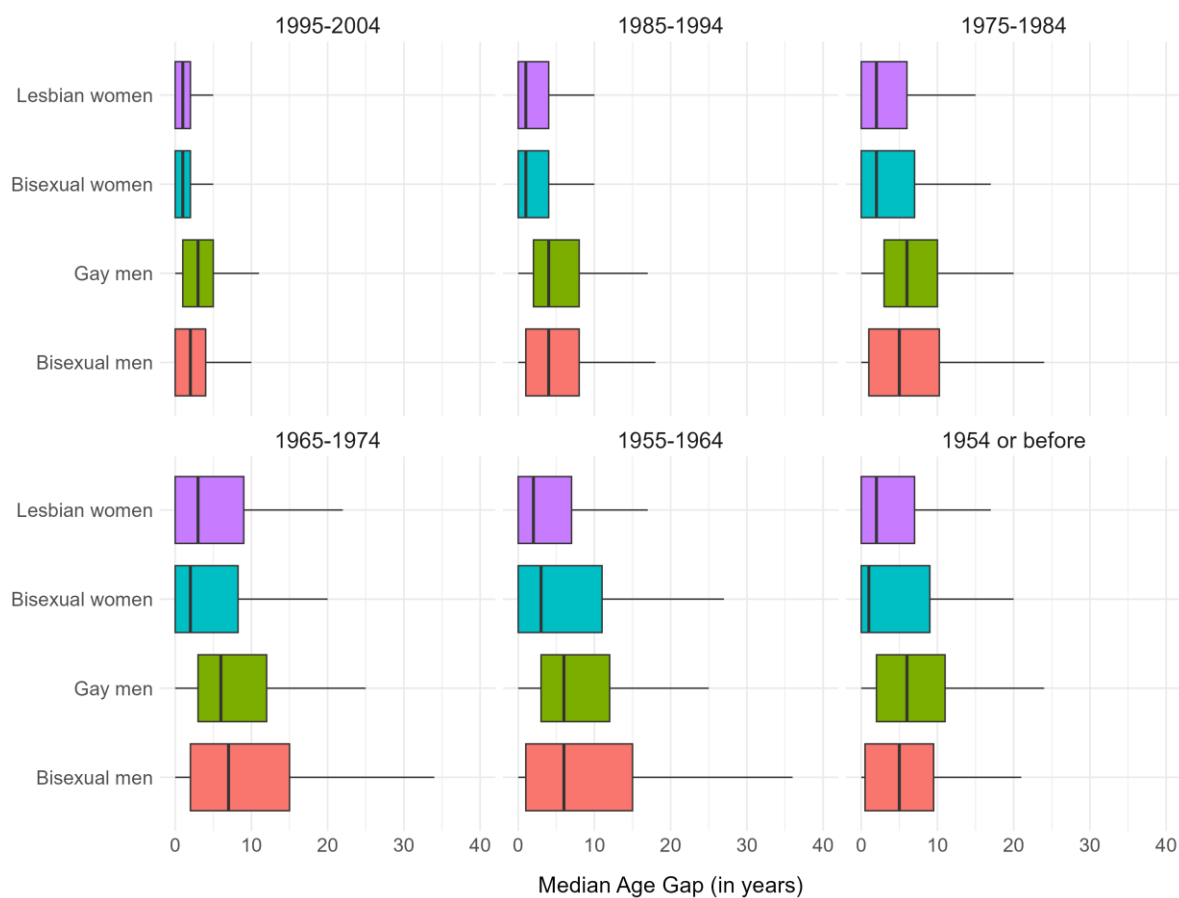
While the age gap between self-disclosure and first coming out is generally smaller among younger individuals for all LGB identities, longer age gaps are consistently observed among LGB men across all cohorts. More specifically, the median age gaps for LGB women are smaller than those for LGB men in (almost) all cohorts. This finding could imply that although LGB women have a higher age at self-disclosure than gay men across all cohorts, they come out more quickly once they acknowledge their sexual identity (as shown in Table 1). Figures 2 and 3 suggest that LGB men face more challenges in coming out compared to LGB women, a pattern that remains consistent across cohorts and countries.

3.4 DISCUSSION AND CONCLUSIONS

Gay men in our sample acknowledge their sexual identity earlier than lesbian women, bisexual men, and bisexual women. Although there are no differences between cohorts in

age at self-disclosure, the gap between age at self-disclosure and age at first coming out to others has narrowed across cohorts, as the age at first coming out has decreased significantly across cohorts. On the other hand, according to our data, age at self-disclosure varies considerably across Europe, being highest in the Nordic countries and lowest in the Eastern European countries. Based on these descriptive findings, some conclusions can be drawn.

Figure 3: Median age gap (in years) between age at self-disclosure and age at first coming out by sexual identity and cohort (FRA, 2019).



Note: Not displaying outside values (± 1.5 times the interquartile range).

First, given that younger people are significantly more likely to come out earlier and at a higher rate than older age groups, the evidence supports the idea that a period effect exists for age at first coming out. On the other hand, we did not find any evidence that the age at self-disclosure depends on the historical period, as it did not vary in different cohorts. Earlier coming out may indicate greater ease in navigating the process of sexual identity development (i.e., reduced social stigma) among younger cohorts (Dunlap 2016). Previous research suggests this is partly attributable to the advent of the internet and social media, which provide access to accurate information, role models, resources, and supportive

communities (Hillier, Mitchell, and Ybarra 2012). Additionally, the first legal recognition of same-sex couples in the 1990s, along with shifting public perceptions and increasingly favourable attitudes toward LGBTQIA individuals over the last two decades (Abou-Chadi and Finnigan 2019), may have offered younger generations greater social support. These factors have likely facilitated coming out experiences and had a positive impact on mental health. Although coming out can increase perceptions of discrimination, being open about one's sexual identity has a net positive effect on mental health by providing access to social support and a sense of belonging within the LGBTQIA community (Hall, Dawes, and Plocek 2021; Suppes, Van Der Toorn, and Begeny 2021).

Second, while earlier mean age at coming out and smaller age gaps for all may suggest that LGB individuals face fewer challenges in disclosing to others, findings for gay and bisexual men suggest that a significant stigma likely persists for LGB men, particularly bisexual men. Gay and bisexual men report the longest gaps between self- disclosure and coming out.

Third, evidence related to country differences may be interpreted in the context of the stigma and social attitudes specific to each country. Thus, higher mean age at coming out and/or large age gaps between self-disclosure and first coming out in certain countries - for instance, Italy or Portugal - may suggest the presence of an accentuated stigma in these countries. Unexpectedly, we found the lowest age of self-disclosure and narrowest age gaps in some Eastern European countries and some of the highest ages of self- disclosure in the Netherlands and Denmark.

A tentative explanation may be that positive social attitudes toward homosexuality - which are repeatedly found in Nordic countries (Dotti Sani and Quaranta 2020) - place less pressure on individuals to question their sexual identity, thus leading to higher age at self-disclosure, on average. Conversely, high homonegativity, often found in some Eastern and Southern European countries (Dotti Sani and Quaranta 2020) that also score poorly on the Rainbow Map Index (i.e., an index that monitors the legislative and policy environment of LGBTI people in Europe), may prompt earlier self-disclosure among LGB individuals due to the perceived dissonance between their identity and socially prescribed gender norms.

To fully comprehend the robustness of the evidence presented, further studies of sexual identity development and disclosure among LGB people living in Europe is required. However, this first evidence on the sexual identity development of LGB people living in Europe can inform future research, enhancing the interpretation of empirical findings concerning sexual orientation in the European context.

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CHAPTER 4.

EDUCATIONAL OUTCOMES OF UK LGB AND HETEROSEXUAL ADOLESCENTS: EXPLORING GENDERED DIFFERENCES AND MECHANISMS¹

ABSTRACT

Studies in the United States have repeatedly found that gay men and older cohorts of lesbian women have higher educational attainment than their heterosexual peers, whereas bisexual individuals and younger cohorts of lesbian women often face educational disadvantages. It remains unclear whether these findings apply to other national contexts and through which mechanisms differences in educational outcomes by sexual identity arise. Using UK longitudinal data from the “Millennium Cohort Study”, this study explores, for the first time in a European setting, the link between sexual identity, gender, and educational outcomes during adolescence. By comparing the achievements, subject choices, and educational expectations in a sample of heterosexual and LGB students aged 16 to 18, we find evidence that gay boys outperform heterosexual boys in terms of grades and expectations. Unexpectedly, similar outcomes are also found for bisexual boys. In contrast, as lesbian girls have comparable grades and expectations to heterosexual girls, our findings do not support the idea of a “lesbian penalty” in educational outcomes during high school in the UK. Overall, no single theory fully explains educational differences by sexual identities, emphasizing the necessity to account for the interplay between sexual identity and gender in evaluating students’ outcomes.

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Anna Caprinalli contributed to the conceptualisation, methodology, formal analysis, writing of the original draft, review and editing, and visualisation of this chapter. Agnese Vitali contributed to the conceptualization, the review, and the supervision of this chapter.

4.1 INTRODUCTION

In the United States, research on educational attainment of LGB people flourished in the last two decades, beginning with Black and colleagues' (2000) findings on the demographic characteristics of American adults in same-sex relationships. According to their results, a higher percentage of gay and lesbian respondents had tertiary degrees than heterosexual respondents. Subsequent studies (Mittleman, 2022; Mollborn and Everett, 2015) found evidence in support of this educational premium for gay men, and mixed findings for lesbian women and bisexual individuals. Mittleman (2022) confirmed Black and colleagues' (2000) findings of an educational premium for lesbian women compared to heterosexual women, but only among the older cohorts. No differences were found between heterosexual and lesbian women born after 1980. Others found a penalty for lesbian and bisexual women in the probabilities of enrolling or completing college when compared to heterosexual women (Fine 2015; Mollborn and Everett 2015). Similarly, studies found an overall disadvantage in educational attainment for bisexual respondents compared to heterosexual respondents (Mollborn & Everett, 2015), although the evidence on this comparison is limited.

Greater heterogeneity in the findings emerges when differences in educational attainment by sexual identity are compared across countries. Boertien and colleagues (2023) found an educational premium only for gay men in the USA, only for lesbian women in Germany and for both gay and lesbian individuals in the UK and Australia. Findings for bisexual respondents were mixed or not significant (Boertien et al., 2023). Altogether, past evidence suggests the presence of gendered and *within-group* differences among the LGB group, depending on individuals' sexual identity.

Two main shortcomings emerge from the previous literature. Despite sporadic studies on countries outside the USA (e.g., Boertien et al., 2023), existing evidence relies heavily on the US context, limiting the generalizability of findings to other educational systems. Moreover, existing research often fails to explain the educational disadvantages faced by some LGB identities. Explanations for the mechanisms driving the existence of the educational premium found among gay students fail to reconcile the higher attainment with evidence of higher stigma, harassment, and hostile environments that LGB students face in secondary education (Pearson et al., 2007) - factors generally associated with poorer educational outcomes (Aragon et al., 2014).

By using the representative cohort panel "Millennium Cohort Study", we study the association between sexual identity and educational outcomes among UK adolescents, and we investigate whether and how LGB students differ in their educational achievements, choices and expectations compared to heterosexual peers. Furthermore, in line with the

theoretical framework's understanding of social positioning as a relational and gendered process (Chapter 1), the paper examines both gender and relationships with peers and parents as key mechanisms shaping educational outcomes.

This paper contributes to the literature on social stratification of LGB people in three ways. First, it focuses on educational outcomes during adolescence, rather than adulthood, i.e., when individuals may begin to explore and understand aspects of their sexual identity. Indeed, the average age of self-disclosure (i.e., the age when individuals become aware of their sexual identity) is between 13 and 16 years old in the European context and is equal to 14.98 for the UK (Caprinali and Vitali, 2025). Second, it examines multiple educational outcomes: academic achievement, as in previous literature, but also educational choices (i.e., the subjects selected for GCSEs) and expectations (i.e., likelihood to go to university). This approach enables a more comprehensive understanding of educational inequalities and sheds light on whether differences in educational attainment during adulthood found in previous literature are mirrored by high school outcomes. Lastly, this paper discusses possible mechanisms that may account for differences in educational outcomes by gender and sexual identity. Given the intricate interplay between gender and sexual identity and the fact that our understanding of sexual orientation is influenced by gender norms, this study contributes to a broader understanding of the lifecourse experiences of non-heterosexual individuals and provides insights into gendered mechanisms in schools. Moreover, we test whether potential differences in educational outcomes between LGB and heterosexual students can be (partially) explained by factors such as peer-relationship and child-parent-relationship dynamics that may be influenced by one's sexual orientation (Campbell & Perales, 2022; Pearson et al., 2007) and that, in turn, may influence educational outcomes (i.e., mediators) (Aragon et al., 2014).

4.2 THEORETICAL FRAMEWORK

While prior research has primarily examined sexual orientation disparities in adults, less is known about whether these disparities emerge earlier, during secondary school. This gap is particularly important because adolescence is a key period of identity development. Relatedly, since the process of sexual identity development generally begins during adolescence (Caprinali and Vitali, 2025; Hall et al., 2021), and thus coincides with crucial educational choices, it is reasonable to hypothesise that sexual identity may influence educational outcomes during secondary school.

This argument is aligned with a life course perspective on education (Pallas, 2003). Educational trajectories are viewed as sequences of transitions and turning points shaped by individual choices, which create unique sets of opportunities and constraints and influence

processes of cumulative (dis)advantage. Accordingly, by highlighting the role of agency and structural constraints in shaping educational trajectories, the life course framework helps to make sense of disparities in educational outcomes other than attainment. Specifically, mechanisms such as self-efficacy and motivation (Aragon et al., 2014) may explain how sexual identity interacts with academic engagement and how the three educational outcomes examined in this study - grades, subject selection, and expectations - are shaped by subjective choices within a social context defined by structural opportunities and interpersonal relationships. Grades may vary based on the effort put into the exams, while preferring certain subjects over others may be influenced by social interactions with peers and family, as well as social pressures shaped by traditional gender norms. Similarly, higher or lower educational expectations may reflect personal evaluations of the educational opportunities and provide insights into LGB students' current experiences and perceptions of the future.

4.2.1 UNDERSTANDING THE EDUCATIONAL ATTAINMENT OF LGB STUDENTS

Past studies proposed several hypotheses for explaining the advantage in educational attainment found among gay men (Mittleman, 2022; Mollborn & Everett, 2015) and, according to some studies and country contexts, among lesbian women (Black et al., 2000; Boertien et al., 2023) compared to heterosexual men and women.

The “selective disclosure” explanation (Barrett and Pollack 2005) hypothesises that LGB individuals are a selected group. Individuals from privileged backgrounds often have greater access to economic and social resources, which may make them more likely to both pursue higher education and disclose their sexual identity in surveys (Barrett & Pollack, 2005; Mollborn & Everett, 2015).

A second explanation, categorized as “status-attainment”, suggests that LGB students pursue education to mitigate the expected discrimination, linked to their sexual identity, that may arise in the labour market and in the job-seeking process. Alternatively, “status-attainment” predicts that LGB students pursue education to achieve the social benefits connected to higher education, such as self-selection out of discriminatory environments or social recognition and acceptance (Mollborn & Everett, 2015). Education can provide LGB students access to more inclusive spaces, such as universities or LGBTQ*-friendly professions. Indeed, LGBTQ* respondents place major importance on a LGBTQ*-friendly work climate in the job decision-making process (Zindel & De Vries, 2024).

The third explanation predicts the existence of differences in educational outcomes within the LGB group (Fine, 2015; Mittleman, 2022; Mollborn and Everett, 2015). The experiences of LGB individuals are intertwined with broader discourses related to gender: sexual identity

is inherently perceived as a gendered phenomenon (Henry and Steiger 2022) and its meaning and development vary by gender (Ueno et al., 2013). Accordingly, since concepts of masculinity and femininity are closely linked to educational expectations about school performance, imperfect adherence to gender norms may have both positive and negative effects on their educational outcomes. For gay students, distancing themselves from hegemonic masculinity could reduce its associated penalty in the academic setting and could encourage them to pursue academic success as a way to enhance self-worth and social status (Mittleman, 2022; Pachankis and Hatzenbuehler, 2013). Conversely, lesbian students may feel less compelled to conform to the “female-high-achiever” and “good girl” stereotypes, a distancing that may translate into more severe sanctions from teachers (Mittleman, 2022; Mollborn and Everett, 2015; Pearson and Wilkinson, 2018).

The three explanations should be evaluated in light of the timing of sexual identity development and the stability of sexual orientation over time. For instance, those who came out early in adolescence may confront homophobia at younger ages, and thus may be more penalized in their academic performance, but if their sexual identity is stable over time, they may also be able to develop coping strategies earlier (McQuillan, 2017). Alternatively, adolescents who conceal their sexual identity while at school may experience mental health challenges related to minority stress (Meyer, 2003), which can, in turn, negatively impact their school performance.

4.2.2 THE INFLUENCE OF SEXUAL IDENTITY ON GRADES, SUBJECT CHOICES AND EXPECTATIONS

The studies reviewed in the previous sections primarily focus on educational attainment. We argue that, similar to demographic factors (Berrington et al., 2016; Codioli McMaster, 2017; Connolly, 2006), sexual orientation influences disparities in academic performance, subject selection, and expectations among LGB students in the UK, affecting their educational and career paths. Building on the insights presented in the theoretical framework, we expand on the hypotheses outlined by previous literature to understand how sexual orientation influences different educational outcomes.

Firstly, by applying the “status-attainment” hypothesis to grades, we expect that LGB students put greater effort into exams and overall performance in order to “invest” in education, which is seen as a gateway to higher social benefit, “safer” environments and occupations perceived as more tolerant. This effort, in turn, may result in higher grades compared to their heterosexual counterparts. Although stigma and harassment are known to negatively affect the academic performance of LGB students, previous literature suggests that such experiences can also reinforce a compensatory mechanism that motivates them to

put in extra effort at school (Pachankis and Hatzenbuehler, 2013). However, considering the strong link between sexual orientation and gender (Henry and Steiger, 2022; Ueno et al., 2013), we do not expect the “status-attainment” hypothesis to hold for all LGB individuals. Rather, we expect differences in grades within LGB students according to gender. While “status-attainment” predicts higher grades for all LGB students, this advantage may not be evenly distributed. Gay and bisexual boys may capitalize on their distance from traditional gender norms, striving for academic success (Pachankis and Hatzenbuehler, 2013) and achieving higher grades than heterosexual boys. However, lesbian and bisexual girls, especially those who openly challenge traditional gender norms, may face frequent sanctions at school, affecting their engagement and achievements. Such penalties may occur because teachers tend to have a “good girl” stereotype and reward “feminine” traits in class (Mittleman, 2022; Morris, 2011).

Hypothesis 1 (status attainment): Gay and bisexual boys have higher grades than heterosexual boys, while lesbian and bisexual girls have lower grades than heterosexual girls.

While few studies have directly investigated school subject choices among LGB students, evidence related to track or college choices suggests that LGB people are less likely to choose (Sansone & Carpenter, 2020) and to be retained in STEM majors (Hughes, 2018b). STEM subjects are associated with future income potential and economic returns (Codioli McMaster, 2017), yet previous studies suggest that LGB students, especially gay men, may be less motivated by these economic incentives compared to their heterosexual counterparts (Burn & Martell, 2020), hence contradicting expectations based on “status-attainment”. Additionally, several studies highlight that non-heterosexual students’ academic decisions are influenced by conscious and unconscious negotiations of identity (Lehtonen, 2010; Squire and Mobley, 2015). For example, they may choose subject majors with fewer individuals prejudiced against homosexuality (Burn and Martell, 2020). Our hypothesis is that LGB students, being distant from hegemonic norms of masculinity and femininity, may feel less constrained by gender-conforming choices and may have more freedom to challenge traditional gendered expectations compared to their heterosexual counterparts (Lehtonen, 2010). As a result, the gender gap in STEM subject choices may be smaller among LGB students compared to their heterosexual peers.

Hypothesis 2 (gender norms): Gay and bisexual boys are less likely to study STEM subjects than heterosexual boys, while lesbian and bisexual girls are more likely to study STEM subjects than heterosexual girls.

Lastly, considering educational expectations, prior evidence has found that, on average, LGB students have lower expectations than their peers in high school (Aragon et al., 2014; Pearson et al., 2007; Pearson and Wilkinson, 2018). However, these studies did not account for the quality of relationships with peers and parents, which are crucial in shaping children's aspirations (Beattie et al., 2021; Campbell & Perales, 2022) and correlate with LGB students' access to financial and emotional support. We contend that, after controlling for these factors, LGB boys may have higher educational expectations than heterosexual boys, as they often have stronger motivations to pursue education. While the limited evidence on educational expectations for LGB students does not differentiate between LGB boys and girls, we draw on the "status-attainment" hypothesis and gender norms. Accordingly, we hypothesize that lesbian and bisexual girls will have lower expectations than their heterosexual counterparts, as they face additional challenges in school related to both their gender and sexual identity, which may negatively affect their motivations to pursue education.

***Hypothesis 3 (educational investment):** Gay and bisexual boy students have higher educational expectations than heterosexual boys, while lesbian and bisexual girl students have lower educational expectations than heterosexual girls.*

4.3 STRATIFICATION OF OPPORTUNITIES IN THE UK CONTEXT

The UK's comprehensive educational system could provide a useful context to investigate the role that sexual orientation may exert on educational outcomes. The UK national curriculum is organised into blocks of years called "Key Stages", where students are not tracked based on their skills but only tested at the end of each block on all subjects studied. One such test is the General Certificate of Secondary Education (GCSE)², a set of formal exams typically taken at age 16 at the end of Key Stage 4 in all subjects studied at this level (usually about nine). The GCSEs mark the end of compulsory education in the UK. However, unlike A-levels - which are taken at age 18 - GCSEs do not grant access to tertiary education. Given this comprehensive structure, differentiation occurs mainly through subject choice - influenced by advice from parents and teachers - and school selectivity³. Therefore, differences in subject choices, expectations, and academic achievements among UK students - observed across demographic characteristics such as gender, family background,

² Students also sit other types of examinations at the end of the Key Stage 4, however, in Millennium Cohort Study, GCSEs examinations apply to most respondents (N=8,397, namely the 85.08 percent of the valid answers). More information on GCSEs is provided in the Appendixs.

³ School selectivity refers to the presence of a competitive admission process, where students must meet specific academic criteria and, in some cases, pass entrance exams to gain entry. This applies for instance to grammar and public schools in compulsory education.

and ethnicity (Berrington et al., 2016; Codioli McMaster, 2017; Connolly, 2006; Dilnot, 2016) - significantly contribute to the stratification of opportunities and result in disparities in students' future careers. As argued in the literature on educational stratification in the UK, higher scores in exams like the GCSEs assign students to different qualification levels⁴, affecting their academic possibilities similarly to subject major choices (Dilnot, 2016). Additionally, having high expectations (i.e., wanting to enrol in university and complete a degree) has been found to predict higher attainments in the UK context because expectations are used and internalized as personal goals and motivational resources (Berrington et al., 2016; Khattab, 2015).

4.4 DATA AND METHODS

Analyses are performed using the Millennium Cohort Study (MCS) data, an ongoing cohort panel study sampling about 19,000 individuals born in the UK between September 2000 and January 2002, all of whom were living in the UK at 9 months old. This stratified sample was recruited to ensure representation across England, Scotland, Wales, and Northern Ireland, with oversampling of disadvantaged areas and ethnic minorities.

MCS primarily measures the cohort members' physical, socio-emotional, cognitive, and behavioural development over time and collects rich data on economic circumstances, parenting relationships, and family life of household residents. Since sweep 6 (when cohort members were aged 13-15), the survey also assessed respondents' sexual orientation, asking about sexual attraction (sweep 6 and 7) and sexual identity (sweep 7, age 16-18) via self-completion questionnaires. These features make the MCS data highly suitable for examining multiple educational outcomes among LGB adolescents and for investigating whether personal or family characteristics influence the association between education and sexual identity.

Due to attrition, the sample size was reduced to 10,757 individuals in the last sweep available. Nonetheless, the sample size remains robust, allowing for analyses on smaller subgroups, such as LGB students (N = 1,063 in wave 7; see Table A1 in Appendix). To maintain reliability and adjust for attrition, we applied probability weights. Additionally, we applied multiple imputation to handle missing data in several control variables and retain the maximum number of cases for the regression analyses. While we initially tried imputing all variables, convergence issues led us to impute only those with substantial missingness (as detailed in Table B1 in the Appendix). The only additional variable that did not cause

4 In the UK, obtaining higher grades in GCSEs examinations correspond to gaining a higher educational attainment (level 2 vs. level 1): <https://www.gov.uk/what-different-qualification-levels-mean/list-of-qualification-levels> (last access: 5th April 2024).

convergence problems was highest parental academic attainment, and including it did not change our main findings, supporting their robustness. Nonetheless, we acknowledge that restricting imputation to certain variables is a limitation. The final analytical samples consisted of 7,656 respondents for the outcomes “Mean of GCSEs grades” and “Proportion of STEM subjects studied”, and 6,089 for the outcome “Educational expectations about tertiary education”⁵.

4.4.1 DEPENDENT VARIABLES

To investigate differences in educational outcomes by sexual identity among UK students, we analyse three separate outcomes: educational achievement at the end of secondary school, subject choices in compulsory education, and educational expectations for tertiary education. Data on these outcomes were primarily obtained from the last wave available (Sweep 7) of MCS, which was released in 2020.

The first dependent variable - mean GCSE grade - is calculated as the average grade obtained by a student in the GCSEs exams taken. MCS collects GCSEs data for all subjects studied at Key Stage 4, with grades ranging from 0 (U) to 9 (A*)⁶. To harmonize grades that are expressed both in numeric and letter-based scales, we constructed a measure that ranges from 0 (U) to 7 (A*). Previous studies on UK educational attainment have used measures such as total GCSE scores, grades in compulsory subjects like English or Maths, or the binary “GCSE-gap” (Connolly, 2006), which indicates whether students achieved more than 5 A*-C grades. Since some students had not completed all their GCSEs at the time of the interview⁷ (which took place between ages 16 and 18, over several months in 2017), we could not rely on the GCSE-gap measure. Using the mean GCSE grade allows us to include students who had taken fewer than the required number of subjects or had not yet completed “core subject”⁸ exams. Nevertheless, this approach does not account for the total number of GCSEs taken, which may be highly relevant, particularly for post-compulsory education and university admissions.

⁵ More information on sample selection and multiple imputation are available in the Appendix in the section “Sample selection and multiple imputation”.

⁶ GCSE grades have been awarded on a 9 to 1 scale since 2017. However, since our dataset includes grades expressed in both the current numeric scale and the previous letter-based scale, we constructed a harmonised measure to account for these differences. This measure ranges from 0 (U) to 7 (A*), based on established equivalence schemes (see: <https://www.gov.uk/government/publications/gcse-9-to-1-grade-scale-explained/gcse-9-to-1-grade-scale-explained> - last access: 23th July 2025)

⁷ Among students who reported having taken GCSE examinations, only 9.94% completed fewer than five GCSEs. In contrast, a larger proportion, 42.59%, undertook less than nine or more GCSE subjects, which is the typical number of GCES exams taken at the end of Key Stage 4.

⁸ While in England and Wales taking English, Math and Science exams are compulsory, this is not true in all the UK countries. Similarly, several exceptions or additionally compulsory subjects exists in private schools: <https://www.gov.uk/national-curriculum/print> (last access: 5th April 2024).

To investigate different propensities to choose STEM subjects, we created a dummy variable for each subject taken at GCSEs indicating whether it was STEM (1) or not (0). We then calculated the proportion of STEM subjects over the total number of subjects studied. Given the lack of consensus on the definition of STEM, we classified subjects according to UK Parliament guidelines (House of Lords, 2012). For simplicity, non-STEM subjects were grouped together, despite distinctions between humanities, social sciences, and health-related disciplines.

The third dependent variable assesses students' educational expectations for tertiary education, measured by the question: *"How likely do you think it is that you will go to university?"*. Responses were recorded on a scale from 0 to 100. While aspirations reflect individual desires, expectations are typically more realistic, based on perceptions of opportunity and likelihood to achieve the goal (Khattab, 2015). As a result, we believe this measure is particularly useful for understanding the challenges LGB students may perceive in continuing education.

4.4.2 INDEPENDENT VARIABLES

The main independent variables are sexual orientation and gender. Since previous studies repeatedly highlighted gender differences in the developmental trajectories, cultural understanding, and social mechanisms related to LGB men and women (Mittleman, 2022; Mollborn and Everett, 2015; Ueno et al., 2013), the two variables measuring gender and sexual identity will be interacted.

Sexual identity, measured by the question *"Which of the following options best describes how you currently think of yourself?"*, is used as a proxy for sexual orientation. Since it is the acknowledgment of non-heterosexuality that makes LGB students aware of prejudices, it is reasonable to state that sexual identity - rather than attraction or behaviour - matters in explaining LGB educational choices (Fine, 2015). The original variable was recoded into five categories: "Completely heterosexual," "Mostly heterosexual," "Bisexual," "(Mostly) Homosexual," and "Other sexual orientation/Don't know." The final subsample consisted of 1,079 non-heterosexual respondents (10.72% of the valid sample; see Table A2). The category "Other/Don't know" was created to capture individuals with non-listed sexual orientations (N=157) or those unsure of their sexual identity (N=16). "Mostly heterosexual" respondents were kept separate from "Completely heterosexual" as their behaviours and drivers differ from both heterosexual and LGB individuals (Mollborn and Everett, 2015), and the sample sizes allowed it. Albeit it would be ideal to also keep "Completely Homosexual" and "Mostly Homosexual" categories separate, sample size limitations prevented it.

The gender variable, based on the question “*Which of the following describes how you think of yourself?*”, was coded as binary, including only male and female respondents. Non-binary⁹ respondents (N = 58) were excluded due to the small sample size, which would not allow for meaningful interactions with sexual identity. Also, non-binary individuals may experience distinct mechanisms compared to cisgender students, complicating the isolation of sexual orientation’s role from that of gender identity. Still, we opted for the “gender identity” variable over sex assigned at birth to include transgender individuals who identify as either women or men, because societal expectations tied to gender norms likely play a more significant role than biological sex in influencing educational outcomes. The univariate distribution of the original variable is presented in Table A3, while the bivariate distribution of sexual identities by gender is shown in Table 1. From this point forward, we will refer to respondents as boys and girls.

Table 1: Distribution of sexual identity by gender of respondents. Weighted data (MCS, 2017).

Sexual orientation (identity) of the respondents	Percent frequencies		
	Boys	Girls	Total
Completely heterosexual	84.78	71.82	78.19
Mainly heterosexual	8.55	14.44	11.54
Bisexual	3.43	9.82	6.67
(Mainly) Homosexual	2.4	2.35	2.37
Other/questioning	0.84	1.58	1.22
Total	100%	100%	100%
N.	4,876	5,076	9,952

4.4.3 ANALYTICAL STRATEGY

We used linear regression to estimate the relationships between sexual orientation and the three outcomes, accounting for controls and potential mediators.

The same set of control variables is used across analyses for all three educational outcomes, grouped into two main sets. The first set of controls includes the respondents’ demographic characteristics, namely the highest parental academic attainment retrieved from wave 1, the self-reported child ethnicity (from wave 6), and age at interview (16, 17 or 18). The second set of controls includes household-related variables: family structure (two-parent,

⁹ In this section, the term “non-binary” is used as an umbrella term to refer to all gender identities beyond cisgender men and women for the sake of brevity. This group includes respondents who selected “Other”, “Androgynous / male and female”, “Gender fluid”, or “Non-binary” in the Gender Identity variable (N=157). For further details, see Table A3 in the Appendix.

repartnered, or single-parent households), number of siblings (0, 1, 2, or 3+), region of residence, and the family's employment. The latter is based on the employment status of the resident adults, categorized as both in paid work, one in paid work, or both jobless. Single parents fall into one of two categories: either in paid work or jobless.

For the outcome "Educational expectations", we additionally control for household income, centred on the sample mean, to account for the anticipation of possible financial difficulties in accessing tertiary education. Indeed, income is a strong predictor of enrolment in tertiary education in the UK context (Berrington et al., 2016; Khattab, 2015).

We also include in the analyses some variables that we conceived as mediators, as we hypothesize that they not only influence educational outcomes but may also be shaped by sexual orientation. Specifically, we account for psychosocial variables—capturing respondents' perceptions of their peer relationships and parent-child interactions—which can impact educational outcomes through mechanisms such as self-efficacy and motivation (Aragon et al., 2014). Poorer relationships with peers and family (Campbell & Perales, 2022; Pearson & Wilkinson, 2018) and higher victimization experienced by LGBTQIA* youth (Mcbrien & Rutigliano, 2022) may contribute to minority stress and internalized homophobia, leading to psychological difficulties that could undermine academic engagement and aspirations (Aragon et al., 2014). Peer relationships are measured using a scale ranging from 0 to 10, where higher values indicate more negative relationships with peers. Parent-child relationships are assessed by the frequency of conversations about topics important to the child, coded into six categories from "Not at all" to "Every day." For the outcome of "Educational expectations", we also introduced GCSEs mean grade as a mediator to account for prior academic achievements, since sexual orientation may indirectly influence educational expectations through performance.

Due to the high importance of the interactive effect between gender and sexual orientation, analyses will not be separated by gender; rather, the two main independent variables will be interacted. For all three outcomes, Model 1 includes the main independent variables (interacted), Model 2 includes all control variables, and Model 3 incorporates the mediators alongside the controls. Results from Model 3 are also presented as predicted probabilities in graphical form to enhance readability. Lastly, pairwise comparisons of marginal effects by sexual identity and gender are reported in the Appendix (Table C1) to evaluate the statistical significance of differences between groups.

We conducted mediation analyses for all three outcomes to better account for the extent to which sexual orientation directly influences educational outcomes. These mediation analyses were stratified by gender, ensuring comparability with the gender-specific results

reported in the linear regression models and enabling a nuanced interpretation of the findings.

4.5 Results

Table 2 provides the descriptive statistics for the three outcomes by sexual identities and gender. Overall, GCSE mean grades and educational expectations appear to be higher among bisexual and gay boys compared to heterosexual boys, while non-heterosexual girls have higher mean grades than heterosexual girls, but lower or comparable educational expectations. No differences were found between heterosexual and LGB boys or between heterosexual and LGB girls in the proportion of STEM subjects, which accounts for approximately 40% of the total subjects studied by all respondents. Overall, “Other sexual orientation / Don’t know” respondents have the lowest grades and report fairly low educational expectations. It should be noted, however, that not all of the observed differences reach statistical significance when compared to the mean of heterosexual peers.

Table 2: Descriptive statistics of the three outcome variables by sexual identity and gender of the respondents, mean and standard deviation in brackets. Weighted data (MCS, 2017).

		Sexual identity					
	Total sample	Heterosexual	Mainly heterosexual	Bisexual	(Mainly) Homosexual	Other / Don't know	N
Boys							
GCSEs mean grade	4.60 (1.12)	4.57 (1.11)	4.85 ^a (1.17)	4.66 (1.23)	4.70 (1.16)	4.48 (1.21)	3,953
Proportion of STEM	0.44 (0.16)	0.45 (0.16)	0.44 (0.15)	0.43 (0.15)	0.43 (0.13)	0.44 (0.21)	3,953
Tertiary educational expectations	56.14 (36.51)	55.10 (39.91)	60.29 ^c (34.69)	63.73 ^c (33.20)	62.18 ^d (34.14)	58.93 (28.89)	2,849
		Sexual identity					
	Total sample	Heterosexual	Mainly heterosexual	Bisexual	(Mainly) Homosexual	Other / Don't know	N
Girls							
GCSEs mean grade	4.87 (1.12)	4.80 (1.10)	5.25 a (1.08)	4.95 b (1.14)	4.90 (0.93)	4.54 (1.40)	4,206
Proportion of STEM	0.39 (0.15)	0.39 (0.15)	0.39 (0.15)	0.41 c (0.13)	0.41 (0.13)	0.41 (0.13)	4,206
Tertiary educational expectations	68.21 (33.75)	66.66 (34.21)	76.63 a (29.03)	67.89 (34.39)	60.88 (39.14)	65.30 (32.58)	3,585

Note: Superscripts indicate group means that differ significantly, respectively, from the mean of heterosexual boys or girls, with significance levels as follows: ^a p<0.001; ^b p<0.01; ^c p<0.05; ^d p<0.1.

Table 3 provides further descriptive statistics of the sample by showing the distribution of controls by sexual identities. While “completely heterosexual” and “(mostly) homosexual” categories are evenly distributed between boys and girls, girls are overrepresented among

the broader LGB sample. Indeed, they represent the majority among mainly heterosexual, bisexual, and other sexual orientation respondents. While this is in line with previous evidence that found a higher likelihood among women of identifying themselves as either mainly heterosexual or bisexual compared to men (Mishel, 2019), this sample composition should be taken into account when interpreting the findings. Moreover, as predicted by the literature (Campbell and Perales, 2022; Pearson and Wilkinson, 2018), LGB respondents in the sample report, on average, more negative peer relationships and lower frequencies of talking with parents compared to heterosexual peers. While it could be hypothesised that LGB respondents have weak parent-child relationships, Table 3 also shows that they are also more likely to be only children and to live in repartnered or single-parent families.

Table 3: Descriptive statistics by sexual identity, column percentages for categorical variables; mean and standard deviation for continuous variables. Weighted data (MCS, 2017).

	Sexual orientation (identity)					Missing	Total
	Completely heterosexual	Mainly heterosexual	Bisexual	(Mainly) Homosexual	Other/ Don't know		
Respondent level variables							
Gender identity (%)							
Boy	53.27	36.12	24.21	46.43	25.48	3.46	47.46
Girl	46.59	62.97	71.68	46.82	49.12	5.44	49.04
Missing	0.14	0.91	4.11	6.74	25.40	91.09	3.50
Age (%)							
16 years old	28.12	32.42	28.44	28.91	30.96	14.06	28.31
17 years old	69.51	64.08	68.16	67.66	66.07	79.27	68.98
18 years old	0.45	0.65	1.28	0.76	0.64	2.49	0.59
Missing	1.92	2.86	2.12	2.68	2.33	4.18	2.12
Ethnicity (%)							
White British	70.14	76.26	74.04	76.05	74.13	48.15	70.71
Mixed	0.48	0.33	0.37	0.55	0.55	0.37	0.45
Indian	1.51	1.4	1.99	0.41	0.22	0.5	1.46
Pakistani	2.6	1.39	0.66	0.69	1.96	1.52	2.25
Black or Caribbean	1.76	2.06	1.06	0	1.3	1.19	1.68
Other ethnic group	1.04	1.84	1.35	0	0.66	1.19	1.12
Missing	22.47	16.71	20.53	22.29	21.19	47.08	22.33
Region of residence (%)							
North East	3.03	2.31	4.5	2.82	4.2	1.44	3.02
North West	10.47	9.29	10.5	7.91	11.17	10.76	10.29
Yorkshire and the Humber	8.99	5.78	9.29	8.46	3.66	12.01	8.64
East Midlands	7.84	8.47	6	7.84	5.91	10.28	7.82
West Midlands	7.86	5.91	6.4	7.36	12.16	13.48	7.75
East of England	10.23	9.28	8.71	9.15	12.46	6.89	9.94
London	9.55	10.32	9.11	9.1	8.52	4.34	9.44
South East	15.55	19.72	16.03	16.66	13.55	19.78	16.16
South West	9.27	10.55	10.06	8.81	11.38	5.31	9.38
Wales	3.03	2.31	4.5	2.82	4.2	1.44	3.02
Scotland	10.47	9.29	10.5	7.91	11.17	10.76	10.29
Northern Ireland	8.99	5.78	9.29	8.46	3.66	12.01	8.64
Missing	7.84	8.47	6	7.84	5.91	10.28	7.82
Negative relationship with peers (mean)	1.96	2.42	2.97	2.89	3.59	2.13	1.96
Sd	1.65	1.79	1.82	1.94	1.76	1.73	1.65

(Continue Table 3 from previous page)

	Sexual orientation (identity)						Total
	Completely heterosexual	Mainly heterosexual	Bisexual	(Mainly) Homosexual	Other/ Don't know	Missing	
Household-related variables							
Household composition							
Both parents	62.66	62.23	56.49	54.48	58.21	49.88	61.58
Repartnered mother	7.32	6.63	9.58	6.67	7.37	5.45	7.33
Repartnered father	0.71	0.43	0.36	0.82	0.64	0.69	0.66
Single mother	22.67	24.32	24.92	30.86	24.87	31.57	23.48
Single father	2.57	1.14	2.04	2.1	1.79	2.61	2.35
Other arrangements	0.43	0.5	0.23	0	1.54	0.94	0.44
Missing	3.65	4.75	6.37	5.06	5.58	8.85	4.16
Number of siblings							
Only child	23.91	28.03	29.91	38.75	32.66	29.13	25.42
1 sibling	44.61	46.62	42.85	35.75	32.25	44.24	44.3
2 siblings	20.83	19.17	21.48	20.88	26.19	17.97	20.7
3 or more siblings	10.65	6.18	5.75	4.62	8.9	8.67	9.59
Household income in range (mean)							
Sd	-0.16	0.13	0.47	-0.45	-0.82	-0.09	-0.16
	5.62	5.72	5.79	5.43	5.00	5.63	5.62
Parent-related variables							
Education of parents (max)							
None of them	7.11	4.23	7.04	6.98	7.48	12.95	6.94
GCSEs grades D-G	5.37	3.5	5.17	3.62	6.69	11.01	5.28
O level / GCSEs grades A-C	29.77	22.63	23.12	31.59	27.74	35.48	28.69
A / AS / S levels	9.61	8.45	7.78	12.93	7.9	7.68	9.36
Diplomas in higher education	12.67	12.25	15.49	11.48	10.79	9.91	12.68
First degree	20.14	26.96	22.46	22.33	23.72	11.83	20.94
Higher degree	8.07	14.02	10.36	5.81	10.06	5.23	8.79
Other	3.62	3.62	2.93	1.96	2.4	2.27	3.48
Missing	3.66	4.35	5.66	3.3	3.23	3.63	3.85
Frequency of talks with parents							
Not at all	3.02	3.08	3.56	4.25	3.53	1.07	3.05
Less than once a month	6.62	5.9	7.28	11.83	10.53	0.09	6.6
Once or twice a month	10.93	13.83	12.73	18.02	15.55	0.58	11.34
Once or twice a week	23.23	24.97	23.98	17.34	21.7	2	22.73
Several times at week	25.4	26.03	25.25	20.48	26.78	1.66	24.72
Every day	26.95	21.2	22.44	23.46	15.46	3.2	25.1
Missing	3.85	4.99	4.76	4.62	6.47	91.41	6.46
Working status of parents							
(Both) Not in paid work	8.24	5.88	9.37	12.44	13.21	8.59	8.24
At least one in paid work	8.5	8.7	9.16	8.17	6.4	4.88	8.43
(Both) In paid work	62.82	70.59	62.12	58.26	59.4	44.79	62.99
Missing	20.44	14.83	19.35	21.14	20.99	41.74	20.34
N	7,888	1,101	656	250	173	277	10,345

4.5.1 MEAN OF GCSE GRADES

Overall, as expected, completely heterosexual girls have higher mean grades than boys, as shown by the positive coefficient which remains consistent and statistically significant across the models in Table 4, even after adding controls (0.266, $p < 0.001$ in Model 3).

Regarding sexual orientation, only mainly heterosexual boys in Model 1 have higher mean GCSEs grades than heterosexual students. Introducing control variables in Model 2 and mediators in Model 3, the positive coefficients found in Model 1 also become significant for gay and bisexual boys (respectively 0.381, $p < 0.001$ and 0.215, $p < 0.05$ in Model 3).

Interestingly, the coefficient of the interaction term for mainly heterosexual (0.183) of Model 1 turns insignificant when adding controls in Model 2, while the sign reverses for bisexual girls. Only the coefficient for lesbian girls has a consistent negative sign and turns significant in Model 2 after adding controls (-0.326, $p < 0.05$), suggesting that gender may moderate the influence of sexual orientation on educational outcomes, particularly for lesbian girls.

Results for people that declare to have a sexual orientation different from those listed are not statistically significant for either boys or girls; for boys the sign of the coefficient is inconsistent across models. Overall, adding mediators in Model 3 does not change the main findings, but rather it confirms the direction and increases the significance of the coefficients of Model 2.

Predicted values for all groups obtained from Model 3 - adjusted to the means of control variables - are displayed in the left panel of Figure 1. The results reveal clear and substantial differences. Completely heterosexual boys appear to be disadvantaged in terms of grades compared to all other groupings, while non-heterosexual boys have similar grades to heterosexual and non-heterosexual girls.

Table 4: OLS regression results for GCSEs mean grades and Proportion of STEM subjects studied. Weighted and imputed data. (MCS, 2017).

	GCSEs mean grades						Proportion of STEM					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	t	B	t	B	t	B	t	B	t	B	t
Sexual orientation (<i>ref: Completely heterosexual</i>)												
Mainly heterosexual	0.268***	(-4.13)	0.175**	(-3.09)	0.216***	(-3.82)	-0.002	(-0.23)	0	(-0.02)	-0.003	(-0.37)
Bisexual	0.115	(-1.14)	0.147	(-1.67)	0.215*	(-2.45)	-0.014	(-1.00)	-0.015	(-1.07)	-0.018	(-1.29)
(Mainly) Homosexual	0.167	(-1.42)	0.312**	(-3.05)	0.381***	(-3.74)	-0.017	(-1.04)	-0.02	(-1.24)	-0.023	(-1.41)
Other / Don't know	-0.088	(-0.34)	0.211	(-0.94)	0.252	(-1.13)	-0.054	(-1.53)	-0.058	(-1.65)	-0.061	(-1.75)
Gender identity (<i>ref: Boy</i>)												
Girl	0.230***	(-8.09)	0.267***	(-10.74)	0.266***	(-10.59)	-0.054***	(-13.98)	-0.056***	(-14.44)	-0.055***	(-13.93)
Sexual orientation # Gender												
Mainly heterosexual # Girl	0.183*	(-2.22)	0.097	(-1.35)	0.078	(-1.09)	0.003	(-0.24)	0.004	(-0.39)	-0.006	(-0.55)
Bisexual # Girl	0.093	(-0.79)	-0.034	(-0.33)	-0.042	(-0.41)	0.036*	(-2.21)	0.038*	(-2.34)	0.037*	(-2.28)
(Mainly) Homosexual # Girl	-0.084	(-0.50)	-0.326*	(-2.25)	-0.335*	(-2.33)	0.037	(-1.63)	0.041	(-1.81)	0.039	(-1.74)
Other / Don't know # Girl	-0.057	(-0.19)	-0.398	(-1.54)	-0.356	(-1.39)	0.082*	(-2.03)	0.087*	(-2.15)	0.084*	(-2.08)
Age (<i>ref: 17 years old</i>)												
16 years old			-0.135***	(-5.63)	-0.129***	(-5.45)			-0.001	(-0.31)	-0.001	(-0.33)
18 years old			0.183	(-1.04)	0.169	(-0.97)			-0.03	(-1.10)	-0.029	(-1.06)
Ethnicity (<i>ref: White British</i>)												
Mixed			-0.089	(-0.59)	-0.088	(-0.57)			0.01	(-0.32)	0.009	(-0.28)
Indian			0.224*	(-2.57)	0.200*	(-2.29)			0.01	(-0.70)	0.011	(-0.76)
Pakistani and Bangladeshi			0.032	(-0.37)	0.021	(-0.25)			0.002	(-0.16)	0.003	(-0.21)
Black or Black British			-0.077	(-0.88)	-0.066	(-0.76)			0.027	(-1.85)	0.026	(-1.85)
Other ethnic group			0.196	(-1.75)	0.199	(-1.82)			0.017	(-1.08)	0.017	(-1.08)
Highest academic qualification of parents (<i>ref: None of them</i>)												
GCSE grades D-G			-0.126	(-1.90)	-0.122	(-1.86)			-0.015	(-1.43)	-0.015	(-1.47)
O level / GCSE grades A-C			0.243***	(-4.88)	0.225***	(-4.54)			0.002	(-0.25)	0.002	(-0.30)
A / AS / S levels			0.580***	(-9.94)	0.566***	(-9.77)			0.01	(-1.09)	0.01	(-1.10)
Diplomas in higher education			0.609***	(-11.07)	0.583***	(-10.66)			-0.003	(-0.30)	-0.002	(-0.20)
First degree			1.140***	(-21.77)	1.089***	(-20.88)			-0.015	(-1.81)	-0.013	(-1.61)
Higher degree			1.435***	(-24.09)	1.383***	(-23.34)			-0.021*	(-2.26)	-0.019*	(-2.07)
Other			0.497***	(-6.82)	0.475***	(-6.57)			0.008	(-0.74)	0.009	(-0.82)
Household type (<i>ref: Both parents</i>)												
Repartnered mother			-0.305***	(-7.12)	-0.279***	(-6.57)			0.009	(-1.39)	0.008	(-1.27)
Repartnered father			-0.368**	(-2.69)	-0.296*	(-2.18)			0.055**	(-2.59)	0.053*	(-2.45)
Single mother			-0.274***	(-9.87)	-0.244***	(-8.79)			0.013**	(-2.94)	0.012**	(-2.76)
Single father			-0.347***	(-4.84)	-0.321***	(-4.51)			-0.006	(-0.55)	-0.007	(-0.63)
Number of siblings (<i>ref: Only child</i>)												
1 sibling			-0.001	(-0.02)	-0.014	(-0.50)			-0.010*	(-2.25)	-0.010*	(-2.15)
2 siblings			-0.056	(-1.67)	-0.068*	(-2.02)			-0.011*	(-2.18)	-0.011*	(-2.12)
3 or more siblings			-0.074	(-1.60)	-0.077	(-1.66)			-0.008	(-1.09)	-0.008	(-1.10)

(Continue Table 4 from previous page)

	GCSEs mean grades						Proportion of STEM					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	B	t	B	t	B	t	B	t	B	t	B	t
Working status of the resident adults (ref: (Both) not in paid work)												
One in paid work			0.154**	(-2.79)	0.148**	(-2.64)			0.007	(-0.74)	0.007	(-0.76)
(Both) in paid work			0.236***	(-5.88)	0.215***	(-5.31)			-0.005	(-0.68)	-0.004	(-0.57)
Region (ref: London)												
North-East			-0.185**	(-2.64)	-0.178*	(-2.56)			0.031**	(-2.85)	0.032**	(-2.89)
North-West			-0.148**	(-2.98)	-0.140**	(-2.84)			0.033***	(-4.20)	0.032***	(-4.18)
Yorkshire and the Humber			-0.203***	(-3.90)	-0.179***	(-3.47)			0.041***	(-5.10)	0.041***	(-5.02)
East Midlands			-0.164**	(-3.10)	-0.146**	(-2.79)			0.043***	(-5.23)	0.042***	(-5.15)
West Midlands			-0.091	(-1.70)	-0.073	(-1.37)			0.028***	(-3.42)	0.028***	(-3.35)
East of England			-0.217***	(-4.40)	-0.214***	(-4.36)			0.028***	(-3.58)	0.027***	(-3.55)
South-East			-0.280***	(-6.17)	-0.269***	(-5.96)			0.014*	(-2.02)	0.014*	(-1.97)
South-West			-0.257***	(-5.02)	-0.243***	(-4.79)			0.023**	(-2.91)	0.023**	(-2.83)
Wales			-0.402***	(-6.67)	-0.386***	(-6.45)			0.046***	(-4.84)	0.045***	(-4.78)
Scotland			-0.053	(-0.21)	0.008	(-0.03)			-0.075	(-1.88)	-0.079*	(-1.98)
Northern Ireland			0.051	(-0.74)	0.045	(-0.65)			0.002	(-0.17)	0.003	(-0.24)
Frequency of "important" talks (ref: Not at all)												
Less often than once a month					0.126	(-1.65)					0.003	(-0.24)
Once or twice a month					0.244***	(-3.39)					0.010	(-0.84)
Once or twice a week					0.323***	(-4.72)					0.004	(-0.34)
Several times a week					0.309***	(-4.52)					0.006	(-0.57)
Every day or almost every day					0.256***	(-3.73)					-0.002	(-0.15)
Negative relationship with peers					-0.059***	(-8.66)					0.003**	(-2.95)
	4.592**	(-233.92)	4.118**	(-56.59)	3.993**	(-40.96)	0.444**	(-165.71)	0.430**	(-35.97)	0.419**	(-26.61)
Intercept	*		*		*		*		*		*	
R squared	0.029		0.273		0.285		0.029		0.048		0.049	
Sample numerosity			7656						7656			

* p<0.05, ** p<0.01, *** p<0.001

The most prominent finding is the advantage observed among mainly heterosexual and bisexual girls, who achieve the highest grades across all groups (see the pairwise comparisons in Table C1 in the Appendix: difference between bisexual girls and heterosexual boys = 0.439, p -value=0.000). This suggests that while non-heterosexuality could be advantageous for boys overall, it rewards girls only if they are “mainly heterosexual” or “bisexual”.

According to these results, we find support for Hypothesis 1 among non-heterosexual boys: gay, bisexual and mainly heterosexual boys achieve significantly higher GCSEs grades than completely heterosexual boys. Findings do not support Hypothesis 1 for LGB women as bisexual and mainly heterosexual girls have higher mean GCSEs grades than both heterosexual girls (and heterosexual boys), while lesbian girls achieve either slightly higher or comparable grades to heterosexual girls (Figure 1, pairwise comparisons in Table C1 in the Appendix). Moreover, the results suggest that the marked difference observed in grades between heterosexual boys and girls is not present when comparing LGB boys and girls (pairwise comparisons in Table C1 in the Appendix).

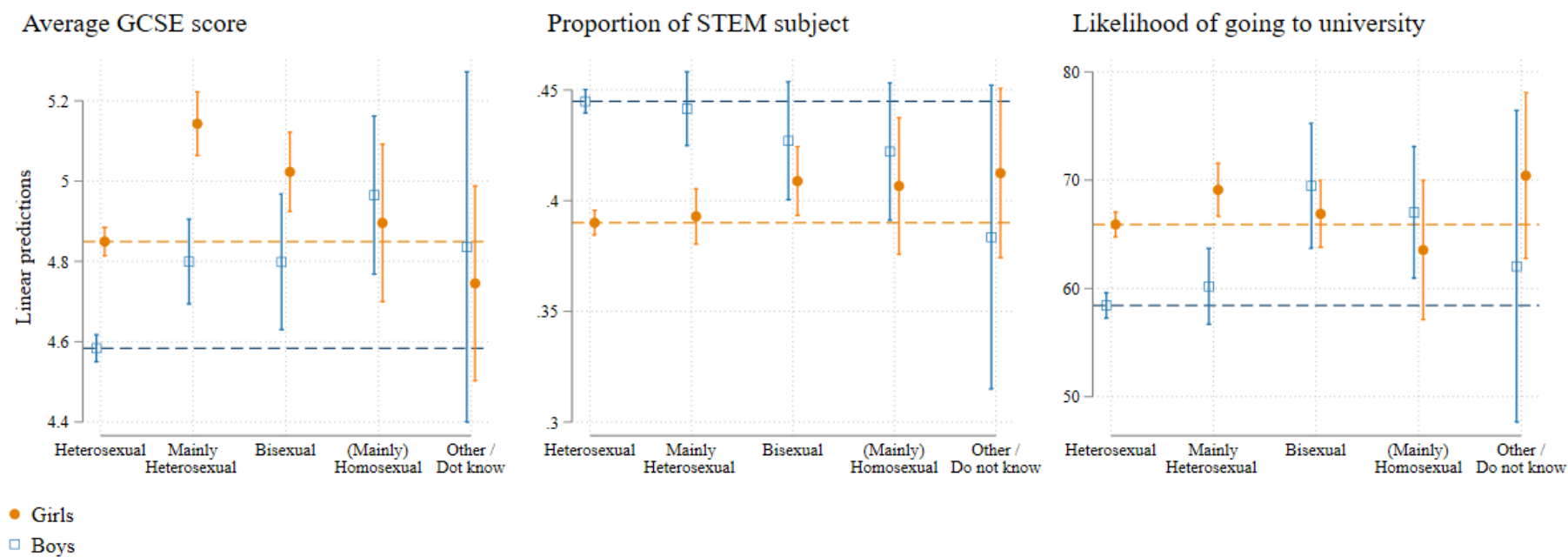
4.5.2 PROPORTION OF STEM SUBJECTS

Table 4 also accounts for the proportion of STEM subjects studied at GCSE level. All models show a significantly negative association between girls and the proportion of STEM subjects studied, which persists after controls and mediators are added in Model 3 (-0.055, $p < 0.001$).

Examining the coefficients for sexual identity in Model 3, only bisexual girls (0.037, $p < 0.05$) and girls who identify with other sexual orientations (0.084, $p < 0.05$), among all groups, present a significantly higher likelihood of studying STEM subjects than heterosexual girls, but still lower than the majority of all boys (Figure 1). It is worth noting that almost none of the control variables are statistically significant.

The results, despite the lack of statistically significant coefficients, indicate a “convergence” which is partially visible in Figure 1 (central panel). As predicted by Hypothesis 2, the gap in the number of STEM subjects studied seems to be smaller among LGB respondents, particularly when comparing gay boys and lesbian girls. Still, confidence intervals are wide and overlap.

Figure 1: Adjusted predicted values by sexual identities for the three outcomes. Weighted and imputed data (MCS, 2017).



Note: Horizontal dashed lines indicate the predicted values for completely heterosexual boys and girls. Predicted values are based on Model 3 from Tables 4 and 5. N = 7,656 for the outcomes “Average GCSE grade” and “Proportion of STEM subjects studied”; N = 6,089 for the outcome “Likelihood of going to university”.

4.5.3 TERTIARY EDUCATION EXPECTATIONS

According to Model 1 in Table 5, LGB boys, mainly heterosexual girls, and heterosexual girls report a higher educational expectation than heterosexual boys. Differences are significant for mainly heterosexual (4.615, $p < 0.05$) and bisexual boys (10.138, $p < 0.01$), who report significantly higher expectations of going to university compared to their heterosexual peers. In Model 2, the interaction terms for bisexual (-11.163, $p < 0.01$) and lesbian girls (-16.580, $p < 0.01$) are negative. Meanwhile, the coefficient for gay boys also becomes significant. Adding mediators in Model 3 does not change - overall - the results, yet some of the coefficients decrease, suggesting that part of the influence of sexual orientation on educational expectations is mediated by these factors. This may be true especially for grades, as regression analyses in Table 4 show that LGB boys, mainly heterosexual girls, and bisexual girls have higher GCSEs mean grades.

Accordingly, the only sizeable difference is the advantage of bisexual and gay boys compared to heterosexual boys, which is clearly visible in Figure 1. However, the expectations reported by bisexual and gay boys are comparable to those of heterosexual women and LGB girls and are not statistically different (pairwise comparisons in Table C1 in the Appendix). Accordingly, Hypothesis 3 is supported only among bisexual and gay boys, while lesbian girls have higher expectations than those of heterosexual boys, but do not differ significantly from heterosexual girls. Again, we observe that the gap in expectations between heterosexual boys and girls is larger than that between LGB people.

4.6 SENSITIVITY ANALYSES AND STUDY LIMITATIONS

Some limitations hindered a comprehensive empirical understanding of the mechanisms at play in the observed results. The focus on a single cohort of students aged 16-18 years old made it impossible to compare expectations with actual participation in tertiary education and to isolate cohort and period effects. Moreover, it was impossible to estimate meaningful interactions between sexual orientation and variables such as ethnicity due to the small number of respondents in each category. This limitation prevented a deeper investigation of intersectionality beyond gender. Lastly, the study lacked sufficient controls capturing schools' context (e.g., school location, neighbourhood) and school environment (e.g., type of school, class environment), which are known to play significant roles in shaping the experiences of LGB individuals in educational settings (Mollborn and Everett, 2015).

Table 5: OLS regression results for educational expectations. Weighted and imputed data (MCS, 2017).

	Likelihood to go to university					
	Model 1		Model 2		Model 3	
	B	t	B	t	B	t
Sexual orientation (ref: Heterosexual)						
Mainly heterosexual	4.615*	(-2.01)	3.269	(-1.55)	1.754	(-0.93)
Bisexual	10.138**	(-2.73)	12.903***	(-3.79)	11.040***	(-3.66)
(Mainly) Homosexual	6.589	(-1.71)	11.179**	(-3.15)	8.597**	(-2.71)
Other / Don't know	2.847	(-0.32)	6.257	(-0.76)	3.615	(-0.49)
Gender identity (ref: Boy)						
Girl	11.286***	(-11.07)	12.435***	(-13.16)	7.475***	(-8.81)
Sexual orientation # Gender						
Mainly heterosexual # Girl	5.654*	(-1.99)	2.27	(-0.87)	1.45	(-0.62)
Bisexual # Girl	-7.067	(-1.67)	-11.163**	(-2.87)	-10.061**	(-2.92)
(Mainly) Homosexual # Girl	-10.177	(-1.81)	-16.580**	(-3.21)	-10.952*	(-2.40)
Other / Don't know # Girl	-4.007	(-0.39)	-4.93	(-0.53)	0.896	(-0.11)
Age (ref: 17 years old)						
16 years old			-2.290*	(-2.53)	0.115	(-0.14)
18 years old			8.68	(-1.20)	8.936	(-1.36)
Ethnicity (ref: White British)						
Mixed			19.776***	(-3.35)	21.128***	(-3.80)
Indian			15.506***	(-4.70)	10.898***	(-3.65)
Pakistani and Bangladeshi			19.929***	(-6.98)	17.713***	(-6.83)
Black or Black British			12.843***	(-3.82)	13.570***	(-4.45)
Other ethnic group			13.331***	(-3.80)	8.401**	(-2.70)
Highest academic qualification of parents (ref: None of them)						
GCSEs grades D-G			-1.987	(-0.73)	-0.913	(-0.38)
O level / GCSEs grades A-C			3.772	(-1.85)	-0.692	(-0.39)
A / AS / S levels			13.854***	(-6.03)	4.179*	(-2.06)
Diplomas in higher education			15.116***	(-6.79)	4.475*	(-2.28)
First degree			29.890***	(-14.19)	11.448***	(-6.07)
Higher degree			31.318***	(-13.44)	9.201***	(-4.35)
Other			13.517***	(-4.62)	6.170*	(-2.41)
Household type (ref: Both parents)						
Repartnered mother			-4.939**	(-2.98)	0.361	(-0.25)
Repartnered father			-7.403	(-1.43)	-1.707	(-0.36)
Single mother			-5.420***	(-4.96)	-1.519	(-1.55)
Single father			-7.791**	(-2.88)	-3.681	(-1.54)
Number of siblings (ref: Only child)						
1 sibling			-0.744	(-0.71)	-0.664	(-0.71)
2 siblings			-1.168	(-0.93)	-0.203	(-0.18)
3 or more siblings			-0.657	(-0.37)	0.253	(-0.16)
Working status of the resident adults (ref: (Both) not in paid work)						
One in paid work			1.44	(-0.68)	-0.508	(-0.24)
(Both) in paid work			3.324	(-1.96)	-0.393	(-0.24)
Household income (in range)			0.277**	(-2.73)	0.072	(-0.82)
Region (ref: London)						
North East			-5.063	(-1.78)	-2.067	(-0.82)
North West			-0.991	(-0.49)	1.296	(-0.73)
Yorkshire and the Humber			-3.973	(-1.92)	-0.899	(-0.49)
East Midlands			-1.926	(-0.92)	0.419	(-0.23)
West Midlands			-4.754*	(-2.29)	-2.585	(-1.40)
East of England			-8.503***	(-4.42)	-4.597**	(-2.71)
South East			-4.513*	(-2.54)	-0.933	(-0.59)
South West			-5.141**	(-2.59)	-1.13	(-0.65)
Wales			-4.472	(-1.92)	1.176	(-0.57)
Scotland			-3.546	(-1.69)	0.54	(-0.27)
Northern Ireland			6.938*	(-2.47)	4.595	(-1.88)
Frequency of "important" talks (ref: Not at all)						
Less often than once a month					1.415	(-0.51)
Once or twice a month					-0.408	(-0.16)
Once or twice a week					1.91	(-0.77)
Several times a week					4.88	(-1.96)
Every day or almost every day					4.637	(-1.87)
Negative relationship with peers					-1.447***	(-6.44)
Mean of GCSEs grades					15.424***	(-38.66)
Intercept	55.602***	(-76.36)	42.102***	(-14.03)	-21.559***	(-5.38)
R squared	0.037		0.201		0.393	
Sample numerosity			6,089			

* p<0.05, ** p<0.01, *** p<0.001

4.6.1 MEDIATION ANALYSES

To enhance the reliability of our findings, we conducted mediation analyses to assess the individual effect of each mediator across all outcomes. This approach allows for a more precise understanding of each mediator's unique contribution in explaining the influence of sexual orientation on educational outcomes. It provides the Total (TE) and Direct Effect (NDE) of sexual identity on the outcome, and the Indirect Effect (NIE), which is mediated by the variables analysed.

Table 6: Mediation Analysis Results. Indirect, Direct and Total effects of sexual orientation on mean GCSEs grades, mediated by negative peer relationships and frequency of talking with parents. Separate analyses by gender. Weighted and imputed data (MCS, 2017).

	Boys				Girls			
	Negative relationship with peers		Frequency of talking with parents		Negative relationship with peers		Frequency of talking with parents	
	Coefficient	P> t	Coefficient	P> t	Coefficient	P> t	Coefficient	P> t
Net Indirect Effect (NIE)								
Mainly heterosexual	-0.043	0.000	-0.004	0.166	-0.037	0.000	-0.014	0.002
Bisexual	-0.065	0.000	-0.007	0.136	-0.078	0.000	-0.017	0.002
(Mainly) Homosexual	-0.049	0.000	-0.006	0.251	-0.080	0.000	-0.024	0.008
Other / Don't know	-0.069	0.003	0.013	0.238	-0.106	0.000	-0.024	0.017
Net Direct Effect (NDE)								
Mainly heterosexual	0.297	0.000	0.266	0.000	0.341	0.000	0.315	0.000
Bisexual	0.268	0.003	0.205	0.023	0.223	0.000	0.163	0.003
(Mainly) Homosexual	0.416	0.000	0.372	0.000	0.122	0.252	0.066	0.535
Other / Don't know	0.022	0.918	0.017	0.939	-0.042	0.730	-0.124	0.310
Total Effect (TE)								
Mainly heterosexual	0.255	0.000	0.262	0.000	0.304	0.000	0.301	0.000
Bisexual	0.202	0.025	0.198	0.028	0.145	0.008	0.147	0.007
(Mainly) Homosexual	0.367	0.001	0.366	0.001	0.042	0.697	0.042	0.694
Other / Don't know	-0.047	0.829	0.030	0.893	-0.148	0.226	-0.148	0.227

For GCSEs mean grade, the total effects for each sexual identity are attributed almost entirely to the Net Direct Effects. The Indirect Effects are generally small, in the opposite (negative) direction, and significant only for the mediator “Frequency of talking with parents”, with a few exceptions (Table 6). This suggests that the effect of being LGB on higher grades is, if anything, only marginally mediated and reduced by the variables “Negative relationship with peers” and “Frequency of talking with parents”. For the outcome “Proportion of STEM subjects” studied, the Total, Net Direct, and Indirect Effects are all insignificant except for the Indirect Effects for the mediator “Negative relationship with peers” among boys (Table 7). This indicates that the null effect of sexual orientation on the “Proportion of STEM subjects studied” is not the result of competing effects.

Table 7: Mediation Analysis Results. Indirect, Direct, and Total effects of sexual orientation on proportion of STEM subjects, mediated by negative peer relationships and frequency of talking with parents. Separate analyses by gender. Weighted and imputed data (MCS, 2017).

	Boys				Girls			
	Negative relationship with peers		Frequency of talking with parents		Negative relationship with peers		Frequency of talking with parents	
	Coefficient	P> t	Coefficient	P> t	Coefficient	P> t	Coefficient	P> t
Net Indirect Effect (NIE)								
Mainly heterosexual	0.003	0.013	0.001	0.192	0.001	0.284	0.000	0.415
Bisexual	0.005	0.013	0.001	0.164	0.001	0.278	0.000	0.414
(Mainly) Homosexual	0.004	0.021	0.001	0.269	0.002	0.285	0.001	0.421
Other / Don't know	0.005	0.037	-0.002	0.262	0.002	0.283	0.001	0.426
Net Direct Effect (NDE)								
Mainly heterosexual	-0.004	0.693	-0.001	0.950	0.001	0.829	0.003	0.704
Bisexual	-0.019	0.204	-0.015	0.323	0.018	0.030	0.019	0.019
(Mainly) Homosexual	-0.023	0.182	-0.021	0.237	0.016	0.323	0.017	0.284
Other / Don't know	-0.047	0.189	-0.039	0.290	0.017	0.350	0.019	0.304
Total Effect (TE)								
Mainly heterosexual	-0.001	0.954	0.000	0.997	0.002	0.749	0.003	0.660
Bisexual	-0.014	0.345	-0.014	0.356	0.019	0.017	0.020	0.016
(Mainly) Homosexual	-0.020	0.261	-0.020	0.256	0.017	0.278	0.018	0.264
Other / Don't know	-0.042	0.244	-0.041	0.270	0.019	0.295	0.020	0.286

In contrast, the results are different for “Educational expectations” (Table 8). For this outcome we also tested and, as expected found to be significant the mediating role of GCSE mean grade. Also “Negative relationship with peers” and “Frequency of talking with parents” show significant Indirect Effects, although the effect size for the latter appears negligible. From these results we conclude that the overall positive effect of sexual orientation on the likelihood of going to university is indeed mediated by these three variables. The only notable exception is “GCSEs mean grade”, which does not seem to offset the negative impact of sexual orientation on educational expectations among lesbian girls.

4.7 DISCUSSION AND CONCLUSIONS

This paper investigates the educational achievements, choices, and expectations of heterosexual and LGB in the UK students aged 16 to 18. By focusing on adolescence and examining multiple outcomes, we found that, overall, high school outcomes (i.e., students’ grades and educational expectations) indicate an advantage for non-heterosexual boys and thus mirror differences in attainment found by previous literature among adult respondents (Black et al., 2000; Mittleman, 2022; Mollborn and Everett, 2015). However, they also challenge prior literature on three main aspects.

First, the advantage of gay boys does not exceed that of heterosexual girls; rather it is comparable. Second, no “lesbian penalty” in achievement is found in MCS data, at least between ages 16 and 18, contrary to what was found in previous literature (Mittleman, 2022; Mollborn & Everett, 2015).

Table 8: Mediation Analysis Results. Indirect, Direct, and Total effects of sexual orientation on educational expectations, mediated by negative relationships with peers, frequency of talking with parents and mean GCSEs grade. Separate analyses by gender. Weighted and imputed data (MCS, 2017).

	Boys						Girls					
	Negative relationship with peers		Frequency of talking with parents		GCSEs mean grade		Negative relationship with peers		Frequency of talking with parents		GCSEs mean grade	
	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>	<i>Coefficient</i>	<i>P> t </i>
Net Indirect Effect (NIE)												
Mainly heterosexual	-2.209	0.000	-0.497	0.064	4.203	0.000	-1.321	0.000	-0.571	0.001	3.510	0.000
Bisexual	-2.852	0.000	-0.305	0.447	4.151	0.028	-3.000	0.000	-0.793	0.000	2.496	0.006
(Mainly) Homosexual	-1.666	0.003	-0.664	0.131	4.990	0.024	-2.700	0.000	-1.034	0.006	0.176	0.925
Other / Don't know	-3.519	0.003	-1.668	0.083	2.068	0.674	-5.182	0.000	-0.902	0.022	-0.293	0.884
Net Direct Effect (NDE)												
Mainly heterosexual	7.599	0.001	6.039	0.006	1.209	0.531	6.756	0.000	6.079	0.000	1.953	0.156
Bisexual	15.956	0.000	13.422	0.000	8.984	0.004	4.544	0.013	2.353	0.198	-0.958	0.561
(Mainly) Homosexual	12.459	0.001	11.392	0.002	5.766	0.087	-2.872	0.427	-4.520	0.215	-5.759	0.082
Other / Don't know	3.059	0.694	1.386	0.862	-2.519	0.732	4.160	0.302	-0.107	0.979	-0.732	0.842
Total Effect (TE)												
Mainly heterosexual	5.389	0.015	5.543	0.013	5.413	0.015	5.436	0.000	5.508	0.000	5.462	0.000
Bisexual	13.103	0.000	13.118	0.000	13.136	0.000	1.544	0.398	1.561	0.393	1.538	0.400
(Mainly) Homosexual	10.793	0.004	10.727	0.004	10.756	0.004	-5.572	0.127	-5.553	0.129	-5.583	0.127
Other / Don't know	-0.460	0.953	-0.283	0.972	-0.451	0.954	-1.022	0.801	-1.008	0.803	-1.025	0.800

Instead, we find an advantage for mainly heterosexual and bisexual girls. Finally, regardless of gender, there seems to be a positive association between educational outcomes and being bisexual or mainly heterosexual. These findings may be specific to the characteristics of the data. For instance, the educational advantage of bisexual respondents could be partly attributed to the increasing proportion of young individuals who identify as bisexual¹⁰.

Similarly, a “lesbian” penalty may not be visible as it could emerge after secondary school, beyond our observational window which ends at age 18. Yet, these findings offer a nuanced understanding of the early roots of LGB students’ educational career and insights into how these may develop into inequalities in adulthood.

The findings for non-heterosexual boys support the status attainment hypothesis (H1) by predicting higher grades and expectations than their heterosexual peers (Mittleman 2022). This could reflect a greater effort in studying, but it could also support the idea that gay students use academic performance as a gateway to increase their social status (Mollborn and Everett 2015) or to re-direct any eventual stigmatic attention, thus avoiding the potential “cost” of traditional masculinity norms (i.e., higher disengagement and lower performance) (Morris 2011; Mittleman 2022). For bisexual boys the results also align with H1, albeit to a smaller extent. A more complex coming out process (Doan and Mize, 2020) and more negative relationships with peers, as found in the descriptive results (Table 3), may partially explain the weaker association. However, bisexual boys are a very small group, and they could be highly selected on certain characteristics.

Results on grades for non-heterosexual girls contradict the first hypothesis (H1): bisexual girls outperform compared to heterosexual girls, being the group with the highest grades, while lesbian girls do not substantially differ from heterosexual girls. The lack of significance for lesbian girls may be attributed to the difficulties predicted by the gender norms hypothesis. On the other hand, bisexual girls may suffer fewer penalties as they tend to be less gender atypical compared to lesbian girls (Mittleman 2022), yet it is still remarkable their advantage over heterosexual girls on grades. Bisexual girls have a mean GCSE grade 0.174 points higher ($p = 0.001$) and mainly heterosexual girls 0.293 points higher ($p < 0.001$) than heterosexual girls.

No strong gender gap was found in the proportions of STEM subjects studied between gay boys and lesbian girls compared to that observed among heterosexual boys and girls. While

¹⁰ According to the latest data of UK CENSUS (2021) on sexual orientation and gender identity, around the 3.2% of the population aged 16 years identified themselves as LGBTQIA+. This percentage rise to 6.91% among the age group 16-24 years-old who are also more likely to identify themselves as pansexual (0.49%), asexual (0.18%) or queer (0.10%).

<https://www.ons.gov.uk/peoplepopulationandcommunity/culturalidentity/sexuality/articles/sexualorientationageandsexenglandandwales/census2021> (last access: 5th April 2024).

it may be too early at GCSE level to observe reliable differences in the STEM gap, given that subject choices are made at age 14, the results partially support H2 and the idea that LGB people may be less gender-conforming in their choice of subjects.

The results on educational expectations support the status attainment hypothesis (H3) for LGB boys and challenge previous literature, which predicted lower expectations for LGB individuals (Aragon et al., 2014; Pearson and Wilkinson, 2018). Even when controlling for grades, LGB students, with the exception of mainly heterosexual boys, have higher expectations than heterosexual boys (see Table C1 in the Appendix: difference of 11.040, $p = 0.000$ for bisexual boys and 8.597, $p = 0.007$ for gay boys) and comparable expectations to heterosexual girls. The higher expectations of bisexual and gay boys may reflect a greater motivation to invest in education as a strategy to overcome potential challenges and discrimination, securing better future opportunities. However, this explanation does not fully account for the small but significant penalty observed for lesbian girls compared to heterosexual girls.

Altogether, the findings raise important questions about the interplay between gender, sexual orientation, and educational attainment. The puzzling results highlight a common issue in LGB research: the challenge of providing coherent explanations for all identities, especially bisexual individuals and identities beyond the “LGB”. Although we attempted to include diverse identities, drawing clear conclusions for these groups was difficult. A deeper understanding of the educational experiences of non-heterosexual individuals, particularly girls and those identifying as mainly heterosexual, bisexual, or queer, is therefore needed to clarify the processes of (dis)advantage within the LGB(TQIA*) population and the broader impact of gender on educational experiences.

From a policy perspective, the findings underline the significant role that sexual orientation and gender have in shaping educational outcomes in adolescence. While - overall - LGB adolescents seem to benefit from non-heterosexuality, achieving either higher or comparable results to heterosexual peers, these successes may come at a cost. Theories suggest that these achievements may reflect coping strategies or efforts to counteract negative societal reactions, such as stigma and bullying, rather than the result of equality in opportunities. This claim finds support in the persistence of inequalities in adulthood. Educational policies must go beyond fostering academic performance to actively challenge stigma, support emotional well-being, and promote environments where educational achievements can be translated into long-term opportunities.

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APPENDIX

Information on GCSEs exams

In the UK GCSE examinations are available in a wide number of subjects (about 60 subjects and vocational areas). Students take a variable number of GCSEs on the subjects they studied in the previous years (i.e., Key Stage). Access to A-levels and universities usually requires passing at least five GCSE exams, but usually students take at least 8 or 9 GCSE exams. Besides the compulsory ones, which are defined at both the national and school level, students can freely choose among all those offered in their school.

While UK students can sit also other types of exams at the end of compulsory education (i.e., 16 years old), we relied on GCSEs since the majority of respondents in our sample took GCSEs examinations. The number of people who affirmatively answered to the question on GCSEs (“Which, if any, of the qualifications on this card do you have? GCSEs”) was indeed of 8,397, that is the 85.08% of the valid sample.

Additional information on sampling, recruitment and attrition

MCS follows over 19,000 young people born in the UK between September 2000 and January 2002. Unlike previous cohort studies of “Centre for Longitudinal Studies (CLS)”, it did not sample individuals born in a specific week but instead covers births over a full year, includes young people from all four countries of the UK, and oversamples young people from disadvantaged backgrounds and areas with high concentrations of ethnic minorities.

The MCS target population indeed is defined as *“all children born between 1 September 2000 and 31 August 2001 (for England and Wales), and between 24 November 2000 and 11 January 2002 (for Scotland and Northern Ireland), alive and living in the UK at age nine months, and eligible to receive Child Benefit at that age”*.

The original target for the achieved sample of children was 15 thousand stratified by country within the UK (12,600 in England, 750 in Wales, 1,200 in Scotland 12 and 450 in Northern Ireland). To improve the reliability of the analyses in Wales and Northern Ireland, a sample of 1,500 children was allocated to both countries, reducing the sample of England to 10,500. Within these strata wards were selected, and a list of all nine-month-old children living in those wards was generated from the Child Benefit (CB) register. The sample was selected systematically within each stratum (wards) and country, the sampling interval being determined by the ratio of the number of wards in the populations to the number of wards required in the samples. Once the sample was determined, a letter to all families with a child eligible was sent to invite them to participate in the study together with a leaflet describing the nature and purposes of the study.

For the UK as a whole, the final sample in MCS at sweep 1 is 91% of the original target sample size. Just over 24,000 families were issued to the field for the first sweep of MCS: 18,552 families and 18,818 cohort members were recruited to the cohort at the age 9-month survey. The achieved sample size remained steady between MCS2 and MCS3 - around 15,000 - but dropped off to 13,850 in MCS4, to around 13,250 at MCS5 and to 11,726 in MCS6.

The 7th sweep, conducted from January 2017 to May 2019 when cohort members were approximately 17, achieved a sample of 10,625 families and 10,757 cohort members. This age marks a critical point in young people's educational and occupational paths, and it is also the last wave involving parent interviews.

Further information is available in the technical reports provided for each sweep in the "Millennium Cohort Study" website (accessible at: <https://cls.ucl.ac.uk/cls-studies/millennium-cohort-study/>).

Sample selection and multiple imputation

10,757 of the original 18,818 sampled individuals at birth were still present in the last wave considered (Sweep 7) at age 16-18. Out of these 9,952 provided a response on both the sexual identity question (excluding "Prefer not to say" and "Not applicable") and the gender identity variable recoded as binary (Table A3). Among them, 8,159 have valid information also on the outcomes GCSEs mean grade and proportion of STEM subjects studied and only 6,434 on the outcome "Educational expectations".

Since including control variables significantly impacted final sample sizes, we used multiple imputation to improve our analytical samples. To limit assumptions, we imputed only control variables with high levels of missing data (as detailed in Table B1 in the Appendix) and excluded the main independent variables. Specifically, we imputed "ethnicity" and "working status of resident adults" for the first two outcomes, and - additionally - "GCSEs mean grades" and "Household income" for the outcome "Educational expectations". After performing multiple imputations (the total number of imputations is equal to 10), sample sizes increased from 5,919 to 7,656 for the outcomes "GCSEs mean grade" and "Proportion of STEM subjects" and from 3,403 to 6,089 for the outcome "Educational expectations".

Tables A: Sexual identity and attraction and gender identity

Table A1: Univariate distribution of the original sexual identity variable (MCS, 2017). Unweighted.

Sexual orientation (identity) of the respondents	<i>Absolute frequency</i>	<i>Percent frequency</i>
Completely heterosexual / straight	7,888	76.25
Mainly heterosexual / straight	1,101	10.64
Bisexual	656	6.34
Mainly gay or lesbian	90	0.87
Completely gay or lesbian	160	1.55
Other	157	1.52
Do not know	16	0.15
Prefer not to say	35	0.34
Not applicable	242	2.34
Total	10,345	100

Table A2: Univariate distribution of the sexual identity variable recoded (MCS, 2017). Unweighted.

Sexual identity of the respondents	<i>Absolute frequency</i>	<i>Percent frequency</i>	Valid (%)
Heterosexual	7,888	76.25	78.35
Mainly heterosexual	1,101	10.64	10.94
Bisexual	656	6.34	6.52
Homosexual	250	2.42	2.48
Other/Don't know	173	1.67	1.72
Missing or inapplicable	277	2.68	
Total	10,345	100	N = 10,068

Table A3: Univariate distribution of the original gender identity variable (MCS, 2017). Unweighted.

Gender identity of the respondents	<i>Absolute frequency</i>	<i>Percent frequency</i>
Male	4,890	47.27
Female	5,097	49.27
Other	20	0.19
Androgynous / male and female	8	0.08
Gender fluid	9	0.09
Non-binary	21	0.2
Prefer not to say / Refuse	56	0.54
Vague irrelevant answer	11	0.11
Don't know	3	0.03
Not Applicable	230	2.22
Total	10,345	100

Table A4: Sexual identity of the respondents by sexual attraction (MCS, 2017). Weighted.

Sexual identity	Sexual attraction						N
	No one	Only other sex	Mainly other sex	Both sexes	Mainly same sex	Only same sex	
Completely heterosexual	1.69	93.41	4.78	0.08	0.00	0.04	7,866
Mainly heterosexual	2.61	25.59	69.14	2.44	0.06	0.17	1,099
Bisexual	2.41	0.89	38.31	46.88	11.2	0.3	655
(Mainly) Homosexual	0.91	0.41	0.41	2.95	48.98	46.33	249
Other/ Don't know	45.06	16.15	10.74	18.55	9.13	0.37	166
Total	2.51	75.65	14.5	3.94	2.16	1.24	10,035

Table B: Multiple imputation

Table B1: Missing values in the dataset after dropping cases with missing information in the outcomes and independent variables and before imputation (MCS, 2017).

	Variable	Missing observations	Valid observations	Total
GCSEs mean grade / Proportion of STEM subjects	Ethnic background	1,907	6,252	8,159
	Working status of resident adults	1,726	6,433	
	Educational level parents	320	7,839	
	Family configuration	140	8,019	
	Frequency of talking with parents	114	8,045	
	Relationship with peers	12	8,147	
Educational expectations	Household income	2,120	4,314	6,434
	GCSEs mean grade	942	5,492	
	Ethnic background	941	5,493	
	Working status of resident adults	801	5,633	
	Educational level parents	212	6,222	
	Family configuration	109	6,325	
	Frequency of talking with parents	84	6,350	
	Relationship with peers	4	6,430	

Tables C: Robustness checks

Table C1: Pairwise differences in marginal effects for GCSEs mean grades, Proportion of STEM subjects studied and Likelihood to go to university across groups defined by sexual orientation and gender. Contrasts obtained from Model 3. Weighted, data imputed. (MCS, 2017).

	GCSEs mean grade				Proportion of STEM subjects				Likelihood to go to university			
	Contrast	t	p-value	CI (95%)	Contrast	t	p-value	CI (95%)	Contrast	t	p-value	CI (95%)
(Heterosexual#Female) vs (Heterosexual#Male)	0.266	10.59	0.000	0.216 0.315	-0.055	-13.93	0.000	-0.063 -0.047	7.475	8.81	0.000	5.812 9.139
(Mainly heterosexual#Male) vs (Heterosexual#Male)	0.216	3.82	0.000	0.105 0.327	-0.003	-0.37	0.709	-0.021 0.014	1.754	0.93	0.352	-1.943 5.451
(Mainly heterosexual#Female) vs (Heterosexual#Male)	0.559	12.72	0.000	0.473 0.645	-0.052	-7.51	0.000	-0.066 -0.038	10.680	7.66	0.000	7.946 13.413
(Bisexual#Male) vs (Heterosexual#Male)	0.215	2.45	0.014	0.043 0.387	-0.018	-1.29	0.197	-0.045 0.009	11.040	3.67	0.000	5.121 16.960
(Bisexual#Female) vs (Heterosexual#Male)	0.439	8.24	0.000	0.335 0.544	-0.036	-4.30	0.000	-0.052 -0.020	8.455	5.01	0.000	5.148 11.762
(Homosexual#Male) vs (Heterosexual#Male)	0.381	3.74	0.000	0.182 0.581	-0.023	-1.41	0.158	-0.054 0.009	8.597	2.71	0.007	2.377 14.816
(Homosexual#Female) vs (Heterosexual#Male)	0.312	3.07	0.002	0.113 0.511	-0.038	-2.40	0.017	-0.069 -0.007	5.120	1.54	0.125	-1.416 11.656
(Other/questioning#Male) vs (Heterosexual#Male)	0.252	1.13	0.258	-0.185 0.689	-0.061	-1.75	0.081	-0.130 0.007	3.615	0.49	0.624	-10.841 18.070
(Other/questioning#Female) vs (Heterosexual#Male)	0.162	1.29	0.196	-0.083 0.406	-0.032	-1.65	0.099	-0.071 0.006	11.986	3.04	0.002	4.242 19.730
(Mainly heterosexual#Male) vs (Heterosexual#Female)	-0.050	-0.87	0.384	-0.162 0.062	0.051	5.73	0.000	0.034 0.069	-5.721	-3.02	0.003	-9.442 -2.000
(Mainly heterosexual#Female) vs (Heterosexual#Female)	0.293	6.61	0.000	0.206 0.380	0.003	0.41	0.682	-0.011 0.017	3.204	2.30	0.021	0.481 5.927
(Bisexual#Male) vs (Heterosexual#Female)	-0.050	-0.57	0.567	-0.223 0.122	0.037	2.67	0.008	0.010 0.064	3.565	1.19	0.235	-2.356 9.486
(Bisexual#Female) vs (Heterosexual#Female)	0.174	3.24	0.001	0.069 0.279	0.019	2.23	0.026	0.002 0.035	0.980	0.58	0.562	-2.309 4.269
(Homosexual#Male) vs (Heterosexual#Female)	0.116	1.13	0.258	-0.085 0.316	0.032	2.00	0.045	0.001 0.064	1.121	0.35	0.723	-5.065 7.307
(Homosexual#Female) vs (Heterosexual#Female)	0.046	0.46	0.648	-0.153 0.246	0.017	1.04	0.299	-0.015 0.048	-2.355	-0.71	0.480	-8.901 4.190
(Other/questioning#Male) vs (Heterosexual#Female)	-0.013	-0.06	0.952	-0.451 0.424	-0.007	-0.19	0.853	-0.075 0.062	-3.861	-0.52	0.600	-18.315 10.594
(Other/questioning#Female) vs (Heterosexual#Female)	-0.104	-0.83	0.406	-0.349 0.141	0.022	1.14	0.255	-0.016 0.061	4.511	1.14	0.255	-3.253 12.275
(Mainly heterosexual#Female) vs (Mainly heterosexual#Male)	0.343	5.11	0.000	0.212 0.475	-0.049	-4.61	0.000	-0.069 -0.028	8.925	4.09	0.000	4.646 13.205
(Bisexual#Male) vs (Mainly heterosexual#Male)	-0.001	-0.01	0.994	-0.199 0.198	-0.014	-0.91	0.363	-0.046 0.017	9.286	2.70	0.007	2.524 16.049
(Bisexual#Female) vs (Mainly heterosexual#Male)	0.223	3.05	0.002	0.080 0.367	-0.033	-2.84	0.005	-0.055 -0.010	6.701	2.84	0.004	2.082 11.320

(Table C1 continue from the previous page)

	GCSEs mean grade					Proportion of STEM subjects					Likelihood to go to university				
	Contrast	t	p-value	CI (95%)		Contrast	t	p-value	CI (95%)		Contrast	t	p-value	CI (95%)	
(Homosexual#Male) vs (Mainly heterosexual#Male)	0.165	1.45	0.146	-0.058	0.389	-0.019	-1.08	0.280	-0.054	0.016	6.843	1.92	0.055	-0.137	13.822
(Homosexual#Female) vs (Mainly heterosexual#Male)	0.096	0.85	0.396	-0.126	0.318	-0.035	-1.96	0.050	-0.070	0.000	3.366	0.91	0.364	-3.892	10.624
(Other/questioning#Male) vs (Mainly heterosexual#Male)	0.036	0.16	0.874	-0.412	0.485	-0.058	-1.61	0.107	-0.129	0.013	1.860	0.25	0.805	-12.922	16.643
(Other/questioning#Female) vs (Mainly heterosexual#Male)	-0.054	-0.40	0.687	-0.318	0.209	-0.029	-1.37	0.169	-0.071	0.012	10.232	2.41	0.016	1.891	18.573
(Bisexual#Male) vs (Mainly heterosexual#Female)	-0.344	-3.62	0.000	-0.530	-0.158	0.034	2.29	0.022	0.005	0.063	0.361	0.12	0.907	-5.893	6.615
(Bisexual#Female) vs (Mainly heterosexual#Female)	-0.120	-1.86	0.062	-0.246	0.006	0.016	1.58	0.115	-0.004	0.036	-2.225	-1.11	0.267	-6.159	1.709
(Homosexual#Male) vs (Mainly heterosexual#Female)	-0.178	-1.64	0.101	-0.390	0.035	0.029	1.72	0.086	-0.004	0.063	-2.083	-0.62	0.534	-8.635	4.469
(Homosexual#Female) vs (Mainly heterosexual#Female)	-0.247	-2.29	0.022	-0.458	-0.036	0.014	0.81	0.417	-0.019	0.047	-5.560	-1.59	0.112	-12.419	1.300
(Other/questioning#Male) vs (Mainly heterosexual#Female)	-0.307	-1.36	0.175	-0.750	0.136	-0.009	-0.26	0.792	-0.079	0.060	-7.065	-0.95	0.344	-21.703	7.573
(Other/questioning#Female) vs (Mainly heterosexual#Female)	-0.397	-3.06	0.002	-0.652	-0.143	0.020	0.96	0.339	-0.021	0.060	1.307	0.32	0.748	-6.718	9.331
(Bisexual#Female) vs (Bisexual#Male)	0.224	2.26	0.024	0.029	0.419	-0.018	-1.16	0.244	-0.049	0.012	-2.586	-0.78	0.436	-9.139	3.968
(Homosexual#Male) vs (Bisexual#Male)	0.166	1.26	0.208	-0.093	0.425	-0.005	-0.23	0.816	-0.046	0.036	-2.444	-0.58	0.564	-10.778	5.890
(Homosexual#Female) vs (Bisexual#Male)	0.097	0.74	0.462	-0.161	0.355	-0.020	-0.98	0.325	-0.061	0.020	-5.921	-1.35	0.179	-14.564	2.722
(Other/questioning#Male) vs (Bisexual#Male)	0.037	0.16	0.877	-0.430	0.504	-0.044	-1.16	0.246	-0.117	0.030	-7.426	-0.94	0.349	-22.951	8.099
(Other/questioning#Female) vs (Bisexual#Male)	-0.054	-0.36	0.722	-0.348	0.241	-0.015	-0.62	0.538	-0.061	0.032	0.946	0.19	0.846	-8.570	10.461
(Homosexual#Male) vs (Bisexual#Female)	-0.058	-0.52	0.606	-0.278	0.162	0.013	0.76	0.449	-0.021	0.048	0.142	0.04	0.967	-6.672	6.955
(Homosexual#Female) vs (Bisexual#Female)	-0.127	-1.14	0.255	-0.346	0.092	-0.002	-0.13	0.900	-0.037	0.032	-3.335	-0.92	0.358	-10.451	3.780
(Other/questioning#Male) vs (Bisexual#Female)	-0.187	-0.82	0.412	-0.634	0.259	-0.025	-0.71	0.480	-0.096	0.045	-4.840	-0.65	0.519	-19.562	9.881
(Other/questioning#Female) vs (Bisexual#Female)	-0.278	-2.09	0.037	-0.539	-0.017	0.004	0.17	0.863	-0.037	0.045	3.531	0.84	0.399	-4.701	11.764
(Homosexual#Female) vs (Homosexual#Male)	-0.069	-0.49	0.625	-0.347	0.208	-0.016	-0.70	0.484	-0.059	0.028	-3.477	-0.78	0.437	-12.244	5.290
(Other/questioning#Male) vs (Homosexual#Male)	-0.129	-0.53	0.596	-0.607	0.348	-0.039	-1.01	0.313	-0.114	0.036	-4.982	-0.63	0.530	-20.556	10.591
(Other/questioning#Female) vs (Homosexual#Male)	-0.220	-1.38	0.167	-0.531	0.092	-0.010	-0.39	0.697	-0.059	0.039	3.389	0.68	0.496	-6.373	13.152
(Other/questioning#Male) vs (Homosexual#Female)	-0.060	-0.25	0.806	-0.538	0.418	-0.023	-0.60	0.547	-0.098	0.052	-1.505	-0.19	0.851	-17.186	14.175
(Other/questioning#Female) vs (Homosexual#Female)	-0.151	-0.95	0.343	-0.461	0.160	0.006	0.23	0.816	-0.043	0.055	6.866	1.36	0.175	-3.066	16.799
(Other/questioning#Female) vs (Other/questioning#Male)	-0.091	-0.36	0.722	-0.589	0.408	0.029	0.72	0.470	-0.049	0.107	8.372	1.01	0.313	-7.892	24.635

Table C2: OLS regression results for GCSEs mean grades, Proportion of STEM subjects studied and Likelihood to go to university including non-binary respondents. Full models. Weighted, data imputed. (MCS, 2017).

	GCSEs mean grade		Proportion of STEM subjects		Likelihood to go to university	
	B	t	B	t	B	t
Sexual orientation (ref: Heterosexual)						
Mainly heterosexual	0.216***	(-3.83)	-0.003	(-0.36)	1.695	(-0.90)
Bisexual	0.216*	(-2.46)	-0.017	(-1.26)	10.928***	(-3.65)
(Mainly) Homosexual	0.380***	(-3.74)	-0.023	(-1.41)	8.906**	(-2.85)
Other /Questioning	0.251	(-1.12)	-0.061	(-1.73)	4.149	(-0.57)
Gender (ref: Men)						
Girls	0.266***	(-10.60)	-0.055***	(-13.95)	7.450***	(-8.69)
Non-binary	0.78	(-0.38)	0.085	(-0.26)	11.95	(-0.71)
Sexual orientation # Gender						
Mainly heterosexual # Girls	0.078	(-1.09)	0.006	(-0.56)	1.603	(-0.69)
Mainly heterosexual # Nonbinary	-0.628	(-0.30)	-0.13	(-0.39)	-44.715*	(-2.16)
Bisexual # Girls	-0.04	(-0.39)	0.036*	(-2.26)	-10.004**	(-2.92)
Bisexual # Nonbinary	-0.597	(-0.29)	-0.111	(-0.34)	-18.138	(-0.94)
(Mainly) Homosexual # Girls	-0.336*	(-2.34)	0.039	(-1.74)	-11.147*	(-2.43)
(Mainly) Homosexual # Nonbinary	-0.559	(-0.27)	-0.075	(-0.23)	8.082	(-0.41)
Other sexual identity # Girls	-0.353	(-1.38)	0.084*	(-2.08)	0.546	(-0.07)
Other sexual identity # Nonbinary	-0.825	(-0.40)	-0.067	(-0.21)	-5.781	(-0.30)
Age (ref: 17 years old)						
16 years old	-0.129***	(-5.44)	-0.001	(-0.39)	0.066	(-0.08)
18 years old	0.163	(-0.93)	-0.03	(-1.08)	8.473	(-1.29)
Ethnicity (ref: White)						
Mixed	-0.1	(-0.65)	0.009	(-0.37)	19.586***	(-3.58)
Indian	0.183*	(-2.25)	0.014	(-0.93)	12.174***	(-4.38)
Pakistani and Bangladeshi	0.053	(-0.81)	0.004	(-0.38)	18.035***	(-7.52)
Black or Black British	-0.073	(-0.85)	0.022	(-1.87)	13.925***	(-5.27)
Other ethinc group	0.199	(-1.95)	0.015	(-0.91)	7.840*	(-2.32)
Highest academic qualification of parents (ref: None of them)						
GCSE grades D-G	-0.12	(-1.84)	-0.015	(-1.45)	-1.246	(-0.50)
O level / GCSE grades A-C	0.227***	(-4.61)	0.002	(-0.29)	-1.071	(-0.57)
A / AS / S levels	0.568***	(-9.86)	0.01	(-1.09)	3.811	(-1.77)
Diplomas in higher education	0.580***	(-10.67)	-0.001	(-0.17)	4.336*	(-2.15)
First degree	1.090***	(-21.03)	-0.014	(-1.66)	11.050***	(-5.49)
Higher degree	1.383***	(-23.47)	-0.019*	(-2.07)	8.770***	(-3.96)
Other	0.471***	(-6.56)	0.008	(-0.72)	5.888*	(-2.26)
Household type (ref: Both parents)						
Repartnered mother	-0.277***	(-6.55)	0.008	(-1.16)	0.748	(-0.51)
Repartnered father	-0.296*	(-2.18)	0.053*	(-2.48)	-1.157	(-0.24)
Single mother	-0.240***	(-8.68)	0.013**	(-2.88)	-1.398	(-1.42)
Single father	-0.304***	(-4.29)	-0.008	(-0.69)	-3.606	(-1.49)
Number of siblings (ref: Only child)						
1 sibling	-0.013	(-0.47)	-0.010*	(-2.20)	-0.634	(-0.68)
2 siblings	-0.068*	(-2.03)	-0.012*	(-2.24)	-0.174	(-0.16)
3 or more siblings	-0.077	(-1.71)	-0.008	(-1.14)	0.268	(-0.17)

(Continue Table C2 from previous page)

	GCSEs mean grade		Proportion of STEM subjects		Likelihood to go to university	
	B	t	B	t	B	t
Working status of the resident adults (ref: (Both) not in paid work)						
One in paid work	0.174**	(-3.28)	0.008	(-0.88)	-0.337	(-0.17)
(Both) in paid work	0.227***	(-5.72)	-0.004	(-0.47)	-0.382	(-0.24)
Region (ref: London)						
North East	-0.178*	(-2.56)	0.032**	(-2.90)	-2.198	(-0.89)
North West	-0.144**	(-2.95)	0.032***	(-4.17)	1.024	(-0.58)
Yorkshire and the Humber	-0.179***	(-3.51)	0.041***	(-5.11)	-1.155	(-0.64)
East Midlands	-0.147**	(-2.81)	0.042***	(-5.13)	0.329	(-0.18)
West Midlands	-0.072	(-1.37)	0.027***	(-3.34)	-2.61	(-1.45)
East of England	-0.215***	(-4.42)	0.027***	(-3.57)	-4.666**	(-2.77)
South East	-0.270***	(-6.05)	0.014*	(-1.98)	-1.066	(-0.69)
South West	-0.243***	(-4.84)	0.022**	(-2.82)	-1.362	(-0.79)
Wales	-0.389***	(-6.56)	0.045***	(-4.83)	1.1	(-0.54)
Scotland	0.009	(-0.03)	-0.079*	(-1.98)	0.41	(-0.22)
Northern Ireland	0.055	(-0.80)	0.001	(-0.12)	4.452	(-1.81)
Frequency of "important" talks (ref: Not at all)						
Less often than once a month	0.121	(-1.58)	0.002	(-0.17)	1.119	(-0.40)
Once or twice a month	0.242***	(-3.36)	0.01	(-0.85)	-0.571	(-0.22)
Once or twice a week	0.325***	(-4.75)	0.003	(-0.28)	1.899	(-0.75)
Several times a week	0.308***	(-4.50)	0.006	(-0.59)	4.761	(-1.91)
Every day or almost every day	0.254***	(-3.70)	-0.001	(-0.13)	4.402	(-1.76)
Negative relationship with peers	-0.059***	(-8.70)	0.003**	(-2.80)	-1.466***	(-6.47)
Household income (in range)					0.063	(-0.73)
Mean of GCSEs grades					15.426***	(-39.99)
Intercept	3.980***	(-41.26)	0.420***	(-26.8)	-21.031***	(-5.49)
R squared	0.262		0.053		0.392	
Sample numerosity	7700		7700		6138	

* p<0.05, ** p<0.01, *** p<0.001

CHAPTER 5.

LGB STUDENTS' EDUCATIONAL PREMIUM IN CONTEXT: MECHANISMS AND CHANGE ACROSS TWO UK BIRTH COHORTS¹

ABSTRACT

LGB individuals are often found to be higher educated than heterosexual individuals, but recent evidence shows that whether this conclusion holds depends on gender, identity, and cohort. Explanations for the association between sexual identity and educational attainment include selection into LGB identities, higher perceived returns from education, and academic effort as a mechanism to derive self-worth in stigmatized contexts. However, we know very little about whether these mechanisms indeed relate to sexual identity and how this varies across gender, identity, and cohorts. This paper contributes by describing changes across two UK birth cohorts in the school and family context LGB people encounter during adolescence, as well as their educational attainment during adulthood. We do not find positive selection into LGB identities but observe persistent social exclusion and high value given to education among gay men across both cohorts. This is reflected in gay men's consistently high levels of educational attainment. However, the relationships of LGB women with peers, families, and teachers worsened across cohorts. In line with these changes, an initial premium in educational attainment for LGB women disappeared across birth cohorts. We suggest this is linked to increased visibility of LGB identities combined with the persistence of traditional gender norms.

¹ This chapter is coauthored with Dr. Diedrik Boertien and is currently under review. Anna Caprinali contributed to the conceptualisation, methodology, formal analysis of BCS70 data, writing of the original draft, review and editing of this chapter. Diedrik Boertien contributed to the conceptualisation, methodology, data analyses of Next Steps and UKHLS data, writing, review and supervision of this chapter.

5.1 INTRODUCTION

Sexual orientation is gaining a place in social stratification research as an important determinant of opportunities in life (Badgett et al., 2021; Mize, 2016). Studies on educational attainment generally find that individuals in same-sex couples are higher educated than individuals in different-sex couples (Black et al., 2000; Valfort, 2017; Verbakel, 2013; Waite and Denier, 2015). Direct measures of sexual identity refined this general picture by showing how an educational premium is not universally observed across non-heterosexual groups but differs by identity, gender, cohort, and ethnicity (Mittleman 2022; Mollborn and Everett 2015). Notably, the educational premium of lesbian women is only observed among older cohorts in the United States and is not observed at all for bisexual people (Mittleman, 2022).

It is hard to understand this variety of findings without a proper understanding of how the lives of different Lesbian Gay and Bisexual (LGB) groups changed across cohorts. Several mechanisms have been proposed to underlie educational premiums for non-heterosexual people including selection into developing or disclosing a non-heterosexual identity (Mittleman, 2022), academic effort as a way to derive self-worth in discriminatory settings or environments with strict gender norms related to school performance (Mittleman, 2022; Pachankis & Hatzenbuehler, 2013), and educational degrees as a route out of discriminatory environments or as a strategy to gain resources anticipating future discrimination and challenges (Barrett et al., 2002). However, we know very little about whether these different processes are indeed observed during LGB people's adolescence, and even less about whether this has changed across time.

To address this gap, we ask two main research questions. First, we aim to answer the question: How did the school and family context change across birth cohorts for LGB adolescents? Adolescence is a key period where educational outcomes are shaped, and central to many of the explanations for educational premiums. Second, we aim to answer the question: how does sexual identity relate to educational attainment in the UK, and did this change across birth cohorts? If, we observe key changes in the school and family context LGB people encounter during adolescence, this should reflect in their educational attainment during adulthood.

We make two major contributions to the literature. First of all, we are able to provide the first systematic evidence on whether cohort changes in key group-characteristics during adolescence, such as levels of social exclusion, align with cohort changes in educational attainment of different groups of LGB people. Testing the role of mechanisms underlying variation in educational premiums is challenging as many mechanisms operate at the group or

macro-level, requiring comparisons across contexts rather than individuals. To our knowledge, we are the first to compare selection into LGB identities, social exclusion, and value attributed to education across cohorts of LGB youth. Our second main contribution is to document, for the first time, changes in educational attainment across cohorts and groups beyond the US context.

To achieve our goals, we use two birth cohort studies (i.e. the British Cohort Study including people born in 1970 and Next Steps including people born in 1989/1990) to describe cohort changes in the context at school and within families of LGB people when they were aged 14-16. Note that, due to data limitations, we are not able to include sexual identities beyond LGB such as asexual, pansexual or queer, as well as non-binary gender identities. Therefore, we will primarily refer to LGB men and women in the remainder of the paper, hoping that future datasets will emerge that can move beyond these identities.

5.2 AN EDUCATIONAL PREMIUM FOR LGB PEOPLE?

A first generation of pioneering quantitative studies on the socioeconomic outcomes of non-heterosexual people used data on the sex/gender of individuals and their partners to compare individuals in “same-sex” couples to individuals in “different-sex” couples.² These studies found that individuals in same-sex couples are higher educated than individuals in different-sex couples across a variety of countries including Canada, France, Norway, Sweden, The Netherlands, the United Kingdom and the United States (Andersson et al., 2006; D. Black et al., 2000; Laurent & Mihoubi, 2012; Verbakel, 2013; Waite & Denier, 2015). While valuable, these studies arguably focused on a selected and possibly advantaged part of the LGBTQIA* population: individuals in same-sex couples.

A second generation of studies was able to benefit from the incorporation of sexual identity measures in large-scale representative surveys. Whereas these measures still exclude parts of the non-heterosexual population that do not identify as Lesbian, Gay or Bisexual (the answer options normally available)³, these studies were able to include single individuals and to compare people with Bisexual, Gay or Lesbian identities. This refinement proved to be important as educational attainment was found to be *lower* among bisexual men and women as compared to their heterosexual counterparts in the US (Mittleman, 2022; Mollborn & Everett, 2015). Two studies provided evidence for people with identities beyond LGB and showed how

² Data was often collected on “sex” without specifying what this exactly referred to (e.g., legally registered sex, sex assigned at birth or gender identity).

³ The “Other” option could in theory be used to include other non-heterosexual identities, but studies have shown how many heterosexual individuals also select this option across contexts, possibly because they do not understand the question (Elliott et al., 2019).

asexual individuals have lower education (controlling for covariates) but queer individuals have higher education (no controls included) than heterosexual individuals in the US (S. K. Goldberg et al., 2020; Poston & Baumle, 2010).

Evidence for other countries is to some extent in line with the results for the US in the sense that an educational premium is observed for gay/lesbian people but not for bisexual people in Australia, Canada, Germany and the UK (Boertien et al., 2023; de Vries et al., 2020; Waite & Denier, 2015), with the exception of one study on the UK that found higher levels of education among bisexual people (Aksoy et al., 2018).

A recent study on the intersection of sexual identity and gender directly called attention to the possibility that the relationship between sexual identity and education may also change across cohorts. Mittleman (2022) noticed that the educational premium for lesbian women, observed among older cohorts, is no longer visible for younger cohorts in the US (i.e., born after 1980; no educational premium is observed for non-White women in general either). This finding aligns with descriptive results reported in other studies (Liu & Reczek, 2021), suggesting that the relationship between sexual identity and educational attainment is indeed shaped by context. We argue that moving from universal explanations to identity- and context-specific interpretations - and then back to broader generalizations - helps to understand this variation. In light of this, the following section will examine historical changes in attitudes and legislation (i.e., macro-level context) since the 1960s in high-income societies, with a particular focus on the UK - the context of our empirical analysis - and subsequently discuss what this might have implied for the educational experiences and attainment of LGB people.

5.2.1 THE CHANGING CONTEXT FOR LGBTQIA* PEOPLE

Prior to the late 1960s, when the LGBTQIA* rights movement began to gain traction in high-income countries, it was highly probable that LGB individuals lived a closeted life due to lower social acceptance, prevailing negative attitudes, and discrimination (Dunlap, 2016). The spreading of the AIDS-pandemic in the 80s (Digoix, 2020b) and the first legal recognition of same-sex couples in the 90s (Abou-Chadi & Finnigan, 2019) contributed, in different ways, to increased visibility of the LGBTQIA* population, and was later followed by a reduction in stigma for LGBTQIA* individuals. This also applies to the UK, where a series of legal changes in the end of 1960s and 1980s decriminalized male same-sex acts. However, in the late 1980s, the conservative government introduced a highly controversial clause - known as “Section 28” - in the Local Government Act 1988 that banned the “promotion” of homosexuality in Britain's

schools, which was in effect until 2003. In 2004, civil partnership was introduced and favourable attitudes toward gay and lesbian people increased steadily across the last two decades⁴ (Abou-Chadi & Finnigan, 2019).

These broader changes created a markedly different social climate for younger LGBTQIA* cohorts compared to older ones. The younger cohort we study, born in 1989/1990 experienced the legal changes of the early 2000s when they were adolescents.⁵ Thus, even though the cohorts we study (born in 1970 and 1989/1990) all experienced institutional discrimination during important parts of their lives, younger cohorts of LGBTQIA* people likely experienced a greater sense of validation and support which potentially influenced their self-acceptance and coming out at younger ages (Caprinali & Vitali, 2025; Dunlap, 2016). The advent of the internet and social media also likely played a major role in this process, providing LGB people with access to accurate information, role models, resources and supportive communities, which facilitated coming out experiences (Hillier et al., 2012).

Despite this progress, discrimination has not disappeared. While explicit forms of open discrimination may have become less prevalent among younger cohorts (Coffman et al., 2017), they are still present among adolescents (McBrien and Rutigliano, 2022). Evidence suggests that LGBTQIA* people still face numerous forms of subtle victimization and rejection (Carastathis et al., 2017). Peer-to-peer microaggressions related to gender normative behaviours are one example of how LGB people's identities are invalidate in their everyday lives (Munro et al., 2019). Supportive relationships, particularly within families, are crucial in this sense. Likely, contextual changes led to an increase in positive relationships for LGB people, sustaining their well-being and buffering hostile environments by challenging heterosexist and homophobic beliefs, helping adolescents to cope with discrimination (Carastathis et al., 2017). Finally, it is worth noting that the increasing prevalence of LGBTQIA* identification and disclosure, especially among bisexual individuals, represents a fundamental shift in the social context of the cohorts we study. UK census data (ONS, 2021) reveals a more than doubling of the LGBTQIA* population between the older (2.39% for those born 1967-1976) and younger (5.63% for those born 1987-1996) cohorts. This demographic shift has important implications for the social and educational experiences of LGBTQIA* individuals across these generations, which we will explore further in our analysis. In the next section, we construct specific hypotheses about how these

⁴ Information retrieved from the ILGA World Database, available at <https://database.ilga.org/en> (last accessed: 5th August 2025).

⁵ Anti-discrimination laws were introduced in the UK in 2003, age of consent was equalized in 2001, same-sex unions were first recognized in legislation in 2005 and adoption became possible for same-sex couples in 2005.

changes might have affected the context at school and at home for LGBTQIA* people in these two birth cohorts, as well as their educational attainment.

5.3 MECHANISMS IN CONTEXT: EDUCATIONAL EXPERIENCES AND OUTCOMES ACROSS LGB BIRTH COHORTS

In this section, we give an overview of the mechanisms that have been proposed in previous literature as explanations for the educational premium among LGB people. We discuss how these mechanisms should manifest empirically during adolescence, which is the life stage we study, and how this could have changed across birth cohorts in the light of the contextual changes discussed above.

A first set of explanations provided by previous research for educational premiums among LGBTQIA* people points at the role of “selective disclosure” of sexual identities (Barrett & Pollack, 2005; Mittleman, 2022; Mollborn & Everett, 2015). Socioeconomic advantages can increase both the likelihood of attaining higher levels of education and the likelihood of identifying as LGB. This explanation could be read both as a spurious relationship between sexual identities and educational attainment, but also as an issue of reverse causality as individuals who achieve greater academic success could be more willing to openly acknowledge their sexual orientation (Barrett & Pollack, 2005). Arguably, such selection is strongest when the obstacles towards disclosing and exploring sexual identities are high. This implies that, with increasing acceptance and visibility of LGBTQIA* identities across birth cohorts, socioeconomic selection into reporting non-heterosexual identities can have become less strong. Given the issues of reverse causality, it is hard to measure selection into LGB identities empirically. However, one solution is to look at an indicator of socioeconomic status that should not be affected by reverse causality: social background. We therefore test whether:

Hp1: Differences in social origin across sexual identities declined across cohorts.

A second set of explanations for educational premiums among LGB people has focused on effort at school, also labelled as the “best little boy in the world hypothesis” (Pachankis & Hatzenbuehler, 2013). This hypothesis suggests that LGB people may aim to validate their identities and find approval from parents, peers, and teachers through academic performance in contexts where non-heterosexual identities are stigmatized and pathways towards gaining self-worth are limited. As underlined by Mittleman (2022), this mechanism has a clear gendered dimension as certain conceptions of masculine identities devalue academic effort, whereas this

is less the case for feminine identities. The outsider status of many LGB youth, combined with exclusion from traditional notions of masculinity, can enable gay boys to prioritize academic achievement without undermining their masculine identities. Conversely, lesbian girls—who may exhibit more “masculine” behaviors than their heterosexual peers—might experience pressures that reduce effort at school, such as punitive responses from teachers to masculine behavior among girls (Mittleman, 2022). Mittleman (2019) found that girls who report same-sex attraction experience higher rates of exclusionary discipline than other girls, while such disparities are not observed among boys.

How the importance of academic effort as a way to gain approval has evolved over remains unclear. However, younger generations of LGB people grew up in less stigmatized environments and might not have had to conceal or mask some parts of their identities as much as older generations (Dunlap, 2016). This can have reduced the need to replace LGB people’s stigmatized identities with other ones (Doan & Mize, 2020). For instance, as social acceptance improves, LGB youth may experience better relationships with parents, peers, and teachers, reducing the need for compensatory mechanisms. This shift may enable them to derive self-worth and approval through other routes than academic effort, which could, paradoxically, contribute to reduced levels of educational attainment over time.

Hp2: The relationship of LGB individuals with peers, families, teachers and other actors improved across cohorts.

A third proposed mechanism underlying the educational premium of LGB people is the so-called status-attainment hypothesis. Education could be seen by LGB people as a privileged route to obtain resources to anticipate potential discrimination in the hiring process and self-selection out of certain occupations which tend to exhibit higher levels of discrimination (D. Black et al., 2000). Kasprowski (2024) argued that this process could be particularly relevant for LGB individuals from lower socioeconomic backgrounds whose working-class habitus can be challenged by their sexual identity. This makes LGB individuals from working class backgrounds particularly more likely to pursue education than their heterosexual counterparts.

Yet, it remains unclear whether LGBTQIA* individuals have accurate expectations about labour market returns on education, making it difficult to determine the importance of this mechanism. While social attitudes have improved over time, and discriminatory environments may have become less pervasive, remaining stigma and discrimination in certain parts of society can keep the incentives to gain educational degrees high. If that holds, resources still help

avoiding the environments where discrimination persists (i.e., there are certain sectors of the labour market where LGB employees still face discrimination during the hiring process and experience workplace bullying, see: Flage 2019). We therefore put forward that:

Hp3: The value LGB individuals give to education remains unchanged and high across cohorts.

While the last hypothesis is formulated for LGB individuals as a whole, it is worth noting that the incentives to accumulate resources through education may vary across LGB identities due to different stereotypes and forms of discrimination. For example, bisexual individuals are often stigmatized due to misconceptions about promiscuity or control over their sexual orientation (Mize and Manago, 2018). Meanwhile, LGB women frequently experience a dual burden of gender and sexual identity discrimination in later life (Littleton, 1996; Piggott, 2004), which may increase their motivation to invest in education.

5.3.1 EDUCATIONAL PREMIUM IN A CHANGING CONTEXT

Considering the above changes in school and family context, how would we expect educational premiums to have evolved across birth cohorts? As a general expectation, in a context where LGB identities are increasingly visible and less stigmatized, the relevance of sexual identity to educational attainment may have declined. If this is the case, this would imply that educational premiums declined among LGB people across cohorts. However, whether a declining educational premium of LGB people across cohorts is observed will depend on whether reductions in stigma and discrimination have been profound enough. In other words, have improvements in context been sufficient for selection into LGB identities to decline, for social integration to improve and for discrimination to decrease to the point where educational attainment is no longer essential to avoid discriminatory contexts?

Moreover, the extent of these changes likely varies within the LGB population. Historically, LGB women may have faced fewer family-related constraints than heterosexual women, allowing greater freedom to pursue education. Today, however, heterosexual women are highly educated on average, while LGB women have to navigate unique challenges arising from the intersection of their gender and minoritized sexual identity (Littleton, 1996; Piggott, 2004), both in everyday life and within the school environment. Mittleman (2022) argues that current differences in educational attainment between gay boys and lesbian girls reflect how each group deviates from dominant gender norms. As LGB identities have become more visible, gender-atypical traits in gay boys may be more accepted or even rewarded (Mittleman, 2022; Pascoe,

2007) while, conversely, lesbian students might face increased negative sanctions and disengagement in school as found by Mittleman (2019). If so, rising visibility may contribute to heightened stigmatization of non-heterosexual girls in younger cohorts.

Based on these considerations, and evidence from Mittleman (2022) which found that only older cohort of lesbian women display higher level of education, we hypothesise the following about educational differences between heterosexual and LGB people:

Hp4: The educational premium of LGB people has declined across birth cohorts, with a greater decline observed among LGB women than LGB men when compared to their heterosexual peers.

Beyond gender, differences may also be expected between gay/lesbian and bisexual individuals. Current evidence indicates that bisexual individuals still have the lowest rates of external disclosure among LGB identities (Doan and Mize 2020) and suffer from stereotypes associated with the misconception that bisexual individuals are promiscuous. That said, it is not clear whether bisexual people experience similar processes and motivations as observed for gay and lesbian individuals, making it difficult to predict how these differences have changed over time. We aim to use the description of their family and school context during adolescence to construct new ideas about mechanisms for bisexual people in the discussion.

5.4 DATA AND METHODS

Empirically testing which mechanisms produce educational premiums among LGB people is challenging as various mechanisms, such as social exclusion or discrimination, operate at the group level, and might have different effects on the individual level. For instance, high levels of stigma and discrimination related to LGB identities can push LGB youth towards investing in academic effort, but on the individual level discrimination and social exclusion are still likely to negatively affect educational outcomes. Hence, an ideal study would study variation across a large set of macro-level contexts. Because such data are not available, we aim to set a first step toward understanding educational experiences and premiums by studying two birth cohorts of LGB people.

We use two birth cohort studies carried out by the UCL Centre for Longitudinal Studies with similar survey designs: the British Cohort Study, comprising over 17,000 individuals born in a specific week in 1970, which we label the 1970 cohort, and Next Steps, including nearly 16,000 people born in 1989 or 1990, which we label the 1990 cohort. These two datasets, which follow

children longitudinally as they grow up, contain information gathered during adolescence regarding their everyday life. This enables us to describe the environment that LGB individuals experienced at home and at school when they were aged 14-16. For young people in the UK, this is a crucial stage in their educational career because at the end of lower secondary education they must sit national qualification exams that determine access to subsequent educational trajectories. We use information from later waves to measure sexual identity and educational attainment.

Missing information was an issue because the relevant variables are collected across different waves, using different modules, filled out by different actors (e.g. parent or child) and at different places (home or school). In the BCS, information collected at school during Sweep 4 (age 16) was particularly affected as a school strike took place during the collection period and led to non-response rates of sometimes over 50% as part of the data was collected at schools (See Table A1b the Appendix). To deal with this, we run our main analysis on 10 multiply imputed datasets, where missing information is imputed except for our main variable of interest: sexual identity.⁶ Imputation is conducted separately for the two cohort studies to account for cohort-specific characteristics, while gender and region of birth are included as predictors. This approach allows missing values to be imputed conditional on key demographic characteristics while preserving sample size and statistical power. In total, the analyses are based on 9039 respondents for the British Cohort Study 1970 and 11,423 respondents for Next Steps including 260 LGB individuals for BCS70⁷ and 673 LGB persons for Next Steps.⁸

We provide additional analysis using a large representative survey of the UK population (UKHLS) to confirm the changes in educational premiums across birth cohorts. To do this, we limited the analytical sample to respondents who reported information on sexual identity and education, who were born before 1981 and aged 30 or more at the time of the survey.⁹ The final sample consisted of 29,251 individuals, with 572 persons identifying as LGB.

⁶ All cases of the sample were included in the imputation, as well as all variables used in the analysis plus a variable indicating sampling strata, but subsequently all cases with missing information on sexual identity, our main variable of interest, were dropped.

⁷ For BCS70, 9,840 of the originally 17,196 sampled individuals in 1970 were still present in the last wave considered at age 42. Out of these 9683 had information on educational attainment and provided a response on the sexual identity question. Depending on the wave and module outcome variables were measured, the final sample sizes ranged from 3,117 to 9,683 and after the multiple imputation we retained 9039 people. More information is provided in the tables and Appendix Table a1.

⁸ For Next Steps, 11,423 of the originally 15,770 sampled individuals at age 14 gave a response to the sexual identity question in one of the waves of the survey (Waves 6-9). Individuals who did not participate in those waves were excluded from the sample.

⁹ From the original sample, 49% was excluded due to age and birth cohort restrictions, 23% because they were not present in a wave where sexual identity was asked and 6% due to missing information on sexual identity or education.

5.4.1 MEASURES

Sexual identity is our main independent variable of interest. Next Steps asked about sexual identity when respondents were 19, 20, 25, and 32 years old, and BCS70 when respondents were 42 years old. The UKHLS survey asked respondents about their sexual identity in waves 3 and 9 (various ages). All surveys used the following phrasing: “*Which of the following options best describes how you think of yourself?*” with the answer options being Heterosexual or Straight, Gay or Lesbian, Bisexual, Other, (and Prefer Not to Say just in UKHLS).

We used the last reported identity, if recorded more than once, as we were not able to account for possible fluidity in sexual identities for most respondents. While this approach acknowledges that sexual identity can evolve over time, we do not know people’s identities during adolescence, which is when we look at family and school context. However, within the context of explaining educational differences among LGB adults, our main interest is in examining differences during high school for people who identify as LGB during adulthood, regardless of how they identified during adolescence. We excluded the categories “Other” or “Prefer not to Say” because these categories often include high shares of heterosexual respondents, complicating their interpretation (Elliott et al., 2019). Based on self-reported gender and sexual orientation, individuals were classified into a constructed sexual identity variable that distinguishes between sexual identities and binary gender. We were not able to consider gender identities beyond man and woman (e.g. non-binary identities).

The *family and school context during adolescence* is measured through a set of variables taken from the birth cohort studies. We study these to describe the components of LGB people’s lives that have been argued to underlie their educational premium in adulthood. The main challenge is to operationalize the aspects of adolescents’ lives in relatively comparable ways across the two cohorts. To avoid an arbitrary focus on specific variables, we included variables that were available in both birth cohort studies and that relate to one of the three main mechanisms of the theoretical framework: selection, social integration, and attitudes towards the value of school.

To understand whether there is any socioeconomic selection into LGB identities, we looked at parental occupation (whether at least one parent had a service class occupation when the respondent was age 16). Parental occupation captures socioeconomic background but should not be influenced by sexual identity. Therefore, any differences in social background are likely to reflect selective disclosure or possibilities to develop LGB identities.

Social integration was captured by questions on adolescents' relationships with peers and with their own families at ages 14-16. A higher social integration in these spheres arguably reduces the outsider status of LGB youth and increases the ways in which individuals can gain self-worth. We also included measures that capture the relationship of children with teachers, which could enable deriving self-worth through academic effort.

Finally, the perceived benefits of gaining education were captured by a battery of questions related to the value respondents gave to education at ages 15-16. More details on each variable used are given in the results section. A complete list of variables, the methodological choices made, the ages at which data was collected, by whom each item was reported, and missing information is reported in Appendix Tables A1b and A1d.

While most of these variables are directly comparable across cohorts, we sometimes had to rely on variables that were not directly comparable, but that - in our opinion - (partially) account for the same conceptual dimensions. We coded all the variables as binary except the "victim of bullying" variable which is a scale based on several questions. Subsequently, to provide an overarching test of changes related to certain aspects of adolescents' lives, we combined the single predictors into standardized composite scores (i.e., *Social isolation*, *Family tensions*, *Trouble at school*, and *Negative school values*). Even though these scores are not always strictly comparable across cohorts - preventing us from testing the significance of changes between cohorts - they do provide an overall evaluation of group differences in these life spheres for each cohort.

Educational attainment is the last variable of interest. For BCS70 and Next Steps, we look at the attainment of a tertiary degree (dummy variable) at ages 42 and 32, respectively. For the UKHLS we take the highest educational attainment measured up to the wave in which sexual identity was retrieved.

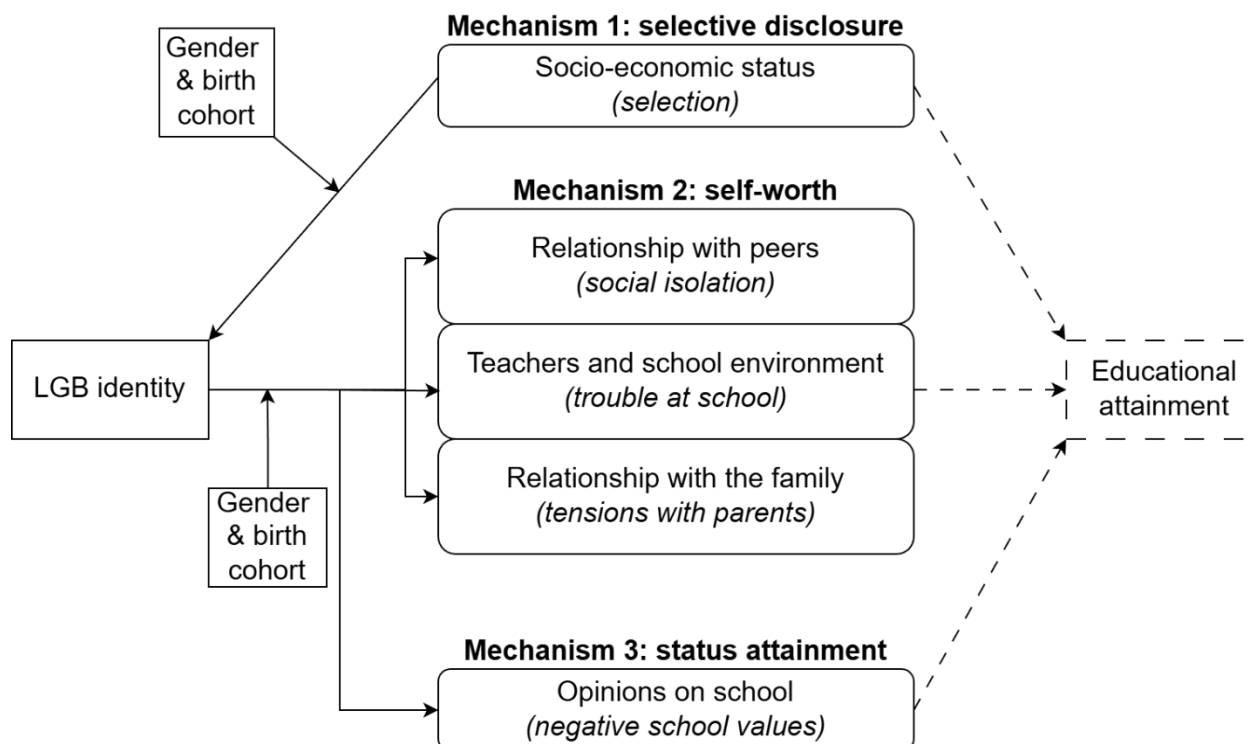
5.4.2 ANALYTIC STRATEGY

To describe changes in LGB adolescents' context across cohorts, we estimate OLS and logistic regressions where the different aspects of LGB individuals' lives are the dependent variables. This is first done for each individual variable used to capture selection, social integration and attitudes towards education and also for the composite scores. The analyses are guided by the theoretical framework depicted in Chapter 1 and will try to understand how different aspects of LGB adolescents' lives (cohort, relationship with peers and parents, school environment, and attitudes toward school), relates to sexual identity and, ultimately, to educational attainment.

Our aim is to describe the context LGB people experienced during adolescence, and therefore we do not include control variables in our analysis

To clarify the theoretical assumptions underlying the empirical analyses, Figure 1 presents a conceptual Directed Acyclic Graph (DAG) illustrating the hypothesised relationships between sexual identity and educational attainment, how mechanisms proposed in the literature may mediate this relationship, and how the outcomes analysed in this paper relate to these mechanisms. This scheme, together with the theoretical framework, guided the analytical strategy and the selection of covariates included in the models. In addition, all respondents also have the same age, and our main variable of interest already contains gender differences, which means that age and gender are controlled for. To facilitate cross-groups comparisons, we present results in terms of predicted values, with indications of whether values significantly differed from those of heterosexual men (the reference category). Indications of whether differences with heterosexual women are statistically significant are provided in the Appendix (Tables A2).

Figure 1: Conceptual Directed Acyclic Graph (DAG) illustrating the hypothesised relationships between sexual identity, mechanisms proposed in the literature, analysed outcomes, and educational attainment.



The final part of our analysis consisted of documenting cohort change in educational premiums among the different groups studied in the UK. Besides showing attainment differences across the birth cohorts studied, we take advantage of the large sample size of the UKHLS to describe trends of educational attainment by sexual identity applying moving averages for birth cohorts. For a given birth year, we take the average educational attainment for individuals born in that year and the five years before and after that year. Subsequently, we use a regression approach explaining educational attainment with birth cohort as an independent variable (we use both categorical and continuous versions of the birth cohort variable).

We included several robustness checks in the Appendix. We run multivariate analyses on the whole sample where educational attainment is explained by the composite scores on the family and school context at age 14-16 (Table A3 and A4). The multivariate analysis can give an indication of whether some of the hypothesised mechanisms can explain educational differences across sexual identities, but it has to be emphasised that most mechanisms operate at the group-level and are therefore not captured in an individual-level analysis as used here. Furthermore, we re-ran all analyses on a version of the sample where educational attainment was not imputed (Table A6a-d), and results were very similar, with only minor differences in coefficients while retaining the same direction and significance.

5.5 RESULTS

5.5.1 SELECTION

The first mechanism we consider is selection into reporting an LGB identity. Table 1 shows differences in social origin across sexual identities measured as parental occupation when cohort members were aged 16. We distinguish between individuals having a service class origin (lower or higher managerial/professional occupation) and those who do not.

We expected declining selection into reporting an LGB identity across cohorts due to increasing acceptance of sexual diversity. We indeed find some selection in the older cohort, but in the opposite direction as expected: gay men are less likely to have a parent with a service class occupation than heterosexual men in the older cohort and this ceases to be the case in the younger cohort. This is similar for lesbian women, although the results are not statistically significant. For bisexual people we see that there was no selection on social origin in the older cohort, but we find that bisexual people are more likely to have a parent with a service class

occupation in the younger cohort compared to both heterosexual men and women (Table 1 and Table A2a in the Appendix). We also looked at differences in social origin using the UKHLS data, finding similar patterns for LGB men (Appendix Table A5).

Table 1: Predicted shares of having a service class parent across identities and cohorts

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
Service Class Parent	.43	.42	.27*	.34	.40	.46
1990 cohort						
Service Class Parent	.45	.44	.44	.47	.55*	.52*

Statistical significance of difference with heterosexual men: ** p<0.01; * p<0.05; † p<0.10.

Predicted values taken from Logistic Regressions without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

5.5.2 LIMITS TO DERIVING SELF-WORTH: SOCIAL ISOLATION, TROUBLE AT SCHOOL, FAMILY TENSIONS

The second mechanism central to explanations of educational premiums is the possibly more limited routes that LGB youth have available to derive self-worth. We hypothesised that, paradoxically, better social integration of LGB youth can lead to lower educational attainment as it diversifies the ways in which adolescents can derive self-worth. We aimed to capture the aspects relevant to this mechanism by looking at their relationships with peers, teachers, and family members during adolescence, as displayed in Table 2 (comparisons with heterosexual boys) and Table A2b in the Appendix (comparisons with heterosexual women),

Relationships with peers were measured using a composite score (“*Social Isolation Score*”) that captures experiences of bullying, a question about where adolescents spend most of their free time, and a question about their relationship with others at school. Across cohorts, we observe that LGB youth are more likely to be socially isolated than heterosexual youth. However, these differences are not statistically significant for bisexual youth in the older cohort, nor for lesbian women in the 1990 cohort when compared to heterosexual women.

When focusing on individual items, we observe high levels of bullying across cohorts for all LGB youth when compared both to heterosexual men and women, except for lesbian girls. We also observe that even though lesbian girls were considerably more likely to report not having someone to talk to in the older cohort, they reported similar levels compared to heterosexual girls in the younger cohort (note that the wording of this question changed across cohorts). Patterns in the frequency of staying at home during free time reveal generational and gender-specific differences among LGB youth. In the 1970 cohort, all groups of LGB youth are more likely to stay at home during their free time similarly to heterosexual women. In the 1990 cohort this patterns differ: gay and bisexual men are more likely to stay at home compared to both heterosexual men and women, while bisexual women are more likely to stay at home compared to heterosexual men but not significantly different from heterosexual women, and lesbian women do not significantly differ from either heterosexual men or women.

A second set of variables captures youth's relationship with teachers and their behaviour in the classroom. The resulting composite score is based on questions about causing trouble in class, participating in fights, and adolescents' perception of whether they got picked on by teachers more than other students.

Overall, we observe that gay boys in both cohorts were less likely to be in trouble at school than heterosexual boys similarly to heterosexual women. For lesbian girls, we observe a change across cohorts: even though they were equally likely to be in trouble as heterosexual girls in the older cohort, they were significantly more likely to be in trouble in the younger cohort compared to heterosexual women (see Table A2b in the Appendix for significance tests). We see a similar pattern for bisexual girls, even though they already seemed slightly more likely to experience trouble at school compared to heterosexual girls in the older cohort.

Once looking at individual items that are comparable across cohorts, we see that in the 1970 cohort the predicted values for lesbian women are not statistically different from those of heterosexual women. Differently, in the younger cohort lesbian women are more likely to participate in fights and to be blamed by teachers compared to heterosexual women (see Table A2b in the Appendix). For the item "causing trouble at school", predicted values are significantly different compared to heterosexual men, but but falls between the values for heterosexual men and heterosexual girls.

Finally, we included variables capturing adolescents' relationship with their parents covering various aspects of how respondents feel treated by their parents as well as other aspects of their relationship. In contrast to the aspects studied so far, comparable items were not available

in both cohort studies. Nevertheless, we were able to select several variables from both cohort studies capturing family relationships. We tested whether each battery of questions captured a single underlying concept using Cronbach's Alpha and found relatively high scores (0.7 in both cohorts). We therefore consider these measures to capture family relations relatively well in both cohorts, even though it is unclear whether these capture the same aspects of family relations across cohorts.

Table 2: Predicted values on variables capturing social relationships across sexual identities and cohorts

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
<i>“Social Isolation” Score</i>	-0.03	0.01	0.38*	0.24†	0.18	0.26
Victim of bullying (scale)	-0.01	-0.02	0.49**	0.16	0.61*	0.74**
Mostly stay at home during free time	0.60	0.68**	0.72†	0.75†	0.80†	0.86*
Feel sad cause nobody to talk to at school	.12	.12	.32**	.27**	.00	.05
<i>“Trouble at school” Score</i>	0.12	-0.11**	0.11**	-0.10*	0.22	0.05
Caused trouble in class	.51	.38**	.23**	.38	.62	.44
Participated in a fight	.57	.41**	.49	.37*	.42	.44
Gets picked on by teacher	.15	.11**	.15	.14	.28*	.20
<i>“Tension with parents” Score</i>	0.01	-0.02†	-0.01	-0.06	0.25	0.14
Feel unhappy living with parents	.16	.18*	.18	.14	.32	.27
Parents don't like to hear my ideas	.37	.28**	.36	.26	.50	.33
Parents don't leave me freedom	.17	.17	.17	.23	.24	.24
Parents are not overprotective	.21	.22	.21	.21	.29	.28
I cannot talk with parents	.50	.41**	.53	.44	.62	.45
Parents treat me as a child	.09	.10	.09	.08	.14	.13
Parents do not understand me	.19	.19	.19	.16	.30	.29
Parents are not caring to me	.31	.23**	.18*	.16†	.38	.28
Parents are strict to me	.15	.22	.14	.17	.24	.29

(Continue from previous page - Table 2)

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1990 cohort						
<i>“Social Isolation” Score</i>	-.04	0.03**	0.27**	0.12*	0.36**	0.25**
Victim of bullying (scale)	-0.07	0.01**	0.24**	0.07	0.36**	0.44**
Mostly stay at home during free time	.26	.31**	.42**	.32	.42**	.31†
Does not get on very well with others at school	.33	.34	.42*	.37	.46**	.41*
<i>“Trouble at school” Score</i>	.12	-.17**	-.23**	-.02*	.04	-.09**
Caused trouble in class	.75	.58**	.59**	.65*	.71	.58**
Participated in a fight	.19	.09**	.06**	.13	.14	.14*
Gets blamed by teacher	.18	.11**	.06	.17	.18	.15
<i>“Tension with parents” Score</i>	-0.05	0.06**	0.06†	0.14**	0.06	0.24**
Fights with mother	.17	.24**	.21	.27**	.22	.26**
Fights with father	.11	.13*	.17*	.16	.17	.21**
Does not get on very well with mother	.28	.35**	.27	.36	.32	.42**
Does not get on very well with father	.27	.30**	.35*	.36†	.30	.40**

Statistical significance of difference with heterosexual men: ** p<0.01; * p<0.05; † p<0.10.

Predicted values taken from OLS regressions or Logistic Regressions (in the case of dichotomous variables) without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

The item *“Feel sad because there is nobody to talk to at school”* in the 1970 cohort was analyzed using a different subsample (N = 9,004) for the 1970 cohort, as no bisexual men in the original sample responded “Yes” to this item. Consequently, they were excluded from the analysis.

As observed in Table 2 and in Table A2b in the Appendix, LGB people in the older cohort do not significantly differ from heterosexual men and women in the composite score of their relationship with parents. When there are differences, gay and lesbian youth had a more positive relationship with parents (for instance they are gay men and lesbian women from the 1970 cohort were less likely to say that their parents did not care about them). In contrast, bisexual children display higher predicted values of reported family tension, but differences are not statistically significant. Results are different for the younger cohort as all groups but

bisexual men are more likely to declare family tensions compared to heterosexual men. Results for bisexual women are also significant compared to heterosexual women (statistically significant; see Appendix Table A2), while predicted values for lesbian women are higher than those of heterosexual women, though not statistically significant. These results may suggest that among LGB women relationships with parents have worsened across birth cohorts compared to heterosexual men.

Once looking at individual items, we see that gay and lesbian youth are similar to heterosexual youth across various aspects of relationships with parents in the older cohort and see more fights with mothers and poorer relationships with fathers for lesbian girls in the younger cohort. For bisexual girls, higher and significant predicted values are visible across all variables capturing relationships with their parents. Differently, for gay men are visible only more fights with father and poorer relationship with father.

Overall, Table 2 shows high levels of social isolation for LGB youth across cohorts. However, whereas gay boys stay out of trouble at school and report overall positive relationships with their parents, this is not the case for other LGB adolescents. For lesbian girls, there appears to have been changes across cohorts in their context. In the older cohort, lesbian girls have higher predicted values of social isolation compared to heterosexual boys, while relationships with teachers and family were similar to those of heterosexual girls. For younger cohorts of lesbian girls, we still observe higher levels of social exclusion compared to heterosexual men, but lesbian girls report also more trouble at school compared to heterosexual girls and higher levels of family tensions compared to heterosexual men. Bisexual girls display a similar pattern to that observed for lesbian girls, though more pronounced. In the younger cohort, they report higher levels of social isolation and tensions with parents compared to heterosexual girls and boys, and higher trouble at school compared to heterosexual girls. For bisexual boys, high levels of bullying and social isolation were present across cohorts, even though social isolation only turned significant in the younger cohort probably due to low statistical power in the older cohort.

5.5.3 INCENTIVES TO INVEST IN EDUCATION: ATTITUDES TOWARDS THE VALUE OF EDUCATION

The status-attainment hypothesis posed that LGB people value school more than others, as they see education as a privileged route to gain resources that can help avoid or face future discrimination. To measure values towards school we looked at questions whether respondents think school is a waste of time, whether they like school and whether adolescents think that education will help them in the future.

According to the composite score “*Negative School Values*” presented in Table 3 (comparisons with heterosexual boys) and Table A2c in the Appendix (comparisons with heterosexual women), gay boys are the least likely to have negative values towards school across both cohorts (not significant different from heterosexual women). In the older cohort, this also appears to be the case for lesbian girls, even though scores are not statistically different compared to heterosexual girls. In the younger cohort, negative school values are higher for lesbian girls and statistically different from heterosexual girls.

Once looking at individual items, we see that lesbian girls report lower levels of not liking school in the older cohort compared to heterosexual men, but higher levels compared to heterosexual girls in the younger cohort (albeit not statistically significant).

Table 3: Predicted values on variables capturing educational values across sexual identities and cohorts.

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
“<i>Negative School Values</i>” Score	0.04	-0.03**	-0.15*	-0.14 †	0.04	-0.15
School is a waste of time	.34	.32	.25	.31	.32	.29
Do not like school	.63	.59**	.51†	.50†	.66	.52
Education only puts off unemployment	.38	.35*	.32	.28	.26	.27
1990 cohort						
“<i>Negative School Values</i>” Score	0.03	-0.03**	-0.15**	0.01	-0.02	0.00
School is a waste of time	.42	.39**	.30**	.40	.40	.40
Do not like school	.75	.70**	.71	.75	.72	.72
Doing well in school does not help future	.46	.41**	.39	.40	.41	.43

Statistical significance of difference with heterosexual men: ** p<0.01; * p<0.05; † p<0.10.

Predicted values taken from OLS regressions or Logistic Regressions (in the case of dichotomous variables) without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

5.5.4 EDUCATIONAL OUTCOMES AT LATER AGES

Table 4 shows the educational outcomes of the different cohorts and groups at later ages. We observe an educational premium for gay men across cohorts. This fits with the persistently high levels of social isolation and high value attached to education that gay boys experienced during adolescence across both cohorts. For lesbian women we see a clear premium in the older birth cohort (also compared to heterosexual women, see Table A2d in the Appendix), but no premium in the younger cohort. This is in line with the changes that lesbian girls experienced at school and at home during adolescence. Lesbian girls went from experiencing higher isolation and similar levels of trouble at school and in relationship with parents as heterosexual girls in the older cohort, to more trouble at school than heterosexual women in the younger cohort. Furthermore, lesbian girls report high levels of social isolation and tensions with parents compared to heterosexual men in the 1990 cohort.

Table 4: Predicted values on educational attainment across identities and cohorts

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
Hold a tertiary degree	.40	.42*	.55**	.54*	.40	.45
1990 cohort						
Hold a tertiary degree	.42	.48	.53**	.50	.51†	.48

Statistical significance of difference with heterosexual men: ** $p < 0.01$; * $p < 0.05$; † $p < 0.10$.

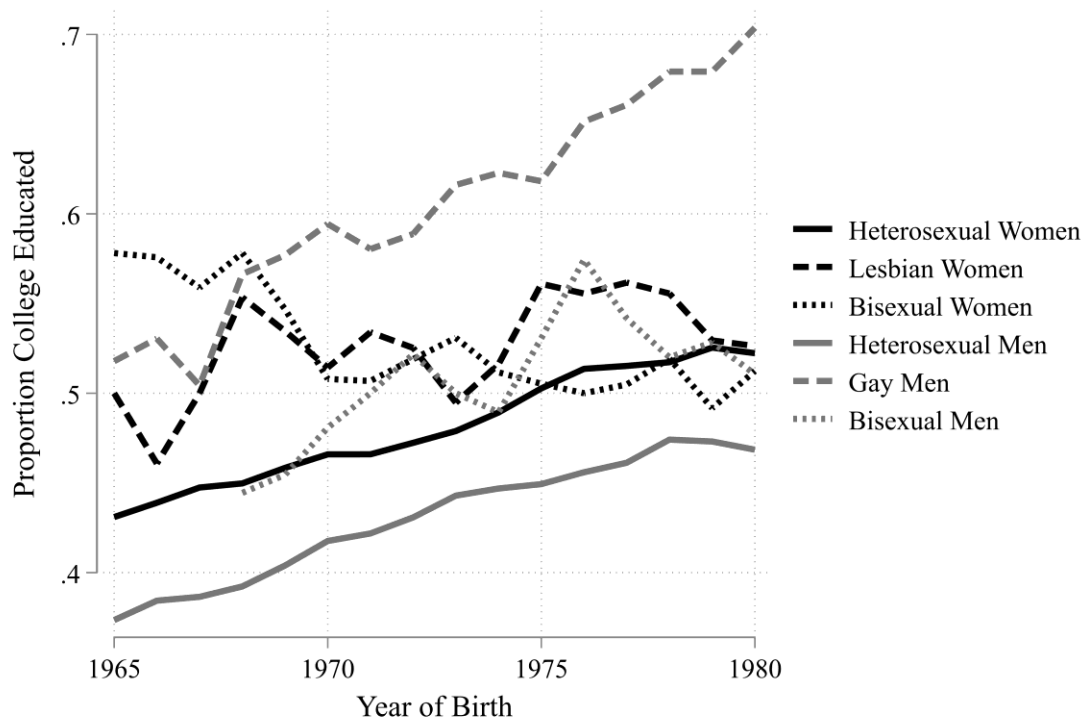
Predicted values taken from Logistic Regressions without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

For bisexual people we do not observe statistically significant differences with heterosexual people for any group or cohort. In substantive terms, we do see somewhat higher levels of education among bisexual men in the younger cohort. We did not observe clear changes in the individual context of bisexual boys, which makes it hard to interpret this possible increase in educational attainment. The changes in context during adolescence were somewhat similar for lesbian and bisexual girls, but stronger among bisexual women who report significantly higher social isolation, more trouble at school and worse relationships with parents compared to

heterosexual women in the younger cohort). Hence, we would expect greater educational differences to emerge across cohorts for bisexual girls, but we do not observe that.

Given the limited sample sizes of the birth cohorts, we replicated our analysis of educational attainment using the UKHLS data. Figure 2 displays the proportion of people that has a college education by birth cohort and sexual identity based on the UKHLS data.

Figure 2: Educational attainment by cohort and sexual identity (UKHLS)



Note. UKHLS data, persons aged 30 or more at the time of survey. Share is calculated separately for each individual year as the share of a birth cohort defined as the year of reference $\pm$ 5 years.

Here, we observe that LGB people are generally higher educated than their heterosexual counterparts. This difference is statistically significant for all LGB groups except for bisexual women (see LPM models explaining college attainment in Appendix Table A5). However, the advantage for LGB women declined across cohorts. Older cohorts of bisexual and lesbian women (i.e., born in 1965) display higher levels of education compared to heterosexual women. In line with the results observed for the birth cohort data, the advantage found in older cohorts of lesbian women decreased over time, a trend that is statistically significant for lesbian women

(Appendix Table A5). In the youngest generation, the share of college-educated women is similar across sexual identities, as also found by Mittleman (2022) for the US.

5.5 DISCUSSION AND CONCLUSIONS

In this paper, we aimed to gain a better understanding of how the context during adolescence changed for LGB youth across birth cohorts. Previous research has shown that educational premiums related to sexual identity changed across countries and groups. However, explanations for these educational differences are based on assumptions about the context of LGB adolescents that are not often empirically tested using representative data. Our goal was to empirically examine the school and family context during adolescence for two birth cohorts of LGB people that vary in terms of their educational attainment relative to heterosexual people. We also contributed by documenting for the first time how sexual identity differences in educational attainment changed across cohorts in the UK.

We formulated various hypotheses regarding cohort-change in the context of LGB youth which cover aspects that have often been connected to educational premiums in previous studies. We did not find support for the hypothesis that LGB people were more positively selected in terms of social origin in the past (Hp1). If anything, we found an opposite trend, and that their families of origin had, on average, a relatively lower socioeconomic status in past cohorts as compared to heterosexual respondents' families of origin.

Similarly, we found no support for the hypothesis that the relationship between LGB people and their peers and families improved over time (Hp2). On the contrary, we found significant tensions at school and with parents in the younger cohort of LGB women that were not observed in the older cohort of LGB women. These trends holds for both lesbian and bisexual women compared to heterosexual men, and for bisexual women also relative to heterosexual women. This was observed alongside persisting social isolation from peers of LGB respondents across both cohorts, except for lesbian women in the 1990 cohort, whose levels significantly differ from heterosexual men but not from women. Results for bisexual men showed that their context did not change much across cohorts.

Finally, an analysis of LGB youth's values regarding education supported the validity of the status attainment mechanism, as gay men generally reported a high value given to school during adolescence (Hp3). For lesbian women, this was true in the 1970 cohort, whereas in the 1990 cohort they reported less positive attitudes toward school.

Our last part of the analysis was devoted to investigating whether the relationship between sexual identity and educational attainment changed across UK birth cohorts. We found a consistent educational premium for gay men across cohorts and a disappearing premium for lesbian women, who were more educated than heterosexual women only in past cohorts (Hp4). Both findings are in line with previous literature on the US (Mittleman, 2022). Results for bisexual people were less precise and inconsistent across sources but, bisexual men appeared more educated than heterosexual men across cohorts, providing some support for the idea of a stable educational premium over time for bisexual people in the case of men; no clear premium was observed for bisexual women.

In short, little changed for gay men across cohorts: relatively high levels of education as compared to heterosexual men, high levels of social isolation from peers, but high value given to education, lower tensions with parents and a good relationship with teachers. The results for gay men therefore appear to fit well with various of the hypothesised mechanisms: 1) an outsider status combined with a commitment to academic effort, which fits with the “best little boy” hypothesis where gay boys derive self-worth from academic effort; 2) high value given to education, in line with the “status attainment” hypothesis where LGB people accumulate resources to deal with or avoid future discrimination.

The small sample size for bisexual men does not allow for solid conclusions there. However, the apparently lower levels of education that bisexual men attain as compared to gay men could possibly be explained by gay youth’s higher value given to education compared to bisexual youth. Another possibility is the lower levels of tensions with family and teachers that gay boys reported which could be conducive of performing well in school. The higher tensions with family and teachers among bisexual men could derive from bisexual people challenging additional norms regarding sexuality or from the stereotypes bisexual people have to deal with (Mize & Manago, 2018) and could make academic success a less feasible avenue to attain self-worth for them compared to gay men.

Results for LGB women showed changes across cohorts with a disappearing educational premium and worsening social relationships. Even though our datasets are roughly comparable, the different scales and answer categories make the data not suited for directly testing change across cohorts within specific groups. We therefore rely on testing whether the ranking of different groups changed across cohorts. In this regard, LGB women’s relationship with parents and trouble at school have become worse as compared to heterosexual men. Descriptively, this pattern is also observed relative to heterosexual women, though differences are often not

significant. It indeed appears to be the case that worsening relationships with teachers and parents across cohorts are observed for all groups of women. However, at least descriptively, this seems more pronounced for LGB women. These changes in the environment are likely candidates for explaining why LGB women are no longer more highly educated than heterosexual women.

Why did the context of LGB women, and lesbian girls in particular, change across cohorts? We suggest that the increasing visibility of the lesbian community in popular culture in the 1990s coincided with an emerging association between masculinity and lesbian identity (Eves, 2004), as illustrated by the widespread stereotype of lesbian as “butch” (Ciasullo, 2001). Increasing visibility, together with breaking norms about gender, may have directly impacted lesbian girls’ everyday life and the way in which the environment started to treat LGB women. For instance, previous studies on the US have already noted how same-sex attraction is more sanctioned among girls (Mittleman, 2019).

Similarly, parents can be more likely to welcome deviations from gender norms for gay boys than for lesbian girls. If gay boys challenge the masculine idea of academic effort as uncool, this can make school a fruitful avenue to derive self-worth and approval by parents. However, challenging norms about femininity might not lead to the same approval for LGB girls. This idea is supported also by the fact that, while socially isolated, gay men are the only ones who did not show higher tensions with parents and teachers in both cohorts. As femininity tends to be associated with academic performance (Legewie & DiPrete, 2012), lesbian girls’ deviance from femininity might not be compensated for by increased academic effort, as girls are already expected to do well in school (Mittleman 2019). Besides the possibility that girls might not be rewarded for good school effort, because gendered norms expect them to do so by default, tension in the relationship with teachers and parents can make deriving self-worth from academic effort less feasible too.

This paper presents several limitations, mainly related to the data. Firstly, due to the nature of birth cohort panels, it was impossible to always rely on comparable measures between the two datasets. Even though we believe that the measures used provided evidence for differences across identities for each cohort, additional work is needed to firmly conclude whether specific aspects of these environments changed across cohorts or not. Secondly, since sexual orientation was only asked in adulthood, it was impossible to know whether people were out already during secondary education. However, regardless of whether peers, family, and teachers were aware of LGB youth’s identities, their relationships to them did differ from their relationships with

heterosexual youth. The exact way in which these relationships are affected by stereotypes, internalized mechanisms or other processes is a question for future research, but the presence of differences suggests that these are relevant aspects of LGB youth's lives during adolescence.

The third issue relates to the individual-level approach that prevents us to conduct proper multivariate regressions and mediation analyses. In robustness checks we did try to explain educational attainment differences by the scores studied, and these results do suggest that differences in trouble at school and value given to education can explain part of the educational premium for gay boys (but the educational premium for lesbian girls in the older cohort, as well as bisexual respondents, remains unexplained). A problem with such mediation analyses is that several of the mechanisms outlined above operate at the group level, rather than the individual level, which complicate quantifying their importance using individual-level analysis. For instance, the individual experience of discrimination is likely to negatively impact school outcomes, but the existence of discrimination and stigma related to LGB identities on the group level could push people to increase their individual evaluations of the value of schooling. Future research can investigate further to what extent the processes uncovered here can actually explain (changes in) educational premiums using larger samples, and, in particular, by comparing across a larger set of contexts to also identify macro-level effects.

In short, we have shown that while all groups experience bullying and adverse environments, this does not translate into higher educational attainment for everyone. There appear to have emerged specific challenges that make academic effort a less feasible way out of adverse environments for LGB women, and to some extent these mechanisms appear applicable to bisexual men too. We showed a worsening in relationships of LGB women at school and with parents across cohorts, which might have reduced the educational premium that existed for these groups in earlier cohorts. Our research therewith highlights that an understanding of the educational attainment of the LGBTQIA* is enhanced by placing the specific experiences of gay men, lesbian women, bisexual men, and bisexual women into context, calling for future research to avoid treating the LGBTQIA* population as a homogenous group.

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APPENDIX

Appendix A1. Descriptive statistics, sample selection and missing values report (BCS70 & Next Steps)

Table A1a: Descriptive statistics of sexual identity (BCS70) collected at age 42.

	<i>Men</i>		<i>Women</i>	
	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>
Heterosexual	4506	95.53	4917	96.6
Gay/Lesbian	112	2.37	67	1
Bisexual	31	0.66	50	0.98
Total (valid cases)	4649	98.56	5,034	98.9
Missing cases	68	1.44	56	1.1
Total cases	4717	100	5090	100

Table A1b: Information on all variables used in the analysis, including percentages of missing cases (BCS).

	<i>% No interview (module)</i>	<i>% No Valid Response</i>	<i>Age</i>	<i>Reported by</i>	<i>Values coded 0</i>	<i>Values coded 1</i>
Tertiary Degree	0	0	42	Child/Derived	None / NVQ 1 / NVQ 2 / NVQ 3	NVQ 4 / NVQ 5
Service Class Parent BCS	46.94	5.77	16	Parent/Derived	All others with parent info	Managerial or professional occupation mother or father
Victim of bullying (scale)	62.04	5.96	16	Child	Scale based on 3 questions ^b	
Staying at home during free time	54.07	2.67	16	Child	Once a week / Less than once/week / Rarely or never	4 or more days/week / 2-3 days/week
Feel sad cause nobody to talk to at school	56.55	3.66		Child	No / Don't know	Yes
"Social isolation" Score					Generated if one value is non- missing, standardized	
Cause trouble in class compared to others	50.25	2.8	16	Child	Less than others / No one does	As others / More than others
Participated in fight at school	54.07	2.78	16	Child	No / Saw a fight	Yes
Teachers are likely to pick me compared to others	50.25	3.26	16	Child	No/ No one does	Yes
"Trouble at school" Score					Generated if one value is non- missing, standardized	

(Continue from previous page - Table A1b)

	% No interview (module)	% No Valid Response	Age	Reported by	Values coded 0	Values coded 1
Feelings about living with your parents	53.72	0.63	16	Child	I am happy / I am very happy	I am somewhat unhappy / Don't live with parents / Don't know or no feelings
Think parents usually like to hear ideas	62.04	1.62	16	Child	Yes	No / Don't know
Parents allow them reasonable freedom	53.72	0	16	Child	Yes	No response
Parents are overprotective	53.72	0	16	Child	No response	Yes
Parents are understanding, can talk with them	53.72	0	16	Child	Yes	No response
Parents treat me as a child	53.72	0	16	Child	No response	Yes
Parents do not understand me	53.72	0	16	Child	No response	Yes
Parents are caring to me	53.72	0	16	Child	Yes	No response
How strict are parents with child	53.72	0.44	16	Child	Very free (4/7)	Very strict (1/3)
"Family tensions" Score					Generated if one value is non-missing, standardized	
Thinks school is a waste of time	53.25	0.91	16	Child	Not true at all	Partly true/Very true
Do not like school	53.25	1.17	16	Child	Not true at all	Partly true/Very true
Thinks full time education only puts off unemployment	56.55	2.83	16	Child	Not true at all	Partly true/Very true
"Negative school values" Score					Generated if one value is non-missing, standardized	

Note. Percentages missing both calculated as % of those who participated at age 42 when sexual identity and educational attainment are measured.

^a Information is retrieved from a previous filter question. We created this category adding respondents who replied that they would not continuing further education to the question: "What will you doing from September 1986?".

^b Did child fall out with peers, feel lonely at school and think pupils say nasty things about them (Yes/No)

Table A1c: Descriptive statistics of sexual identity (Next Steps) collected at ages 19,20, 25 and 32 (last non-missing identity).

	<i>Men</i>		<i>Women</i>	
	<i>Frequency</i>	<i>%</i>	<i>Frequency</i>	<i>%</i>
Heterosexual	4937	87.9	5109	85.1
Gay/Lesbian	158	2.8	104	1.7
Bisexual	100	1.8	262	4.4
Total (valid cases)	5195	92.5	5475	91.2
Missing cases	420	7.5	526	8.8
Total cases	5615	100	6001	100

Table A1d: Information on all variables used in the analysis, including percentages of missing cases (Next Steps).

	<i>% No interview (module)</i>	<i>% No Valid Response</i>	<i>Age</i>	<i>Reported by</i>	<i>Values coded 0</i>	<i>Values coded 1</i>
Hold university degree	0.0	0.0	32	Child/Derived	No	Yes
Service Class Parent Next Steps	13.5	0.5	16	Parent/Derived	All others with parent info	Managerial or professional occupation mother or father
Victim of bullying (scale)	13.5	3.1	16	Child	Scale based on 3 questions ^a	
How mainly spend free time	9.8	0.5	15	Child	With friends (out/their home)	With family / alone
Child gets on with others at school	3.0	0.7	14	Parent	Very satisfied	Fairly satisfied / Not satisfied
Social isolation Score					Generated if one value is non-missing, standardized	
Caused trouble in class	1.8	0.3	14	Child	Not been a problem at all	Now and then or more often
Participated in fight at school	9.8	1.1	15	Child	No	Yes
Teachers are likely to blame me if there is trouble compared to others	10.7	5.4	16	Child	Less likely / No difference	More likely
Trouble at school Score					Generated if one value is non-missing, standardized	
Fights with mother	4.9	1.1	14	Child	Hardly ever / Not at all / mother not present ^b	Less than weekly /More often
Fights with father	5.7	1.0	14	Child	Hardly ever / Not at all / father not present ^b	Less than weekly /More often
Not get on very well with mother	6.0	1.0	14	Child	Very well / not present ^b	Fairly well / badly
Not get on very well with father	4.6	1.1	14	Child	Very well / not present ^b	Fairly well / badly

	<i>% No interview (module)</i>	<i>% No Valid Response</i>	<i>Age</i>	<i>Reported by</i>	<i>Values coded 0</i>	<i>Values coded 1</i>
Family tensions Score					Generated if one value is non-missing, standardized	
School is waste time	13.5	1.4	16	Child	Strongly Disagree	Disagree / Agree
Overall, I like being at school	13.5	1.4	16	Child	Agree / Disagree	Strongly Agree
Doing well in school will help me later	10.7	2.2	15	Child	Strongly Agree	Agree / Disagree / Strongly
Negative school values Score					Generated if one value is non-missing, standardized	

Note. Percentages missing both calculated as % of those who participated at age 32 when sexual identity and educational attainment are measured.

^a Did child experience threats of violence, exclusion from activities by peers, and name-calling (Yes/No) ^b Results similar if “not present” excluded.

Appendix A2. Predicted values on items and composite scores comparing sexual identities to heterosexual women (BCS70 & Next Steps)

Table A2a: Predicted values of parental SES across identities and cohorts

	Hetero Women	Hetero Men	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
Service Class Parent	.42	.43	.27*	.34	.40	.46
1990 cohort						
Service Class Parent	.44	.45	.44	.47	.55*	.52*

Statistical significance of difference with heterosexual women: ** p<0.01; * p<0.05; † p<0.10.

Predicted values taken from OLS regressions or Logistic Regressions (in the case of dichotomous variables) without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

Table A2b: Predicted values on variables capturing social relationships across sexual identities and cohorts

	Hetero Women	Hetero Men	Lesbian Women	Gay Men	Bisexual Women	Bisexual Men
1970 cohort						
<i>“Social Isolation” Score</i>	0.01	-0.03	0.24*	0.38**	0.26	0.18
Victim of bullying (scale)	-0.02	-0.01	0.16	0.49**	0.74**	0.61*
Mostly stay at home during free time	0.68	0.60**	0.75	0.72	0.86	0.80
Feel sad cause nobody to talk to at school	.12	.12	.27**	.32**	.05	.00
<i>“Trouble at school” Score</i>	-0.11	0.12**	-0.10	-0.11	0.05	0.22†
Caused trouble in class	.38	.51**	.38	.23*	.44	.62
Participated in a fight	.41	.57**	.37	.49	.44	.42
Gets picked on by teacher	.11	.15**	.14	.15	.20	.28

(Continue from previous page - Table A2b)

	Hetero Women	Hetero Men	Lesbian Women	Gay Men	Bisexual Women	Bisexual Men
1970 cohort						
<i>“Tension with parents” Score</i>	-0.02	0.01†	-0.06	-0.01	0.14	0.25
Feel unhappy living with parents	.18	.16*	.14	.18	.27	.32
Parents don’t like to hear my ideas	.28	.37**	.26	.36	.33	.50†
Parents don’t leave me freedom	.17	.17	.23	.17	.24	.24
Parents are not overprotective	.22	.21	.21	.21	.28	.29
I cannot talk with parents	.41	.50**	.44	.53†	.45	.62
Parents treat me as a child	.10	.09	.08	.09	.13	.14
Parents do not understand me	.19	.19	.16	.19	.29	.30
Parents are not caring to me	.23	.31**	.16	.18	.28	.38
Parents are strict to me	.22	.15**	.17	.14	.29	.24
1990 cohort						
<i>“Social Isolation” Score</i>	0.03	-.04**	0.12	0.27**	0.25**	0.36**
Victim of bullying (scale)	0.01	-0.07**	0.07	0.24**	0.44**	0.36**
Mostly stay at home during free time	.31	.26**	.32	.42**	.31	.42*
Does not get on very well with others at school	.34	.33	.37	.42*	.41*	.46*
<i>“Trouble at school” Score</i>	-.17	.12**	-.02*	-.23	-.09*	.04**
Caused trouble in class	.58	.75**	.65	.59	.58	.71*
Participated in a fight	.09	.19**	.13†	.06	.14**	.14†
Gets blamed by teacher	.11	.18**	.17†	.06†	.15*	.18†
<i>“Tension with parents” Score</i>	0.06	-0.05**	0.14	0.06	0.24**	0.06
Fights with mother	.24	.17**	.27	.21	.26	.22
Fights with father	.13	.11*	.16	.17	.21**	.17
Does not get on very well with mother	.35	.28**	.36	.27*	.42**	.32
Does not get on very well with father	.30	.27**	.36	.35	.40**	.30

Statistical significance of difference with heterosexual women: ** p<0.01; * p<0.05; † p<0.10. Predicted values taken from OLS regressions or Logistic Regressions (in the case of dichotomous variables) without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS. The item *“Feel sad because there is nobody to talk to at school”* was analysed using a different subsample (N = 9,009) for the 1970 cohort, as no bisexual men in the original sample responded “yes” to this item. Consequently, they were excluded from the analysis.

Table A2c: Predicted values on variables capturing educational values across sexual identities and cohorts

	Hetero Women	Hetero Men	Lesbian Women	Gay Men	Bisexual Women	Bisexual Men
1970 cohort						
<i>“Negative School Values” Score</i>	-0.03	0.04**	-0.14	-0.15	-0.15	0.04
School is a waste of time	.32	.34	.31	.25	.29	.32
Do not like school	.59	.63**	.50	.51	.52	.66
Education only puts off unemployment	.35	.38*	.28	.32	.27	.26
1990 cohort						
<i>“Negative School Values” Score</i>	-0.03	0.03**	0.01*	-0.15	0.00	-0.02
School is a waste of time	.39	.42**	.40	.30*	.40	.40
Do not like school	.70	.75**	.75	.71	.72	.72
Doing well in school does not help future	.41	.46**	.40	.39	.43	.41

Statistical significance of difference with heterosexual women: ** p<0.01; * p<0.05; † p<0.10. Predicted values taken from OLS regressions or Logistic Regressions (in the case of dichotomous variables) without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

Table A2d: Predicted values on educational attainment across identities and cohorts

	Hetero Women	Hetero Men	Lesbian Women	Gay Men	Bisexual Women	Bisexual Men
1970 cohort						
Hold a tertiary degree	.42	.40*	.54†	.55*	.45	.40
1990 cohort						
Hold a tertiary degree	.48	.42**	.50	.53	.48	.51

Statistical significance of difference with heterosexual women: ** p<0.01; * p<0.05; † p<0.10. Predicted values taken from Logistic Regressions without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

Appendix A3. Multivariate linear probability models explaining university attainment using scores aligned to mechanisms proposed in previous literature (BCS70 and Next Steps)

Table A3a: Linear Probability Models explaining attainment of university education by age 42 of 1970 cohort (BCS70).

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Sexual identity (ref: Heterosexual men)												
Heterosexual women	0.02*	(0.01)	0.03*	(0.01)	0.02*	(0.01)	0.01	(0.01)	0.02	(0.01)	0.02*	(0.01)
Gay men	0.15**	(0.05)	0.18**	(0.05)	0.18**	(0.05)	0.17**	(0.05)	0.15**	(0.05)	0.18**	(0.05)
Lesbian women	0.14*	(0.06)	0.16**	(0.06)	0.15*	(0.06)	0.14*	(0.06)	0.13*	(0.06)	0.16*	(0.06)
Bisexual men	0.00	(0.09)	0.01	(0.09)	0.00	(0.09)	0.01	(0.09)	-0.01	(0.09)	0.01	(0.09)
Bisexual women	0.05	(0.07)	0.04	(0.07)	0.03	(0.07)	0.04	(0.07)	0.01	(0.07)	0.05	(0.07)
SES at 16 y/o (ref: None of parents I or II)												
At least one parent Higher managerial			0.23**	(0.02)	0.23**	(0.02)	0.23**	(0.02)	0.19**	(0.02)	0.23**	(0.02)
Social integration score (sd)												
					0.00	(0.04)						
Trouble at school score (sd)												
							-0.07**	(0.01)				
Negative school values score (sd)												
									-0.15**	(0.01)		
Family tensions Score (sd)												
											-0.04**	(0.01)
Constant	0.40**	(0.01)	0.30**	(0.01)	0.30**	(0.01)	0.31**	(0.01)	0.32**	(0.01)	0.30**	(0.01)
Observations	9,039		9,039		9,039		9,039		9,039		9,039	

Statistical significance of difference with heterosexual men: ** p<.01; * p<.05; † p<.10; based on 10 imputations for missing data, except for information on sexual identity/gender group.

Table A3b: Linear Probability Models explaining attainment of tertiary education by age 32 of the 1990 cohort (Next Steps).

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Sexual identity (ref: Heterosexual men)												
Heterosexual women	0.06**	(0.01)	0.06**	(0.01)	0.06**	(0.01)	0.03*	(0.01)	0.06**	(0.01)	0.07**	(0.01)
Gay men	0.11**	(0.04)	0.12**	(0.04)	0.12**	(0.04)	0.07†	(0.04)	0.09*	(0.04)	0.12**	(0.04)
Lesbian women	0.08	(0.05)	0.08	(0.05)	0.08	(0.05)	0.06	(0.05)	0.07	(0.05)	0.08	(0.05)
Bisexual men	0.09	(0.05)	0.07	(0.05)	0.07	(0.05)	0.06	(0.05)	0.06	(0.05)	0.07	(0.05)
Bisexual women	0.06†	(0.03)	0.04	(0.03)	0.05	(0.03)	0.02	(0.03)	0.04	(0.03)	0.05	(0.03)
SES at 16 y/o (ref: None of parents I or II)												
At least one parent Higher managerial			0.24**	(0.01)	0.24**	(0.01)	0.23**	(0.01)	0.23**	(0.01)	0.24**	(0.01)
Social integration score (sd)					-0.02**	(0.01)						
Trouble at school score (sd)							-0.13**	(0.01)				
Negative school values score (sd)									-	(0.01)		
									0.14**			
Family tensions Score (sd)											-0.02*	(0.01)
Constant	0.42**	(0.01)	0.31**	(0.01)	0.31**	(0.01)	0.33**	(0.01)	0.32**	(0.01)	0.31**	(0.01)
Observations	11,423		11,423		11,423		11,423		11,423		11,423	

Statistical significance of difference with heterosexual men: ** p<.01; * p<.05; † p<.10; based on 10 imputations for missing data, except for information on sexual identity/gender group.

Appendix A4. Multivariate linear probability models explaining university attainment using scores aligned to mechanisms proposed in previous literature run on subsamples (BCS70 and Next Steps)

Table A4a: Linear Probability Models explaining attainment of a tertiary degree by age 42 of the 1970 cohort. BCS70 data, only heterosexual.

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Sexual identity (ref: Heterosexual men)												
Heterosexual women	0.02*	(0.01)	0.03*	(0.01)	0.02*	(0.01)	0.01	(0.01)	0.02	(0.01)	0.02*	(0.01)
SES at 16 y/o (ref: None of parents I or II)												
At least one parent Higher managerial			0.23**	(0.02)	0.23**	(0.02)	0.23**	(0.02)	0.19**	(0.02)	0.23**	(0.02)
Social integration score (sd)					0.00	(0.04)						
Trouble at school score (sd)							-0.07**	(0.01)				
Negative school values score (sd)									-0.15**	(0.01)		
Family tensions Score (sd)											-0.03*	(0.01)
Constant	0.40**	(0.01)	0.30**	(0.01)	0.30**	(0.01)	0.31**	(0.01)	0.32**	(0.01)	0.30**	(0.01)
Observations	8,793		8,793		8,793		8,793		8,793		8,793	

Statistical significance of difference with heterosexual men: ** p<.01; * p<.05; † p<.10; based on 10 imputations for missing data, except for information on sexual identity/gender group.

Table A4b: Linear Probability Models explaining attainment of a tertiary degree by age 42 of the 1970 cohort. BCS70 data, only LGB.

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Sexual identity (ref: Gay men)												
Lesbian women	-0.01	(0.08)	-0.01	(0.08)	-0.02	(0.08)	-0.01	(0.08)	-0.00	(0.08)	-0.02	(0.08)
Bisexual men	-0.15	(0.10)	-0.17	(0.10)	-0.18+	(0.11)	-0.14	(0.11)	-0.12	(0.10)	-0.15	(0.11)
Bisexual women	-0.11	(0.09)	-0.14	(0.09)	-0.15	(0.09)	-0.12	(0.09)	-0.13	(0.09)	-0.13	(0.09)
SES at 16 y/o (ref: None of parents I or II)												
At least one parent Higher managerial			0.14	(0.09)	0.15	(0.09)	0.14	(0.09)	0.09	(0.09)	0.14	(0.09)
Social integration score (sd)					-0.05	(0.08)						
Trouble at school score (sd)							-0.07	(0.07)				
Negative school values score (sd)									-0.19**	(0.06)		
Family tensions Score (sd)											-0.09	(0.08)
Constant	0.55**	(0.05)	0.51**	(0.05)	0.53**	(0.06)	0.49**	(0.05)	0.48**	(0.05)	0.51**	(0.05)
Observations	246		246		246		246		246		246	

Statistical significance of difference with heterosexual men: ** p<.01; * p<.05; † p<.10; based on 10 imputations for missing data, except for information on sexual identity/gender group.

Table A4c: Linear Probability Models explaining attainment of a tertiary degree by age 32 of the 1990 cohort. Next Steps data, only heterosexual.

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Sexual identity (ref: Heterosexual men)												
Heterosexual women	0.06**	(0.01)	0.06**	(0.01)	0.06**	(0.01)	0.03*	(0.01)	0.06**	(0.01)	0.07**	(0.01)
SES at 16 y/o (ref: None of parents I or II)												
At least one parent Higher managerial			0.24**	(0.01)	0.24**	(0.01)	0.23**	(0.01)	0.23**	(0.01)	0.24**	(0.01)
Social integration score (sd)					-0.02†	(0.01)						
Trouble at school score (sd)							-0.12**	(0.01)				
Negative school values score (sd)									-0.14**	(0.01)		
Family tensions Score (sd)											-0.02*	(0.01)
Constant	0.42**	(0.01)	0.31**	(0.01)	0.31**	(0.01)	0.33**	(0.01)	0.32**	(0.01)	0.31**	(0.01)
Observations	10,750		10,750		10,750		10,750		10,750		10,750	

Statistical significance of difference with heterosexual men: ** p<.01; * p<.05; † p<.10; based on 10 imputations for missing data, except for information on sexual identity/gender group.

Table A4d: Linear Probability Models explaining ever attending university by age 25 of the 1990 cohort. Next Steps data, only LGB.

	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
Sexual identity (ref: Gay men)												
Lesbian women	-0.03	(0.06)	-0.04	(0.06)	-0.05	(0.06)	-0.00	(0.06)	-0.02	(0.06)	-0.04	(0.06)
Bisexual men	-0.02	(0.07)	-0.06	(0.06)	-0.05	(0.07)	-0.01	(0.06)	-0.04	(0.06)	-0.06	(0.06)
Bisexual women	-0.06	(0.05)	-0.08	(0.05)	-0.08	(0.05)	-0.05	(0.05)	-0.06	(0.05)	-0.07	(0.05)
SES at 16 y/o (ref: None of parents I or II)												
At least one parent Higher managerial			0.28**	(0.04)	0.27**	(0.04)	0.24**	(0.04)	0.26**	(0.04)	0.28**	(0.04)
Social integration score (sd)					-	0.03						
					0.07**							
Trouble at school score (sd)							-0.18**	(0.03)				
Negative school values score (sd)									-0.11**	(0.03)		
Family tensions Score (sd)											-0.03	(0.03)
Constant	0.53**	(0.04)	0.41**	(0.04)	0.43**	(0.04)	0.38**	(0.04)	0.40**	(0.04)	0.41**	(0.04)
Observations	673		673		673		673		673		673	

Statistical significance of difference with heterosexual men: ** p<.01; * p<.05; † p<.10; based on 10 imputations for missing data, except for information on sexual identity/gender group.

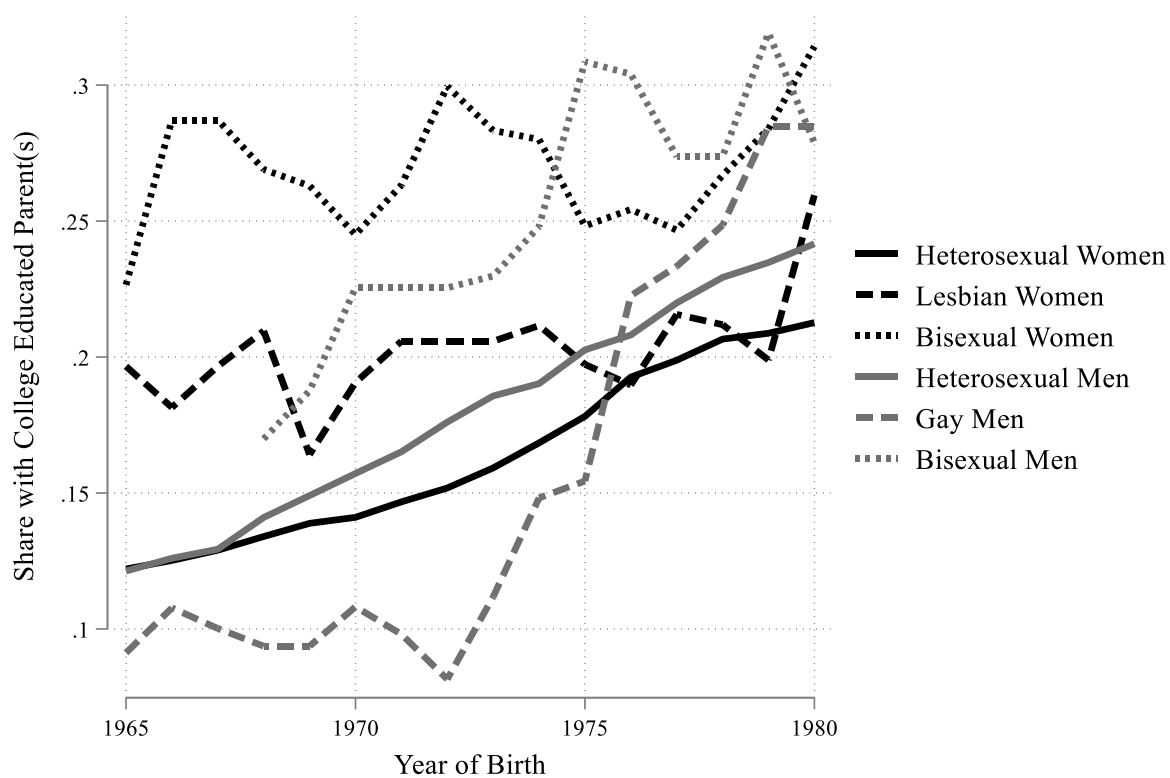
Appendix A5. Robustness checks of the results on Educational Attainment and Selection on Social Origin by sexual identity and birth cohort using UKHLS.

Table A5. Linear Probability Models Explaining Attainment of College Education (UKHLS).

	Own College Attainment								Parent College Educated			
	Men				Women				Men		Women	
	Model 1		Model 2		Model 3		Model 4		Model 5		Model 6	
	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE	Coef.	SE
<i>Identity (Ref. Hetero)</i>												
Gay/Lesbian	.143**	.035	.117**	.04	.101*	.041	.174**	.050	-.039*	.019	.069†	.04
Bisexual	.135**	.050	.156**	.05	.069	.046	.088†	.053	.062	.042	.081†	.04
Birth year	.005**	.000	.005**	.000	.007**	.000	.007**	.000	.004**	.000	.004**	.000
Birth year*Gay/Lesbian			.005	.003			-.011*	.004	.001	.001	-.000	.004
Birth year*Bisexual			-.006	.004			-.002	.003	.005	.004	.001	.003
Constant	.306**	.007	.305**	.007	.323**	.006	.323**	.006	.097**	.005	.096**	.004
Observations	13,265		13,265		15,986		15,986		10,378		13,312	

Note. Birth year centered at sample average of 1958. Individuals born before 1981 and aged 30 or more. Controls included for wave. Own education is a dummy of having college education or not. Parental education is a dummy of having at least one college educated parent. Coef. = OLS coefficient; SE = Standard Error. ** = $p < 0.001$; * = $p < 0.05$; † = $p < 0.10$.

Figure A1: Parental education by cohort and sexual identity (UKHLS)



Note. UKHLS data, persons aged 30 or more at the time of survey. Share is calculated as a “moving average” taking the share of a birth cohort defined as the year of reference $\pm$ 5 years.

Appendix A6. Predicted values on items and composite scores comparing sexual identities to heterosexual men. Imputed samples excluding educational attainment from imputation (BCS70 & Next Steps)

Table A6a: Predicted values of parental SES across identities and cohorts

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
Service Class Parent	0.45	0.43	0.30*	0.32	0.38	0.47
1990 cohort						
Service Class Parent	0.45	0.45	0.42	0.47	0.54 †	0.51 †

Statistical significance of difference with heterosexual men: ** p<0.01; * p<0.05; † p<0.10.

Predicted values taken from Logistic Regressions without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

Table A5b: Predicted values on variables capturing social relationships across sexual identities and cohorts

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
“Social Isolation” Score	-0.03	0.01	0.38**	0.20	0.16	0.24
Victim of bullying (scale)	-0.01	-0.02	0.43*	0.12	0.55	0.62
Mostly stay at home during free time	0.61	0.69**	0.75*	0.76*	0.78	0.85*
Feel sad cause nobody to talk to at school	0.11	0.12	0.29**	0.22*	0.00	0.04
“Trouble at school” Score	0.12	-0.11**	-0.12**	-0.08†	0.29	0.01
Caused trouble in class	0.50	0.38**	0.25**	0.40	0.62	0.41
Participated in a fight	0.57	0.41**	0.46†	0.38**	0.44	0.43
Gets picked on by teacher	0.14	0.11**	0.15	0.14	0.32*	0.18
“Tension with parents” Score	0.01	-0.02†	-0.04	-0.07	0.24†	0.12
Feel unhappy living with parents	0.15	0.18**	0.15	0.12	0.30†	0.27
Parents don’t like to hear my ideas	0.36	0.27**	0.33	0.26	0.52	0.34
Parents don’t leave me freedom	0.16	0.17	0.16	0.24	0.30	0.24
Parents are not overprotective	0.21	0.22	0.21	0.20	0.26	0.27
I cannot talk with parents	0.51	0.41**	0.52	0.45	0.61	0.44
Parents treat me as a child	0.10	0.10	0.09	0.06	0.13	0.09
Parents do not understand me	0.20	0.19	0.22	0.17	0.30	0.31
Parents are not caring to me	0.31	0.23**	0.15**	0.15*	0.36	0.28
Parents are strict to me	0.15	0.22**	0.12	0.17	0.22	0.26

(Continue from previous page - Table A6b)

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1990 cohort						
“Social Isolation” Score	-0.04	0.03**	0.28**	0.11	0.36**	0.24**
Victim of bullying (scale)	-0.07	0.01**	0.24**	0.07*	0.36**	0.44**
Mostly stay at home during free time	0.26	0.31**	0.43**	0.31	0.42**	0.31†
Does not get on very well with others at school	0.33	0.34	0.43*	0.37	0.46**	0.40*
“Trouble at school” Score	0.12	-0.17**	-0.22**	-0.02*	0.03	-0.09**
Caused trouble in class	0.75	0.58**	0.59**	0.65*	0.71	0.58**
Participated in a fight	0.19	0.09**	0.07**	0.13	0.13	0.13*
Gets blamed by teacher	0.18	0.11**	0.06**	0.17	0.17	0.15
“Tension with parents” Score	-0.05	0.06**	0.06†	0.14**	0.07	0.24**
Fights with mother	0.17	0.24**	0.20	0.28**	0.23	0.26**
Fights with father	0.11	0.13*	0.17*	0.16	0.17†	0.22**
Does not get on very well with mother	0.28	0.35**	0.27	0.36†	0.32	0.42**
Does not get on very well with father	0.27	0.30**	0.36*	0.35†	0.30	0.40**

Statistical significance of difference with heterosexual men: ** p<0.01; * p<0.05; † p<0.10.

Predicted values taken from OLS regressions or Logistic Regressions (in the case of dichotomous variables) without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

The item “*Feel sad because there is nobody to talk to at school*” in the 1970 cohort was analyzed using a different subsample (N = 9,004) for the 1970 cohort, as no bisexual men in the original sample responded “Yes” to this item. Consequently, they were excluded from the analysis.

Table A6c: Predicted values on variables capturing educational values across sexual identities and cohorts

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
“Negative School Values” Score	0.03	-0.02**	-0.19*	-0.17†	-0.01	-0.15
School is a waste of time	0.33	0.31	0.22†	0.26	0.29	0.25
Do not like school	0.61	0.58**	0.47*	0.50†	0.71	0.55
Education only puts off unemployment	0.36	0.34	0.29	0.27	0.26	0.23
1990 cohort						
“Negative School Values” Score	0.03	-0.03**	-0.15**	0.03	-0.04	0.00
School is a waste of time	0.42	0.39**	0.31**	0.41	0.39	0.39
Do not like school	0.75	0.70**	0.71	0.76	0.71	0.71
Doing well in school does not help future	0.46	0.41**	0.40	0.40	0.41	0.43

Statistical significance of difference with heterosexual men: ** p<0.01; * p<0.05; † p<0.10.

Predicted values taken from OLS regressions or Logistic Regressions (in the case of dichotomous variables) without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 9039 for BCS.

Table A6d: Predicted values on educational attainment across identities and cohorts

	Hetero Men	Hetero Women	Gay Men	Lesbian Women	Bisexual Men	Bisexual Women
1970 cohort						
Hold a tertiary degree	.40	.42*	.55**	.54*	.40	.45
1990 cohort						
Hold a tertiary degree	.46	.50**	.54†	.53	.51	.55

Statistical significance of difference with heterosexual men: ** $p < 0.01$; * $p < 0.05$; † $p < 0.10$.

Predicted values taken from Logistic Regressions without controls based on 10 imputations for missing data, except for information on sexual identity/gender group. N = 11,423 for Next Steps; 6967 for BCS.

CHAPTER 6.

PARTNERSHIP DISPARITIES BETWEEN UK LGB AND HETEROSEXUAL ADULTS: CHANCES AND EDUCATIONAL GRADIENTS¹

ABSTRACT

Partnership formation and progression, an important axis of social stratification in the general population, remains comparatively under-researched in LGBTQ+ studies, particularly in Europe. The role of education in shaping partnership trajectories among LGB people is also poorly understood, despite their generally higher educational attainment compared to heterosexual people.

Using data from the UK Household Longitudinal Study, this paper examines differences in partnership status and the timing of first coresidential union formation between LGB and heterosexual individuals across birth cohorts, and how education shapes these outcomes. The analytical approach combines Coarsened Exact Matching with multinomial and Poisson regression models with individual clustered standard errors, alongside Kaplan-Meier analysis.

Findings reveal a consistent pattern: LGB individuals, particularly gay men, are significantly less likely than their heterosexual peers to transition into a first coresidential partnership or to be partnered at any given time. Lower partnership rates among LGB people may reflect structural constraints, while fewer transitions into coresidential unions may point to less heteronormative life-course trajectories. Analyses of educational gradients show that medium-educated bisexual women and highly educated lesbian women are less likely to be partnered than lower counterparts, while low-educated gay men are more likely than highly educated gay men. Overall, no consistent educational gradient emerges in transitions to first coresidential partnership for LGB individuals.

¹ This chapter is a single-authored paper. It has been presented at the following conferences: *RC28 Spring Meeting 2025* (Milan), *PopDays - Giornate di Studio sulla Popolazione 2025* (Cagliari), *ISA conference 2025* (Rabat), *BSPS conference 2025* (Swansea), and is currently submitted to a journal.

6.1 INTRODUCTION

Research has repeatedly found that Lesbian, Gay, and Bisexual (LGB) people face considerable health disparities (Liu & Reczek, 2021), earning penalties (Denier & Waite, 2019; Drydakis, 2022), and higher risk of poverty (Uhrig, 2015). However, the partnership domain - that is a critical dimension of adults' lives - remains less explored, particularly in Europe (Bohr & Lengerer, 2024; Ophir et al., 2023). Existing evidence suggests that LGB adults are less likely than heterosexuals to have a partner (Bohr & Lengerer, 2024; Carpenter & Gates, 2008; Waite, 2021) and face higher risks of divorce (Andersson et al., 2006; Einiö & Ponkilainen, 2025; Kolk & Andersson, 2020). Single LGB adults also report higher levels of internalized stigma than their partnered peers (Laming et al., 2021), highlighting how relationship status can compound minority stress.

Although unexplored among LGB people, partnership is widely recognized as an important axis of social stratification and wellbeing in the general population. Marriage and cohabitation have long been associated with economic and health advantages, including greater wealth accumulation (Vespa & Painter, 2011) and income premiums (Light, 2004), while singlehood is linked to poorer economic outcomes and lower wellbeing (Braithwaite & Holt-Lunstad, 2017; Quintano & D'Agostino, 2006; Stern et al., 2024), especially in later life (Carr et al., 2024; Hill et al., 2009). These patterns suggest that disparities in LGB partnership may carry meaningful economic, social, and psychological consequences. Nevertheless, little is known about LGB partnerships and the mechanisms driving disparities among LGB people, particularly in Europe, and how broader stratification factors, such as education, shape these outcomes.

Addressing these gaps, this article investigates partnership rates and how educational attainment shapes partnership dynamics differently among LGB and heterosexual individuals in the UK. The paper aims to answer two different questions: to what extent does union formation and timing differ between LGB and heterosexual individuals in the UK? And how are these differences shaped by educational attainment, also across cohorts? Specifically, it examines whether sexual identity is associated with the likelihood and timing of entering a first coresidential partnership, and how education moderates these relationships across cohorts.

To answer these questions, the study relies on matching techniques and stratified samples, which allow comparisons not only between LGB and heterosexual individuals but also

between highly educated and less educated LGB adults, while mitigating bias arising from differential selection into partnership and variation in educational composition.

This study makes three key contributions to the literature: (1) providing some of the first evidence on partnerships among LGB individuals in the UK (Ophir et al., 2023; Ophir & Boertien, 2024), (2) it examines how education influences union formation and transition to first coresidential union among LGB individuals vs heterosexuals; and (3) it offers a first step toward understanding how sexual identity intersects with social stratification factors to shape broader life-course and adult outcomes.

6.2 LGB PARTNERSHIP: PERSISTENT INEQUALITIES?

While research on LGB populations has expanded over the past two decades (Badgett et al., 2021), studies that focus specifically on partnership patterns among LGB individuals remain relatively scarce. Much of the existing literature relies on identifying LGB people through their marital status, using same-sex cohabiting or married couples as a proxy for sexual identity (Kolk & Andersson, 2020; Reczek, 2020). Although this approach has enabled valuable insights, it limits analyses of social stratification and relationship trajectories by excluding bisexual individuals and non-cohabiting partnerships.

Despite these limitations, existing evidence reveals two consistent patterns: (1) LGB individuals are less likely to be in partnerships compared to their heterosexual counterparts (Bohr & Lengerer, 2024; Waite, 2021), and (2) same-sex partnerships are more likely to dissolve, particularly among female couples (Andersson et al., 2006; Einiö & Ponkilainen, 2025). These trends persist despite broader rises in cohabitation across all sexual orientations (Goetschy, 2025; Westrick-Payne & Manning, 2025), and despite studies reporting a comparable or higher relationship satisfaction among same-sex couples (Manning et al., 2016; Perales & Baxter, 2018).

Such patterns underscore persistent inequalities in intimate life for LGB people. While the underlying causes of these disparities have not been directly examined, theoretical elaborations attributes these to minority stress, social stigma, and structural discrimination (Rostosky et al., 2016). Stress experienced by one partner can compound within the couple, contributing to instability (Song et al., 2024; Whitton et al., 2024), while broader social stigma impacts both relationship stability (Ruiz-Vallejo & Boertien, 2021), and individuals' well-being (Boertien & Vignoli, 2019).

Even though understudied, these disparities could have meaningful consequences. Romantic partnerships (or their absence) affect current and later-life economic security (Carr et al.,

2024; Vespa, 2012), but also social support, well-being and mental health (Braithwaite & Holt-Lunstad, 2017; Nowak & Liu, 2025). For LGB people in particular, partnerships may serve as a buffer against the negative effects of family rejection (Laming et al., 2021) and are associated with better health and mental health (Du Bois et al., 2019).

While the consequences of partnership disparities are clear, less is known about the mechanisms underlying these differences. The following section explores why LGB partnership patterns diverge from those of heterosexuals, focusing on the social and structural factors at play.

6.2.1 STRUCTURAL AND SOCIAL CONSTRAINTS ON LGB RELATIONSHIP FORMATION

The decision to enter a committed relationship, particularly to cohabit or marry, is shaped not only by individual characteristics but also by the broader social context and life-course stage (Cortina & Festy, 2020). As such, the chances, partnership formation and stability among LGB individuals may reflect a complex interplay of social, economic, and legal factors (Boertien & Vignoli, 2019; Kolk & Andersson, 2020). Same-sex couples face distinct constraints that reflect not only internal heterogeneity (Andersson et al., 2006; Cortina, 2016; Kolk & Andersson, 2020), but of *fundamentally diverse* life-course experiences (Patterson, 2013). Three key dimensions likely shapes union formation for LGB individuals.

First, structural limitations reduce the pool of potential partners. Although LGBTQIA* identification is increasing in younger generations (England et al., 2016; Twenge et al., 2024), the dating market remains smaller. Digital platforms partially offset these limitations, providing access to information, supportive communities, role models, and facilitating coming out experiences (Hillier et al., 2012), expanding also opportunities for meeting partners (Johnson et al., 2017). However, online relationships can provide emotional intimacy and support even in the absence of physical proximity, allowing more non-linear and non-traditional relational trajectories (Licoppe et al., 2016).

Second, stigma and social barriers shape partnership timing and formalization. LGB individuals experience early discrimination and social exclusion (Mcbrien & Rutigliano, 2022; Mittleman, 2019), which can delay self-disclosure and entry into romantic relationships (Doan & Mize, 2020; Saewyc, 2011). Even when out, some avoid formalizing partnerships, particularly marriage, to limit visibility (Digoix, 2020; Rostosky et al., 2016). Younger cohorts, however, tend to come out earlier (Baams et al., 2025; Dunlap, 2016) and transition faster to partnership (Bohr & Lengerer, 2024) suggesting that the impact of stigma on partnership timing may be diminishing.

Third, varying levels of legal recognition, community support, and familial acceptance create unequal opportunities for cohabitation and marriage across sexual orientations. While recognition and legal protection of same-sex relationships have expanded steadily in Western countries over the past decades (Waldijk, 2020) and tolerance is growing even where such rights are absent (Abou-Chadi & Finnigan, 2019; Wilson, 2020), not everyone benefits equally. Many continue to rely on alternative strategies to navigate a context of limited institutional support (Digoix et al., 2016; Monaco & Nothdurfter, 2022). In this context, family rejection has a profoundly negative impact on well-being (Carastathis et al., 2017), whereas supportive relationships can buffer hostile environments and help individuals cope with everyday discrimination (Goldberg & Gartrell, 2014; Kwon, 2013).

Finally, it remains unclear to what extent LGB individuals wish to sustain traditional forms of partnership (Hammack et al., 2019). Cohabitation and marriage reflect conventional models of intimacy that do not necessarily capture the diversity of queer relational practices, such as Living Apart Together (LAT), open or polyamorous relationships or chosen families and other non-traditional forms of connection (Diamond et al., 1999; Hammack et al., 2019). For many, intimacy and friendship are fluid categories, and though dating apps they seek both romantic and platonic bonds (Byron et al., 2021). Moreover, some LGB individuals reject marriage as a heteronormative institution, even in contexts where legal recognition is available (Rostosky et al., 2016).

6.3 EDUCATIONAL GRADIENTS IN PARTNERSHIPS

Among heterosexual populations, the relationship between education and partnership formation has been extensively studied, especially since women's rapid expansion in higher education and labour force participation (Van Bavel et al., 2018). Early theories proposed a negative relationship between women's education and marriage, arguing that highly educated women would be less willing to marry, prioritizing autonomy and career advancements (Lesthaeghe, 2014; Perelli-Harris & Lyons-Amos, 2016). More recent research, however, has emphasized that higher education increase be attractive for women foster marriage stability and protect against divorce (Boertien & Härkönen, 2018; Kalmijn, 2013; McErlean, 2021). Although highly educated women may postpone marriage, their stronger economic resources enable them to negotiate more egalitarian partnerships, which in turn contributes to greater relationship stability (Boertien & Härkönen, 2018).

Evidence on educational gradients in cohabitation and singlehood is more mixed. Across Europe, women with lower levels of education are significantly less likely to ever cohabit

compared to those with higher qualifications (Sturm & Van Bavel, 2024) and in Germany, this pattern applies to both men and women (Hudde & Engelhardt, 2023). However Kalmijn (2013) reports no educational differences in women's cohabitation, even after accounting for gender egalitarianism. Differently, positive educational gradients in singlehood tend to be stronger among women, but smaller in contexts with higher female labour force participation (Van Den Berg, 2023).

It is unclear whether these educational gradients extend to LGB populations. Given that existing research consistently shows that same-sex couples, and LGB individuals more broadly, have higher levels of education than their heterosexual counterparts (Andersson et al., 2006; Mittleman, 2022; Mollborn & Everett, 2015), understanding the role of education in shaping LGB partnership formation and dynamics is critical.

6.3.1 THE POTENTIAL ROLE OF EDUCATION IN SHAPING LGB PARTNERSHIPS

Some studies suggest that higher education may increase the likelihood of being partnered among LGB people (Bohr & Lengerer, 2024; Carpenter & Gates, 2008). This effect may operate through three main mechanisms: economic resources, geographic mobility, and identity affirmation.

First, education enhances economic security, lowering barriers to cohabitation and marriage (Ishizuka, 2018). For heterosexual couples, the so-called “income effect” applies across genders, as higher education can also increase women's attractiveness in the marriage market (Goldscheider et al., 2015). Similar dynamics may apply to same-sex unions: lesbian women tend to earn more when partnered (Aksoy et al., 2018), and higher earnings are associated with a greater likelihood of formalizing partnerships among gay men (Martell & Nash, 2020). At the same time, the relationship is potentially reciprocal, as partnerships can provide economic support to LGB individuals, particularly in contexts where family ties are weak.

Second, pursuing higher education often involves relocating to urban areas, which exposes LGB individuals to larger queer networks and more affirming social environments (Taulke-Johnson, 2010). These networks not only increase opportunities to meet compatible partners but also provide safer spaces for relationship formation.

Third, higher education fosters self-confidence and identity exploration, encouraging individuals to come out and become more visible to potential partners (Taulke-Johnson, 2010). Similarly, university often marks a period when many LGB individuals come out and

experience their first romantic relationships (Baams et al., 2025; Hall et al., 2021), making higher education a key gateway to partnership opportunities.

Yet, some of the mechanisms described may also operate in the opposite direction, leading to lower rates of partnership formation. By increasing economic independence, expanding social opportunities and fostering identity affirmation, higher education can enable LGB individuals to remain single or pursue non-traditional forms of partnership ((Hammack et al., 2019; Van Den Berg, 2023). This highlights the need to examine how education shapes partnership outcomes among LGB people, emphasizing the diversity of life-course strategies and potential disparities within this population.

6.4 THE CURRENT STUDY AND HYPOTHESES

In the previous sections, we discussed how sexual orientation can hinder partnership formation due to structural constraints, smaller dating pools, and persistent minority stress. At the same time, education may counteract some of these challenges by increasing economic resources, expanding social and geographic opportunities, and fostering identity affirmation. Building on these ideas, we formulate four testable hypotheses regarding union formation among LGB individuals.

Previous research indicates that LGB individuals are less likely than their heterosexual counterparts to form partnerships (Bohr & Lengerer, 2024; Waite, 2021), reflecting both structural constraints and social barriers to same-sex relationship formation. Lesbian and gay individuals, in particular, navigate smaller dating pools than bisexual and heterosexual peers (Wu et al., 2020) and, despite legal progress, continue to face stigma and persistent minority stress (Laming et al., 2021; Nadal et al., 2016). Furthermore, rejection of heteronormativity may lead some LGB individuals to avoid traditional forms of partnership (Hammack et al., 2019). This may be particularly true for transition to first coresidential partnerships as, for many LGB individuals, this transition also entails increased visibility as a couple, both within private networks and in public life (Digoix, 2020). Accordingly, we can hypothesise that:

Hp1: Gay and lesbian individuals are less likely to be in a partnership and to transition to first coresidential partnership compared to their heterosexual counterparts.

Beyond overall differences with heterosexual people, union formation and dynamics may also vary within the LGB community. Past research often grouped lesbian, gay, and bisexual individuals together, potentially obscuring key distinctions (Mize, 2016). Bisexual individuals may access a broader dating pool due to attraction to multiple genders (Wu et al., 2020),

which could facilitate relationship formation. However, they also face distinct challenges, including limited acceptance and stigma related to confusion and promiscuity (Doan & Mize, 2020; Mize & Manago, 2018). These mixed pressures make it difficult to predict bisexual individuals' partnership outcomes, but existing evidence from Germany suggests that bisexual individuals have partnership rates similar to heterosexuals and higher than those of lesbian and gay individuals, although their odds of transitioning to a first partnership may be slightly lower (Bohr & Lengerer, 2024). Accordingly, we hypothesised that:

Hp2: Bisexual individuals are more likely to be in a partnership and to transition to first coresidential partnership compared to gay and lesbian individuals.

In the context of lower overall partnership rates among LGB individuals, higher education may enhance partnership prospects by increasing geographic, social, and economic mobility, as well as fostering identity confidence and providing access to more supportive environments. Accordingly, higher education is expected to partially mitigate the partnership disparities experienced by lesbian and gay individuals. No specific hypothesis is formulated for bisexual individuals, as evidence regarding their educational premium is mixed and, unlike lesbian and gay peers, in previous studies they do not appear to experience lower partnership rates compared to heterosexual people (Bohr & Lengerer, 2024).

Hp3: High-educated gay and lesbian individuals are more likely to be in a partnership and to transition to first partnership compared to their lower-educated counterparts.

Partnership patterns among LGB individuals may also vary by cohort. Over time, greater social acceptance and earlier coming out have likely reduced barriers to partnership for younger cohorts. Consistent with this, Bohr and Lengerer (2024) finds that more recent cohorts have higher odds of entering cohabiting partnerships compared to older cohorts, suggesting that shifts in social climate, rather than education alone, play a key role in shaping partnership outcomes. Relatedly, as the relationship between sexual identity and educational attainment has changed over time (Mittleman, 2022), it is plausible that the association between education and partnership formation among LGB individuals has also evolved.

Hp4: The association between education and partnership formation among LGB individuals is stronger in older cohorts than in younger ones.

6.5 THE UK CONTEXT

The United Kingdom provides a valuable case study for investigating the relationship between education and partnership formation among LGB individuals due to its unique combination of progressive legal frameworks and persistent socioeconomic disparities.

While existing research has documented enduring patterns of social stratification among LGB people in the UK (Aksoy et al., 2018; Boertien et al., 2023; Uhrig, 2015), studies focusing specifically on partnership dynamics (Lau, 2012; Ophir et al., 2023; Ophir & Boertien, 2024) and their intersection with educational outcomes remain limited, particularly in contrast to the extensive literature from Scandinavian countries (Kolk & Andersson, 2020). This gap is particularly relevant in light of major legal milestones in the UK over the past two decades that have reshaped the opportunities and constraints for LGB partnership formation. These include the introduction of civil partnerships (2005), the expansion of adoption rights (2005-2013), and the legalization of same-sex marriage (2014 in England, Wales, and Scotland; 2020 in Northern Ireland) (ILGA Europe, 2024).

By examining how partnership disparities and educational gradients of partnership across sexual identity, this study aims to contribute to broader debates on LGB partnership dynamics in both Europe and the UK.

Table 1: Distribution of Sexual Identity Across Individuals and Observations, with Weighted Percentages After CEM. (UKHLS, 2009-2022)

	Overall		Between		Weighted %
	Frequencies	%	Frequencies	%	
Heterosexual men	78974	41.52	11400	42.24	47.61
Heterosexual women	106149	55.8	14850	55.02	49.69
Gay men	1694	0.89	239	0.89	0.90
Lesbian women	1338	0.7	188	0.7	0.71
Bisexual men	817	0.43	125	0.46	0.43
Bisexual women	1256	0.66	189	0.7	0.66
Total	190228	100	26991	100	100

Note: "Overall" refers to all observations across waves, including repeated measures of the same individuals. "Between" refers to unique individuals in the matched sample. Weighted % reflects population-representative estimates after applying CEM weights.

6.6 DATA AND METHODS

This study draws on the UK Household Longitudinal Study (UKHLS), a large, nationally representative survey of the UK population. The UKHLS provides high-quality longitudinal data, including rich information on partnership dynamics, and features a dedicated dataset on partnership histories. Importantly, it is one of the few European datasets that allows researchers to study the partnership trajectories of LGB individuals based on self-identified sexual orientation, rather than inferring sexual identity status from same-sex cohabitation. This enables us to capture not only partnered individuals but also those who are single, offering a more comprehensive view of relationship patterns across sexual identities. As such, the dataset provides a unique opportunity to advance understanding of how educational attainment may shape partnership formation among LGB individuals.

Analyses use data from waves 3 to 13 (2009-2022), as sexual identity was first collected in wave 3. The analytical sample is restricted to respondents aged 25 or older at the time of observation, who provided valid information on both sexual identity and educational attainment. The final sample after applying Coarsened Exact Matching comprises 26,991 individuals, including 741 unique individuals who identified as LGB at least once during the observation window (“Between”), representing 2.75% of the sample (Table 1). Across all waves, LGB respondents account for 5,105 observations (“Overall”), reflecting repeated measures of the same individuals.

6.6.1 DEPENDENT VARIABLES

The analyses focus on two interrelated aspects of partnership formation.

On the one hand, union formation is examined using two operationalisations of partnership status measured at each wave. The main specification distinguishes three categories: being single (0), in a non-coresidential partnership (1), or in a coresidential partnership (2). Additionally, to improve statistical robustness in stratified samples, I estimate models using a binary version of the same measure, coded 1 if the respondent reports being in any partnership (non-coresidential or coresidential) and 0 if single.

On the other hand, it is analysed the hazard and timing of entry into the first coresidential partnership, measured as age (in years) at the time of the event (27,813 episodes) or at censoring (3,419 episodes), starting from age 15. This information is drawn from the Partnership History dataset provided by UKHLS, rather than relying on self-reported partnership status at each wave. Respondents who do not report a valid starting date for their first relationship are excluded from the analysis, as are inconsistencies in which

cohabitation begins before the starting date of the partnership itself. However, to maximise data completeness, missing information in the ad hoc partnership histories is supplemented using the main survey when the date of starting cohabitation is unavailable. This applies to 249 observations (approximately 0.90% of the analytical sample).

6.6.2 INDEPENDENT AND CONTROL VARIABLES

The main independent variable of interest is *sexual identity*. The information is present in waves 3 and 9 of the UKHLS, when respondents were asked: “Which of the following options best describes how you think of yourself?”. The possible response options were: *Heterosexual or Straight, Gay or Lesbian, Bisexual, Other, and Prefer not to say*. This information was then combined with information on *gender identity* to construct a variable capturing the last reported sexual identity by gender. Due to data limitations, gender identities beyond man and woman could not be identified.

Following Elliott and colleagues (2019), respondents selecting *Other* or *Prefer not to say* were excluded from the analysis, as these categories often include a substantial proportion of individuals who identify as heterosexual, complicating interpretation. Moreover, when sexual identity was reported in both waves, the most recent response was used. As shown in Table A in the Appendix, however, most individuals reported the same sexual identity across both waves.

The second key independent variable is educational attainment, measured as a three-level variable indicating the highest qualification achieved in the waves from which the dependent variable is drawn. Education is classified according to ISCED into low education (lower secondary or below, ISCED 0-2), medium education (upper secondary or post-secondary non-tertiary, ISCED 3-4), and high education (tertiary education, ISCED 5-8).

Control variables include birth cohort (1945-1964, 1965-1979, 1980-1994), ethnicity (*White British, Not White British*), current occupation (ISCO 1-2, ISCO 3-4, ISCO 5-6, ISCO 7-9), age (centered on the mean), age squared, parental socioeconomic status at the first wave (*Higher managerial, Other*), and region of residence.

Childbearing is included in the final model in Table 4 as a robustness check and in the supplementary models in Tables C, E, and F in the Appendix, but it is not included in the main specification. Parenthood is unequally distributed across sexual identity groups (Table B in the Appendix) and reflects broader structural and social inequalities that are likely themselves part of the processes shaping union formation. Controlling for parenthood would

shift the analytical focus from group-level differences to selected subgroups, thereby reducing interpretability and potentially underestimating disparities.

6.6.3 ANALYTICAL STRATEGY

The analytical strategy unfolds in two main stages, aimed at addressing selection bias, time-to-event dynamics, and differences in union formation.

The first stage uses Coarsened Exact Matching (CEM) to reduce observable differences between LGB and heterosexual individuals. Sexual orientation (LGB vs. non-LGB) is treated as the exposure variable, and individuals are matched based on characteristics measured at the first available wave: birth cohort, parental occupational status, gender, urban or rural residence, and ethnicity. The procedure produces weights that are applied in subsequent analyses and help ensure balance on these covariates across sexual identity groups. Descriptive statistics before CEM are provided in the Appendix (Table B) to check for previous imbalances.

After matching, I estimate multinomial logistic regression models with year fixed effects and standard errors clustered at the individual level to assess the relative risk of being single (0), in a non-coresidential partnership (1), or in a coresidential partnership (2). As a second step, to examine whether birth cohort and its interaction with education shapes union formation differently by sexual identity, I estimate stratified models that combine non-coresidential and coresidential partnerships into a single category. Poisson regression models are used to estimate the relative risk of being in a relationship (1) versus being single (0), improving statistical power in stratified samples. All models control for ethnicity, current occupation, age and age squared, parental socioeconomic status, and region of residence. Finally, the timing and probability of entering a first coresidential partnership are analysed using Kaplan-Meier survival curves and Cox proportional hazards models are estimated to adjust for covariates. This approach allows us to observe how the likelihood of entering a coresidential partnership unfolds over time and to examine whether educational attainment have a stronger effect at certain ages or stages of life for LGB people.

As a sensitivity analysis, I conduct robustness checks adding controls for parenthood across all regression models (Table F). An additional sensitivity analysis estimates panel logistic regressions. These models were not used as the main analytical approach because they do not allow clustered standard errors when weights are applied, nor do they support CEM weights as probability weights.

6.7 RESULTS

First descriptive results confirm that LGB individuals are, on average, more likely to hold a tertiary degree than their heterosexual peers (Table 2). Tertiary education is more common among LGB individuals than among heterosexual peers, with gaps of around 14.6 percentage points for gay men (59.6% vs. 45.0%) and 7.4 percentage points for lesbian women (59.3% vs. 51.9%). These advantages are consistent and significant across all LGB identities.

In addition to educational attainment, the descriptive analyses indicate important differences in sociodemographic characteristics and partnership patterns (Tables B in the Appendix). As displayed in Table B, LGB respondents have a lower mean age and are overrepresented in younger cohorts, particularly bisexual women. Bisexual respondents also show greater ethnic diversity than heterosexual respondents. LGB people are also less likely to have children, especially lesbian/gay individuals and, to a lesser extent, bisexual people.

Table 2: Educational Attainment by Sexual Identity. CEM-Weighted Percentages and T-test results (UKHLS, 2009-2022)

	Heterosexual men	Gay men	Bisexual men	Heterosexual women	Lesbian women	Bisexual women	Total sample
		***	***		***	**	
% No degree	54.96	40.44	43.33	48.07	40.66	44.59	51.18
% Tertiary educated	45.04	59.56	56.67	51.93	59.34	55.41	48.82
N	78,974	1,694	817	106,149	1,338	1,256	190,228

* p value < 0.05; ** <0.01; *** <0.001. Pooled Sample. T-tests compare gay and bisexual men to heterosexual men and lesbian and bisexual women to heterosexual women.

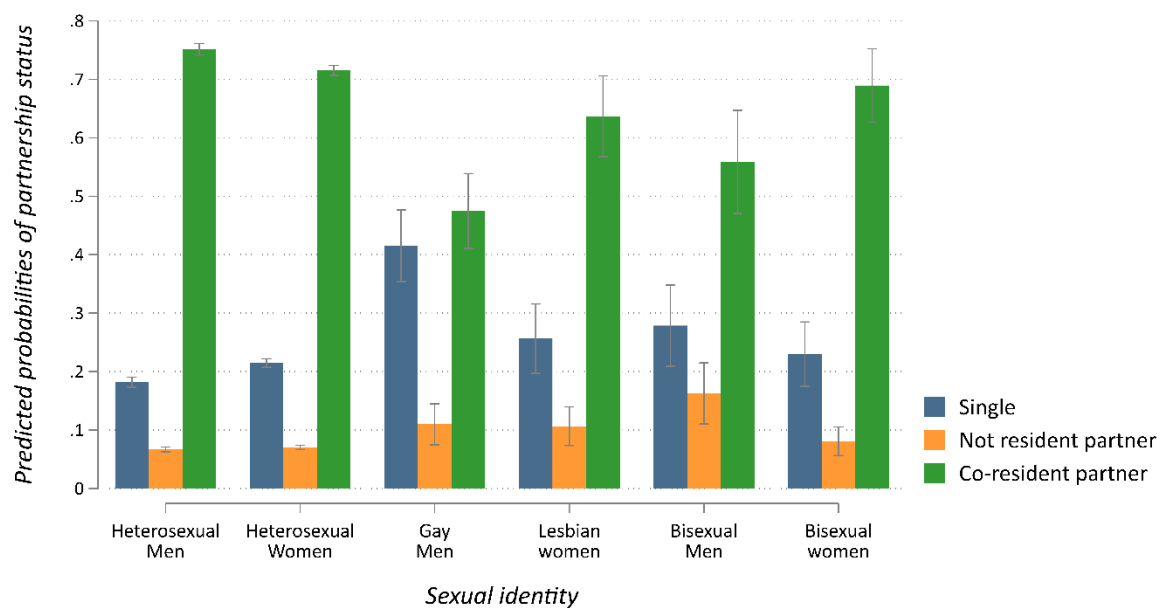
Partnership formation differs markedly between LGB and heterosexual groups. All LGB people, except lesbian women, are less likely to have a partner (whether non-residential or coresidential) compared to heterosexual individuals (Table B in the Appendix). The largest gap is observed among gay men, whose share in a coresidential partnership (48.1%) is over 27 percentage points lower than that of heterosexual men (75.3%), accompanied by a much higher share single (41.2% vs. 18.2%). Bisexual men also have notably high rates of non-residential partnerships (16.7% vs. 6.5% for heterosexual men).

Overall, these descriptive patterns show that LGB individuals have higher levels of educational attainment while also experiencing substantial differences in partnership formation and family-related characteristics compared to heterosexual individuals.

6.7.1 UNION FORMATION: DISPARITIES AND EDUCATIONAL DIFFERENCES AMONG LGB PEOPLE

Figure 1 presents the predicted probabilities of partnership status adjusted for controls based on the multinomial regression models shown in Table D in the Appendix (with regression coefficient shown in Table C). Consistent with Hypothesis 1, gay men and bisexual men are more likely to be single and less likely to be in a coresidential partnership than heterosexual men, but not lesbian women. Specifically, the probability of being single is highest for gay men (41.5%) compared to heterosexual men (18.2%). Probabilities of coresidential partnership are the lowest among gay men (47.5%) and the highest among heterosexual adults (75.1% for men, 71.5% for women). Lesbian women displayed a higher predicted probability of being single (25.6%) compared to heterosexual women (21.5%), although the confidence intervals overlap indicating that this difference is not statistically significant (Figure 1).

Figure 1: Predicted probabilities of partnership status by sexual identity. Multinomial logistic regression with year fixed effects and clustered standard errors. (UKHLS, 2011-2022)



The interactions between sexual identity and educational level in the multinomial regression models (Table C) are mostly not statistically significant. For gay men, the relative risk of being single versus in a coresidential partnership is high, but does not differ significantly by education level. This applies across all sexual identities with the only exception of heterosexual women, indicating that education does not substantially modify partnership outcomes within LGB identities. The only exception is medium-educated bisexual men, who display a significantly lower relative risk of being single versus in a coresidential partnership ($RRR = 0.222$, $p < .05$).

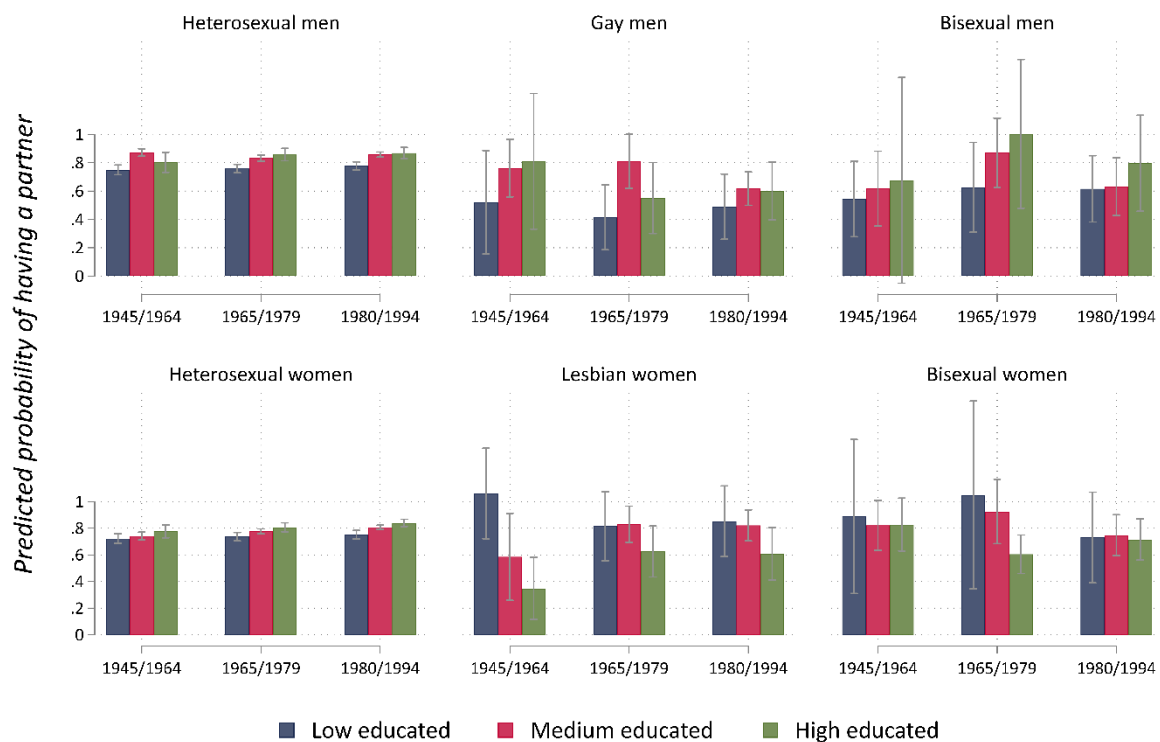
Given the complexity of the interactions in the multinomial models and their largely non-significant patterns, I turn to Poisson regression models stratified by sexual identity. This approach allows examination of the effect of education on partnership outcomes within each group separately, providing a clearer picture of whether education operates differently across LGB and heterosexual individuals. Moreover, the Poisson models in Table E in the Appendix further explore whether the association between educational level and birth cohort varies by sexual identity. Predicted values from these models are presented in Figure 2.

Focusing on the effects for the reference cohort (1965-1979), educational attainment shows only modest associations with partnership status (Table E in the Appendix). Among heterosexual women, higher education is associated with a slightly higher likelihood of having a partner, while the opposite holds for heterosexual men (not statistically significant). A similar gendered pattern is observed among gay men and lesbian women, though also not statistically significant. In contrast, among bisexual respondents, highly educated men are more likely to have a partner, while highly educated women show a lower likelihood.

Looking at Figure 2, we can indeed observe a clear gradient across almost all cohorts, with higher education among heterosexual people associated with a slightly higher likelihood of having a partner. Interestingly, an opposite gradient seems to exist among lesbian women, although this is statistically significant only in the older cohort. Results among gay men and bisexual people present very wide confidence intervals. Tentatively, it could be said that gay and bisexual men are following a gradient similar to heterosexual people, while bisexual women show no clear gradient, except in the 1965-1979 cohort, where they display a pattern similar to lesbian women. Indeed, as visible in Table E in the Appendix interaction effects with educational attainment and birth cohort are generally not significant among LGB respondents. Regarding controls, ethnic minority background predicts a lower likelihood of

having a partner among lesbian women and a higher likelihood among bisexual men, while occupational status shows a negative effect of being not employed for gay men and lesbian women, and a positive association for bisexual men in lower-skilled occupations (ISCO 7-9). Parental SES retains a significant effect only among heterosexual men.

Figure 2: Predicted probabilities of having a partner by sexual identity, educational attainment and birth cohort. Poisson regression with year fixed effects and clustered standard errors stratified by sexual identity. (UKHLS, 2011-2022)



These results are broadly consistent with the logistic panel regression estimates presented in Table G in the Appendix. Gay men and lesbian women show a significantly lower likelihood of having a partner compared to heterosexual men, while bisexual individuals do not differ significantly from heterosexual respondents. Additionally, the interaction terms with education remain non-significant among LGB people, confirming that educational attainment does not substantially moderate union formation within LGB groups.

Taken all together, these results show that education has modest and inconsistent associations with union formation within LGB groups. Similarly, the analysis did not find

support for Hypothesis 4, as birth cohort interactions are mostly non-significant. Then only exception are lesbian women, among whom stronger educational differences are observed in older cohorts.

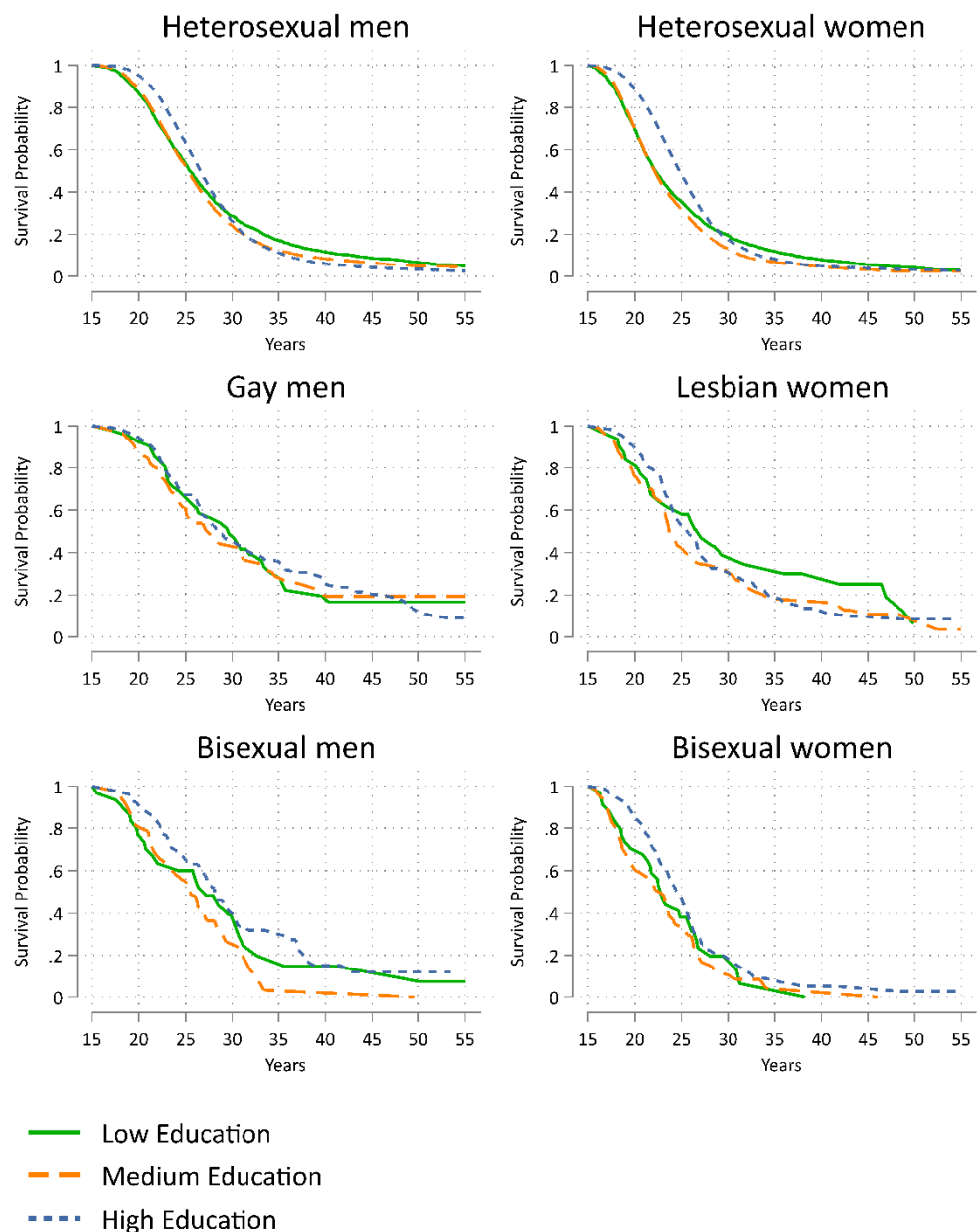
6.7.2 EDUCATIONAL GRADIENTS IN THE TRANSITION TO FIRST CORESIDENTIAL PARTNERSHIP

While the Multinomial and Poisson models provide insight into overall partnership patterns, they cannot fully capture how educational differences may operate differently across different stages of the life course. To assess whether education exerts a stronger effect on the timing of the transition to a first coresidential union, and whether this effect may be more pronounced at specific ages, we turn to Kaplan-Meier survival curves and Cox regression models.

Commenting on the transition to a first coresidential union (Figure 3), Kaplan-Meier survival curves reveal a clear gradient of postponement among heterosexual people that is not visible among LGB people. Highly educated heterosexual women are slower to enter their first coresidential partnership at younger ages, but over time their likelihood of transitioning to first coresidential union increases, potentially surpassing that of low-educated women. Medium-educated women initially follow a trajectory similar to low-educated women. Among heterosexual men, educational differences are less pronounced, although a similar pattern is observed also among highly educated men.

Interestingly, higher-educated lesbian women display a higher likelihood of transitioning to a first coresidential partnership across all ages, while low-educated lesbian women are the least likely to transition to first coresidential partnerships. For gay men the curves are overlapping across the whole observation window, but, similarly to bisexual men and contrary to heterosexual people and bisexual women, they display a higher likelihood of remaining single at the end of the observational window. This means that gay men consistently show a lower likelihood of entering a first coresidential partnership regardless of educational level.

Figure 3: Timing of first co-residential partnership by sexual identity and educational level. CEM-weighted Kaplan Meier curves. (UKHLS, 2009-2022)



These overall patterns are confirmed by Cox proportional hazards models adjusted for covariates. Table 4 shows that gay men have a consistently lower hazard of entering a first coresidential union compared to heterosexual men (HR = 0.63-0.57 across models), supporting the descriptive patterns from the Kaplan-Meier curves and highlighting delayed or less frequent union formation. Similarly, lesbian women show a slightly lower hazard, but

it is only significant in the model without controls. In contrast, bisexual women have higher hazards than heterosexual men (HR = 1.5-2.3 across models), resembling the coefficients observed for heterosexual women. These patterns partially confirmed Hypothesis 1 for gay men and Hypothesis 2 for bisexual women.

Table 4: Cox proportional hazards regression models of transition to first co-residential partnership estimated with CEM weights (UKHLS, 2009-2022).

	Main model		+ interaction		+ controls		+ children	
Sexual identity (ref: Heterosexual men)								
Heterosexual women	1.467	***	1.470	***	1.508	***	1.630	***
	(0.019)		(0.044)		(0.045)		(0.049)	
Gay men	0.634	***	0.569	**	0.565	**	0.889	
	(0.048)		(0.110)		(0.109)		(0.172)	
Lesbian women	0.899		0.621	*	0.645		1.046	
	(0.072)		(0.143)		(0.149)		(0.241)	
Bisexual men	0.902		1.080		1.012		1.092	
	(0.093)		(0.263)		(0.247)		(0.266)	
Bisexual women	1.515	***	1.771	**	2.095	***	2.270	***
	(0.120)		(0.371)		(0.440)		(0.476)	
Educational level (ref: Low educated)								
Medium educated	1.181	***	1.104	***	1.075	**	1.053	*
	(0.022)		(0.028)		(0.028)		(0.027)	
High educated	0.909	***	0.969		1.029		0.955	
	(0.016)		(0.024)		(0.027)		(0.025)	
Birth cohort (ref: 1965/1979)								
1945/1964	0.976		0.980		0.966	*	0.984	
	(0.016)		(0.016)		(0.016)		(0.016)	
1980/1994	1.049	**	1.051	**	1.045	**	1.458	***
	(0.016)		(0.017)		(0.017)		(0.024)	
Sexual identity # Educational level								
Heterosexual women # Medium educated			1.149	***	1.141	***	1.073	
			(0.042)		(0.042)		(0.039)	
Heterosexual women # High educated			0.892	**	0.867	***	0.814	***
			(0.032)		(0.031)		(0.029)	
Gay men # Medium educated			1.083		1.084		1.130	
			(0.263)		(0.263)		(0.275)	
Gay men # High educated			1.132		1.110		1.260	
			(0.247)		(0.242)		(0.275)	
Lesbian women # Medium educated			1.601		1.505		1.410	
			(0.426)		(0.401)		(0.376)	
Lesbian women # High educated			1.473		1.308		1.409	
			(0.376)		(0.334)		(0.360)	
Bisexual men # Medium educated			1.030		1.084		1.098	
			(0.312)		(0.328)		(0.333)	
Bisexual men # High educated			0.683		0.696		0.887	
			(0.194)		(0.198)		(0.252)	
Bisexual women # Medium educated			0.927		0.803		0.903	
			(0.232)		(0.201)		(0.226)	
Bisexual women # High educated			0.768		0.631		0.683	
			(0.181)		(0.149)		(0.162)	
Ethnic group (ref: White UK)								
Non-white UK					0.818	***	0.777	***
					(0.014)		(0.014)	

*** p<.001, ** p<.01, * p<.05

(Continue Table 4 from previous page)

	Main model	+ interaction	+ controls	+ children
ISCO current occupation (ref: ISCO 1-2)				
ISCO 3-4			0.930 (0.017)	*** (0.018)
ISCO 5-6			1.016 (0.022)	1.115 (0.025) ***
ISCO 7-9			1.116 (0.026)	*** (0.027) ***
Not employed			0.993 (0.019)	1.174 (0.023) ***
Parental SES (ref: Lower than higher managerial)				
Higher managerial			0.943 (0.013)	*** (0.013) ***
Region (ref: North East)				
Wales			0.810 (0.034)	*** (0.037) **
Scotland			0.803 (0.032)	*** (0.034) ***
Northern Ireland			0.652 (0.030)	*** (0.031) ***
North West			0.934 (0.035)	0.933 (0.035)
Yorkshire and the Humber			0.944 (0.037)	0.949 (0.038)
East Midlands			1.047 (0.043)	0.999 (0.041)
West Midlands			0.919 (0.037)	* (0.036) *
East of England			0.915 (0.036)	* (0.036) *
London			0.718 (0.028)	*** (0.030) ***
South East			0.931 (0.035)	0.924 (0.035) *
South West			1.006 (0.040)	0.972 (0.038)
Parenthood timing (ref: No child)				
Chid(ren) born before cohabitation				0.977 (0.026)
Chid(ren) born after cohabitation				3.346 (0.058) ***
Pseudo R-squared	.046	.049	.076	.283
Number of observations	27636	27636	27636	27636

*** p<.001, ** p<.01, * p<.05

6.8 DISCUSSION AND CONCLUSION

Drawing on longitudinal UKHLS data and a combination of Coarsened Exact Matching, Multinomial and Poisson regression models and Event history Analysis, this article investigates partnership dynamics across different sexual identities in the UK and the role of education in shaping these patterns. By analysing the interplay between sexual identity, education, and relationship trajectories, this study aims to advance the literature on LGB partnership dynamics and contribute to research on social stratification among LGBTQIA*

individuals. In particular, this contribution provides preliminary insights into whether and how the educational advantage of LGB people is associated with differences in partnership formation, shedding light on the mechanisms through which higher education may shape life course trajectories within LGB population.

Overall, the results show a consistent pattern: gay men are significantly less likely than their heterosexual peers to transition into a first coresidential partnership or to be partnered at any given time. This finding holds across survival models of timing to first coresidential union, Poisson models of partnership status across the life course, and Panel logistic regressions. Furthermore, results that distinguish between singlehood, non-coresidential, and coresidential partnerships suggest that all LGB people but bisexual women are less likely to have a coresident partner compared to heterosexual men consistent with previous research (Badgett et al., 2021; Ophir et al., 2023). Differently from previous literature (Bohr & Lengerer, 2024; Carpenter & Gates, 2008; Waite, 2021), lesbian women are indeed found to have a lower hazard of transitioning to a first coresidential union (without controls), but a comparable likelihood of being single compared to heterosexual women.

When examining the moderating role of education, educational level has little to no impact on the partnership trajectories of LGB respondents in most of the models. These findings suggest that, although education traditionally been associated with partnership dynamics among heterosexual people, the same or different patterns do not hold for LGB people. Exceptions are observed among low-educated lesbian women from the oldest cohort, who display a clear and significant educational gradient: high educated lesbian women in the oldest cohort are less likely to have a partner. This pattern may reflect both limited availability of same-sex partners and societal constraints on lesbian relationships during the mid-20th century (assuming that lower-educated women were more likely to form different-gender partnerships), as well as the possible prioritization of education and career in a historical context given that women in this cohort were more likely to attain higher education compared to heterosexual women (Mittleman, 2022).

While results suggests only limited support for the expectation of education moderating partnership dynamics, the analysis also reveals that birth cohort effects are weak and largely non-significant, providing little evidence the hypothesis of stronger educational differences in older cohorts. Both of these patterns likely reflect, at least in part, the relatively small sample sizes of LGB respondents. Taken together, these patterns suggest that multiple structural and social factors interact to shape partnership outcomes among LGB individuals. On the one hand, it is likely that persistent stigma and a smaller mating market can constrain

opportunities to form coresidential unions (Meyer, 2003; Wu et al., 2020), particularly for gay men (Doan & Mize, 2020). This may be particularly true observing that the stronger differences are found among LG respondents, while results for bisexual people hardly reach statistical significance as partner availability and social norms more likely regard LG people. In this sense, the lack of significance for educational gradients may signal that partner availability, social norms, and minority stress are playing a strong role in shaping partnership outcomes among LGBTQIA* people than educational attainment. On the other hand, it may be that, regardless of educational attainment, heteronormative expectations regarding coupledness are weaker among LGB people, who may prefer to pursue more diverse relationship arrangements and place less emphasis on cohabiting unions (Hammack et al., 2019). As a result, given this paper's research design it is difficult to affirm whether the higher likelihood of being single or in non-coresidential partnerships reflect structural barriers or alternative relationship norms. What emerges more clearly, however, is the descriptive evidence of lower partnership rates and the limited extent to which higher education translates into partnership formation among LGB individuals.

This study has several important limitations. First, the sample sizes of LGB individuals, particularly bisexual men, are relatively small. Although pooling data and applying matching techniques helped mitigate this issue, the resulting estimates still carry a considerable degree of uncertainty. Second, the measures of partnership rely on self-reported data collected at different time points. While part of the analysis reconstructs transitions into first co-residential unions, the partnership measures collected at each wave do not fully capture the fluidity of relationship status over time, especially with respect to informal partnerships. In particular, non-coresidential unions can only be identified when reported during annual interviews, making them sensitive to short-term fluctuations in relationship status. Third, the analysis cannot account for relationship quality, duration, or desire for partnership. This makes it difficult to disentangle differences in opportunities for partnership from differences in preferences or normative orientations toward union formation among LGB individuals. Future research could build on these findings by using more granular longitudinal data, incorporating measures of relationship aspirations and quality, and further exploring the mechanisms underlying partnership stratification among LGBTQIA* people.

Despite these limitations, the results provide new evidence on union formation and partnership dynamics among LGB individuals and call for further research to disentangle the

role structural and cultural factors - respectively minority stress and social norms, and heteronormative expectations - play in shaping partnership trajectories for LGB individuals. Furthermore, these findings challenge the assumption that education universally facilitates union formation and underscore the need for a nuanced, intersectional perspective that accounts for how sexual identity and social context interact to influence relationship outcomes.

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APPENDIX

Table A: Within-Individual Transitions in Sexual Identity Across Panel Waves. (UKHLS, 2009-2022)

	Heterosexual men	Heterosexual women	Gay men	Lesbian women	Bisexual men	Bisexual women	Other men	Other women	Prefer not to say men	Prefer not to say women	Total
Heterosexual men	99.95	-	0.01	-	0.04	-	-	-	-	-	100
Heterosexual women	-	99.95	-	0.01	-	0.04	-	-	-	-	100
Gay men	0.21	-	99.64	-	0.14	-	-	-	-	-	100
Lesbian women	-	0.45	-	99.28	-	0.27	-	-	-	-	100
Bisexual men	3.63	-	0.32	-	96.05	-	-	-	-	-	100
Bisexual women	-	3.16	-	0.59	-	96.25	-	-	-	-	100
Other men	16.23	-	0.65	-	1.3	-	81.82	-	-	-	100
Other women	-	17.52	-	-	-	0.36	-	82.12	-	-	100
Prefer not to say men	17.07	-	1.46	-	1.22	-	-	-	80.24	-	100
Prefer not to say women	-	17.75	-	0.46	-	0.76	-	-	-	81.03	100
Total	41.14	55.53	0.87	0.69	0.4	0.63	0.08	0.14	0.2	0.33	100

Table B: Sample description by sexual identity. (UKHLS, 2009-2022)

	Heterosexual men	Heterosexual women	Gay men	Lesbian women	Bisexual men	Bisexual women	Total sample
Age (mean)	49.77	48.98	45.34	46.27	45.27	39.23	49.18
Partnership status							
Single	18.22	41.15	29.99	21.39	23.77	25.88	20.14
Not resident partnership	6.48	10.74	16.65	7.19	9.94	9.47	6.96
Resident partnership	75.31	48.11	53.37	71.42	66.29	64.65	72.9
Educational level							
Low (ISCED 1-2)	22.79	20.83	14.23	12.48	17.5	10.75	21.45
Medium (ISCED 3-4)	35.76	33.69	26.21	28.18	25.83	33.84	34.41
High (ISCED 5-8)	41.45	45.48	59.56	59.34	56.67	55.41	44.14
Birth cohort							
1945/1964	47.46	44.95	34.89	36.02	33.78	17.36	45.61
1965/1979	35.43	36.13	38.61	41.85	34.64	33.20	35.88
1980/1994	17.11	18.92	26.51	22.12	31.58	49.44	18.51
Current occupation							
ISCO 1-2	27.07	19.93	34.36	32.44	24.85	29.30	23.19
ISCO 3-4	15.64	25.01	23.26	25.41	14.20	21.10	21.03
ISCO 5-6	6.78	15.71	8.03	13.45	11.51	12.02	11.87
ISCO 7-9	24.41	5.21	9.27	9.94	16.03	4.38	13.29
Not employed	26.10	34.15	25.09	18.76	33.41	33.20	30.61
Ethnicity							
White British	83.17	81.31	83.94	87.97	74.05	72.21	82.06
Not White British	16.83	18.69	16.06	12.03	25.95	27.79	17.94
Parental SES							
ISCO 3-9	68.78	68.10	59.62	64.87	63.53	59.08	68.20
ISCO 1-2	31.22	31.90	40.38	35.13	36.47	40.92	31.80
Having a child							
No child(ren)	24.26	18.20	86.72	68.98	49.33	44.27	21.99
At least one child(ren)	75.74	81.80	13.28	31.02	50.67	55.73	78.01
Region of residence							
North-East	3.78	4.05	4.13	3.06	7.59	3.26	3.95
North-West	11.03	10.64	10.80	18.91	7.83	10.35	10.85
Yorkshire and the Humber	8.55	8.60	6.73	14.87	5.26	9.63	8.60
East Midlands	7.90	7.56	6.91	7.62	4.77	7.01	7.68
West Midlands	8.37	8.38	4.55	8.22	9.06	7.80	8.34
East of England	9.33	9.41	9.21	9.42	8.69	11.54	9.38
London	10.75	11.35	22.67	10.01	11.87	17.12	11.23
South-East	13.09	13.34	8.09	15.77	17.38	10.99	13.21
South-West	9.12	9.07	11.04	4.19	13.83	6.45	9.08
Wales	5.70	5.48	8.09	2.84	5.75	7.09	5.58
Scotland	7.96	7.87	6.49	2.54	6.24	7.48	7.85
Northern Ireland	4.42	4.26	1.30	2.54	1.71	1.27	4.26

Table C: Multinomial Regression Models on partnership status: baseline, with controls, and controlling for children. CEM weighted pooled sample with year fixed effects and individual-level clustered standard errors (UKHLS, 2009-2022)

	Single vs Coresidential partner						Non-Resident partner vs Coresidential partner					
	Baseline Model		+ controls		+ children		Baseline Model		+ controls		+ children	
Sexual identity (ref: Heterosexual men)												
Heterosexual women	1.511	***	1.446	***	1.843	***	1.303	*	1.277	*	1.561	***
	(0.117)		(0.114)		(0.146)		(0.146)		(0.146)		(0.181)	
Gay men	3.235	**	3.285	**	1.173		2.097		2.229		0.941	
	(1.216)		(1.220)		(0.460)		(1.077)		(1.155)		(0.485)	
Lesbian women	1.720		1.939		0.997		3.205	*	3.208	*	1.805	
	(0.795)		(0.915)		(0.515)		(1.507)		(1.576)		(0.894)	
Bisexual men	3.610	**	3.680	**	3.008		6.155	**	6.699	**	5.504	**
	(1.722)		(1.856)		(1.749)		(3.824)		(4.151)		(3.600)	
Bisexual women	0.841		0.785		0.722		0.858		0.844		0.757	
	(0.356)		(0.342)		(0.320)		(0.508)		(0.489)		(0.455)	
Educational level (ref: Low educated)												
Medium educated	0.966		1.035		0.989		1.224	*	1.190		1.157	
	(0.075)		(0.081)		(0.077)		(0.123)		(0.121)		(0.119)	
High educated	0.753	***	0.848	*	0.732	***	1.035		1.032		0.907	
	(0.061)		(0.070)		(0.063)		(0.101)		(0.105)		(0.093)	
Sexual identity # Educational level												
Heterosexual women # Medium educated	0.800	*	0.803	*	0.826		0.827		0.849		0.863	
	(0.079)		(0.079)		(0.082)		(0.112)		(0.115)		(0.119)	
Heterosexual women # High educated	0.818	*	0.859		0.794	*	0.831		0.851		0.797	
	(0.082)		(0.085)		(0.081)		(0.109)		(0.112)		(0.106)	
Gay men # Medium educated	1.200		1.209		1.507		1.652		1.512		1.775	
	(0.561)		(0.562)		(0.749)		(1.059)		(0.980)		(1.150)	
Gay men # High educated	1.200		1.216		1.630		1.225		1.137		1.441	
	(0.500)		(0.505)		(0.709)		(0.699)		(0.658)		(0.826)	
Lesbian women # Medium educated	0.827		0.712		0.879		0.375		0.372		0.438	
	(0.457)		(0.396)		(0.546)		(0.217)		(0.222)		(0.268)	
Lesbian women # High educated	0.965		0.977		0.968		0.626		0.685		0.703	
	(0.495)		(0.515)		(0.548)		(0.344)		(0.390)		(0.401)	
Bisexual men # Medium educated	0.320		0.303		0.343		0.259		0.222	*	0.254	
	(0.197)		(0.196)		(0.234)		(0.181)		(0.158)		(0.185)	
Bisexual men # High educated	0.805		0.745		0.709		0.723		0.690		0.671	
	(0.444)		(0.436)		(0.459)		(0.509)		(0.485)		(0.491)	
Bisexual women # Medium educated	1.727		1.522		1.804		1.101		1.029		1.234	
	(0.864)		(0.784)		(0.972)		(0.765)		(0.703)		(0.878)	
Bisexual women # High educated	2.376		2.433		2.261		2.264		2.306		2.242	
	(1.160)		(1.230)		(1.167)		(1.451)		(1.456)		(1.470)	
Birth cohort (ref: 1965/1979)												
1945/1964	1.464	***	1.804	***	1.462	***	0.918		1.734	***	1.461	***
	(0.066)		(0.144)		(0.118)		(0.055)		(0.191)		(0.160)	
1980/1994	1.705	***	0.854	*	0.850	*	2.264	***	0.726	***	0.729	***
	(0.076)		(0.064)		(0.067)		(0.116)		(0.061)		(0.064)	
Ethnic group (ref: White UK)												
Non-white UK			1.239	***	1.350	***			0.897		0.964	
			(0.069)		(0.076)				(0.057)		(0.061)	
ISCO current occupation (ref: ISCO 1-2)												
ISCO 3-4			1.384	***	1.392	***			1.339	***	1.344	***
			(0.065)		(0.066)				(0.075)		(0.077)	
ISCO 5-6			1.436	***	1.640	***			1.238	**	1.397	***
			(0.084)		(0.096)				(0.087)		(0.100)	
ISCO 7-9			1.328	***	1.506	***			1.291	***	1.430	***
			(0.076)		(0.088)				(0.096)		(0.109)	
Not employed			2.056	***	2.367	***			1.284	***	1.481	***
			(0.106)		(0.124)				(0.087)		(0.101)	
Age (centred on mean)												
			0.981	***	0.994				0.963	***	0.972	***
			(0.004)		(0.005)				(0.005)		(0.005)	
Age (squared)												
			1.001	***	1.000	**			1.002	***	1.001	***
			(0.000)		(0.000)				(0.000)		(0.000)	
Parental SES (ref: Lower than higher managerial)												
Higher managerial			0.923	*	0.887	**			0.998		0.960	
			(0.037)		(0.037)				(0.049)		(0.047)	

*** p<.001, ** p<.01, * p<.05

(Continue Table D from previous page)

	Single vs Coresidential partner			Non-Resident partner vs Coresidential partner		
	Main Model	+ controls	+ children	Main Model	+ controls	+ children
Region (ref: North East)						
North West	0.979 (0.105)	0.932 (0.104)		1.099 (0.143)	1.048 (0.138)	
Yorkshire and the Humber	0.973 (0.107)	0.918 (0.105)		0.908 (0.124)	0.860 (0.119)	
East Midlands	0.847 (0.096)	0.803 (0.094)		0.921 (0.131)	0.874 (0.125)	
West Midlands	0.994 (0.109)	0.962 (0.111)		1.153 (0.154)	1.116 (0.152)	
East of England	0.954 (0.105)	0.884 (0.101)		0.974 (0.130)	0.900 (0.121)	
London	1.507 (0.162)	*** 1.303 (0.145)	*	1.707 (0.224)	*** 1.471 (0.196)	**
South East	0.973 (0.102)	0.882 (0.096)		1.107 (0.140)	1.007 (0.129)	
South West	0.836 (0.093)	0.735 (0.086)	**	0.878 (0.120)	0.788 (0.109)	
Wales	1.010 (0.120)	0.980 (0.119)		0.985 (0.142)	0.956 (0.140)	
Scotland	1.142 (0.132)	1.038 (0.121)		1.274 (0.173)	1.165 (0.160)	
Northern Ireland	1.352 (0.195)	* 1.306 (0.202)		1.135 (0.178)	1.103 (0.174)	
Have a child(ren)						
Yes		0.192 (0.008)	***		0.247 (0.012)	***
Year fixed effect	Yes	Yes	Yes	Yes	Yes	Yes
Intercept	0.207 (0.014)	*** 0.086 (0.011)	*** 0.375 (0.051)	*** 0.074 (0.007)	*** 0.026 (0.004)	*** 0.097 (0.017)
Pseudo R-squared	.019	.040	.096	.019	.040	.096
Number of observations	190228	190228	190228	190228	190228	190228

*** p<.001, ** p<.01, * p<.05

Table D: Predicted probabilities of partnership status by sexual identity, adjusted for covariates. CEM weighted pooled sample with year fixed effects and individual-level clustered standard errors (UKHLS, 2009-2022).

	Heterosexual men		Gay men		Bisexual men	
	Predicted Probability	Confidence Interval	Predicted Probability	Confidence Interval	Predicted Probability	Confidence Interval
Single	0.18	(0.17-0.19)	0.42	(0.35-0.48)	0.28	(0.21-0.35)
Non-resident partnership	0.07	(0.06-0.07)	0.11	(0.07-0.14)	0.16	(0.11-0.21)
Co-resident partnership	0.75	(0.74-0.74)	0.47	(0.41-0.54)	0.56	(0.47-0.65)

	Heterosexual women		Lesbian women		Bisexual women	
	Predicted Probability	Confidence Interval	Predicted Probability	Confidence Interval	Predicted Probability	Confidence Interval
Single	0.21	(0.21-0.22)	0.26	(0.20-0.32)	0.23	(0.18-0.28)
Non-resident partnership	0.07	(0.07-0.07)	0.11	(0.07-0.14)	0.08	(0.06-0.11)
Co-resident partnership	0.72	(0.71-0.72)	0.64	(0.57-0.71)	0.69	(0.63-0.75)

Table E: Relative risks of having a partner by educational level and cohort, stratified by sexual identity. Poisson regressions with clustered standard errors and fixed year effects.

	Heterosexual Men		Heterosexual Women		Gay Men		Lesbian Women		Bisexual Men		Bisexual Women
Educational level (ref: Low educated)											
Medium educated	0.955 (0.018)	*	1.046 (0.024)	*	1.062 (0.180)		1.420 (0.424)		1.410 (0.336)		1.126 (0.181)
High educated	0.984 (0.017)		1.089 (0.024)	***	0.810 (0.133)		1.404 (0.422)		1.025 (0.275)		0.910 (0.135)
Birth cohort (ref: 1965/1979)											
1945/1964	0.860 (0.026)	***	0.974 (0.032)		0.683 (0.270)		1.814 (0.614)	†	0.882 (0.291)		1.081 (0.362)
1980/1994	0.921 (0.043)	†	1.047 (0.040)		1.063 (0.358)		0.594 (0.268)		1.096 (0.668)		1.007 (0.178)
Educational level # Birth cohort											
Low educated # 1945/1964	1.059 (0.030)	*	0.974 (0.032)		0.750 (0.331)		0.541 (0.188)	†	0.816 (0.320)		1.049 (0.383)
Low educated # 1980/1994	1.118 (0.057)	*	0.993 (0.040)		0.640 (0.272)		1.268 (0.569)		1.053 (0.619)		0.649 (0.144)
Medium educated # 1945/1964	1.055 (0.030)	†	0.956 (0.032)		1.162 (0.466)		0.572 (0.193)	†	1.104 (0.380)		0.903 (0.302)
Medium educated # 1980/1994	1.099 (0.053)	†	0.994 (0.037)		0.914 (0.328)		1.248 (0.540)		1.150 (0.660)		0.950 (0.177)
Ethnic group (ref: White UK)											
Non-white UK	0.965 (0.015)	*	0.932 (0.015)	***	0.777 (0.117)	†	0.943 (0.118)		1.293 (0.137)	*	0.891 (0.099)
ISCO current occupation (ref: ISCO 1-2)											
ISCO 3-4	0.946 (0.011)	***	0.970 (0.010)	**	0.905 (0.102)		0.960 (0.070)		1.122 (0.161)		1.038 (0.089)
ISCO 5-6	0.932 (0.016)	***	0.953 (0.012)	***	0.831 (0.119)		0.943 (0.101)		1.030 (0.169)		0.917 (0.098)
ISCO 7-9	0.953 (0.010)	***	0.939 (0.018)	**	1.005 (0.138)		0.925 (0.100)		1.348 (0.242)	†	0.993 (0.137)
Not employed	0.775 (0.014)	***	0.946 (0.012)	***	0.739 (0.101)	*	0.838 (0.091)		0.897 (0.125)		0.924 (0.096)
Age (centred on mean)	1.008 (0.001)	***	0.997 (0.001)	**	0.991 (0.014)		0.988 (0.010)		1.013 (0.011)		0.986 (0.015)
Age (squared)	1.000 (0.000)	***	1.000 (0.000)	***	1.000 (0.000)		1.000 (0.000)		1.000 (0.000)		1.000 (0.000)
Parental SES (ref: Lower than higher managerial)											
Higher managerial	1.023 (0.011)	*	1.012 (0.010)		0.993 (0.108)		0.940 (0.080)		1.029 (0.117)		0.998 (0.089)

*** p<.001, ** p<.01, * p<.05, † p<.1

(Continue Table E from previous page)

	Heterosexual Men		Heterosexual Women		Gay Men		Lesbian Women		Bisexual Men		Bisexual Women
Region (ref: North East)											
North West	0.999 (0.029)		1.016 (0.027)		0.881 (0.290)		1.646 (0.629)		0.861 (0.260)		0.683 (0.129) *
Yorkshire and the Humber	0.985 (0.030)		1.016 (0.028)		1.130 (0.368)		1.599 (0.615)		1.131 (0.385)		0.825 (0.133)
East Midlands	0.999 (0.030)		1.058 (0.029)	*	0.844 (0.338)		1.893 (0.723)	†	0.604 (0.208)		0.917 (0.096)
West Midlands	1.008 (0.030)		0.999 (0.028)		1.365 (0.457)		1.381 (0.562)		0.841 (0.252)		0.641 (0.114) *
East of England	0.986 (0.029)		1.025 (0.029)		1.060 (0.353)		1.677 (0.673)		1.216 (0.341)		0.964 (0.109)
London	0.940 (0.029)	*	0.901 (0.027)	***	1.123 (0.344)		1.435 (0.586)		1.208 (0.299)		0.926 (0.115)
South East	0.989 (0.028)		1.020 (0.027)		1.051 (0.352)		1.501 (0.585)		1.294 (0.342)		0.807 (0.112)
South West	1.002 (0.029)		1.058 (0.029)	*	1.384 (0.433)		1.640 (0.672)		0.934 (0.243)		0.781 (0.138)
Wales	0.993 (0.033)		1.005 (0.030)		0.829 (0.278)		1.643 (0.677)		1.473 (0.446)		0.784 (0.126)
Scotland	0.977 (0.030)		0.979 (0.031)		1.081 (0.341)		1.955 (0.912)		1.444 (0.371)		0.698 (0.121) *
Northern Ireland	0.891 (0.048)	*	0.984 (0.034)		0.448 (0.262)		1.800 (0.715)		0.805 (0.294)		1.144 (0.136)
Year fixed effect	Yes		Yes		Yes		Yes		Yes		Yes
Intercept	1.069 (0.037)	†	0.819 (0.028)	***	0.766 (0.266)		0.318 (0.158)	*	0.531 (0.185)	†	0.853 (0.173)
Pseudo R-squared	.006		.003		.036		.015		.024		.013
Number of observations	78974		106149		1694		1338		817		1256

*** p<.001, ** p<.01, * p<.05, † p<.1

Table F: Relative risks of having a partner by educational level and cohort, stratified by sexual identity including control for parenthood. Poisson regressions with CEM weighted pooled sample, clustered standard errors and fixed year effects (UKHLS, 2009-2022)

	Heterosexual Men		Heterosexual Women		Gay Men		Lesbian Women	Bisexual Men		Bisexual Women		
Educational level (ref: Low educated)												
Medium educated	0.977		1.045	*	1.116		1.403	1.269		1.185		
	(0.016)		(0.023)		(0.195)		(0.428)	(0.309)		(0.194)		
High educated	1.011		1.089	***	0.834		1.394	0.994		0.965		
	(0.016)		(0.023)		(0.135)		(0.427)	(0.257)		(0.142)		
Birth cohort (ref: 1965/1979)												
1945/1964	0.913	**	0.987		0.724		1.776	0.988		1.017		
	(0.026)		(0.031)		(0.285)		(0.621)	(0.318)		(0.322)		
1980/1994	0.922	*	0.998		1.055		0.586	1.011		1.091		
	(0.037)		(0.037)		(0.355)		(0.267)	(0.622)		(0.205)		
Educational level # Birth cohort												
Low educated # 1945/1964	1.047	†	0.981		0.694		0.550	†	0.931	1.066		
	(0.028)		(0.031)		(0.304)		(0.196)	(0.350)		(0.363)		
Low educated # 1980/1994	1.088	†	1.008		0.635		1.273	0.951		0.591	*	
	(0.047)		(0.040)		(0.269)		(0.576)	(0.527)		(0.137)		
Medium educated # 1945/1964	1.047	†	0.965		1.122		0.585	1.238		0.908		
	(0.029)		(0.031)		(0.439)		(0.202)	(0.469)		(0.294)		
Medium educated # 1980/1994	1.139	**	1.050		0.916		1.257	1.123		0.917		
	(0.048)		(0.039)		(0.330)		(0.548)	(0.617)		(0.174)		
Ethnic group (ref: White UK)												
Non-white UK	0.939	***	0.933	***	0.772	†	0.938	1.285	*	0.875		
	(0.014)		(0.015)		(0.115)		(0.117)	(0.126)		(0.096)		
ISCO current occupation (ref: ISCO 1-2)												
ISCO 3-4	0.967	**	0.965	***	0.886		0.955	1.092		1.016		
	(0.010)		(0.010)		(0.099)		(0.069)	(0.149)		(0.089)		
ISCO 5-6	0.948	***	0.929	***	0.826		0.934	0.923		0.886		
	(0.014)		(0.011)		(0.123)		(0.103)	(0.129)		(0.099)		
ISCO 7-9	0.958	***	0.924	***	0.990		0.923	1.302	†	0.973		
	(0.009)		(0.018)		(0.130)		(0.100)	(0.203)		(0.129)		
Not employed	0.810	***	0.912	***	0.754	*	0.834	†	0.819	0.854		
	(0.014)		(0.011)		(0.102)		(0.091)	(0.108)		(0.090)		
Age (centred on mean)	1.003	**	0.996	***	0.988		0.988	1.004		0.992		
	(0.001)		(0.001)		(0.013)		(0.010)	(0.012)		(0.013)		
Age (squared)	1.000		1.000	***	1.000		1.000	1.000		1.000		
	(0.000)		(0.000)		(0.000)		(0.000)	(0.000)		(0.000)		
Parental SES (ref: Lower high managerial)												
Higher managerial	1.029	**	1.015		0.998		0.938	1.066		1.036		
	(0.010)		(0.010)		(0.109)		(0.080)	(0.108)		(0.090)		
Region (ref: North East)												
North West	1.027		1.017		0.871		1.622	0.618	†	0.689	*	
	(0.029)		(0.027)		(0.291)		(0.624)	(0.179)		(0.128)		
Yorkshire and the Humber	1.017		1.016		1.083		1.576	0.916		0.819		
	(0.030)		(0.027)		(0.350)		(0.609)	(0.263)		(0.133)		
East Midlands	1.030		1.056	*	0.818		1.876	0.523	†	0.914		
	(0.029)		(0.028)		(0.335)		(0.719)	(0.187)		(0.094)		
West Midlands	1.034		0.997		1.258		1.366	0.707		0.639	*	
	(0.029)		(0.027)		(0.441)		(0.559)	(0.192)		(0.114)		
East of England	1.021		1.028		1.105		1.655	1.029		0.969		
	(0.028)		(0.028)		(0.373)		(0.669)	(0.272)		(0.115)		
London	1.006		0.915	**	1.122		1.417	0.964		0.962		
	(0.029)		(0.026)		(0.348)		(0.581)	(0.239)		(0.134)		
South East	1.028		1.027		1.066		1.480	1.068		0.829		
	(0.028)		(0.026)		(0.358)		(0.582)	(0.289)		(0.116)		
South West	1.039		1.066	*	1.433		1.631	0.858		0.739		
	(0.029)		(0.028)		(0.457)		(0.673)	(0.223)		(0.144)		
Wales	1.015		1.004		0.847		1.616	1.152		0.789		
	(0.031)		(0.029)		(0.282)		(0.667)	(0.384)		(0.118)		
Scotland	1.015		0.988		1.041		1.923	1.112		0.706	*	
	(0.028)		(0.029)		(0.329)		(0.909)	(0.270)		(0.120)		
Northern Ireland	0.926		0.978		0.453		1.793	0.951		1.283		
	(0.049)		(0.033)		(0.267)		(0.714)	(0.335)		(0.212)		
Having a child(ren)												
Yes	1.500	***	1.272	***	1.334	*	1.041	1.730	***	1.320	**	
	(0.025)		(0.019)		(0.179)		(0.077)	(0.236)		(0.127)		
Year fixed effect												
Yes	Yes		Yes		Yes		Yes	Yes		Yes		
Intercept												
	0.674	***	0.650	***	0.699		0.322	*	0.383	**	0.690	†
	(0.024)		(0.024)		(0.247)		(0.162)	(0.135)		(0.152)		
Pseudo R-squared												
	.016		.007		.038		.015	.041		.019		
Number of observations												
	78974		106149		1694		1338	817		1256		

*** p<.001, ** p<.01, * p<.05, † p<.1

Table G: Logistic panel regression models predicting partnership status, estimated with CEM weights and clustered standard errors (UKHLS, 2009-2022).

	Main model		+ interaction		+ controls		+ children	
Sexual identity								
Heterosexual women	-0.474 (0.071)	***	-0.863 (0.162)	***	-0.891 (0.160)	***	-1.201 (0.149)	***
Gay men	-4.154 (0.554)	***	-4.879 (1.186)	***	-4.936 (1.057)	***	-2.718 (0.902)	**
Lesbian women	-1.105 (0.411)	**	-2.133 (0.964)	*	-2.147 (0.972)	*	-0.852 (0.933)	
Bisexual men	-2.755 (0.627)	***	-2.344 (1.465)		-2.206 (1.386)		-1.897 (1.180)	
Bisexual women	-1.026 (0.434)	*	-1.286 (1.135)		-1.246 (1.109)		-1.103 (1.050)	
Educational level								
Medium educated	0.185 (0.096)	†	-0.087 (0.134)		-0.224 (0.134)	†	-0.118 (0.126)	
High educated	0.741 (0.091)	***	0.509 (0.128)	***	0.397 (0.129)	**	0.699 (0.124)	***
Birth cohort								
1945/1964	-0.669 (0.090)	***	-0.673 (0.090)	***	0.356 (0.116)	**	0.393 (0.108)	***
1980/1994	-2.091 (0.081)	***	-2.089 (0.081)	***	-1.520 (0.098)	***	-1.035 (0.097)	***
Sexual identity # Educational level								
Heterosexual women # Medium educated			0.515 (0.194)	**	0.546 (0.192)	**	0.442 (0.180)	*
Heterosexual women # High educated			0.448 (0.183)	*	0.368 (0.181)	*	0.401 (0.172)	*
Gay men # Medium educated			0.227 (1.495)		0.364 (1.378)		-0.052 (1.165)	
Gay men # High educated			1.109 (1.179)		1.128 (1.080)		0.552 (0.942)	
Lesbian women # Medium educated			1.430 (1.160)		1.325 (1.168)		0.948 (1.124)	
Lesbian women # High educated			1.069 (1.052)		0.801 (1.057)		0.678 (1.011)	
Bisexual men # Medium educated			1.389 (1.500)		1.336 (1.441)		1.538 (1.276)	
Bisexual men # High educated			-1.521 (1.529)		-1.508 (1.480)		-0.997 (1.290)	
Bisexual women # Medium educated			0.244 (1.341)		0.406 (1.310)		0.198 (1.236)	
Bisexual women # High educated			0.360 (1.238)		0.235 (1.214)		0.347 (1.153)	
Ethnic group								
Non-white UK					-0.835 (0.090)	***	-0.923 (0.086)	***
ISCO current occupation								
ISCO 3-4					-0.057 (0.053)		-0.110 (0.053)	*
ISCO 5-6					-0.177 (0.065)	**	-0.293 (0.064)	***
ISCO 7-9					-0.088 (0.069)		-0.189 (0.069)	**
Not employed					-0.482 (0.058)	***	-0.703 (0.058)	***
Age (centred on mean)								
					-0.068 (0.004)	***	-0.072 (0.004)	***
Age (squared)								
					-0.004 (0.000)	***	-0.002 (0.000)	***
Parental SES								
Higher managerial					0.298 (0.074)	***	0.412 (0.071)	***

*** p<.001, ** p<.01, * p<.05

(Continue Table G from previous page)

	Main model		+ interaction		+ controls		+ children	
Region (ref. North East)								
North West					-0.592	**	-0.402	*
					(0.187)		(0.179)	
Yorkshire and the Humber					-0.387	*	-0.266	
					(0.192)		(0.184)	
East Midlands					-0.155		0.040	
					(0.199)		(0.191)	
West Midlands					-0.950	***	-0.777	***
					(0.191)		(0.184)	
East of England					-0.320	†	-0.129	
					(0.191)		(0.183)	
London					-1.309	***	-0.981	***
					(0.188)		(0.180)	
South East					-0.560	**	-0.286	
					(0.183)		(0.175)	
South West					-0.282		-0.058	
					(0.191)		(0.183)	
Wales					-0.406	†	-0.336	†
					(0.208)		(0.199)	
Scotland					-0.762	***	-0.508	**
					(0.201)		(0.192)	
Northern Ireland					-1.006	***	-0.876	***
					(0.229)		(0.216)	
Having a child(ren)								
Yes							3.026	***
							(0.072)	
Intercept	6.889	***	7.082	***	7.676	***	4.285	***
	(0.099)		(0.120)		(0.209)		(0.211)	
Lnsig2u	3.891		3.888		3.817		3.531	
	(0.018)		(0.018)		(0.019)		(0.019)	
Sigma_u	6.997		6.988		6.743		5.846	
	(0.064)		(0.063)		(0.062)		(0.056)	
Rho	0.937		0.937		0.933		0.912	
	(0.001)		(0.001)		(0.001)		(0.002)	
Pseudo R-squared	.007		.007		.017		.034	
Number of observations	190228		190228		190228		190228	

*** p<.001, ** p<.01, * p<.05

CONCLUSIONS

Sexual orientation emerges clearly as a significant stratification factor for educational stratification and partnership outcomes from this thesis, but remains an under-investigated dimension in quantitative social research. This dissertation has examined its relationship with education from multiple perspectives trying both to advance knowledge in this field and to advocate for more research and better data. The main objectives were to provide insights into the mechanisms underlying this relationship and their evolution over time, to investigate whether educational advantages - where they exist - can influence or buffer against disparities in union formation, and to expand knowledge of this scholarship beyond the United States, where most previous research has been conducted.

To address these aims, the thesis consist of both theoretical and empirical chapters. Chapters 1 and 2 set the conceptual foundations and discuss methodological issues. Chapter 3 explored the heterogeneities of LGB sexual identity development across European countries. Chapter 4 examined how sexual orientation shapes the educational choices and achievements of LGB adolescents in the UK. Chapter 5 investigated whether these patterns have changed across birth cohorts and tentatively discussed possible explanations, while Chapter 6 turned to partnership outcomes to gain insights into how educational advantages may influence a key dimension of LGB people life-course trajectories.

Results from Chapter 3 highlight differences in self-disclosure and first coming out by sexual identity, age, and country among LGB people in Europe. While age at self-disclosure is stable across cohorts, the age at first coming out has decreased, narrowing the gap between self-recognition and disclosure. Gay and bisexual men, however, experience the longest gaps, suggesting that stigma persists, particularly for LGB men. Patterns also vary between countries, reflecting the influence of social, cultural, and legal contexts on sexual identity development.

Chapter 4 shows that non-heterosexual boys exhibit higher grades and educational expectations than their heterosexual peers. In contrast, lesbian girls do not significantly differ from heterosexual girls, showing no evidence of a “lesbian penalty” while bisexual girls outperform heterosexual girls, achieving the highest mean GCSE scores across all groups. No substantial gender differences were observed in STEM subject taken between gay boys and lesbian girls compared to their heterosexual peers.

Similarly to evidence from the USA, Chapter 5 found that gay men consistently maintain a relative educational advantage across cohorts. Across cohorts they also were more likely to place high value on education and have positive relationships with parents and teachers,

despite social isolation. In contrast, the educational premium for lesbian women has disappeared in younger cohorts, alongside a worsening of relationships with teachers and family (only partially significant). A comparable pattern of contextual change is also observed among bisexual women, although they do not exhibit a statistically significant educational premium in either cohort. Finally, results for bisexual men are mixed with respect to both contextual change and educational premium, likely due to smaller sample sizes and greater statistical uncertainty.

Finally, results from Chapter 6 show that, overall, LGB people are more likely to be single or in non-residential partnerships than to have a coresident partner, with gay men showing the highest probability of being single. gay men are also generally less likely to enter a first coresidential union than heterosexual men. Despite generally higher educational levels among LGB people, no clear educational gradient emerges in partnership outcomes, nor birth cohort ones. If anything, some pattern suggests that highly educated lesbian women in the oldest cohort are less likely to have a partner compared to their lower educated counterparts.

Overall, the findings highlight both consistencies with previous literature and results that contrast with earlier studies. These contrasts, given the limited evidence available outside the USA, may reflect context-specific features of the UK or the birth cohorts under study. Consistent with prior research, the results show that the age of first coming out is decreasing, that gay men continue to enjoy an educational advantage relative to heterosexual peers while the educational premium for lesbian women appears to be declining. Results also confirm that LGB men are generally less likely to be in a coresidential partnership compared to heterosexual individuals, suggesting persistent disparities in relationship trajectories.

At the same time, the results reveal important nuances. Gendered and country-specific differences emerge in sexual identity development, indicating that experiences of coming out and navigating adulthood vary across groups and contexts. Adolescent bisexual women exhibit higher educational outcomes compared to lesbian women, achieving the highest educational grades among students born in the UK between 2000 and 2002. Differently from LGB men, the relationships of LGB women with peers, families, and teachers appear to have worsened across younger cohorts, suggesting increasing social challenges in recent cohorts. Finally, lesbian women in our sample do not significantly differ from heterosexual women in their likelihood of being single or being in a coresidential union.

From a theoretical perspective, the findings reinforce and refine the multi-level framework outlined in Chapter 1, which conceptualizes sexual-orientation as social positioning

emerging from the interaction of individual strategies, relational environments, and broader structural contexts across the life course. Relatedly, educational choices and outcomes that may appear to result from individual motivations – such as effort, resilience, or self-efficacy – cannot be understood in isolation. Instead, they are shaped by sexual identity development, group-level pressures, peer and family relationships, and institutional and cultural conditions.

Across the empirical chapters, consistent differences within LGB populations reflect the distinct social positioning of non-heterosexual individuals across contexts and cohorts. Cross-national and cohort variation in disclosure timing and coming out (Chapter 3) indicates differences in constraint and opportunity structures. Differences in educational expectations and performance (Chapter 4) further show that apparently individual mechanisms are socially embedded and operate differently across gender and sexual identity groups. For example, the educational advantage of gay men appears to reflect both coping strategies and gendered social expectations, while the patterns observed among bisexual women and men illustrate how identity-specific stereotypes and relational dynamics intersect with educational processes. Results also show that educational expectations are shaped in part through peer and family relationships, underscoring their relational foundation.

Cohort comparisons (Chapter 5) further demonstrate that these mechanisms are not uniform but contingent on subgroup-specific experiences and interpersonal dynamics. For instance, differently from gay men, persistent bullying and social isolation among bisexual men do not result in a consistent educational premium, indicating that exposure to such experiences does not produce uniform effects. Furthermore, cohort shifts in visibility, norms, and stigma suggest that changing social narratives alter social positioning and relational experiences, thereby indirectly shaping educational trajectories. The worsening social relationship across cohorts are associated with a decline in educational premiums among lesbian women, while educational premiums are absent across cohorts for bisexual women.

Taken together, the results confirm the value of a multi-level and contextually sensitive approach to educational and early lifecourse outcomes among LGBTQIA* populations. Mechanisms behind educational (in)equality operate under specific relational and contextual conditions and function as gendered and identity-specific processes whose strength varies across cohorts and institutional settings.

Extending the theoretical framework's emphasis on context-dependent and subgroup-specific mechanisms, the notion of "diverging trajectories" in this dissertation is best interpreted through differences within the LGB population. Divergence emerges not only

between heterosexual and LGB populations, as highlighted in prior research, but also within the LGB population itself, thus across gender, sexual identity, and cohort. In addition, a central question of the dissertation remains whether educational inequalities among LGB adolescents translate into diverging early adult trajectories. The empirical results suggest that educational premiums among gay men and lesbian women do not appear to shape their partnership dynamics. Yet, the question of “diverging trajectories” in the lifecourse remains open in light of the (constant) educational premium found in this thesis if related to the vast literature concerning inequalities in labour market and mental health in adulthood. While this thesis does not directly investigate outcomes beyond partnership formation, the findings raise the question of why educational advantages do not appear to translate into equalized outcomes in other adult domains.

A tentative answer may be that, in several cases, educational success appears linked to coping and adaptation strategies in stigmatizing environments, which may support academic achievement without necessarily modifying the relational or structural constraints LGB people will face in early adulthood. These insights emphasize the need for policies that go beyond promoting educational achievement. Interventions should address the root causes of inequalities, including stigma, discrimination, and emotional well-being, and actively support the translation of educational success into long-term opportunities. By highlighting the complex interplay between identity, context, and life outcomes, this dissertation contributes to a deeper understanding of the processes shaping social stratification among LGBTQIA* individuals and underscores the importance of adopting nuanced, identity-sensitive approaches in both research and policy. Such an approach calls for further research on the demographic and socio-economic outcomes of LGBTQIA* individuals.

Despite the contributions of this dissertation, several challenges remain, and important gaps need to be addressed in future research. First, findings for bisexual individuals remain difficult to interpret. Results vary substantially across cohorts, and small sample sizes, particularly in older cohorts, limit the robustness of conclusions. While the theoretical framework presented in Chapter 1, which underpins the reasoning and research design in the following chapter, provides a useful starting point for contextualizing and understanding the experiences and differences of LGBTQIA* identities, it remains a preliminary attempt. In the coming years, research should both generate new empirical evidence - especially on bisexual, queer, and other often-neglected identities - and use these findings to refine and advance theoretical and conceptual models for a better interpretation of empirical results. Second, the patterns observed for lesbian women call for further longitudinal investigation. While this study sheds light on declining educational premiums and changes of school and family context across cohorts, the mechanisms underlying these trends cannot be fully

disentangled within this research design. Third, the analysis has been restricted to the UK, mainly reflecting data availability. While this advances current literature, the ability to capture cross-national variation remains limited. There is still a need to explore different cultural contexts in order to better understand how institutional settings and policies may shape educational and partnership outcomes for LGBTQIA* individuals.

Future research should address these gaps by advocating for larger, more diverse, and longitudinal datasets that make it possible to explore intersectional effects of sexual identity beyond gender - such as intersections with socioeconomic background and ethnicity. This dissertation demonstrates that sexual orientation outcomes are not uniform: they vary across cohorts, genders, and sexual identities. Studying these differences is essential to understanding the mechanisms underlying educational stratification and life-course trajectories among LGB populations. Expanding data collection would also enable cross-national analyses, allowing scholars to investigate how social policies, cultural attitudes, and structural inequalities shape LGBTQIA* outcomes in different contexts. In addition, richer datasets should incorporate more granular and dynamic measures of sexual identity across the life course, capturing its fluidity and potential changes over time.

Beyond large-scale surveys, qualitative research and primary data collection remain crucial for investigating the mechanisms through which education interacts with stigma, social networks, and identity to shape life course trajectories. Combining these approaches would help move the field beyond descriptive patterns and toward a more comprehensive understanding of how sexual identity, education, and adulthood intersect. Importantly, even where educational advantages are observed among some LGB groups, these may reflect coping with stigma rather than unambiguous social advantage. Addressing these gaps would significantly advance knowledge of the long-term consequences of educational attainment for LGBTQIA* individuals and provide stronger evidence.

Notwithstanding the limitations illustrated in every chapter and the methodological challenges of studying the LGBTQIA* population discussed in Chapter 2, sexual orientation will increasingly become a promising and important branch of demographic and sociological research. Studying LGBTQIA* issues is not only important to shed light on a small yet growing segment of the world population, but it also provides a powerful lens through which to rethink gendered analyses in quantitative literature and to unveil mechanisms of inequality that may otherwise remain hidden. In this light, sexual orientation is not a “niche” concern but may be central to understanding social stratification in contemporary societies.