Health and Wellbeing of LGBTQ+ People

(Heilsa og líðan hinsegin fólks)

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Abstract

Background: Currently, there is a notable gap in understanding the health and well-being of the LGBTQ+ community in Iceland, particularly in relation to mental health, alcohol and substance use, as well as experience of abuse. Gaining insight into these issues is crucial for improving the overall health and well-being of LGBTQ+ individuals in Iceland.

Aim: This study aimed to evaluate the health and well-being of LGBTQ+ participants in comparison to cis-straight participants with a special focus on mental health, alcohol and substance use, and experience of abuse.

Methods: Population-based, cross-sectional studies (as part of a longitude study) were conducted using residents in Iceland of 18 years and older in 2017 and 2022. Descriptive statistics were used to characterise the study population. Chi-squared test was used to assess the significance of differences in proportions between LGBTQ+ and cis-straight participant groups.

Results: The proportions of LGBTQ+ participants that reported abuse, had alcohol and drug problem were significantly higher than of cis-straight participants. Furthermore, LGBTQ+ participants showed significantly higher prevalence across several mental health categories.

Discussion: The findings highlight significant disparities in mental health, abuse, and substance use between LGBTQ+ and cis-straight participants. These disparities underscore the need for a comprehensive strategy that prioritizes mental health support, addresses alcohol and substance use, and provides targeted interventions for individuals who experience abuse

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Reykjavík

Introduction

In the summer of 2024, the research project *Heilsa og líðan hinsegin fólks* (Health and Well-being of lesbian, gay, bisexual, transgender, queer, questioning, intersex, asexual (LGBTQ)+ People) received funding from the Student Research and Innovation Fund. The primary focus of the project was to examine the health and well-being of LGBTQ+ individuals in Iceland, a topic that has been under researched. This research project specifically addressed key areas such as experiences of violence, alcohol and substance use, and mental health within the LGBTQ+ community. By using data from the Directorate of Health's comprehensive survey *Heilsa og líðan*, the project provided insights into the challenges faced by LGBTQ+ individuals in Iceland.

The *Heilsa og líðan* survey, administered every five years to a large sample of Icelanders, serves as a vital source of data on the nation's health and well-being with the most recent survey being conducted in 2022. In 2017, for the first time, the survey included a question about participants' sexual orientation, allowing researchers to collect data about one group of the LGBTQ+ community. In 2022, the survey expanded further by incorporating questions on gender identity. Because of these additions, the project could only begin analysing data related to LGBTQ+ individuals starting from 2017, as earlier surveys lacked demographic questions to identify this group. This also highlights the importance of including questions related to sexuality and gender identity in public health survey's such as *Heilsa og líðan*, without such questions the data on the health and wellbeing of the LGBTQ+ community simply wouldn't exist. The primary focus of this research was to investigate how LGBTQ+ individuals experienced key aspects of their health and well-being in both 2017 and 2022. The aim was to highlight areas where disparities might exist between LGBTQ+ individuals and the cis-straight population.

The results of the project provide crucial statistical information on the health and well-being of LGBTQ+ individuals in Iceland for the years 2017 and 2022. These findings delve into various aspects of life for LGBTQ+ individuals, with particular emphasis on their experiences of violence, alcohol consumption, and mental health, as well as broader indicators of happiness, loneliness, and sense of purpose. By comparing these factors between the two years, the research reveals both persistent challenges and emerging trends within the LGBTQ+ community.

One of the most alarming findings relates to the significantly higher rates of violence experienced by LGBTQ+ individuals. The data shows that LGBTQ+ individuals are disproportionately affected by violence, physical, emotional and sexual.

The research findings paint a complex picture of the health and well-being of LGBTQ+ individuals in Iceland. While there has been progress in terms of visibility and legal protections for LGBTQ+ individuals, significant challenges remain. The data highlights the ongoing need for targeted interventions and policies to address the specific health disparities faced by the LGBTQ+ community.

The project was supervised by Þórhildur Elínardóttir Magnúsdóttir, an LGBTQ+ issues expert with the City of Reykjavík, and Harpa Þorsteinsdóttir, a project manager for public health at the City of Reykjavík. The project was carried out by Flóra Vuong Nu Dong, MSc. Biostatistics, with collaboration from Samtökin '78 – The National LGBTQ+ Organization of Iceland.

1. Background

This section outlines the background of the project, detailing its purpose, goals, inspiration, and innovative contributions to the field.

1.1. Purpose and Goals of the Project

Currently, there is a significant gap in understanding the health and well-being of the LGBTQ+ community in Iceland. This is particularly concerning as there are strong indications that LGBTQ+ individuals often experience poorer health outcomes compared to their cisgender, heterosexual counterparts. Similar trends have been documented internationally, where studies consistently show that LGBTQ+ individuals face unique challenges in physical and mental health, often exacerbated by societal stigma and discrimination (see Blondeel et al., 2016; Marchi et al., 2023; Reisner et al., 2016; Wittgens et al., 2022; Zeeman et al., 2018).

As a vulnerable group, LGBTQ+ people require targeted actions to improve their health and well-being. However, to design effective interventions, it is essential to first gather accurate information about their current health status. Historically, data on LGBTQ+ individuals in Iceland has been limited, but this has gradually improved, particularly with the inclusion of questions related to sexual orientation (since 2017) and gender identity (since 2022) in the *Heilsa og líðan* (Health and Well-being) survey. These additions allow for a more nuanced analysis of the health and well-being of the LGBTQ+ community in Iceland, which was a central aim of this project.

The primary goal of this project was to analyse the *Heilsa og líðan* data through the lens of sexual orientation and gender identity, focusing on factors such as experiences of violence, mental health, and alcohol and substance use. By doing so, the project sought to illuminate the disparities between LGBTQ+

individuals and their cisgender, heterosexual peers. The findings provide a clearer picture of the challenges LGBTQ+ people face and help shape the conversation on what can be done to address these issues.

1.2. Innovation and Practical Value

While this project is not the first to use the *Heilsa og líðan* data to explore the health of LGBTQ+ individuals, it represents a significant step forward in expanding our understanding of the LGBTQ+ community's health in Iceland. Previous research, such as the study by Hrafnhildur Snæfríðar- and Gunnarsdóttir et al. (2023) on violence against disabled women, briefly touched on the intersection of sexual orientation and violence. Their findings revealed that LGBTQ+ individuals were three times more likely to have experienced violence compared to heterosexual individuals, sparking further interest in exploring the role sexual orientation plays in experiences of violence. However, Hrafnhildur's study primarily focused on disabled individuals, and sexual orientation was not deeply analysed. This project seeks to build on that finding by closely examining violence and other key health factors specific to LGBTQ+ people.

Additionally, at least one student thesis has utilised the *Heilsa og líðan* data to explore the health of the LGBTQ+ community. In her 2020 thesis, *A Comparison of Alcohol and Illicit Drug Use among Lesbian, Gay, Bisexual Individuals and Heterosexual Icelandic Individuals: Possible Risk Factors and Protective Factors*, Kristjana R. Elínardóttir found that alcohol and drug use was significantly higher among LGB individuals compared to heterosexuals, with social support serving as a protective factor. These previous studies underscore the need for deeper exploration into the specific health challenges LGBTQ+ individuals face, which this project directly addresses.

This project still holds substantial innovation value, as there is still a considerable lack of comprehensive information on the health and well-being of LGBTQ+ individuals in Iceland. Without reliable data, policies and interventions aimed at supporting the LGBTQ+ community often fall short or remain too general. This project provides the data necessary for informed policymaking and lays the groundwork for future research that can further deepen our understanding of the health of LGBTQ+ individuals.

Given that this research is backed by both the City of Reykjavík and Samtökin '78 – The National LGBTQ+ Organization of Iceland – it is expected that the findings will be directly applied to public health initiatives and policy-making efforts such as for the Public Health Policy of Reykjavík City. One of the policy's main goals is *Health and well-being equity - no one left behind*. This research provides an addition to the public health indicators that can be used to prioritise health promoting initiatives for the city's LGBTQ+ community. Both the city and Samtökin ´78 are deeply involved in supporting the LGBTQ+ community, and this research will inform their work in the coming years, ensuring that the health and well-being of LGBTQ+ people in Iceland are properly prioritised in public health strategies.

1.3. Impact and Future Directions

The findings from this project will not only inform immediate policymaking but also support the development of health promotion and prevention strategies specifically designed for the LGBTQ+ community. Both the City of Reykjavík and Samtökin '78 plan to use these insights to guide their future work, such as within the Public Health Policy of Reykjavík City, helping to shape focused interventions that address the unique needs of LGBTQ+ individuals.

Despite the progress made in recent years, there is still much we don't know about the health of LGBTQ+ individuals in Iceland. The reliable data provided

by this research project offers a strong foundation for meaningful change, benefiting both the LGBTQ+ community and the policymakers working to support them.

The results will be made available to the public through publications on the websites of the City of Reykjavík and Samtökin '78, and the findings will be shared with relevant stakeholders as opportunities arise. By compiling and comparing data on the health of LGBTQ+ individuals in Iceland, this project creates a knowledge base that will not only benefit current public health efforts but also serve as a foundation for future research.

Looking ahead, this project could be expanded in future years as more data from the *Heilsa og líðan* survey becomes available. The next survey, due in 2027, would allow researchers to compare a decade's worth of data on LGBTQ+ health outcomes, providing even more valuable insights into trends and changes over time. This project could also serve as a model for future research on other health-related factors within the LGBTQ+ population, such as chronic illness, healthcare access, and community resilience.

By shedding light on these critical issues, this research represents a significant step forward in improving the health and well-being of LGBTQ+ individuals in Iceland, and its impact will likely to be felt for years to come.

2. Material and Methods

2.1. Study population

This population-based study included participants from 18 years and older with residency in Iceland that took part in the survey Health and Wellbeing in Iceland (Icelandic: Heilsa og Líðan á Íslandi) that started first in 2007. All participants were selected by randomization for the survey. Data used in this study was collected in September 2017 and again in September 2022. The study population in 2017 included only Icelanders with Icelandic citizenship. However, in 2022, foreign residences that had residency in Iceland for 3 years or more were also included.

The data from 2017 included 6,776 observations, while from 2022 included 7,813 observations. This study focused on the difference between cis-straight and LGBTQ+ participants so all missing observations for sexuality and gender identity were excluded. After the exclusion of 200 missing observations in 2017 and 854 missing observations in 2022 for sexuality and gender identity, the number of observations for data from 2017 and from 2022 was 6,576 and 6,959, respectively.

2.2. Measurements

In this study, the primary outcome was to assess the health and well-being of LGBTQ+ participants versus cis-straight participants with special focus on mental health, alcohol and substance use as well as experience of abuse.

Sexuality and gender identity were defined as LGBTQ+ and cis-straight. LGBTQ+ participants were defined based on the answer from question 22 in the 2017 questionnaire and question 57 in the 2022 questionnaire about

participants' sexuality and gender identity. Participants that defined themselves as cis-straight were categorised as such, participants with other definitions (homosexual, bisexual, pansexual, asexual, uncertain and other) as well as those who did not defined themselves as male or female in the question about gender were categorised as LGBTQ+. Furthermore, in the 2017 data, participants that answered "other" for sexuality and gender identity could write further explanation about it and 7 participants were excluded from the LGBTQ+ group due to unrelated explanation to sexuality and gender identity. Additionally, in the 2022 data, all participants that had different gender identity than they had at birth were also categorised as LGBTQ+.

2.3. Statistical analysis

Descriptive statistics were used to understand and describe the data and variables. Bar plot and box plot were used to summarize categorical variables. Additionally, tables were utilised to provide an overview of the variables, stratified by sexuality and gender identity.

Chi-squared test for equality of proportions was used to assess the significant of difference proportions between LGBTQ+ and cis-straight participant groups.

In this study, statistical analyses were performed using R, a language and environment for statistical computing (R Core Team, 2021). The specific version of R used was 4.1.1.

3. Results

3.1. Background characteristics

After excluding missing observations for variable sexuality and gender identity, 6,576 observations from 2017 and 7,813 observations from 2022 were used for descriptive statistical analysis of the data. *Figure 1* below illustrates the percentage of LGBTQ+ and cis-straight participants in 2017 and 2022.

The percentage of LGBTQ+ participants in 2017 and 2022 was 2.27% and 6.13%, respectively. Consequently, the percentage of cis-straight participants in 2017 and 2022 was 97.73% and 93.87%, respectively.

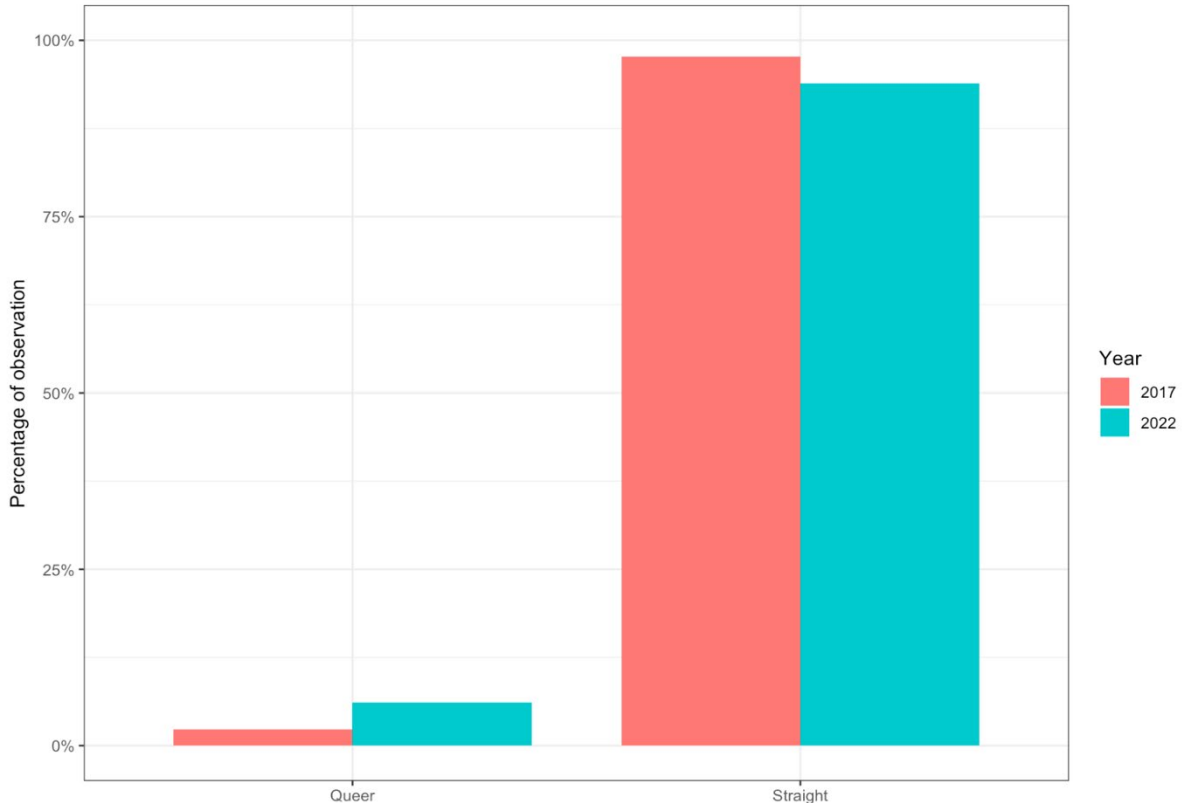

Figure 1: The percentage of LGBTQ+ and cis-straight participants from 2017 and 2022.

The overviews of the background characteristics can be seen in *Table 1* and *Table 2* below for data from 2017 and 2022, respectively. In these tables, the number and proportion for each category with regards to sexuality and gender identity, as well as the total number and proportion of the participants are shown.

Table 1: Summaries of background characteristics from 2017 data.

Descriptive statistics of background variables by sexuality

	Queer (N=152)	**Straight (N=6424)**	**Total (N=6576)**
Age			
Mean (SD)	47.3 (18.4)	58.6 (16.3)	58.4 (16.4)
Median [Min, Max]	44.0 [19.0, 88.0]	60.0 [18.0, 98.0]	60.0 [18.0, 98.0]
Missing	0 (0%)	2 (0.0%)	2 (0.0%)
Gender			
Male	53 (34.9%)	2917 (45.4%)	2970 (45.2%)
Female	96 (63.2%)	3499 (54.5%)	3595 (54.7%)
Missing	3 (2.0%)	8 (0.1%)	11 (0.2%)
Residency			
Capital	98 (64.5%)	3084 (48.0%)	3182 (48.4%)
South	26 (17.1%)	1241 (19.3%)	1267 (19.3%)
West	5 (3.3%)	664 (10.3%)	669 (10.2%)
North	18 (11.8%)	1109 (17.3%)	1127 (17.1%)
East	5 (3.3%)	304 (4.7%)	309 (4.7%)
Missing	0 (0%)	22 (0.3%)	22 (0.3%)
Education			
Elementary	36 (23.7%)	1921 (29.9%)	1957 (29.8%)
Highschool	44 (28.9%)	1841 (28.7%)	1885 (28.7%)
Bachelor	44 (28.9%)	1776 (27.6%)	1820 (27.7%)
Master	24 (15.8%)	763 (11.9%)	787 (12.0%)
Other	1 (0.7%)	8 (0.1%)	9 (0.1%)
Missing	3 (2.0%)	115 (1.8%)	118 (1.8%)

Descriptive statistics of background variables by sexuality

	Queer (N=152)	Straight (N=6424)	Total (N=6576)
Employment status			
Employee	95 (62.5%)	3562 (55.4%)	3657 (55.6%)
Employer	11 (7.2%)	507 (7.9%)	518 (7.9%)
Student	6 (3.9%)	99 (1.5%)	105 (1.6%)
Retiree	19 (12.5%)	1759 (27.4%)	1778 (27.0%)
Other	17 (11.2%)	387 (6.0%)	404 (6.1%)
Missing	4 (2.6%)	110 (1.7%)	114 (1.7%)
Smoking			
Never	67 (44.1%)	2900 (45.1%)	2967 (45.1%)
Quit	54 (35.5%)	2703 (42.1%)	2757 (41.9%)
Regularly	7 (4.6%)	224 (3.5%)	231 (3.5%)
Daily	21 (13.8%)	530 (8.3%)	551 (8.4%)
Missing	3 (2.0%)	67 (1.0%)	70 (1.1%)
Feeling lonely			
Often	30 (19.7%)	536 (8.3%)	566 (8.6%)
Sometimes	97 (63.8%)	3604 (56.1%)	3701 (56.3%)
Never	19 (12.5%)	2146 (33.4%)	2165 (32.9%)
Missing	6 (3.9%)	138 (2.1%)	144 (2.2%)
Sleep			
Less than 6	12 (7.9%)	404 (6.3%)	416 (6.3%)
6	25 (16.4%)	1236 (19.2%)	1261 (19.2%)
7	53 (34.9%)	2772 (43.2%)	2825 (43.0%)
8	42 (27.6%)	1557 (24.2%)	1599 (24.3%)
9 or more	12 (7.9%)	310 (4.8%)	322 (4.9%)
Missing	8 (5.3%)	145 (2.3%)	153 (2.3%)
Physical Health			
Very good	29 (19.1%)	1417 (22.1%)	1446 (22.0%)
Good	68 (44.7%)	2960 (46.1%)	3028 (46.0%)
Ok	38 (25.0%)	1630 (25.4%)	1668 (25.4%)
Poor	15 (9.9%)	373 (5.8%)	388 (5.9%)
Missing	2 (1.3%)	44 (0.7%)	46 (0.7%)
Mental Health			

Descriptive statistics of background variables by sexuality

	Queer (N=152)	Straight (N=6424)	Total (N=6576)
Very good	31 (20.4%)	2204 (34.3%)	2235 (34.0%)
Good	66 (43.4%)	2941 (45.8%)	3007 (45.7%)
Ok	38 (25.0%)	1074 (16.7%)	1112 (16.9%)
Poor	16 (10.5%)	133 (2.1%)	149 (2.3%)
Missing	1 (0.7%)	72 (1.1%)	73 (1.1%)
Consume alcohol			
Yes	144 (94.7%)	6000 (93.4%)	6144 (93.4%)
No	8 (5.3%)	394 (6.1%)	402 (6.1%)
Missing	0 (0%)	30 (0.5%)	30 (0.5%)
Alcohol and Drug Problem			
Never	124 (81.6%)	5541 (86.3%)	5665 (86.1%)
Currently	16 (10.5%)	367 (5.7%)	383 (5.8%)
Previously	6 (3.9%)	111 (1.7%)	117 (1.8%)
Missing	6 (3.9%)	405 (6.3%)	411 (6.3%)
Physically abused			
Never	85 (55.9%)	5067 (78.9%)	5152 (78.3%)
<12 months	4 (2.6%)	43 (0.7%)	47 (0.7%)
>12 months	59 (38.8%)	1040 (16.2%)	1099 (16.7%)
Missing	4 (2.6%)	274 (4.3%)	278 (4.2%)
Sexually abused			
Never	84 (55.3%)	5231 (81.4%)	5315 (80.8%)
<12 months	3 (2.0%)	17 (0.3%)	20 (0.3%)
>12 months	57 (37.5%)	767 (11.9%)	824 (12.5%)
Missing	8 (5.3%)	409 (6.4%)	417 (6.3%)
Mentally abused			
Never	63 (41.4%)	4475 (69.7%)	4538 (69.0%)
<12 months	12 (7.9%)	294 (4.6%)	306 (4.7%)
>12 months	70 (46.1%)	1341 (20.9%)	1411 (21.5%)
Missing	7 (4.6%)	314 (4.9%)	321 (4.9%)
Cannabis Usage			
Never	78 (51.3%)	5186 (80.7%)	5264 (80.0%)
<10x	47 (30.9%)	844 (13.1%)	891 (13.5%)

Descriptive statistics of background variables by sexuality

	Queer (N=152)	Straight (N=6424)	Total (N=6576)
10x+	21 (13.8%)	317 (4.9%)	338 (5.1%)
Missing	6 (3.9%)	77 (1.2%)	83 (1.3%)
Amphetamine Usage			
Never	123 (80.9%)	6005 (93.5%)	6128 (93.2%)
<10x	16 (10.5%)	199 (3.1%)	215 (3.3%)
10x+	10 (6.6%)	130 (2.0%)	140 (2.1%)
Missing	3 (2.0%)	90 (1.4%)	93 (1.4%)
Sexual Transmitted Diseases			
Never	112 (73.7%)	5333 (83.0%)	5445 (82.8%)
Currently	4 (2.6%)	20 (0.3%)	24 (0.4%)
Previously	28 (18.4%)	527 (8.2%)	555 (8.4%)
Missing	8 (5.3%)	544 (8.5%)	552 (8.4%)
ADHD/ ADD			
Never	120 (78.9%)	5536 (86.2%)	5656 (86.0%)
Currently	22 (14.5%)	374 (5.8%)	396 (6.0%)
Previously	5 (3.3%)	56 (0.9%)	61 (0.9%)
Missing	5 (3.3%)	458 (7.1%)	463 (7.0%)

Table 2 below presents the background characteristics of data from 2022. In this data, the option of „non-binary“ was first introduced to the question about participants‘ gender. The number of participants that were non-binary was 12, equivalent to 2.8% of LGBTQ+ participants and 0.2% of all participants.

Table 2: Summaries of background characteristics from 2022 data.

Descriptive statistics of background variables by sexuality

	Queer (N=522)	**Straight (N=7180)**	**Total (N=7702)**
Age			
Mean (SD)	52.3 (16.9)	53.8 (16.4)	53.7 (16.4)
Median [Min, Max]	53.0 [18.0, 89.0]	55.0 [18.0, 94.0]	55.0 [18.0, 94.0]
Missing	0 (0%)	12 (0.2%)	12 (0.2%)
Gender			
Male	238 (45.6%)	3222 (44.9%)	3460 (44.9%)
Female	282 (54.0%)	3943 (54.9%)	4225 (54.9%)
Other	2 (0.4%)	15 (0.2%)	17 (0.2%)
Residency			
Capital	263 (50.4%)	3803 (53.0%)	4066 (52.8%)
South	116 (22.2%)	1498 (20.9%)	1614 (21.0%)
West	53 (10.2%)	601 (8.4%)	654 (8.5%)
North	69 (13.2%)	976 (13.6%)	1045 (13.6%)
East	21 (4.0%)	265 (3.7%)	286 (3.7%)
Missing	0 (0%)	37 (0.5%)	37 (0.5%)
Education			
Elementary	81 (15.5%)	1158 (16.1%)	1239 (16.1%)
Highschool	112 (21.5%)	1738 (24.2%)	1850 (24.0%)
Bachelor	133 (25.5%)	1888 (26.3%)	2021 (26.2%)
Master	81 (15.5%)	1121 (15.6%)	1202 (15.6%)
Other	31 (5.9%)	319 (4.4%)	350 (4.5%)
Missing	84 (16.1%)	956 (13.3%)	1040 (13.5%)
Employment status			
Employee	282 (54.0%)	3999 (55.7%)	4281 (55.6%)
Employer	23 (4.4%)	375 (5.2%)	398 (5.2%)

Descriptive statistics of background variables by sexuality

	Queer (N=522)	Straight (N=7180)	Total (N=7702)
Student	10 (1.9%)	87 (1.2%)	97 (1.3%)
Retiree	78 (14.9%)	1261 (17.6%)	1339 (17.4%)
Other	34 (6.5%)	386 (5.4%)	420 (5.5%)
Missing	95 (18.2%)	1072 (14.9%)	1167 (15.2%)
Smoking			
Never	212 (40.6%)	3012 (41.9%)	3224 (41.9%)
Quit	190 (36.4%)	2708 (37.7%)	2898 (37.6%)
Regularly	21 (4.0%)	215 (3.0%)	236 (3.1%)
Daily	44 (8.4%)	603 (8.4%)	647 (8.4%)
Missing	55 (10.5%)	642 (8.9%)	697 (9.0%)
Feeling lonely			
Often	50 (9.6%)	734 (10.2%)	784 (10.2%)
Sometimes	267 (51.1%)	3633 (50.6%)	3900 (50.6%)
Never	127 (24.3%)	1950 (27.2%)	2077 (27.0%)
Missing	78 (14.9%)	863 (12.0%)	941 (12.2%)
Sleep			
<6	37 (7.1%)	530 (7.4%)	567 (7.4%)
6	84 (16.1%)	1267 (17.6%)	1351 (17.5%)
7	193 (37.0%)	2578 (35.9%)	2771 (36.0%)
8	101 (19.3%)	1585 (22.1%)	1686 (21.9%)
9 or more	28 (5.4%)	365 (5.1%)	393 (5.1%)
Missing	79 (15.1%)	855 (11.9%)	934 (12.1%)
Physical Health			
Very good	113 (21.6%)	1534 (21.4%)	1647 (21.4%)
Good	244 (46.7%)	3478 (48.4%)	3722 (48.3%)
Ok	128 (24.5%)	1694 (23.6%)	1822 (23.7%)
Bad	32 (6.1%)	385 (5.4%)	417 (5.4%)
Missing	5 (1.0%)	89 (1.2%)	94 (1.2%)
Mental Health			
Very good	129 (24.7%)	1990 (27.7%)	2119 (27.5%)
Good	244 (46.7%)	3145 (43.8%)	3389 (44.0%)
Ok	102 (19.5%)	1455 (20.3%)	1557 (20.2%)

Descriptive statistics of background variables by sexuality

	Queer (N=522)	Straight (N=7180)	Total (N=7702)
Bad	25 (4.8%)	321 (4.5%)	346 (4.5%)
Missing	22 (4.2%)	269 (3.7%)	291 (3.8%)
Consume alcohol			
Yes	447 (85.6%)	6172 (86.0%)	6619 (85.9%)
No	21 (4.0%)	381 (5.3%)	402 (5.2%)
Missing	54 (10.3%)	627 (8.7%)	681 (8.8%)
Alcohol and drug problem			
Never	463 (88.7%)	6259 (87.2%)	6722 (87.3%)
Currently	6 (1.1%)	145 (2.0%)	151 (2.0%)
Previously	29 (5.6%)	484 (6.7%)	513 (6.7%)
Missing	24 (4.6%)	292 (4.1%)	316 (4.1%)
Physically abused			
Never	345 (66.1%)	5104 (71.1%)	5449 (70.7%)
<12 months	18 (3.4%)	251 (3.5%)	269 (3.5%)
>12 months	86 (16.5%)	1018 (14.2%)	1104 (14.3%)
Missing	73 (14.0%)	807 (11.2%)	880 (11.4%)
Sexually abused			
Never	381 (73.0%)	5494 (76.5%)	5875 (76.3%)
<12 months	9 (1.7%)	111 (1.5%)	120 (1.6%)
>12 months	55 (10.5%)	734 (10.2%)	789 (10.2%)
Missing	77 (14.8%)	841 (11.7%)	918 (11.9%)
Mentally abused			
Never	281 (53.8%)	4416 (61.5%)	4697 (61.0%)
<12 months	76 (14.6%)	902 (12.6%)	978 (12.7%)
>12 months	84 (16.1%)	1068 (14.9%)	1152 (15.0%)
Missing	81 (15.5%)	794 (11.1%)	875 (11.4%)
Cannabis Usage			
Never	336 (64.4%)	4845 (67.5%)	5181 (67.3%)
<10x	87 (16.7%)	1083 (15.1%)	1170 (15.2%)
10x+	43 (8.2%)	598 (8.3%)	641 (8.3%)
Missing	56 (10.7%)	654 (9.1%)	710 (9.2%)
Amphetamine Usage			

Descriptive statistics of background variables by sexuality

	Queer (N=522)	Straight (N=7180)	Total (N=7702)
Never	419 (80.3%)	5877 (81.9%)	6296 (81.7%)
<10x	26 (5.0%)	362 (5.0%)	388 (5.0%)
10x+	18 (3.4%)	255 (3.6%)	273 (3.5%)
Missing	59 (11.3%)	686 (9.6%)	745 (9.7%)
Sexual Transmitted Diseases			
Never	433 (83.0%)	6079 (84.7%)	6512 (84.5%)
Currently	0 (0%)	37 (0.5%)	37 (0.5%)
Previously	61 (11.7%)	765 (10.7%)	826 (10.7%)
Missing	28 (5.4%)	299 (4.2%)	327 (4.2%)
ADHD/ ADD			
Never	416 (79.7%)	5894 (82.1%)	6310 (81.9%)
Currently	60 (11.5%)	803 (11.2%)	863 (11.2%)
Previously	16 (3.1%)	147 (2.0%)	163 (2.1%)
Missing	30 (5.7%)	336 (4.7%)	366 .8%)

3.2. Chi-squared test for equality of proportions

Chi-squared test for equality of proportions was performed to test the relationship between the difference proportions between LGBTQ+ and cis-straight participant groups.

In physical health, the proportions between the two groups in 2017 were not significantly different. However, in 2022, the proportions between the two groups were significantly different. The proportion of LGBTQ+ participants experiencing poor physical health was significantly higher than cis-straight participants, and significantly fewer LGBTQ+ participants experiencing good physical health. These proportions can be seen in *Table 1* (for 2017 and *Table 2* (for 2022) above.

In mental health, there was no difference between LGBTQ+ and cis-straight participants having good mental health in 2017. Although, in 2022, LGBTQ+ participants having good mental was found to be significantly fewer than cis-straight participants. In the other mental health categories, similar results were found for 2017 and 2022 with the proportion of LGBTQ+ participants experienced poor and "OK" mental health significantly higher, and very good mental health significantly lower than cis-straight participants. These proportions can be seen in *Table 1* (for 2017) and *Table 2* (for 2022) above.

LGBTQ+ participants that never experienced fatigue was significantly fewer than cis-straight participants in both 2017 and 2022. Additionally, LGBTQ+ participants that were having fatigue was significantly higher in 2017, and those previously had fatigue was significantly higher in 2022. These proportions can be seen in *Table 3* below.

LGBTQ+ participants that never experienced anxiety disorder was significantly fewer than cis-straight participants, as well as those that were having anxiety

disorder was significantly higher in both 2017 and 2022. Moreover, LGBTQ+ participants previously had anxiety disorder was significantly higher in 2022, but this difference was not significant in 2017. These proportions can be seen in *Table 3* below.

Similar result between the categories of post-traumatic stress disorder (PTSD) were found in 2017 and 2022. LGBTQ+ participants never experienced PTSD was significantly fewer than cis-straight participants, and those that were having PTSD was significantly higher. These proportions can be seen in *Table 3* below.

In chronic depression and other mental disorder (other than fatigue, anxiety disorder, PTSD and chronic depression), significance difference was found between LGBTQ+ and cis-straight participants for all categories. The proportion of LGBTQ+ participants that never had chronic depression and other mental disorder was significantly lower than cis-straight participants in both 2017 and 2022. LGBTQ+ participants that currently and previously had chronic depression and other mental disorder was significantly higher than cis-straight participants in both 2017 and 2022. These proportions can be seen in *Table 3* below.

LGBTQ+ participants that never experienced loneliness was significantly lower, and those that experienced often loneliness was significantly higher than cis-straight participants in both 2017 and 2022. In 2017, LGBTQ+ participants experienced loneliness sometimes was significantly higher than their cis-straight counterpart. These proportions can be seen in *Table 3* below.

Happiness was measured from scale one to ten, with ten being the happiest. Participants in 2022 had lower mean value of happiness than in 2017, the mean value was 8.02 and 7.60 for 2017 and 2022, respectively. The mean value of happiness in LGBTQ+ participants was 7.26 and 6.99 in 2017 and 2022,

respectively. While the mean value of happiness in cis-straight participants was 8.04 and 7.64 in 2017 and 2022, respectively. The mean value of happiness was significantly lower for the LGBTQ+ participants than cis-straight participants in 2017. *Figure 2* below illustrates the happiness measured for 2017 and 2022.

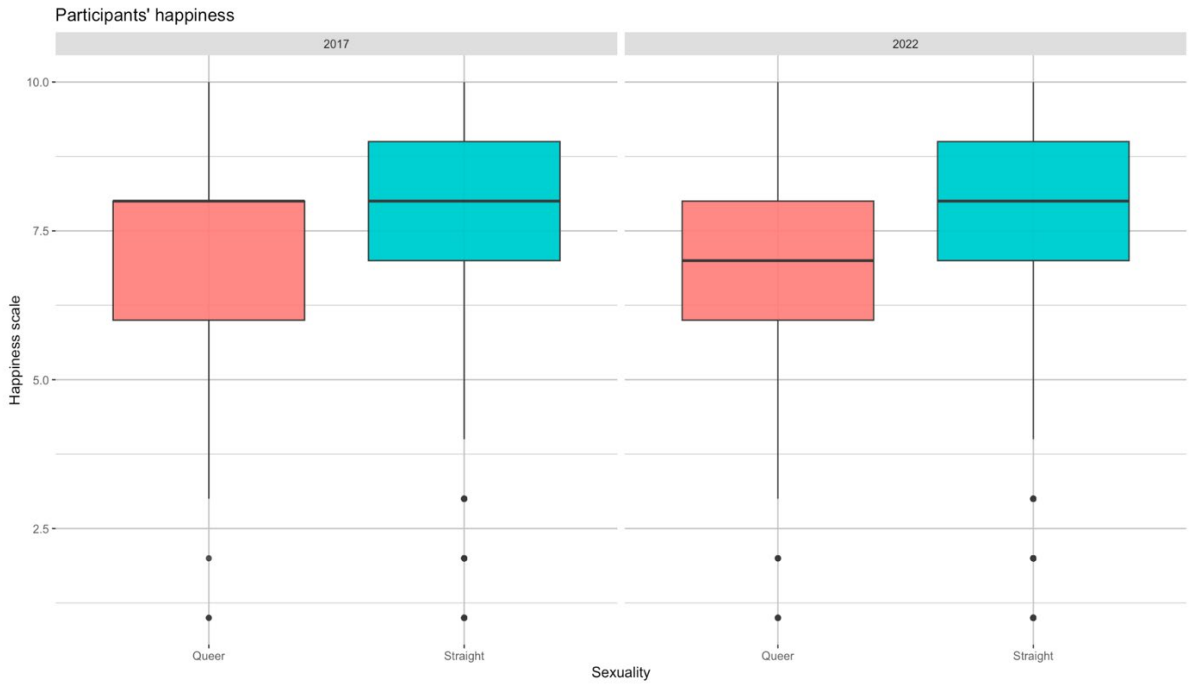

Figure 2: Participants' happiness in 2017 and 2022 by sexuality and gender identity.

In opinion about body image, LGBTQ+ participants were found to have significantly higher unsatisfaction rate about their body image in 2017 comparing to their cis-straight counterpart. However, LGBTQ+ participants were found to have significantly higher satisfaction rate than cis-straight participants in 2022. Despite these before mentioned significances, the general rate of body image satisfaction was lower in 2022 than 2017 in all participants. These proportions can be seen in *Table 3* below.

In experiencing stress, LGBTQ+ participants that never experienced stress was significantly fewer, and those that experienced stress often was significantly

larger than cis-straight participants in both 2017 and 2022. LGBTQ+ participants that experienced stress sometimes was significantly fewer than cis-straight participants in 2022. These proportions can be seen in *Table 3* below.

The proportion of LGBTQ+ participants that never had alcohol and drug problem was significantly lower than of cis-straight participants in 2017 and 2022. In addition, those that were having and previously had alcohol and drug problem was significantly higher than of cis-straight participants in 2022. These proportions can be seen in Table 3 below.

In physical, mental and sexual abuse, the proportion of LGBTQ+ participants experienced these were significantly higher than of cis-straight participants in both 2017 and 2022. The proportion of LGBTQ+ participants experienced mental abuse was the highest among these three types. When comparing the origin of physical, mental and sexual abuse, LGBTQ+ participants were found to have significantly higher rate than cis-straight participants when it comes to abuse from ex-partner, friends, relatives and other (other than from partner, ex-partner, friends and relatives) in both 2017 and 2022. The abuse rates are lower in 2022 than compared to 2017. The proportions can be seen in *Table 3* below.

Table 3: Result from Chi-squared test for equality of proportion to check for difference between LGBTQ+ and cis-straight participant groups in 2017 and 2022.

	2017			2022		
	Queer (%)	Straight (%)	Significant (Yes/No)	Queer (%)	Straight (%)	Significant (Yes/No)
Fatigue						
Never	73.24	80.72	Yes	59.29	68.02	Yes
Currently	16.90	9.56	Yes	18.57	15.49	No
Previously	9.86	9.72	No	22.14	16.49	Yes
Anxiety						
Never	54.79	71.31	Yes	52.86	71.87	Yes
Currently	26.71	11.27	Yes	25.95	11.70	Yes
Previously	18.49	17.42	No	21.19	16.43	Yes
PTSD						
Never	75.17	86.95	Yes	76.01	85.32	Yes
Currently	13.10	3.50	Yes	12.35	4.90	Yes
Previously	11.72	9.55	No	11.64	9.77	No
Depression						
Never	56.64	84.66	Yes	47.39	68.71	Yes
Currently	23.08	5.81	Yes	22.27	9.91	Yes
Previously	20.28	9.53	Yes	30.33	21.39	Yes
Other mental disorder						
Never	75.00	91.96	Yes	68.11	86.49	Yes
Currently	12.14	2.98	Yes	18.47	5.55	Yes
Previously	12.86	5.05	Yes	13.43	7.96	Yes
Loneliness						
Never	13.29	34.15	Yes	19.95	31.33	Yes
Sometimes	66.43	57.33	Yes	59.59	57.72	No
Often	20.28	8.52	Yes	20.46	10.95	Yes
Body image						
Satisfied	58.90	64.28	No	24.81	17.75	Yes
Neutral	17.12	19.71	No	19.80	21.84	No
Unsatisfied	23.97	16.02	Yes	55.39	60.41	No
Stress						

	2017			2022		
	Queer (%)	Straight (%)	Significant (Yes/No)	Queer (%)	Straight (%)	Significant (Yes/No)
Never	11.11	22.34	Yes	11.28	18.01	Yes
Sometimes	62.50	63.36	No	56.41	63.64	Yes
Often	26.39	14.29	Yes	32.31	18.35	Yes
Alcohol and Drug problem						
Never	84.93	92.06	Yes	85.20	91.72	Yes
Currently	10.96	6.10	No	3.58	1.87	Yes
Previously	4.11	1.84	No	11.22	6.41	Yes
Abused						
Physical	42.07	17.58	Yes	36.71	19.24	Yes
Mental	55.63	26.76	Yes	50.75	30.16	Yes
Sexual	41.13	13.02	Yes	30.73	12.46	Yes
Abused by:						
Partner	9.40	5.39	No	2.82	2.54	No
Ex-partner	19.46	7.96	Yes	4.93	1.20	Yes
Friends	16.78	5.99	Yes	3.99	1.33	Yes
Relatives	27.52	9.06	Yes	5.40	1.73	Yes
Other	28.19	11.14	Yes	5.87	3.60	Yes

3.3. Older LGBTQ+ participants

LGBTQ+ participants of older than 55 years old were recorded specifically. The number older LGBTQ+ participants were 49 and 111 in 2017 and 2022, respectively. The older LGBTQ+ participants groups were further analysed with regards to loneliness and experiences with physical, mental and sexual abuse. The number of older LGBTQ+ participants and the respective proportion within the LGBTQ+ participants group in each category can be seen in *Table 4*.

Table 4: Statistics of LGBTQ+ participants older than 55 years old in the study.

	2017		**2022**	
	Count	Rate (%)	Count	Rate (%)
Loneliness				
Never	12	26.67	31	29.25
Sometimes	26	57.78	60	56.60
Often	7	15.56	15	14.15
Abuse				
Physical	13	28.89	17	16.50
Mental	15	34.88	27	25.96
Sexual	8	19.05	13	12.38

4. Discussion

The data from 2017 and 2022 paints a clear picture: LGBTQ+ individuals continue to face significant challenges when it comes to both their physical and mental health, as well as their experiences of violence and abuse. These disparities are not just statistics, they represent real people dealing with the consequences of discrimination, marginalisation, and lack of support.

In 2017, we already saw a worrying trend: LGBTQ+ people were more likely than cis-straight people to report abuse, and their mental health was suffering as a result. This wasn't just a minor difference; the numbers were striking. Fast forward to 2022, and while the visibility of LGBTQ+ people increased, so did the gap in health outcomes, especially in mental health. The fact that nearly 13.2% of LGBTQ+ individuals reported poor mental health compared to only 3.6% of cis-straight individuals in 2022 is alarming. Similarly, their physical health was also worse on average, and the LGBTQ+ group reported higher amounts of abuse, whether it was physical, mental or sexual.

4.1. Recommendations and Next Steps:

Addressing these disparities requires a multi-pronged approach, focusing on mental health support, physical healthcare access, preventing violence, and better care for those who experience abuse or violence. Here's how we can make a real difference:

4.1.1. Mental Health Support

One of the key recommendations from the project is to improve access to mental health services tailored to the needs of LGBTQ+ individuals. Given the high rates of mental health issues within the community, it is crucial that mental health services be both accessible and culturally competent. This means training healthcare providers to understand the unique stressors faced by

LGBTQ+ individuals and ensuring that services are non-judgmental, inclusive, and affirming of diverse sexual orientations and gender identities (see Rees et al., 2020).

- **Expand Resources**: Mental health services need to be easily accessible and specifically designed with LGBTQ+ individuals in mind. Therapy should be affordable, culturally sensitive, and available both in-person and online for those who might not feel safe or comfortable seeking help in traditional settings.
- **Trauma-Informed Care**: Many LGBTQ+ individuals have experienced trauma due to discrimination or violence. It's critical that mental health professionals are trained in trauma-informed care that takes these unique experiences into account.
- **Peer Support Networks**: Building a sense of community is crucial. Peer support groups where LGBTQ+ individuals can connect with others who've gone through similar challenges can help alleviate feelings of isolation and provide emotional support. This is already available to some extent as Samtökin ´78 - The National LGBTQ+ Organisation host some support groups especially for trans people as well as the relatives of trans people (see here: https://samtokin78.is/starfsemin/studningshopar/)

4.1.2. Physical Health

Improving health outcomes also requires addressing the social determinants of health, such as economic stability, social support, and access to healthcare. For LGBTQ+ individuals, this means creating inclusive policies that remove barriers to healthcare. It also means promoting community-building initiatives that reduce isolation and provide social support for LGBTQ+ individuals,

particularly those who may be more vulnerable, such as transgender individuals and LGBTQ+ individuals with a disability.

- **Ensure Equal Access to Healthcare**: Discrimination in healthcare can be a major issue. LGBTQ+ people deserve the same level of care as anyone else. Healthcare providers need training on how to treat LGBTQ+ individuals with respect and without bias.
- **Health Education**: Educating both the LGBTQ+ community and healthcare providers is essential. LGBTQ+ individuals should be educated on health-related matters and encouraged to prioritise their health. while healthcare providers need to be better educated on the specific health issues faced by LGBTQ+ individuals.
- **Community Health Programs**: Programs that focus on the physical well-being of LGBTQ+ individuals (whether it's fitness, nutrition, or preventive health) can help improve outcomes and reduce the disparities we see in physical health. Samtökin '78 - The National LGBTQ+ organisation are currently (as this is written in September 2024) offering for a second time a 12-week health promoting course that is focused on reaching LGBTQ+ individuals that don't trust themselves to seek conventional healthcare or attend other health-promoting activities (see here: https://www.facebook.com/share/p/qrCjcYhPd8cRTWxo/)

4.1.3. Preventing and Addressing Violence

Preventing violence against LGBTQ+ individuals is another priority area. The research calls for stronger anti-violence measures, including both legal protections and community-based programs aimed at reducing violence and supporting victims. Educational campaigns that challenge homophobia and transphobia are also essential in changing societal attitudes and preventing

violence before it occurs. Schools play a critical role in fostering inclusive environments where LGBTQ+ youth can feel safe and supported.

- **Awareness Campaigns**: We need to shift societal attitudes toward LGBTQ+ individuals. Public campaigns that tackle homophobia and transphobia head-on can help reduce violence and discrimination.
- **Safe Spaces**: Creating more safe spaces for LGBTQ+ individuals, both in physical locations like community centres and online, can help reduce their exposure to violence and provide a refuge when needed.
- **School-Based Interventions**: Schools should implement sensitivity training that specifically address homophobia and transphobia, creating a safer environment for LGBTQ+ youth. Reykjavík City and Samtökin ´78 currently have a contract which ensures LGBTQ+ sensitivity training for both students and employees of all primary schools in Reykjavík City.
- **Comprehensive Victim Services**: Victims of violence need immediate and long-term support. This means providing access to medical care, legal assistance, and mental health services that are specifically designed for LGBTQ+ individuals.
- **Crisis Support**: Ensuring that emergency services such as shelters and hotlines are inclusive for LGBTQ+ victims of violence are essential. These services need to be easily accessible to ensure they can provide immediate support.
- **Education on Rights and Resources**: LGBTQ+ individuals need to know their rights and the resources available to them if they experience violence. Outreach programs should focus on educating LGBTQ+ communities about their options for legal and medical help after experiencing violence.

4.1.4. Advocacy and Policy Change

Achieving long-term improvements in the health and well-being of LGBTQ+ individuals require more than addressing immediate healthcare needs—it necessitates systemic policy reform. Policy change is crucial to tackling the root causes of health disparities, including discrimination, unequal access to services, and societal stigma. For LGBTQ+ communities to thrive, both at a societal and institutional level, policies must be updated and enforced to ensure fair treatment in healthcare, legal protection, and access to mental health resources. LGBTQ+ individuals continue to face unique challenges that often go unaddressed in mainstream policy discussions. From fighting for equal healthcare access to ensuring comprehensive legal protections from violence and discrimination, advocacy plays a critical role in advancing LGBTQ+ rights. Additionally, supporting research on LGBTQ+ health issues can offer more informed approaches to policy development, leading to sustainable, inclusive change.

- **Advocacy for Policy Reform**: LGBTQ+ communities and their allies must be included in policy making if inclusive health care is to be ensured as well as a better health and wellbeing outcomes for LGBTQ+ people. This applies to all fields whether it is equal healthcare access, violence prevention or more mental health resources.
- **Funding for Research**: To better understand the root causes of these disparities and develop effective solutions, more research is needed. Governments and institutions should fund studies focusing on LGBTQ+ health, safety, and well-being to inform future policies. One good example is this research project which is funded by the Student Innovation Fund and overseen by Reykjavik City. This research project could, and should, be repeated in 2027 when the Heilsa og líðan study is carried out next.

5. Conclusion

The significant disparities in both physical and mental health between LGBTQ+ and cis-straight individuals, as well as the disproportionate levels of violence faced by LGBTQ+ people, are not issues we can ignore. These aren't just statistics, behind each number is a person dealing with the emotional and physical fallout of discrimination and violence.

Addressing these problems requires action across multiple fronts: mental health services must be improved, healthcare systems need to be more inclusive, violence must be prevented, and support for victims of violence must be strengthened. By taking these steps, we can begin to close the gap in health outcomes, ensure LGBTQ+ people are safe from violence, and provide the care they need and deserve when violence does occur. Ultimately, these efforts are about creating a society where LGBTQ+ individuals can live healthy, safe, and fulfilling lives.

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