

Disparities in Subjective Well-being by Sexual Orientation: Comparing Cohorts from pairfam's (2008-09) and FReDA's (2021) Baseline Waves*

Karsten Hank, Franz J. Neyer, Carolin Thönnissen

Abstract: Significant expansion of legal rights and recognition of sexual minority populations triggered expectations that structural stigma, sexual minority stress and, consequently, previously well-documented disadvantages in health and well-being may decline over time. The empirical evidence on this issue is, however, still sparse and inconclusive. We contribute to this research by comparing baseline data from the *German Family Panel* (pairfam; 2008-09) and the *German Family Demography Panel Study* (FReDA; 2021). These data allow us to assess disparities in subjective well-being by sexual orientation and potential changes therein after legalisation of same-sex marriage in Germany in two adult cohorts interviewed more than a decade apart. We focus on two specific outcomes, namely life satisfaction and self-rated health. Two main findings emerged from our analysis: *First*, minority sexual orientation is associated with significantly lower subjective well-being, specifically lower life satisfaction. *Second*, there are no statistically significant changes in the sexual orientation-health nexus between cohorts. Our study, thus, neither lends support to “optimistic” expectations regarding the contribution of (further) reductions in institutional discrimination and structural stigma to (further) reductions in remaining disadvantages, nor does it lend support to “pessimistic” expectations suggesting that younger cohorts of sexual minority adults may experience an even larger gap in health and well-being than previous cohorts. We propose that the stability of sexual minorities’ disadvantages in subjective well-being during the first two decades of the 21st century in Germany be interpreted as the result of two opposing forces working in parallel: Reduced institutional discrimination and increased exposure to continued stigma. The legal recognition of same-sex relationships appears to be a necessary but not sufficient condition for the acceptance of sexual minorities. Remaining disparities by sexual orientation will thus not simply disappear when institutional discrimination of sexual minorities is eliminated. Currently, we may therefore find ourselves in a “transitory

* This article belongs to a special issue on “Family Research and Demographic Analysis – New Insights from the German Family Demography Panel Study (FReDA)”.

period” whose further evolution is difficult to predict. FReDA – with its evolving longitudinal dimension and the inclusion of self-reported measures of respondents’ sexual orientation – will constitute a powerful resource for future investigations of inequalities in yet understudied but increasingly visible sexual minority populations.

Keywords: Sexual minorities · Structural stigma · Health inequalities · Social change

1 Introduction

A plethora of studies indicate disadvantages in health and well-being among people with minority sexual orientations (see *Hsieh/Shuster 2021*; *National Academies of Sciences, Engineering, and Medicine 2020*: Chapter 11 for reviews). While there are several theoretical frameworks aiming to explain these disparities, one common approach refers to stigmatising and stress processes (see *Hsieh/Shuster 2021*: 323f.; *National Academies of Sciences, Engineering, and Medicine 2020*: Chapter 2). Accordingly, significant expansions of legal rights and recognitions of sexual minority populations – such as the legalisation of same-sex marriage – triggered expectations that structural stigma (*Hatzenbuehler 2016*; *National Academies of Sciences, Engineering, and Medicine 2020*: Chapter 6), sexual minority stress (*LeBlanc et al. 2015*; *Meyer 1995*) and, consequently, disadvantages in health and well-being may have declined. However, whereas *Hatzenbuehler et al. (2018)* found that sexual orientation-related mental health disparities present in Swedish gay men and lesbian women in 2005 had disappeared ten years later, *Liu/Reczek (2021)* provide evidence of increasing disadvantages in health and well-being among gay, lesbian, and bisexual-identified people across three US cohorts, suggesting that “LGB health disparities may be a result of more insidious and deeply embedded factors in US society that are not eradicated simply with changes in marriage or discrimination laws” (*Liu/Reczek 2021*: 1468; also see *Dotti Sani/Quaranta 2022*).

Against the background of these sparse and ambiguous empirical findings, it seems worthwhile to assess changes over time in sexual minorities’ health disparities in further contemporary “Western” societies. The present study focusses on the German context, a yet understudied case that is characterised by steadily increasing numbers and proportions of cohabiting same-sex couples (*Lengerer/Bohr 2019*), a notable increase in positive attitudes towards gays and lesbians (*Dotti Sani/Quaranta 2022*), as well as much improved opportunities to formalise same-sex relationships (from the adoption of the “Lebenspartnerschaftsgesetz” in 2001 to the legalisation of same-sex marriages in 2017; *Waldijk 2020*); see *Fischer/de Vries (2023)* for an overview.

To date, only very few studies drawing on population-based samples investigated health disparities in Germany’s sexual minority populations. Compared to the general population, *Sattler et al. (2017)* observed more mental health problems in gay and bisexual men, partly attributing this difference to minority stress (also see

Sattler et al. 2016). Similarly, *Kasprowski et al.* (2021) identified significant physical health disadvantages as well as a three times higher risk of suffering from depression among LGBTQ+ people than in the general population, whereas *Buczak-Stec et al.* (2021) found no significant association between sexual orientation and depressive symptoms among community-dwelling older adults.

These previous German studies merely provide a descriptive snapshot taken at a single point in time, however. We extend this research by comparing baseline data from the *German Family Panel* (pairfam; *Huinink et al.* 2011) and the *German Family Demography Panel Study* (FReDA; *Hank et al.* 2023; *Schneider et al.* 2021). Whereas the pairfam sample was first interviewed in 2008-09, FReDA's baseline wave was collected in 2021. This allows us to assess health disparities by sexual orientation and potential changes therein after the legalisation of same-sex marriage in two cohorts of adults aged 24 to 38 at the time of the respective interviews, which were conducted 13 years apart. In other words, we are interested in possible *changes over time across cohorts due to period effects*: Within the same age range, our two cohorts were exposed to different societal conditions, therefore we can rule out age effects. Both surveys provide partnership-inferred information on respondents' sexual orientation (see *Hank/Wetzel* 2018 for an exemplary previous study using pairfam) as well as various indicators of subjective well-being. With regard to the latter, we focus on two specific outcomes, namely life satisfaction (e.g., *Boertin/Vignoli* 2019; *Meyer et al.* 2022; *Tornello et al.* 2018) and self-rated health (SRH; e.g., *Carpenter et al.* 2021; *Reczek et al.* 2017; *Solazzo et al.* 2020). While SRH is mostly used as a proxy for respondents' more objective health characteristics, we are particularly interested in SRH answers as indicators of respondents' perceptions of health, emphasising the subjective component of the concept (see *Gabarski* 2016).

The remainder of this article is structured as follows: Section 2 briefly discusses the relationship between structural stigma, sexual minority stress, and well-being. Section 3 introduces our data and methods, followed by a description of results in Section 4. The final Section 5 provides conclusions.

2 Structural stigma, sexual minority stress, and well-being

According to *minority stress* theory (*LeBlanc et al.* 2015; *Meyer* 1995), sexual minorities are exposed to specific stressors (such as discrimination and internalised homophobia), which have been associated with higher risks to engage in unhealthy behaviours (e.g., smoking, excessive drinking, illicit drug use) and poorer health outcomes. Physiologically, for example, minority stress contributes to the dysregulation of cortisol, which adversely affects metabolism, immune function, cardiovascular health, cognition, and mood (e.g., *Hsieh/Shuster* 2021; also see *Hatzenbuehler* 2009). A recent Consensus Study Report of the US *National Academies of Sciences, Engineering, and Medicine* (2020: 8) thus concludes that "disparities affecting [sexual and gender diverse] populations are driven by experiences of minority stress, which include both structural and interpersonal stigma, prejudice, discrimination, violence, and trauma".

Importantly, *structural stigma* is explicitly acknowledged here. Whereas previous research on stigma and its consequences for health and well-being focussed on the individual and interpersonal levels, macro-social forms of stigma have only been addressed more recently, eventually leading to a conceptualisation of stigma “as a multilevel construct [...], ranging from individual (e.g., self-stigma) and interpersonal processes (e.g., discriminatory treatment) to structural factors (e.g., laws and policies, institutional practices)” (*National Academies of Sciences, Engineering, and Medicine* 2020: 131; see *Link/Phelan* 2001). Referring to this conceptual framework, structural stigma has been defined as “societal-level conditions, cultural norms, and institutional policies that constrain the opportunities, resources and wellbeing of the stigmatized” (*Hatzenbuehler* 2016: 743). This broad definition allows for different approaches to measure structural stigma, focusing on single components (e.g., laws and policies or social attitudes) or using composite indicators. Geographic variation in different dimensions of structural stigma (e.g., *Hatzenbuehler et al.* 2009; *Perales/Todd* 2018) as well as changes therein over time (e.g., *Boertin/Vignoli* 2019; *Hatzenbuehler et al.* 2018) provide researchers with opportunities to employ observational or even (quasi-)experimental designs to assess associations between different levels of structural stigma and health disparities in sexual minority populations (see *Hatzenbuehler* 2016).

Structural stigma resulting from *institutional discrimination* – especially same-sex marriage bans – seems particularly relevant (and has received particular attention) for at least two reasons: First, *Aksoy et al.* (2020) showed that legal relationship recognition was associated with improvements in attitudes toward sexual minorities (also see *Ofori et al.* 2019).¹ Even though “changes in public opinion occur at a slower pace compared with institutional changes [...] state-level recognition of same-sex relationships [...] appears to be a necessary but not a sufficient condition for the acceptance of homosexuality” (*Dotti Sani/Quaranta* 2022: 135), abolishing specific elements of institutional discrimination might thus contribute to reducing structural stigma in both direct and indirect ways. Second, institutional discrimination affects the well-being of entire minority groups and not just those directly involved (e.g., *Hatzenbuehler et al.* 2009). Conversely, the effect of abolishing an institutional source of discrimination may also extend beyond the target group. Specifically, same-sex marriage legalisation has been suggested to have had a beneficial effect on sexual minorities’ health regardless of union status, presumably resulting from a general reduction in structural stigma (e.g., *Boertin/Vignoli* 2019; *Carpenter et al.* 2021; *Chen/van Ours* 2022).

In *Germany*, the detrimental effects of structural stigma on sexual minorities’ health and well-being may already have declined following the adoption of the “*Lebenspartnerschaftsgesetz*” (allowing for same-sex registered partnerships) in 2001 and parallel to continuously improving public attitudes towards gays and

¹ Obviously, the reverse causal relationship – that changing attitudes affect social and legal practices and, eventually, result in de jure changes – also needs to be considered (see *Hank/Steinbach* 2019 for a more general discussion).

lesbians over the past two decades (*Dotti Sani/Quaranta 2022*). One might still expect to observe further reductions in health disparities after Germany legalised same-sex marriages in 2017. However, despite an overall tendency towards greater liberalism and tolerance of sexual minority rights, homonegativity at the individual level continues to persist and public attitudes towards homosexuality are less positive in Germany than in the Scandinavian countries, albeit more positive than in Southern and Eastern Europe (e.g., *Dotti Sani/Quaranta 2022*; *Waldijk 2020*: Table 2.2). It might therefore just as well be the case that sexual minorities' health disadvantage in Germany did not decrease across recent cohorts (as observed in Swedish gay men and lesbian women; *Hatzenbuehler et al. 2018*), but remained stable or even increased (as reported by *Liu/Reczek 2021* for the US), because younger cohorts – coming out more openly and thus being potentially more exposed to remaining stigma – may react more sensitively (that is, with greater declines in subjective well-being) to experiences of homophobia, etc.

3 Data & method

3.1 Data

Our empirical analysis is based on two independent samples: The first was derived from the *German Family Panel* (pairfam; see *Brüderl et al. 2022*), which was funded by the German Research Foundation until 2022 but is now fully integrated into the German Family Demography Panel Study. Respondents in this sample are nationally representative of two cohorts – born in 1971-73 and in 1981-83 – and were first interviewed in 2008-09 (annual follow-up interviews have been conducted since then, but were not included in our study). Because our identification of sexual minority respondents depends on self-reported same-sex partnerships prior to or at the time of the baseline interview, we only considered respondents who ever had a partner for at least six months (or shorter if they cohabited or had a child while in that relationship). This applies to only half of pairfam's youngest cohort born in 1991-91 (aged 15-17 at baseline) versus 95 percent in the two older cohorts. Following *Hank/Wetzel (2018)*, we therefore decided to exclude the entire cohort from our study. This leaves us with a total of 7,628 respondents aged 24 to 38, of whom 96 (= 1.3 percent) reported to have had one or more same-sex relationships. (Note that the number of respondents identified as having had same- and different-sex partners was far too small to consider them as a distinct category of bisexuals in our analysis; also see *Hank/Wetzel 2018*.)

The second sample was derived from the first wave of the *German Family Demography Panel Study* (FReDA; see *Hank et al. 2023*; *Schneider et al. 2021*). The FReDA-GGS sample, which constitutes the German contribution to the Generations and Gender Surveys, was drawn from the population aged 18 to 49 living in Germany and was first interviewed in 2021. The data used for our analysis come from FReDA's Wave 1A (*Bujard et al. 2023*), comprising 8,986 web-based and 1,436 paper-based self-administered interviews with respondents aged 24 to 38 at the

time of the interview who ever had a partner for at least three months. Of these, 325 (= 3.1 percent) reported to have had one or more same-sex relationships. This means that the proportion of sexual minority respondents in the FReDA-GGS sample is substantially larger than in the pairfam sample.

This difference between samples might be explained by younger cohorts (1) being actually more likely to experience same-sex relationships (e.g., *Lengerer/Bohr* 2019), (2) being more willing to disclose minority sexual orientations in social surveys, and (3) by differences in interview modes: Whereas pairfam conducted face-to-face interviews, FReDA implemented a more “anonymous” mixed-mode design with self-administered interviews. Moreover, FReDA’s respondents are, on average, more highly educated (see below) and LGBT people tend to be better educated than the total adult population (e.g., *Pew Research Center* 2013: Chapter 1). Importantly, the estimates from both our samples are within the range of estimates of sexual minority population prevalence derived from recent US surveys, for example (see *PDR* 2022: Table 1).

3.2 Measures

We employ two measures of individuals’ subjective well-being as *dependent variables*: The first, *general life satisfaction*, was assessed by the question “All in all, how satisfied are you with your life at the moment?” referring to an 11-point answer scale ranging from “very dissatisfied” (0) to “very satisfied” (10). The second, *self-rated health*, was assessed by the question “How would you describe your health status [during the past 4 weeks; pairfam], generally speaking?”, with answer categories ranging from “poor” (1) to “very good” (5) in the pairfam questionnaire and from “very good” (1) to “very poor” (5) in the FReDA questionnaire, respectively. Following common practice (e.g., *Reczek et al.* 2017; *Solazzo et al.* 2020), we dichotomised self-rated health: The resulting binary indicator equals 1 if respondents described their health status as good or better (the two top categories in both surveys), 0 otherwise. For simplicity and ease of interpretation we run *linear (OLS) regressions* for both outcome variables, but results are not sensitive to this choice.

Our *main explanatory variable* is a binary indicator of individuals’ partnership-inferred sexual orientation, which takes the value of 1 if respondents reported having had any same-sex relationship prior to or at the time of the interview. This frequently employed measure (1) tends to exclude singles and makes it difficult to identify bisexuals (e.g., *Kühne et al.* 2019), (2) is sensitive to sex-coding errors (e.g., *Régnier-Loilier* 2018), and (3) captures only one specific dimension of the individual’s sexual orientation (e.g., *Bailey et al.* 2016). One would thus ideally complement partnership-inferred information with self-reports of respondents’ sexual orientation (e.g., *Kühne et al.* 2019), which, however, were not collected in pairfam’s and FReDA’s baseline waves.

Moreover, we accounted for a set of standard socio-demographic *control variables* (e.g., *Liu/Reczek* 2021): age, sex (a binary indicator that equals 1 if the respondent was (self-)identified as female), relationship status (three binary

indicators distinguishing singles (ref.) from those living apart together and married/cohabiting respondents), parental status (a binary indicator that equals 1 if the respondent has any children), highest school degree (a binary indicator that equals 1 if the respondent achieved “(Fach-)Hochschulreife”), employment status (a binary indicator that equals 1 if the respondent is gainfully (self-)employed), as well as country of birth (a binary indicator that equals 1 if “Germany” was reported as country of birth).

Comparing (unweighted) descriptive sample statistics for both of our samples reveals major similarities in basic demographic characteristics (such as average age, sex, proportion of singles, country of birth), but also some noteworthy exceptions (see Table 1): Alongside a larger proportion of sexual minority respondents in the FReDA-GGS sample (see above), we observe a higher average level of general life satisfaction (7.48 vs 7.06), but somewhat lower self-rated health (good or better: 66.7 percent vs 71.2 percent) in the pairfam sample.² Moreover, the proportion of parents is about ten percentage points larger in the pairfam sample, whereas the FReDA-GGS sample is, on average, substantially more highly educated.

Tab. 1: Descriptive sample statistics (unweighted percentages or means with standard errors in parentheses)

	<i>pairfam</i>	<i>FReDA</i>
Life satisfaction	7.48 (1.79)	7.06 (1.84)
Self-rated health (good or better)	66.7 %	71.2 %
Minority sexual orientation	1.3 %	3.1 %
Age	31.3 (5.1)	31.5 (4.2)
Sex (female)	53.8 %	56.9 %
Living apart together	14.9 %	12.0 %
Married/cohabiting	65.1 %	73.2 %
Respondent has child(ren)	54.1 %	44.3 %
Education (“FH/Abitur”)	40.3 %	71.4 %
Gainfully (self-)employed	71.2 %	72.2 %
Country of birth (Germany)	83.3 %	88.3 %
Observations	7,628	10,429

Source: Own calculations based on pairfam (Wave 1) and FReDA (Wave 1A)

² We cannot determine whether the lower average level of life satisfaction in FReDA’s baseline wave is due to a survey mode effect (e.g., Sarracino *et al.* 2017) or a result of the COVID-19 pandemic (e.g., Möhring *et al.* 2021).

4 Results

Our multivariate analysis (see Table 2) revealed generally lower life satisfaction in sexual minority respondents, but provides no indication of a statistically significant disadvantage in self-rated health by sexual orientation. In the pairfam sample, life satisfaction is substantially lower if respondents reported to have (had) a same-sex partner: -0.66 without controls and -0.56 if control variables are included in the regression. Even though the coefficients in the FReDA-GGS sample are almost two-thirds smaller – and only marginally significant (at the 10 percent level) when controlled for socio-demographic characteristics – a Wald test does not indicate statistically significant differences between the coefficients in both samples. This is also true if we compare the sexual orientation coefficients in the regressions for self-rated health; importantly though, if we employ a continuous measure of self-rated health, we find indication of a statistically significant disadvantage in subjective well-being in sexual minority respondents from the FReDA-GGS sample (details not shown).

The coefficients of the control variables provide a picture of overall lower subjective well-being in older and female respondents, whereas those with a partner or a higher educational degree reported higher levels of subjective well-being than their counterparts. We observe some statistically significant differences (results of Wald test not shown) – or changes over time – between samples, however: Whereas women in the pairfam sample exhibit a higher life satisfaction than men, the association between sex and life satisfaction reversed in the FReDA-GGS sample. Moreover, having children does not have a statistically significant association with life satisfaction in the pairfam sample, but is positively associated with life satisfaction in FReDA. Finally, gainful (self-)employment is positively correlated with both life satisfaction and self-rated health in pairfam, whereas the coefficients became much smaller and insignificant in the FReDA-GGS sample. One possible explanation for these latter findings – which we can only speculate, however – is that the observed differences result from partly gender specific effects of the COVID-19 pandemic on work and family life (e.g., *Möhring et al.* 2021).

5 Conclusions

Against the background of significant expansions of legal rights and recognitions of sexual minority populations as well as yet sparse and inconclusive empirical evidence of how such developments may have affected sexual minorities' health disadvantages, the current study set out to investigate potential changes in subjective well-being disparities by sexual orientation in two adult cohorts that were interviewed more than a decade apart in the respective baseline waves of the German Family Panel (pairfam) and the German Family Demography Panel Study (FReDA).

Two main findings emerged from our analysis: *First*, minority sexual orientation is associated with significantly lower subjective well-being, specifically lower life

Tab. 2: Linear regression results for life satisfaction and self-rated health in the pairfam and FReDA baseline samples (standard errors in parentheses)

	Life satisfaction		Self-rated health	
	<i>pairfam</i>	<i>FReDA</i>	<i>pairfam</i>	<i>FReDA</i>
Minority sexual orientation (w/out controls)	-0.66*** (0.18)	-0.22* (0.10)	-0.02 (0.05)	-0.04 (0.03)
Minority sexual orientation (w/controls)	-0.56** (0.18)	-0.19 (0.10)	-0.03 (0.05)	-0.04 (0.03)
Age	-0.01*** (0.00)	-0.01 (0.00)	-0.01*** (0.00)	-0.00*** (0.00)
Sex (female)	0.08* (0.04)	-0.17*** (0.04)	-0.05*** (0.01)	-0.05*** (0.01)
Relationship status (ref.: single)				
Living apart together	0.77*** (0.07)	0.80*** (0.07)	0.03 (0.02)	0.07*** (0.02)
Married/cohabiting	1.19*** (0.05)	1.09*** (0.05)	0.07*** (0.01)	0.11*** (0.01)
Respondent has child(ren)	-0.02 (0.05)	0.18*** (0.04)	-0.03* (0.01)	-0.01 (0.01)
Education ("FH/Abitur")	0.35*** (0.04)	0.40*** (0.04)	0.07*** (0.01)	0.12*** (0.01)
Gainfully (self-)employed	0.28*** (0.05)	0.06 (0.04)	0.04** (0.01)	-0.01 (0.01)
Country of birth (Germany)	-0.05 (0.05)	-0.04 (0.06)	-0.02 (0.01)	0.00 (0.01)
Constant	6.73*** (0.14)	6.18*** (0.17)	0.79*** (0.04)	0.73*** (0.04)
Observations	7,622	10,275	7,616	10,296
R-squared	0.08	0.06	0.02	0.02

Note: Respondents with missing values on any of the variables included in the regression model (< 1 percent in both samples) were excluded from the multivariate analysis.

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

Source: Own calculations based on pairfam (Wave 1) and FReDA (Wave 1A)

satisfaction. Whereas this result is consistent with other research indicating health disadvantages in Germany's sexual minority populations (e.g., *Kasprowski et al.* 2021; *Sattler et al.* 2017), it is important to note that self-rated health differentials by sexual orientation were only statistically significant in the FReDA-GGS sample when employing a continuous operationalisation. *Second*, we did not observe any statistically significant changes in the sexual orientation-health nexus between

cohorts. Therefore, our study neither lends support to very “optimistic” expectations regarding the contribution of (further) reductions in institutional discrimination and structural stigma to (further) reductions in sexual minorities’ health disadvantages (e.g., *Hatzenbuehler et al.* 2018), nor does our study lend support to “pessimistic” expectations suggesting that younger cohorts of sexual minority adults – being potentially more exposed to remaining stigma, for example – may even experience a larger gap in health and well-being than previous cohorts (e.g., *Liu/Reczek* 2021).

Our study aimed to assess possible differences between two cohorts due to their exposure to different societal conditions (period effects). We propose that the stability of sexual minorities’ disadvantage in subjective well-being during the first two decades of the 21st century in Germany be interpreted as the result of two opposing forces working in parallel: Reduced institutional discrimination and increased exposure to remaining stigma. The legalisation of same-sex marriage in 2017, for example, may have contributed to a (further) decline in structural stigma (thereby prohibiting a widening of health disparities), whereas the persistence of internalised homonegativity and ambiguous public attitudes towards homosexuality may have prohibited (further) progress in closing the disadvantage gap. The legal recognition of same-sex relationships thus appears as a necessary but not sufficient condition for the acceptance of sexual minorities and health disparities by sexual orientation will not simply disappear when the institutional discrimination of sexual minorities is eliminated (see *Dotti Sani/Quaranta* 2022; *Liu/Reczek* 2021). Currently, we might therefore find ourselves in a “transitory period” whose further evolution is difficult to predict.

Two main *limitations* of our study deserve consideration. We, firstly, cannot rule out mode effects on some of our core variables: The risk of sex-coding errors might vary by interview mode and participants might also respond differently to the same questions regarding their subjective well-being depending on whether they were asked by an interviewer (pairfam) or filled-out a self-administered questionnaire (FReDA). We should therefore be cautious when directly comparing, say, the levels of life satisfaction in our two study samples (see *Sarracino et al.* 2017 for a related discussion). However, as we are primarily interested in relative differences in well-being between groups within the same sample and whether the size of these relative differences changed over time, possible mode effects on levels in the outcome variables should not be a relevant issue. A second and, arguably, more important shortcoming is that our identification of respondents’ sexual orientation is based on a one-dimensional, partnership-inferred measure. This also limits our ability to distinguish gay and lesbian respondents from bisexuals. The latter have been shown to experience the largest sexual minority health disadvantages (e.g., *Liu/Reczek* 2021; *Ross et al.* 2018) and to be excluded from the benefits of reduced structural stigma for gay men and lesbians observed in the Swedish study by *Hatzenbuehler et al.* (2018). Fortunately, future waves of FReDA will include more refined self-reported measures of respondents’ sexual orientation, similar to those recently implemented in other surveys (e.g., *Fischer et al.* 2022). Together with its evolving longitudinal dimension, FReDA will then constitute a powerful resource for further

investigations of social, economic, and health inequalities in yet understudied but increasingly visible sexual minority populations.

Acknowledgements

We gratefully acknowledge funding by the Federal Ministry of Education and Research (BMBF) under grant # 01UW2001C (“FReDA: Integration und Fortführung der pairfam-Stichprobe”) as well as grants # 01UW2001A and # 01UW2001B.

References

- Aksoy, Cevat G. et al.* 2020: Do laws shape attitudes? Evidence from same-sex relationship recognition policies in Europe. In: *European Economic Review* 124: 103399. <https://doi.org/10.1016/j.euroecorev.2020.103399>
- Bailey, J. Michael et al.* 2016: Sexual orientation, controversy, and science. In: *Psychological Science in the Public Interest* 17,2: 45-101. <https://doi.org/10.1177/1529100616637616>
- Boertien, Diederik; Vignoli, Daniele* 2019: Legalizing same-sex marriage matters for the subjective well-being of individuals in same-sex unions. In: *Demography* 56,6: 2109-2121. <https://doi.org/10.1007/s13524-019-00822-1>
- Brüderl, Josef et al.* 2022: The German Family Panel (pairfam). GESIS Data Archive. Cologne. ZA5678 Data file Version 13.0.0. <https://doi.org/10.4232/pairfam.5678.13.0.0>
- Buczak-Stec, Elżbieta et al.* 2021: Der Anteil sexueller Minoritäten in der älteren Wohnbevölkerung in Deutschland und potenzielle Assoziation zwischen der sexuellen Orientierung und depressiven Symptomen. In: *Psychiatrische Praxis* 48,2: 92-98. <https://doi.org/10.1055/a-1228-6299>
- Bujard, Martin et al.* 2023: FReDA – The German Family Demography Panel Study. GESIS, Cologne. ZA7777 Data File Version 2.0.0. <https://doi.org/10.4232/1.14065>
- Carpenter, Christopher S. et al.* 2021: Effects of access to legal same-sex marriage on marriage and health. In: *Journal of Policy Analysis and Management* 40,2: 376-411. <https://doi.org/10.1002/pam.22286>
- Chen, Shuai; van Ours, Jan C.* 2022: Mental health effects of same-sex marriage legalization In: *Health Economics* 31,1: 42-56. <https://doi.org/10.1002/hec.4441>
- Dotti Sani, Giulia M.; Quaranta, Mario* 2022: Mapping changes in attitudes towards gays and lesbians in Europe: An application of diffusion theory. In: *European Sociological Review* 38,1: 124-137. <https://doi.org/10.1093/esr/jcab032>
- Fischer, Mirjam M.; de Vries, Lisa K.* 2023: LSBTQI* Paarbeziehungen und Familien In: *Arránz Becker, Oliver; Hank, Karsten; Steinbach, Anja* (Eds.): *Handbuch Familiensoziologie*. Wiesbaden: Springer VS: 601-623. https://doi.org/10.1007/978-3-658-35215-8_24-1
- Fischer, Mirjam M. et al.* 2022: Sexual and gender minority (SGM) research meets household panel surveys: Research potentials of the German Socio-Economic Panel and its boost sample of SGM households. In: *European Sociological Review* 38,2: 321-335. <https://doi.org/10.1093/esr/jcab050>

- Gabarski, Dana* 2016: Research in and prospects for the measurement of health using self-rated health. In: *Public Opinion Quarterly* 80,4: 977-997. <https://doi.org/10.1093/poq/nfw033>
- Hank, Karsten; Wetzel, Martin* 2018: Same-sex relationship experiences and expectations regarding partnership and parenthood. In: *Demographic Research* 39,25: 701-718. <https://doi.org/10.4054/DemRes.2018.39.25>
- Hank, Karsten; Steinbach, Anja* 2019: Families and their institutional contexts: The role of family policies and legal regulations. In: *Kölner Zeitschrift für Soziologie und Sozialpsychologie* 71,S1: 375-398. <https://doi.org/10.1007/s11577-019-00603-z>
- Hank, Karsten et al.* 2023: A new data infrastructure for family research and demographic analysis: The German Family Demography Panel Study (FReDA). In: *European Sociological Review* [forthcoming].
- Hatzenbuehler, Mark L.* 2009: How does sexual minority stigma “get under the skin”? A psychological mediation framework. In: *Psychological Bulletin* 135,5: 707-730. <https://doi.org/10.1037/a0016441>
- Hatzenbuehler, Mark L.* 2016: Structural stigma: Research evidence and implications for psychological science. In: *American Psychologist* 71,8: 742-751. <https://doi.org/10.1037/amp0000068>
- Hatzenbuehler, Mark L.; Bränström, Richard; Pachankis, John E.* 2018: Societal-level explanations for reductions in sexual orientation mental health disparities: Results from a ten-year, population-based study in Sweden. In: *Stigma and Health* 3,1: 16-26. <https://doi.org/10.1037/sah0000066>
- Hatzenbuehler, Mark L.; Keyes, Katherine M.; Hasin, Deborah S.* 2009: State-level policies and psychiatric morbidity in lesbian, gay, and bisexual populations. In: *American Journal of Public Health* 99,12: 2275-2281. <https://doi.org/10.2105/AJPH.2008.153510>
- Hsieh, Ning; Shuster, Stef M.* 2021: Health and health care of sexual and gender minorities. In: *Journal of Health and Social Behavior* 62,3: 318-333. <https://doi.org/10.1177/00221465211016436>
- Huinink, Johannes et al.* 2011: Panel Analysis of Intimate Relationships and Family Dynamics (pairfam): Conceptual framework and design. In: *Journal of Family Research* 23,1: 77-100. <https://doi.org/10.20377/jfr-235>
- Kasprowski, David et al.* 2021: LGBTQI* people in Germany face staggering health disparities. In: *DIW Weekly Report* 5-6/2021: 42-50. https://doi.org/10.18723/diw_dwr:2021-5-1
- Kühne, Simon; Kroh, Martin; Richter, David* 2019: Comparing self-reported and partnership-inferred sexual orientation in household surveys. In: *Journal of Official Statistics* 35,4: 777-805. <https://doi.org/10.2478/JOS-2019-0033>
- LeBlanc, Allen J.; Frost, David M.; Wight, Richard G.* 2015: Minority stress and stress proliferation among same-sex and other marginalized couples. In: *Journal of Marriage and Family* 77,1: 40-59. <https://doi.org/10.1111/jomf.12160>
- Lengerer, Andrea; Bohr, Jeanette* 2019: Gibt es eine Zunahme gleichgeschlechtlicher Partnerschaften in Deutschland? Theoretische Überlegungen und empirische Befunde. In: *Zeitschrift für Soziologie* 48,2: 136-157. <https://doi.org/10.1515/zfsoz-2019-0010>
- Link, Bruce G.; Phelan, Jo C.* 2001: Conceptualizing stigma. In: *Annual Review of Sociology* 27: 363-385. <https://doi.org/10.1146/annurev.soc.27.1.363>
- Liu, Hui; Reczek, Rin* 2021: Birth cohort trends in health disparities by sexual orientation. In: *Demography* 58,4: 1445-1472. <https://doi.org/10.1215/00703370-9357508>

- Meyer, Dixie et al.* 2022: Differences in life satisfaction and emotions by romantic coupling and sexual orientation. In: *Journal of Family Issues*.
<https://doi.org/10.1177/0192513X221106737>
- Meyer, Ilan H.* 1995: Minority stress and mental health in gay men. In: *Journal of Health and Social Behavior* 36,1: 38-56. <https://doi.org/10.2307/2137286>
- Möhring, Katja et al.* 2021: The COVID-19 pandemic and subjective well-being: Longitudinal evidence on satisfaction with work and family. In: *European Societies* 23,S1: S601-S617. <https://doi.org/10.1080/14616696.2020.1833066>
- National Academies of Sciences, Engineering, and Medicine* 2020: *Understanding the Well-Being of LGBTQI+ Populations*. Washington, DC: The National Academies Press. <https://doi.org/10.17226/25877>
- Ofosu, Eugene K. et al* 2019: Same-sex marriage legalization associated with reduced implicit and explicit antigay bias. In: *Proceedings of the National Academy of Sciences* 116,18: 8846-8851. <https://doi.org/10.1073/pnas.1806000116>
- Perales, Francisco; Todd, Abram* 2018: Structural stigma and the health and wellbeing of Australian LGB populations: Exploiting geographic variation in the results of the 2017 same-sex marriage plebiscite. In: *Social Science & Medicine* 208: 190-199. <https://doi.org/10.1016/j.socscimed.2018.05.015>
- Pew Research Center* 2013: *A Survey of LGBT Americans*. Washington, DC [<https://www.pewresearch.org/social-trends/2013/06/13/a-survey-of-lgbt-americans/>, 08.11.2022].
- PDF (Population and Development Review)* 2022: Survey estimates of sexual orientation in the United States. In: *Population and Development Review* 48,2: 635-637. <https://doi.org/10.1111/padr.12498>
- Reczek, Corinne; Liu, Hui; Spiker, Russell* 2017: Self-rated health at the intersection of sexual identity and union status. In: *Social Science Research* 63: 242-252. <https://doi.org/10.1016/j.ssresearch.2016.09.013>
- Régnier-Loilier, Arnaud* 2018: Are the Generations and Gender Surveys well suited for studying same-sex couples? In: *European Journal of Population* 34,4: 567-578. <https://doi.org/10.1007/s10680-017-9440-6>
- Ross, Lori E. et al.* 2018: Prevalence of depression and anxiety among bisexual people compared to gay, lesbian, and heterosexual individuals: A systematic review and meta-analysis. In: *The Journal of Sex Research* 55,4-5: 435-456. <https://doi.org/10.1080/00224499.2017.1387755>
- Sarracino, Francesco; Riillo, Cesare Fabio Antonio; Mikucka, Malgorzata* 2017: Comparability of web and telephone survey modes for the measurement of subjective well-being. In: *Survey Research Methods* 11,2: 141-169. <https://doi.org/10.18148/srm/2017.v11i2.6740>
- Sattler, Frank A.; Franke, Gabriele H.; Christiansen, Hanna* 2017: Mental health differences between German gay and bisexual men and population-based controls. In: *BMC Psychiatry* 17,267. <https://doi.org/10.1186/s12888-017-1435-7>
- Sattler, Frank A.; Wagner, Ulrich; Christiansen, Hanna* 2016: Effects of minority stress, group-level coping, and social support on the mental health of German gay men. In: *PLoS ONE* 11,3: e0150562. <https://doi.org/10.1371/journal.pone.0150562>
- Schneider, Norbert F. et al.* 2021: Family Research and Demographic Analysis (FRoDA): Evolution, Framework, Objectives, and Design of "The German Family Demography Panel Study". In: *Comparative Population Studies* 46: 149-186. <https://doi.org/10.12765/CPoS-2021-06>

Solazzo, Alexa; Gorman, Bridget; Denney, Justin 2020: Does sexual orientation complicate the relationship between marital status and gender with self-rated health and cardiovascular disease? In: *Demography* 57,2: 599-626.
<https://doi.org/10.1007/s13524-020-00857-9>

Tornello, Samantha L.; Ivanova, Katya; Bos, Henny M.W. 2018: Same-sex and mixed-sex couples in the Netherlands: The association between life satisfaction and relationship dynamics. In: *Journal of Family Issues* 39,6: 1443-1464.
<https://doi.org/10.1177/0192513X17710771>

Waldijk, Kees 2020: What first, what later? Patterns in the legal recognition of same-sex partners in European countries. In: *Digoix, Marie* (Ed.): Same-sex families and legal recognition in Europe. In: *European Studies of Population* 24. Cham: Springer: 11-44.
https://doi.org/10.1007/978-3-030-37054-1_2

Date of submission: 19.09.2022

Date of acceptance: 05.01.2023

Prof. Dr. Karsten Hank (✉), Dr. Carolin Thönnissen. University of Cologne. Institute of Sociology and Social Psychology (ISS) Cologne, Germany.
E-mail: hank@wiso.uni-koeln.de; c.thoennissen@uni-koeln.de
URL: <https://iss-wiso.uni-koeln.de/en/institute/staff/h/prof-dr-karsten-hank>
<https://iss-wiso.uni-koeln.de/en/institut/personen/t/dr-carolin-thoennissen>

Prof. Dr. Franz J. Neyer. Friedrich Schiller University Jena. Jena, Germany.
E-mail: franz.neyer@uni-jena.de
URL: <https://www.perpsy.uni-jena.de/en/team/prof-dr-franz-j-neyer>

Comparative Population Studies

www.comparativepopulationstudies.de

ISSN: 1869-8980 (Print) – 1869-8999 (Internet)

Published by

Federal Institute for Population Research
(BiB)
65180 Wiesbaden / Germany

Managing Publisher

Dr. Nikola Sander



2023

Editor

Prof. Frans Willekens

Managing Editor

Dr. Katrin Schiefer

Editorial Assistant

Beatriz Feiler-Fuchs
Wiebke Hamann

Layout

Beatriz Feiler-Fuchs

E-mail: cpos@bib.bund.de

Board of Reviewers

Bruno Arpino (Barcelona)
Laura Bernardi (Lausanne)
Gabriele Doblhammer (Rostock)
Anette Eva Fasang (Berlin)
Michael Feldhaus (Oldenburg)
Alexia Fürnkranz-Prskawetz (Vienna)
Birgit Glorius (Chemnitz)
Fanny Janssen (Groningen)
Frank Kalter (Mannheim)
Stefanie Kley (Hamburg)
Bernhard Köppen (Koblenz)
Anne-Kristin Kuhnt (Rostock)
Hill Kulu (St Andrews)
Nadja Milewski (Wiesbaden)
Roland Rau (Rostock)
Thorsten Schneider (Leipzig)
Tomas Sobotka (Vienna)
Jeroen J. A. Spijker (Barcelona)
Heike Trappe (Rostock)
Helga de Valk (The Hague)
Sergi Vidal (Barcelona)
Michael Wagner (Cologne)

Scientific Advisory Board

Kieron Barclay (Stockholm)
Karsten Hank (Cologne)
Ridhi Kashyap (Oxford)
Natalie Nitsche (Rostock)
Alyson van Raalte (Rostock)
Pia S. Schober (Tübingen)
Rainer Wehrhahn (Kiel)