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New Zealand Crime and Victims Research

The burden of crime victimisation among the LGBTQ+ population in Aotearoa

NEW ZEALAND POLICY RESEARCH INSTITUTE
TE KĀHUI RANGAHAU MANA TAURITE

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Disclaimer

Access to the data used in this study was provided by Stats NZ under conditions designed to give effect to the security and confidentiality provisions of the Data and Statistics Act 2022. The results presented in this study are the work of the author, not Stats NZ or individual data suppliers.

These results are not official statistics. They have been created for research purposes from the Integrated Data Infrastructure (IDI) and Longitudinal Business Database (LBD) which are carefully managed by Stats NZ. For more information about the IDI or LBD please visit https://www.stats.govt.nz/integrated-data/ .

Results reported in this study might differ from published figures in New Zealand Crime and Victims Survey reports because of a) using the IDI dataset, which is a subset of the full New Zealand Crime and Victims Survey dataset, and b) methodological differences (e.g., application of weights).

Executive Summary

This study examines the differences in crime victimisation between sexual and gender minorities (identified as LGBTQ+) and the general population in Aotearoa New Zealand. We (a) compare the risk of victimisation between LGBTQ+ individuals and non-LGBTQ+ individuals, controlling for differences in sociodemographic characteristics, and (b) assess the differences between LGBTQ+ and non-LGBTQ+ individuals in their crime-victimisation-related interactions with public agencies, e.g., mental health providers, police, or Accident Compensation Corporation (ACC). For our empirical research, we use the New Zealand Crime and Victims Survey (NZCVS), which has been integrated into the Integrated Data Infrastructure (IDI)—Stats NZ's administrative research database that consolidates information from a wide range of public agencies.

The NZCVS collects data on reported and non-reported crime victimisation, as well as captures the perceived motivation behind the crime and the physical and mental harm associated with the victimisation. Additionally, the survey collects a wide range of sociodemographic characteristics, including—and crucial for our study—sexual orientation, gender identity, and sex at birth. We use this information to identify our population of interest, classifying individuals as LGBTQ+ if their sexual orientation is gay/lesbian, bisexual, or other (i.e., not heterosexual), or if they are gender diverse or when their gender identity and biological sex differ. We aggregate the NZCVS data from the first five cycles, covering the years 2018 to 2022.

Our key findings are:

1. LGBTQ+ individuals report higher rates of crime victimisation than non-LGBTQ+ individuals. One out of three non-LGBTQ+ individuals (31.8%) report being a victim of a crime in the past 12 months—but the reported burden is 14.3 percentage points higher for LGBTQ+ individuals (45.5%).
2. LGBTQ+ individuals have sociodemographic characteristics that tend to be associated with higher crime victimisation risk, such as being younger on average and having lower average incomes than non-LGBTQ+ individuals. However, accounting for these differences between LGBTQ+ and non-LGBTQ+ individuals in regression models has minimal impact on the crime victimisation gap between these two groups.
3. Differences in crime victimisation rates by LGBTQ+ status are smaller for individuals living in Auckland or Wellington compared to the rest of New Zealand.
4. LGBTQ+ individuals are more likely to report that the perceived reason for crime victimisation is their sexual orientation or their sex compared to non-LGBTQ+ individuals. Moreover, they are more likely to experience negative effects, such as having to take time off work or sustaining physical injuries.

Contents

1 Introduction

Understanding and expressing one's sexual orientation and gender identity is a journey unique to each individual. The acronym LGBTQ+ encompasses individuals who are not heterosexual and/or express their gender in diverse ways and refers to lesbian, gay, bisexual, transgender, queer or questioning, or other diverse sexual orientations and gender identities.

In New Zealand, gradual progress has been made, particularly in the past two decades, towards improving the basic rights of LGBTQ+ people. However, there is an ongoing public discussion across various dimensions, including employment, marriage equality, and gender-affirming procedures, on how inclusive New Zealand society is towards sexual and gender minorities (Yeung & Crothers, 2016; Carpenter et al., 2024). By international standards, New Zealand is considered an inclusive country. Flores (2021) ranked 175 countries on LGBTQ+ equality for the period 1981-2020, with New Zealand ranked the tenth most inclusive country, with the most progressive countries being Iceland, Norway, the Netherlands, Sweden, and Canada. Legislative changes in New Zealand reflect this—discrimination based on gender identity and sexual orientation has been banned since 1990, the 2013 Marriage Amendment Act allowed for same-sex marriages and the 2022 Conversion Practices Prohibition Legislation Act banned conversion therapy practices. However, recent research from Carpenter et al. (2024) found that earnings differentials in New Zealand were strikingly similar to those documented in other less-inclusive developed countries and that men living in a same-sex relationship experience an earnings penalty despite New Zealand being an inclusive country.

Another concern of the LGBTQ+ community is that these individuals face significantly different risks of being victims of crime compared to non-LGBTQ+ people. This raises the question of whether the existing legal framework and administrative institutions adequately safeguard against crime and discrimination that targets the LGBTQ+ community. However, so far, little is known about how the violence and crime faced by LGBTQ+ individuals compare to the general population.

The existing body of research, especially in the New Zealand context, is limited and often lacks documentation of relevant indicators and the motivations behind such crimes. This study addresses these gaps by focusing on the crime victimisation of LGBTQ+ individuals in New Zealand compared to non-LGBTQ+ people and addresses the following two research aims:

- *Research Aim 1*: Estimating the victimisation risk of LGBTQ+ individuals compared to non-LGBTQ+ individuals after controlling for differences in sociodemographic characteristics.
- *Research Aim 2*: Estimating the difference between LGBTQ+ and non-LGBTQ+ individuals in their interaction with crime victimisation-related public agencies such as mental health providers, police or the Accident Compensation Corporation (ACC).

Research Aim 1 helps our understanding of the factors behind differences in victimisation rates by LGBTQ+ status. For example, LGBTQ+ individuals tend to be younger and have lower incomes on average than non-LGBTQ+

individuals. At the same time, these kinds of sociodemographic characteristics are associated with higher victimisation rates in general. Thus, the analysis will help us understand to which extent these socioeconomic differences explain the differences in victimisation rates by LGBTQ+ status or if they are more likely to be related to their LGBTQ+ identity. Research Aim 2 provides insights into LGBTQ+ individuals' access to government services in the event of victimisation and whether they face higher access barriers than non-LGBTQ+ individuals.

In this study, we use data from the New Zealand Crime & Victims Survey (NZCVS) to investigate how LGBTQ+ individuals are affected or targeted by crime. The NZCVS spans the period 2018 to 2023 and covers over 32,000 individuals across five cycles. There are multiple advantages of using the NZCVS:

- It provides a comprehensive view of *reported* and *non-reported* crime victimisation in New Zealand, including household and personal offences.
- It holds comprehensive individual-level information, including sexual orientation and gender identity, that is otherwise not found in other data sources.
- It considers both the risk of being a victim of an offence in the past year and also the offence type.
- It provides the perceived reason for the crime or offence and whether it was related to any discrimination, including ethnicity, sexual orientation, and sex.
- It can be linked to other administrative datasets within the Integrated Data Infrastructure (IDI), which can provide a measure of service uptake of public agencies, including ACC claims, Pharmaceutical Management Agency (PHARMAC) records, Programme for the Integration of Mental Health Data (PRIMHD), and Ministry of Social Development (MSD) benefit claims.

This study contributes to the existing literature by providing novel findings across numerous dimensions. First, we not only examine the relationship between LGBTQ+ status and crime victimisation but also explore differences by offence type (e.g., personal or physical offence). Moreover, we investigate how the perceived reason (e.g., sexual orientation or sex) and consequences of crime (e.g., taking time off) differ between LGBTQ+ and non-LGBTQ+ populations. Furthermore, we explore how victims of an offence interact with public agencies (e.g., police and mental health providers) in the same 12-month period that they were victimised and whether we observe differences by LGBTQ+ status.

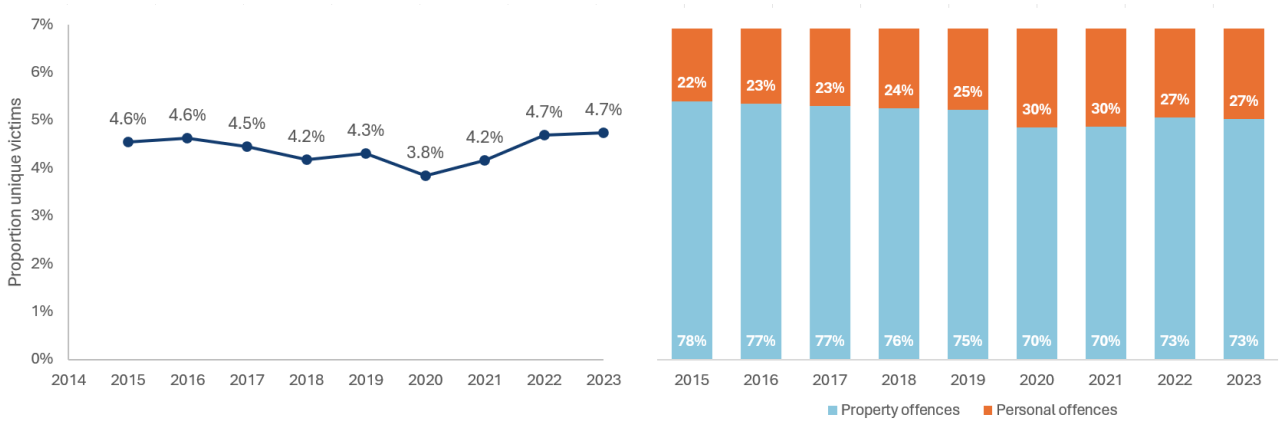
The remainder of this report is structured as follows: Section 2 discusses the New Zealand crime victimisation landscape and summarises the national and international literature on the crime victimisation prevalence of LGBTQ+ individuals. Section 3 details the data used and provides descriptive statistics. Section 4 presents the econometric approach used in this study, and Section 5 discusses the empirical findings. Section 6 concludes and presents the policy implications of the results.

2 Background and Literature Review

2.1 The New Zealand Victimisation Landscape

The New Zealand Police/Nga Pirihimana o Aotearoa publishes detailed statistics on who is affected by crime and records how many individuals are victims of a crime over a 12-month period.[1] Using the estimated resident population of New Zealand, between 4% and 5% of the population have been a victim of crime over a 12-month period according to police records (see Figure 1, left graph).[2] There is a gradual decline in victimisation rates between 2015 (4.6%) and 2019 (4.3%). However, these figures have increased since 2020 and plateaued at around 4.7% in the past two years. When examining crime victimisations by type of crime (see Figure 1, right graph), around 75% of victims experienced property offences (e.g., robbery, burglary or theft). The remaining share were victims of personal offences that include acts intended to cause injury, assault (including sexual) or harassment and the share of these types of crimes increased over time (22% in 2015 versus 27% in 2023).

Figure 1: Recorded crime victimisation



Source: Author's own calculation using data from New Zealand Police/Nga Pirihimana o Aotearoa and the Estimated Resident Population data from Stats NZ (see footnotes 1 and 2). The left figure shows the proportion of unique victims on the population level (in %) and the right figure decomposes the offences by type (property vs personal).

Not every crime is reported to the police.[3] According to the New Zealand Crime and Victims Survey (NZCVS) Cycle 5 results for 2023, almost one-third of NZ adults were victimised in the 12 months before the survey interview—

[1] See: https://www.police.govt.nz/about-us/publications-statistics/data-and-statistics/policedatanz/unique-victims-demographics
[2] The Estimated Resident Population was used as the denominator. See: https://www.stats.govt.nz/topics/population
[3] The top four reasons for not reporting an incident to Police were (NZCVS 2023, p. 53): the incident was too trivial to be worth reporting (45%), reported to the bank (24%), police could not do anything (24%), respondents decided to deal with the issue themselves (18%) and police would not be interested (15%).

and this share has remained stable since 2018. It is important to note that the risk of experiencing a crime is not evenly distributed across the population, with certain groups and communities facing disproportionately higher risks. According to Cycle 5 of the NZCVS, 6.4% of respondents experienced at least one act of interpersonal violence (defined as sexual assault; other assault; robbery; harassment and threatening behaviour; and property damage where the offender is known to the victim). This was highest for those who identify as LGBTQ+ — 17.8% of those who identified as LGBTQ+ had experienced at least one act of interpersonal violence, and this was the highest among all demographic characteristics (New Zealand Crime and Victims Survey Key Findings Report, 2023).[4]

2.2 Victimisation Prevalence of LGBTQ+ Individuals

Early literature, such as that by Herek (1990), attributes the higher frequency of attacks against LGBTQ+ individuals to heterosexism or heteronormativity. The basis of this concept is that heterosexuality is the only normal and natural expression of sexuality and encompasses the belief that different-sex relationships are the only norm and therefore superior compared to same-sex relationships (Cramer, 2002). Another factor is genderism (see Hill & Willoughby, 2005), which is a "social system of beliefs that reinforces the negative evaluation of individuals not conforming to the society's gender role expectations" (Bandini & Maggi 2014, p. 49). A consequence of this system of beliefs for individuals not conforming traditional norms of sex and gender is societal discrimination and stigma, also summarized in the term transphobia (Sugano et al., 2006).

In the following, we provide an overview of New Zealand and overseas findings on crime victimisation among LGBTQ+ individuals. The discussed studies often focus on particular groups within the LGBTQ+ communities, and we use the acronyms according to how the authors of the studies define them.

New Zealand facts

There is limited academic research on crime victimisation among LGBTQ+ individuals in New Zealand. Some factual information can be found in government reports. According to pooled data from the 5th cycle of the NZCVS, one out of three New Zealanders (29.9%) had experienced a crime (all offences) in the past twelve months. However, substantial differences are observed when examining by sexual orientation and gender identity. The prevalence rate (victimisation rate) sits at 29.4% for non-LGBT+ individuals, while the respective rate is 43.0% for people who identify themselves as LGBT+. When examining only interpersonal violence offences, which include sexual assault, harassment and threatening behaviour, the discrepancy is further pronounced: the prevalence rate is at 6.5% for non-LGBT+ individuals and 20.2% for individuals belonging to the LGBT+ group.

[4] The report defines LGBT+ as a demographic group that includes transgender people and people who identify as lesbian, gay, bisexual or having another non-heterosexual sexual identity.

There is also substantial variation within the LGBT+ community and by offence type. The prevalence rate for gay/lesbian individuals is 35.1% for all offences and 20.8% for personal offences.[5] For bisexual individuals, the rate is 52.4% for all offences and 41.2% for personal offences. This discrepancy widens when examining interpersonal violence offences.[6] The prevalence rate among bisexual individuals (28.7%) is almost three times higher compared to gay/lesbian individuals (10.2%) and four times higher compared to non-LGBT+ individuals (6.5%).

A 2017 report on student experiences of sexual violence prior to and during tertiary education also provides descriptive evidence on violence specific to minority genders, sexes and sexualities (Thursdays in Black, 2017). The minority gender, sex and sexuality participants of the survey are asked whether they have experienced unwanted behaviour relating to minority sex, sexuality or gender identity. Out of the 426 respondents, 38% have experienced biphobia, and the same share has experienced homophobia. 54 students indicated having experienced transphobia.

However, the figures above do not take into account the confounding impact of differences in socio-demographic characteristics that may contribute to differences in victimisation rates among the LGBTQ+ community in New Zealand. Moreover, it needs to be noted that in the New Zealand context, there is so far limited understanding of the perceived reason for victimisation and the consequences by LGBTQ+ status.

International findings

Prevalence of crime victimisation by LGBTQ+ status

In the United States, several studies examining crime victimisations use the National Crime Victimization Survey (NCVS), which collects information about respondents' sexual orientation and gender identity. The NCVS is a close match to the New Zealand Crime Victimisation Survey.

Bender & Lauritsen (2021) used the NCVS to examine violence-related victimisations by sexual orientation. The authors showed that among men, both gay and bisexual individuals exhibit significantly higher rates of violent victimisation compared to heterosexual men. Total violent victimisation rates were 38.6 per 1,000 for gay men and 76.7 per 1,000 for bisexual men, compared to 19.4 per 1,000 for heterosexual men. Moreover, gay men experienced 19.2 serious violent crimes per 1,000, while this was 41.6 per 1,000 for bisexual men — both significantly higher than the 6.8 per 1,000 rate for heterosexual men.

[5] Personal offences include fraud and deception, cybercrime, sexual assault, harassment and threatening behaviour, assault, robbery, and theft and damage.
[6] Interpersonal violence offences include sexual assault; other assault; harassment and threatening behaviour; robbery. It also includes damage to personal or household property if the victim knows the offender.

Among women, the study found that total violent victimisation rates were significantly higher among lesbians (78.4 per 1,000) compared to heterosexual women (21.0 per 1,000), with bisexual women exhibiting the highest rate (189.1 per 1,000). Additionally, bisexual women experienced the highest rate of serious violent victimisations (87.5 per 1,000). Bisexual women were found to have significantly higher rates of victimisation for every level of violence compared to heterosexual women and higher victimisation rates compared to lesbian women for all crime types except for simple assault.

Disparities by sexual orientation were particularly notable with respect to violence related to rape, sexual assault, and violence resulting in serious injuries or involving multiple offenders. After adjusting for other factors, the odds ratios were nearly two times those of heterosexuals. That is, those who identified as lesbian or gay were twice as likely to be victims of these types of crime compared to those who identified as heterosexual. There were also large disparities for those who identified as bisexual compared to heterosexuals.

Flores et al. (2021) also analysed NCVS data to study gender identity disparities in victimisation rates. The authors found that transgender individuals experienced violence at four times the rate of their cisgender counterparts, irrespective of similar racial, ethnic, and educational distributions. Additionally, the victimisation rates are similar for transgender women and men, though the perceived causes of their victimisation differ. Transgender victims whose sex assigned at birth was male (trans women) were more likely to perceive their victimisation as a hate crime than cisgender victims (cisgender men) whose sex assigned at birth was male (28% vs. 9%). Studies such as those by D'Augelli & Grossman (2001) and Dunbar (2006) indicate that the more open individuals are to disclose their sexual orientation, the higher the reported victimisation rates.

Victimisations reported to the police

It is important to note that victimisation rates measured as incidents reported to the police may differ from the actual prevalence (which includes non-reported incidents), especially for LGBTQ+ individuals. LGBTQ+ individuals often conceal their sexual orientation or gender identity due to safety concerns and/or experiencing verbal and physical violence in various settings, including home, school, work, and the broader community (Pilkington & D'Augelli, 1995). In terms of reporting victimisations to authorities, Flores et al. (2021) found no disparities between transgender and cisgender people: roughly half of violent crimes were reported to the police across both groups (51% for transgender people and 47% for cisgender people).

Briones-Robinson et al. (2016) also used the NCVS to explore the victim–police interactions of LGBT individuals. Even though LGBT hate crimes are typically more violent and cause greater harm as compared to other victimisations, they are underreported. The authors list homophobic attitudes of the police as one barrier for LGBT individuals to report an incident. The study focuses on the Matthew Shepard Act, which extended the reach of federal remedies to include offences perpetrated against sexual minorities and its impact on the anticipation of biased police responses against LGBT people. The authors compared crimes where sexual orientation was believed to be the reason for the crime with other crimes and assessed changes in reporting following the

enactment of the Act. Their results indicate that within the first two years after the legal change, LGBT victims continued to view the police as biased.

Further findings on victimisations

Kahle (2020) analysed bullying experiences among lesbian, gay, bisexual, and questioning youth. The authors used data from the 2013 Youth Risk Behavior Surveillance System conducted by the US Centers for Disease Control and Prevention (CDC). The study found lesbian, gay, bisexual, and questioning youth faced higher rates of traditional, electronic, and homophobic bullying compared to heterosexual peers. As a result of their findings, the authors suggested that "school policies must explicitly acknowledge and address how sexual orientation and gender matter within the constructs of youth violence if they wish to create safer learning environments for youth" (p. 4960). Additionally, the study identified factors such as age, ethnicity, weight perception, and involvement in misbehaviour that influenced bullying victimisation among LGB and questioning youth.

Langenderfer-Magruder et al. (2016) examined the relationship between gender identity and partner violence. The authors used data from One Colorado's (a statewide LGBT advocacy organisation) anonymous 2011 LGBT Health Survey to investigate intimate partner violence (IPV). They aimed to determine lifetime prevalence and police reporting in both cisgender and transgender individuals. Results indicate that over one-fifth of all participants experienced IPV, with transgender individuals showing significantly higher rates compared to cisgender peers. The study suggests the importance of inclusive language in discussing IPV and advocates for policies and interventions that address the unique needs of LGBT individuals, particularly transgender victims and perpetrators of IPV. It also recommended further research to understand the risk factors and experiences of IPV among transgender individuals and emphasises the importance of routinely screening transgender clients for IPV in healthcare settings.

Katz-Wise & Hyde (2012) conducted a meta-analysis using data from 386 studies, with samples from 18 countries across six continents conducted between 1992 and 2009, to determine the prevalence and type of victimisation experienced by LGB individuals. Over 500,000 participants were included in the analysis. Results showed that LGB individuals reported substantial levels of victimisation, with 55% experiencing verbal harassment and 41% experiencing discrimination. LGB individuals experienced higher rates of victimisation compared to heterosexual individuals, though the differences were small to moderate. Gay and bisexual men experienced certain types of victimisation more so than lesbian and bisexual women, but overall gender differences were small. Their study highlights the ongoing issue of victimisation among LGB individuals.

2.3 Sociodemographic Interacting with the Relationship Between Sexuality and Victimisation

The international literature shows that LGBTQ+ individuals face higher victimisation rates compared to their cis-heterosexual peers. Social stigma and discrimination is considered a major driver for victimisation and often involves multiple intersecting factors. In the following we discuss the intersection between LGBTQ+ status and sociodemographic factors and differences in the experience of victimisation.

Socio-demographic characteristics and victimisation

The literature reports differences in crime victimisations not only by sexual orientation or transgender status, but also by socio-demographic characteristics. For example, Bender & Lauritsen (2021) found that those who identified as bisexual were more likely to be younger, female, and in the lowest income category. Being young and female may explain why bisexual individuals have higher victimisation rates rather than their sexual orientation. Therefore, it is vital to investigate how the prevalence of self-reported crime victimisation differs between LGBTQ+ individuals and their cisgender-heterosexual peers after controlling for a large range of socio-demographic characteristics.

Kimerling et al. (2002) analysed medical charts of 842 women and 128 men seen at an urban hospital-based rape treatment centre in San Francisco. Despite many similar demographic characteristics among the male and female samples, the authors found that men were more likely to identify as gay or bisexual—however, women were more likely to be of minority ethnicity.

D. Meyer (2012) revealed that LGBTQ+ people of colour often interpret anti-queer violence as implying negative representations of their racial communities compared to their white peers.

Experience with victimisation

Meyer (2008, 2010) conducted semi-structured in-depth interviews with 44 LGBT people who experienced anti-LGBT violence in New York City. Their findings showed that violent experiences differed by the sociodemographic characteristics of the respondents (e.g., ethnicity, social class, gender). The author concludes that the social position of LGBT people plays an instrumental role in structuring how they evaluate the severity of hate-motivated violence. For example, middle-class white respondents were more likely to perceive their violent experiences as severe compared to low-income people of colour, even though the latter experienced more physical violence than the former.

Rothman et al. (2011) systematically reviewed 75 studies conducted between 1989 and 2009 that examined the prevalence of sexual assault victimisation among gay or bisexual men and lesbian or bisexual women in the United States. The studies reported on lifetime sexual assault victimisation, childhood sexual assault, adult sexual assault, intimate partner sexual assault, and hate crime-related sexual assault. Prevalence estimates of lifetime sexual assault victimisation ranged from 15.6% and 85.0% for lesbian or bisexual women and 11.8% and 54.0%

for gay or bisexual men. Lesbian or bisexual women were more likely to report childhood sexual assault, adult sexual assault, lifetime sexual assault victimisation, and intimate partner sexual assault, while gay or bisexual men were more likely to report hate crime-related sexual assault.

Health consequences of victimisation and LGBTQ+ status

Bontempo & D'Augelli (2002) examined the link between victimisation at school and health risk behaviours (such as substance use, suicidality, and sexual risk behaviours) of LGB and heterosexual youths. The authors used data from the 1995 Youth Risk Behavior Survey taken in Massachusetts and Vermont, which included 9,188 students from 9th through 12th grade (including 315 students who identified themselves as LGB). The authors found large differences in health risk behaviours among those who reported high levels of at-school victimisation by sexual orientation. LGB youths reported higher levels of substance use, suicidality, and sexual risk behaviours compared to their heterosexual peers. Additionally, Meyer (2003) showed that LGB individuals exhibit a higher prevalence of mental disorders than heterosexual individuals, which is attributed to hostility and stress from their social environment.

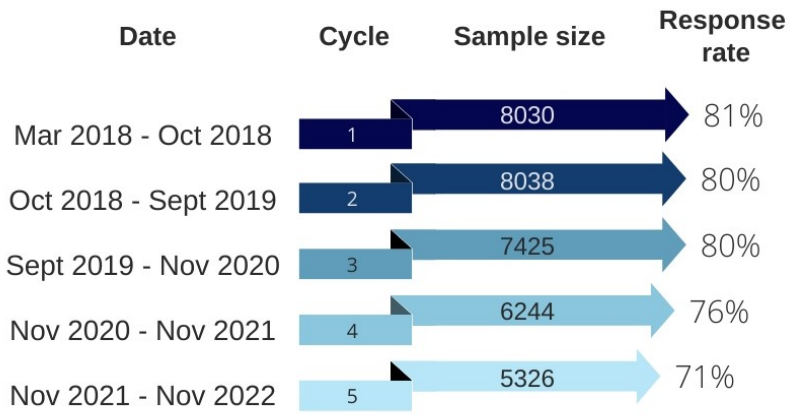
Those who experience physical attacks based on their sexual orientation reported lower self-esteem, increased loneliness, poorer mental health, and higher rates of suicide attempts among older adults (D'Augelli & Grossman, 2001). Hate crime survivors also exhibit more symptoms of depression, anger, anxiety, and posttraumatic stress, greater crime-related fears and beliefs, lower sense of mastery, and increased attributions of personal setbacks to sexual prejudice (Herek et al., 1999). Moreover, crimes based on sexual orientation tend to involve more severe violence and have a greater impact on victims' functioning (Dunbar, 2006).

3 Data and Descriptive Statistics

3.1 The New Zealand Crime & Victims Survey (NZCVS)

This study uses data from the New Zealand Crime and Victims Survey (NZCVS), which collects information about New Zealanders' experience of crime. The survey has been run every year since 2018, and each cycle asks around 8,000 New Zealanders, with a drop to 5,000 during the covid pandemic, from all walks of life about their experiences of crime (see also Figure 2). The NZCVS represents a significant advancement in design compared to its predecessors, like the New Zealand Crime & Safety Survey (NZCASS). Key improvements include alterations in the method of selecting interviewees within households, adopting a coding system for offences that is consistent with police categorisation, revising the approach to capping the number of offences, encompassing additional offence types such as fraud and cybercrime, refining data collection for individuals experiencing multiple victimisations, and reducing the need for data imputations.

Figure 2: The New Zealand Crime and Victims Survey



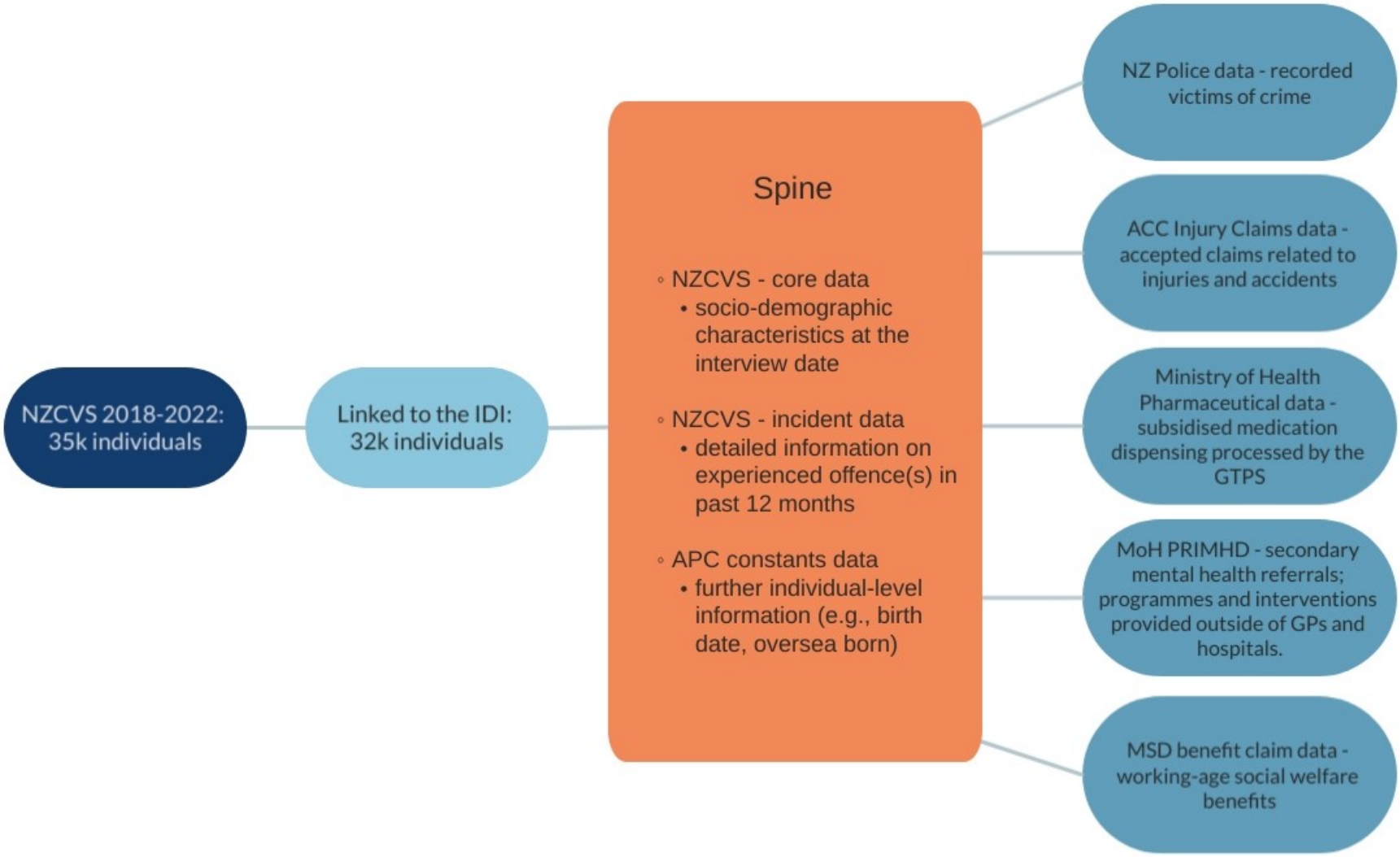
Source: New Zealand Crime and Victims Survey Key Findings Report Cycle 1-5 and author's own calculation.

The NZCVS consists of a core module with recurring crime and victimisation questions, supplemented by changing in-depth modules on various topics. For example, Cycles 1 and 3 focused on family violence by asking extended family violence questions, while Cycle 4 addressed controlling behaviour in families following legislative changes. The NZCVS is a vital source of comprehensive data on adult victims of crime

in New Zealand, offering insights into crime patterns and victimisation across different regions and demographics. It covers household and personal offences but excludes crimes against businesses, homicide, "victimless" crimes, and traffic offences. The NZCVS has significantly enhanced the understanding of crime and victimisation since its inception in 2018, aiding policy development for various governmental and non-governmental organisations. A consistent methodology across all five cycles from 2018 to 2023 allows for accurate analysis of changes in crime and victimisation levels over the years.

About 35,000 participants have been interviewed across the five NZCVS cycles. To allow for a wider analysis that incorporates factors not otherwise captured in the NZCVS, the participants were asked for their consent to link their anonymised records with the Statistic NZ Integrated Data Infrastructure (IDI). The IDI is a large research database containing de-identified microdata about people and households (see also Figure 3). Data is provided by a large range of government agencies (e.g., Police, Ministry of Justice, Ministry of Social Development, Inland Revenue), Stats NZ surveys, and non-government organisations. Individuals are linked across datasets to form the IDI. Of the 35,000 participants, around 32,000 individuals have agreed to have their NZCVS responses linked to the IDI. Having the NZCVS linked within the IDI provides two substantial advantages: first, further background information for each individual can be retrieved from other datasets. Second, other outcome variables related to crime victimisation can be examined for each individual in the NZCVS. This is particularly important for Research Aim 2, which looks at the uptake of public agency support.

Figure 3: Identifying the population of interest



Source: Author's own representation.

3.2 Population of Interest

The starting point of this analysis is the creation of our population of interest, which uses the *core* dataset from the NZCVS and serves as the spine for which other variables are attached. The core dataset holds a large range of sociodemographic characteristics that are relevant to our study, most importantly, sexual orientation, gender identity and biological sex. This is linked to the *apc_constants* dataset generated by Stats NZ. This dataset holds individual-level information, which is constant over time, including birth date (year and month) and birthplace (overseas or NZ). We restrict our sample to the adult population between 18 and 79 at the time of the interview. After removing all individuals with missing information, our final sample consists of 28,692 individuals.[7]

The first column of Table 1 shows the distribution of the sociodemographic characteristics of our population of interest. By ethnicity, the sample is 55.5% European, followed by 28.7% Māori, 11.1% Asian and other and 5.2% Pacific Peoples[8]. Almost 84% of participants are aged 30 and above, and 68% state being in a (same-sex or different-sex) relationship. Carpenter et al. (2024) found the largest representation of same-sex couples relative to different-sex couples in Auckland and Wellington than in the rest of the country. The authors also showed that the earnings penalty for men in same-sex couples, compared to their counterparts in different-sex couples, was smaller in these two regions. We follow the spatial differentiation and Table 1 shows that two out of five adults live in Auckland or Wellington. Moreover, three-quarters of the population were born in New Zealand.

[7] To protect data confidentiality, a widely used method is by adding noise to the data. To disguise small counts, it is imperative by Stats NZ rule to apply the random rounding to base 3 (RR3) rule, in which counts are randomly rounded to base three in a consistent manner. For details see: https://data.govt.nz/toolkit/privacy-and-security/understanding-data-confidentiality/data-confidentiality-principles-and-methods-report#:~:text=We%20can%20protect%20information%20in,three%20in%20a%20consistent%20manner.

[8] Respondents have the option to list more than one ethnicity. We use the following modification of Stats NZ ethnicity prioritization system and assign a single ethnicity in the following order: Māori, Pacific Peoples, Asian and Other, European. An individual is assigned the ethnicity that appears first in the order. For example, an individual with Māori and European ethnicity is assigned Māori. Boven et al. (2020) provide a detailed discussion of this concept and highlight limitations when the study's focus is on Māori of Pacific Peoples.

Table 1: Demographic summary statistics

	Total (I)	LGBTQ+ (II)	Non-LGBTQ+ (III)
Ethnicity			
Māori	8,241 (0.287)	444 (0.369)	7,797 (0.284)
Pacific Peoples	1,497 (0.052)	48 (0.040)	1,449 (0.052)
Asian/other	3,180 (0.111)	96 (0.080)	3,084 (0.111)
European	15,774 (0.550)	615 (0.511)	15,159 (0.550)
Age			
<30	4,725 (0.165)	435 (0.361)	4,290 (0.156)
≥30	23,967 (0.835)	771 (0.639)	23,196 (0.844)
Partnership status			
Single	9,144 (0.319)	531 (0.440)	8,613 (0.313)
Partnered[a]	19,548 (0.681)	675 (0.560)	18,873 (0.687)
Geographic location			
Auckland/Wellington	11,460 (0.399)	594 (0.493)	10,866 (0.395)
Rest of New Zealand	17,232 (0.601)	612 (0.507)	16,620 (0.605)
Household income			
$20,000 or less	2,457 (0.086)	135 (0.112)	2,322 (0.084)
$20,001-$30,000	3,105 (0.108)	108 (0.090)	2,997 (0.109)
$30,001-$50,000	4,719 (0.164)	183 (0.152)	4,536 (0.165)
$50,001-$70,000	5,061 (0.176)	219 (0.182)	4,842 (0.176)
$70,001-$100,000	5,043 (0.176)	210 (0.174)	4,833 (0.176)
$100,001 or more	8,298 (0.289)	345 (0.286)	7,953 (0.289)
Deprivation score			
8 or higher	10,347 (0.361)	465 (0.386)	9,882 (0.360)
< 8	18,345 (0.639)	741 (0.614)	17,604 (0.640)
Birthplace			
New Zealand	21,846 (0.761)	963 (0.799)	20,883 (0.760)
Overseas	6,846 (0.239)	243 (0.201)	6,603 (0.240)
Individuals	**28,692**	**1,206**	**27,486**

Source: IDI (2024) and author's own calculations. The numbers in parentheses refer to the respective share within each group. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ.
[a] includes same-sex and different-sex partnerships.

Next, we link our spine to the *incident* dataset of the NZCVS database. The dataset holds detailed information on any experienced offence or crime in the past 12 months, including the offence category, the perceived reason for the offence, the relationship with the offender, and the consequences (e.g., the offence was reported to the police, taking time off, being physically injured). We follow the MoJ (2023)

definition of offence type to create the following variables that focus on personal and physical offences which may be linked to certain individual characteristics like identifying as LGBTQ+:

- *Any*: all offence types
- *Physical offence*: includes robbery and non-sexual assault
- *Personal offence*: includes personal theft, property damage, assault incl. sexual, robbery, fraud and deception, cybercrime, harassment and threatening behaviour
- *Interpersonal offence*: includes sexual and other assault, harassment and threatening behaviour, robbery, and damage of personal or household property if the victim knows the offender
- *Multiple victimised*: reporting more than one victimisation in the past 12 months (note that MoJ (2023) has a highly victimised category with a threshold of four or more offences)

Note that our measures are calculated on the pool of individuals across all 5 cycles that are available in the IDI, and as such, we cannot examine differences over time. However, MoJ (2024) has stated that the overall prevalence rate of victimisation has been stable across different cycles, with significant changes observed in some subcategories (e.g., personal offences). The focus of this study is to examine crime victimisations for a vulnerable priority population – splitting the analysis by survey cycle would substantially lower the statistical power and ability to interpret the results.

Table 2 shows the distribution of victimisation by offence category and socio-demographic characteristics. The last row shows that about one-third of the survey respondents (31.8%) experienced at least one offence in the 12 months prior to the interview, and one out of ten (11.3%) had been victimised more than once. The prevalence for personal and interpersonal offences was 16.3% and 7.8%, respectively. Less than 5% of respondents were victims of a physical offence.

By ethnicity, Māori have substantially higher victimisation rates (36.6%) compared to Asian and others (28.1%). Victimisation rates were higher for respondents aged below 30 (39.5%) compared to those aged 30 and above (30.3%) and for those living in Auckland/Wellington (33.5%) compared to the rest of New Zealand (30.7%). Differences in the victimisation rates also vary by offence type. The share of respondents below 30 reporting having encountered a physical offence was more than twice that of those 30 and above (6.0% and 2.5%, respectively).

Table 2: Victimisation by socio-demographic characteristics

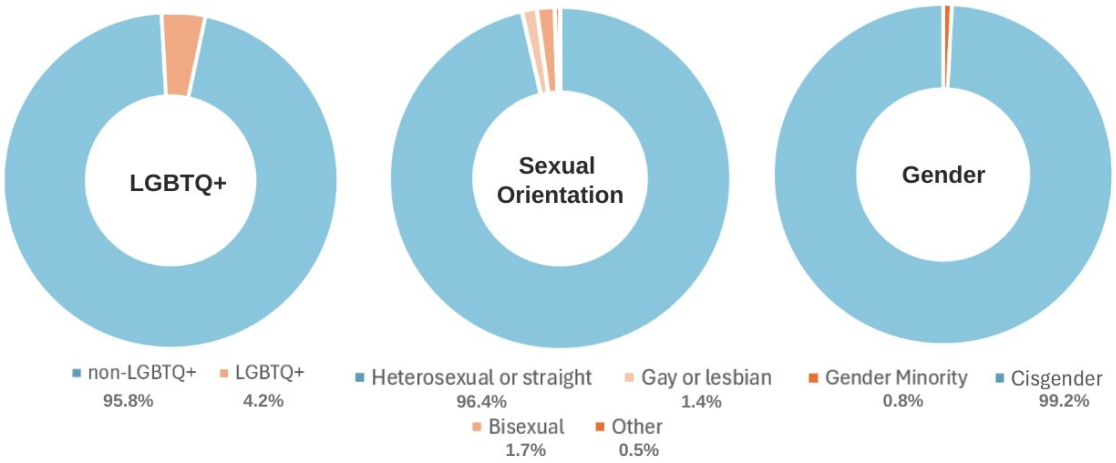
Offence category	Any	Personal offence	Interpersonal offence	Physical offence	Multiple victimised
Ethnicity					
Māori	0.366	0.197	0.112	0.050	0.153
Pacific Peoples	0.308	0.123	0.054	0.023	0.108
Asian/other	0.281	0.111	0.044	0.017	0.086
European	0.302	0.159	0.069	0.024	0.098
Biological sex					
Male	0.308	0.153	0.068	0.035	0.102
Female	0.326	0.170	0.085	0.028	0.121
Age					
30+	0.303	0.154	0.065	0.025	0.103
<30	0.395	0.207	0.142	0.060	0.164
Geographic location					
Auckland/Wellington	0.335	0.161	0.071	0.032	0.116
Rest of New Zealand	0.307	0.164	0.082	0.029	0.110
Household income					
$20,000 or less	0.350	0.180	0.105	0.047	0.142
$20,001-$30,000	0.275	0.142	0.078	0.031	0.105
$30,001-$50,000	0.305	0.154	0.079	0.030	0.109
$50,001-$70,000	0.320	0.159	0.079	0.032	0.111
$70,001-$100,000	0.315	0.158	0.075	0.029	0.109
$100,001 or more	0.334	0.176	0.071	0.026	0.112
Deprivation score					
<8	0.299	0.159	0.069	0.026	0.095
8 or higher	0.352	0.169	0.095	0.039	0.143
Birthplace					
New Zealand	0.329	0.174	0.088	0.035	0.121
Overseas	0.285	0.127	0.048	0.018	0.087
Partnership status					
Single	0.347	0.191	0.117	0.046	0.144
Partnered	0.305	0.150	0.060	0.024	0.098
Total	**0.318**	**0.163**	**0.078**	**0.031**	**0.113**

Source: IDI (2024) and author's own calculations. The number refers to the share of individuals who experienced in the past 12 months to the interview a specific type of offence.
Physical offence: includes robbery and non-sexual assault. *Personal offence*: includes personal theft, property damage, assault incl. sexual, robbery, fraud and deception, cybercrime, harassment and threatening behaviour. *Interpersonal offence*: includes sexual and other assault, harassment and threatening behaviour, robbery, and damage of personal or household property if the victim knows the offender. *Multiple victimised*: reporting more than one victimisation in the past 12 months.

3.3 Crime Victimisation of the LGBTQ+ Population

To characterise LGBTQ+ status, we use the information (and follow the survey's terminology) provided on sexual orientation (heterosexual/straight, gay/lesbian, bisexual, other), gender identity (male, female, gender diverse), and biological sex (male, female). An individual is assigned as LGBTQ+ when their sexual orientation is gay/lesbian, bisexual or other, when they record their gender as gender diverse or when their gender identity and biological sex differ. Our sample comprises 1,206 LGBTQ+ individuals, which is 4.2% of the total population (see also Figure 4).

Figure 4: Distribution of sexual orientation and gender identity



Source: IDI (2024) and author's own calculations. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ. Individuals are identified as gender minority when being gender diverse or when gender identity and biological sex differ.

Substantial differences exist when comparing sociodemographic characteristics by LGBTQ+ status (columns II and III of Table 1). LGBTQ+ individuals are, on average, younger (36.0% are below 30 compared to 15.6% of the non-LGBTQ+ sample), are single (44.0% vs 31.0%) and live in Auckland or Wellington (49.0% vs 40.0%).

Table 3: Crime victimisation

Offence category	Any	Personal offence	Interpersonal offence	Physical offence	Multiple victimised
LGBTQ+ status					
Non-LGBTQ+	0.312	0.157	0.073	0.029	0.108
LGBTQ+	0.455	0.296	0.192	0.067	0.221
Difference	0.143***	0.139***	0.119***	0.038***	0.114***
Sexual orientation					
Heterosexual or straight	0.313	0.157	0.073	0.029	0.108
Gay or lesbian	0.403	0.224	0.119	0.030	0.149
Difference 1	0.090***	0.066***	0.046***	0.001	0.041***
Bisexual	0.531	0.383	0.278	0.105	0.290
Difference 2	0.218***	0.225***	0.204***	0.076***	0.182***
Gender identity					
Cisgender	0.318	0.162	0.077	0.031	0.112
Gender minority	0.405	0.253	0.152	0.051	0.190
Difference 3	0.087***	0.091***	0.075***	0.020*	0.078***
Total	**0.318**	**0.163**	**0.078**	**0.031**	**0.113**

Source: IDI (2024) and author's own calculations. The number refers to the share of individuals who experienced in the past 12 months to the interview a specific type of offence. ***, **, and * are significance at the 1%, 5% and 10% level of a *t*-test, respectively. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ. Individuals are identified as gender minority when being gender diverse or when gender identity and biological sex differ.

Physical offence: includes robbery and non-sexual assault. *Personal offence*: includes personal theft, property damage, assault incl. sexual, robbery, fraud and deception, cybercrime, harassment, and threatening behaviour. *Interpersonal offence*: includes sexual and other assault, harassment and threatening behaviour, robbery, and damage of personal or household property if the victim knows the offender. *Multiple victimised*: reporting more than one victimisation in the past 12 months.

Table 3 shows crime victimisation by LGBTQ+ status. One out of three (31.2%) non-LGBTQ+ individuals reported having experienced a crime in the 12 months before the interview. Almost every second LGBTQ+ individual (45.5%) states having been a victim of an offence or crime. That is a difference of 14.3 percentage points – this means that sexual and gender minorities report almost fifty per cent higher victimisations (0.143/0.312 = 45.8%) compared to their cis-heterosexual peers. By offence types, these differences are even more so pronounced: personal offences (87% higher), physical offences (131% higher), and interpersonal offences (162% higher). There are also large differences in crime victimisation by sexual orientation and gender identity. Individuals who identify as bisexual have a much higher victimisation rate, even when compared to those whose sexual orientation is gay or lesbian. Bisexual individuals report being victims of an interpersonal offence 20.4 percentage points more often than their heterosexual peers (279% = 0.204/0.073).

As mentioned in Section 2, there is likely to be a positive correlation between the overall distribution of LGBTQ+ individuals' socio-demographic characteristics in Table 2 (e.g., younger, living in Auckland or Wellington) and having reported being a victim of a crime. Thus, the econometric model used in this study estimates the likelihood of being a victim of an offence and controls for both LGBTQ+ status and socio-demographic characteristics. This will help understand to which degree the differences observed in Table 3 can be explained by differences in the individual's background or by their LGBTQ+ status.

3.4 Crime Victimisation and Public Agency Records

The second research aim of this study is to examine how victims of an offence interact with public agencies in the same 12 month period that they were victimised and whether we observe differences by LGBTQ+ status. For this reason, the spine is linked to the following IDI datasets:

- NZ Police data on recorded victims of crime includes all criminal incidents where the offence type, as defined by the Australian and New Zealand Standard Offence Classification (ANZSOC) group, is within scope.[9]
- ACC Injury Claims data which records information on accepted claims related to injuries and accidents, including the time of the accident and the nature of the accident (work vs non-work-related claim).
- Ministry of Health (MoH) Pharmaceutical data contains information about subsidised medication dispensing processed by the General Transaction Processing System (GTPS). The dataset contains details on the issuance date of the prescription and the chemical identification of the drug. We follow Bowden et al. (2020) and use the chemical ID to identify mental-health-related drugs, including those intended to treat depression, anxiety, emotional problems, substance abuse, disruptive behaviour, psychosis, or sleep problems. As a sub-group with the largest prevalence, we also isolate those that are intended to treat depression, anxiety and emotional problems.[10]

[9] For details, see: https://www.abs.gov.au/statistics/classifications/australian-and-new-zealand-standard-offence-classification-anzsoc/latest-release

[10] There are a number of medications that are typically good indicators of either Anxiety Disorders or Depressive Disorders, but not specifically one in particular; Bowden et al. (2020) use this composite group to indicate that the medication is likely to be used for mental health reasons but defined as a specific mental health disorder.

- MoH Programme for the Integration of Mental Health (PRIMHD) data which collects information on secondary mental health referrals. These refer to mental health programmes and interventions provided outside of general practitioners and hospitals.
- Ministry of Social Development (MSD) benefit claim data. This dataset holds information on people who have received a working-age social welfare benefit, including the type of benefit. We also differentiate between unemployment/sickness-related benefits and supported-living benefits (e.g., accommodation supplement, sole parent support).

NZCVS respondents who appear in the survey but were not victims of a crime may also access these services for other reasons. For each individual, we create a binary indicator equal to 1 if the individual had accessed the respective service in the past 12 months before the interview and 0 otherwise, the same time window when asked about experiencing crime victimisation. Table 4 provides public agency uptake rates for the entire sample (columns (I) and (II), those who reported having been a victim of crime in the past 12 months before the interview (columns (III)-(IV)), and those who were the victim of an interpersonal or physical offence or have been multiple victimised (columns (V)-(VI)).

Table 4 shows LGBTQ+ individuals have a slightly higher share of individuals who recorded their victimisation to the police (4.2%) compared to non-LGBTQ+ individuals (3.3%). These numbers are substantially lower compared to the prevalence of self-reported crime victimisation, as shown in Table 3, but in line with what the NZ Police publishes. In terms of uptake of other agencies, there are similar levels of ACC claims but higher levels of PHARMAC mental health prescriptions and PRIMHD referrals for LGBTQ+ individuals compared to non-LGBTQ+ individuals. When examining MSD benefits, we find higher uptake of unemployment/sickness-related benefits and lower uptake of supported-living benefits for LGBTQ+ individuals compared to non-LGBTQ+ individuals.

When we restrict the sample to those individuals who reported having experienced a crime in the past twelve months prior to the interview (columns (III) and (IV)) or being a victim of an interpersonal or physical offence or highly victimised (columns (V) and (VI)), the magnitude of differences is further pronounced. For example, the share of LGBTQ+ individuals with a mental-health prescription is 13.2 percentage points higher compared to non-LGBTQ+ people in the full sample. This difference grows to 19.5 percentage points when examining only victimised individuals by LGBTQ+ status. Interestingly, police reporting flips – while LGBTQ+ individuals were more likely to report being a victim of a crime compared to non-LGBTQ+ individuals in the full sample, the victimised subsample shows LGBTQ+ individuals were one percentage point less likely to report to the police. Those who experienced an interpersonal or physical offence or are multiple victimised were 1.9 percentage points less likely to report to the police.

Table 4: Crime victimisation and interaction with public agencies

	Full sample			Victimised			Interpersonal/Physical/Multiple victimised		
	Non-LGBTQ+ (I)	LGBTQ+ (II)	Difference (II)-(I)	Non-LGBTQ+ (III)	LGBTQ+ (IV)	Difference (IV)-(III)	Non-LGBTQ+ (V)	LGBTQ+ (VI)	Difference (VI)-(V)
Reported to police	0.033	0.042	0.010	0.075	0.066	-0.010	0.107	0.088	-0.019
ACC claim	0.302	0.303	0.001	0.331	0.350	0.019	0.363	0.360	-0.003
ACC non-work claim	0.265	0.269	0.003	0.292	0.306	0.014	0.317	0.325	0.008
PHARMAC	0.226	0.358	0.132***	0.253	0.448	0.195***	0.280	0.491	0.211***
PHARMAC (anxiety/depression)	0.141	0.269	0.128***	0.162	0.344	0.182***	0.187	0.368	0.181***
PRIMHD	0.036	0.087	0.051***	0.055	0.126	0.071***	0.083	0.175	0.093***
MSD benefits (any)	0.337	0.318	-0.018	0.319	0.344	0.026	0.339	0.404	0.064**
MSD unemployment benefits	0.071	0.144	0.073***	0.093	0.169	0.076***	0.121	0.211	0.089***
MSD supported-living benefits	0.276	0.187	-0.089***	0.239	0.202	-0.037*	0.236	0.219	-0.017
Individuals	**27,486**	**1,206**		**8,586**	**549**		**3,810**	**342**	

Source: IDI (2024) and author's own calculations. ***, **, and * are significance at the 1%, 5% and 10% level of a *t*-test, respectively. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ.

Reported to police: NZ Police data on recorded victims of crime. *ACC claim*: ACC Injury Claims data which records information on accepted claims related to injuries and accidents, including the time of the accident and the nature of the accident (work vs non-work-related claim). *PHARMAC*: MoH's Pharmaceutical data contains information about subsidised medication dispensing. The dataset contains details on the issuance date of the prescription and the chemical identification of the drug. We follow Bowden et al. (2020) and use the chemical ID to identify mental-health-related drugs (any) and those that are intended to treat depression, anxiety and emotional problems. *PRIMHD*: MoH Programme for the Integration of Mental Health (PRIMHD) data which collects information on secondary mental health referrals. These refer to mental health programmes and interventions provided outside of general practitioners and hospitals. *MSD benefits (any)*: Ministry of Social Development (MSD) benefit claim data. This dataset holds information on people who have received a working-age social welfare benefit, including the type of benefit. We differentiate between unemployment/sickness-related benefits and supported-living benefits (e.g., accommodation supplement, sole parent support).

4 Empirical Approach

Research Aim 1 focuses on understanding the contributing factors to the elevated number of victimisations among the LGBTQ+ population, as observed in Table 3. We follow the approach of Bender & Lauritsen (2021) by predicting the probability of being a victim of an offence and controlling for sociodemographic characteristics. For our regression, we use a linear probability model (LPM). The LPM is the application of ordinary least squares on binary outcomes and the major advantage compared to non-linear models (e.g., probit regression) is that the estimated coefficients can be directly interpreted, and no further transformation is required. Our model takes the following form:

$$y_i = \beta_0 + \beta_1 LGBTQ_i^+ + \beta_j \boldsymbol{X} + u_i \quad (1)$$

where y_i is a dummy variable on crime victimisation; it is equal to 1 if the individual was a victim of a crime and 0 otherwise. The variable $LGBTQ_i^+$ is equal to 1 if the individual is identified as part of the LGBTQ+ group and 0 else. The matrix $\boldsymbol{X}$ controls for the socio-demographic characteristics displayed in Table 1. Finally, u_i is our error term and we estimate White standard errors robust to heteroskedasticity. The variable of interest is β_1, which measures the likelihood (in percentage points) of LGBTQ+ individuals being victimised compared to non-LGBTQ+ individuals after controlling for socio-demographic characteristics. We also compare β_1 to the following unadjusted model, in which we do not control for differences in socio-demographic characteristics:[11]

$$y_i = \beta_0 + \beta_1 LGBTQ_i^+ + u_i \quad (2)$$

A limitation of the LPM is that the estimated probabilities beyond the 0 to 1 boundary in cases of very small positive outcomes. Therefore, we repeat our estimation and apply a probit model. We report the marginal effects of the variables of interest, which can be than directly compared with the estimated β_1 coefficients of the linear probability model.

To examine the relationship between sexual orientation and crime victimisation, we replace the $LGBTQ_i^+$ variable by sexual orientation variables – a dummy variable equal to 1 if their sexual orientation is gay/lesbian and a dummy variable equal to 1 if their sexual orientation is bisexual, 0 otherwise. We also investigate the relationship between gender identity and crime victimisation by replacing the $LGBTQ_i^+$

[11] As we estimate robust standard errors, likelihood-ratio tests between nested models cannot be performed.

variable with a gender identity marker. It is a binary variable that takes the value of 1 if the individual is gender diverse or when gender identity and biological sex differ and 0 else (cisgender).

Carpenter et al. (2024) noted differences between LGBTQ+ and non-LGBTQ+ outcomes may differ by location. Auckland and Wellington are larger metropolitan areas where a high share of the LGBTQ+ population resides. The authors found empirical evidence that earning differences were more pronounced outside of Auckland and Wellington, the two cities where most LGBTQ+ individuals live (see also Table 1). This study addresses potential differences by location by modifying Equation (1) to include a location dummy variable:

$$y_i = \beta_0 + \beta_1 LGBTQ_i^+ + \beta_2 AKL/WLG_i + \beta_3 LGBTQ_i^+ \times AKL/WLG_i + \beta_j \boldsymbol{X} \quad (3)$$

The dummy variable AKL/WLG_i is equal to 1 if the individual lives in Auckland or Wellington, and 0 otherwise.[12] The variable of interest is the interaction between $LGBTQ_i^+$ and AKL/WLG_i, which allows us to examine differences in victimisation likelihood by location.

So far, our focus has been on quantifying the differences in crime-victimisation between LGBTQ+ and non-LGBTQ+ individuals. Following the focus of the first Research Aim, we replace the outcome variable and estimate linear probability models to understand the contributing factors. Our aim is to understand:

- Does the perceived cause for victimisations (ethnicity, sexual orientation, sex, general discrimination) differ between LGBTQ+ and non-LGBTQ+ individuals?
- Do we observe differences in the consequences of victimisation (offence perceived serious, offence reported to the police, taking time off, physically injured) by LGBTQ+ status?
- Are there further repercussions of crime victimisations (safety feeling and life satisfaction) that are different between LGBTQ+ and non-LGBTQ+ individuals?

To apply the linear probability model, some outcome variables need to be transformed into binary variables. For example, life satisfaction is measured on a scale ranging from 0 (very low) to 10 (very high). We then transform the variable by identifying the point in the distribution that splits the population into three-quarters vs. one-quarter shares. This transformation ensures that we have enough observations in both categories (e.g., high vs low life satisfaction) when applying our linear probability model.

For Research Aim 2, we estimate the uptake of public agency support in the 12 months prior to the interview. However, the uptake of particular public agency support is not restricted to being a victim of a

[12] Due to small counts, we did not further differentiate the regions Auckland/Wellington (e.g., CBD vs. rest).

crime. An individual's interaction with public agencies following crime victimisation may 1) be unrelated to the crime victimisation itself or 2) be related to an individual's likelihood to use public agency support prior to the crime victimisation itself. For example, mental health prescription uptake following a crime victimisation may be related to an individual's prior mental health. To account for this, we expand Equation (1) and add the variable y_i^L, which is the lagged dependent variable referring to the time window 13 to 24 months before the interview. This controls for the likelihood of having a mental health prescription between one to two years prior to the crime victimisation, as show in Equation (4) below:

$$y_i = \beta_0 + \beta_1 LGBTQ_i^+ + \beta_2 y_i^L + \beta_j \boldsymbol{X} \quad (4)$$

5 Results

This section reports the results for Research Aims (1) and (2). We first discuss the regression results for crime victimisations and whether regional differences are observed. Next, we test different perceived reasons for victimisation. We then examine differences in crime victimisation consequences and the societal perceptions within the LGBTQ+ community. The last set of results discusses differences in the uptake of public agency services in the 12 months prior to the interview and its interrelation with crime victimisations.

5.1 Likelihood of Crime Victimisation

Table 5 presents the results for Equation (1) which examines the likelihood to report having been a victim of an offence in the past 12 months, by offence type.[13] The table provides three numbers:

1. The coefficients of the adjusted model as described in Equation (1) that accounts for differences in sociodemographic factors between LGBTQ+ and non-LGBTQ+ individuals.
2. The coefficients of the unadjusted model as described in Equation (2), in which we do not control for differences in socio-demographic characteristics.
3. The marginal effects of a probit regression, which also accounts for differences in sociodemographic factors between LGBTQ+ and non-LGBTQ+ individuals

The coefficients in Table 5 are reported as percentage points and report how likely an LGBTQ+ individual states being a victim of a crime compared to non-LGBTQ+ individuals. Table 5 shows that the coefficients between the adjusted and unadjusted models differ, indicating that controlling for sociodemographic factors explains to some part the observed difference in the victimisation prevalence between LGBTQ+ and non-LGBTQ+ individuals.

[13] The full regression output tables are available upon request from the authors.

Table 5: Regression results on crime victimisation

	Offence category				
	Any	Personal	Interpersonal	Physical	Multiple victimised
Non-LGBTQ+			*reference*		
LGBTQ+	0.111***	0.116***	0.094***	0.028***	0.093***
	(0.015)	(0.013)	(0.011)	(0.007)	(0.012)
Unadjusted model	0.142***	0.138***	0.118***	0.038***	0.115***
	(0.015)	(0.013)	(0.011)	(0.007)	(0.012)
ME of a Probit model	0.108***	0.109***	0.080***	0.024***	0.084***
	(0.014)	(0.013)	(0.01)	(0.006)	(0.011)
Observations	28,692	28,692	28,692	28,692	28,692
Heterosexual/straight			*reference*		
Gay or lesbian	0.072***	0.056***	0.029*	-0.001	0.032*
	(0.025)	(0.021)	(0.016)	(0.009)	(0.018)
Unadjusted model	0.093***	0.069***	0.041**	0.006	0.044**
	(0.025)	(0.021)	(0.016)	(0.009)	(0.018)
ME of a Probit model	0.071***	0.054***	0.026*	-0.002	0.031*
	(0.024)	(0.02)	(0.014)	(0.008)	(0.017)
Bisexual	0.174***	0.196***	0.169***	0.062***	0.152***
	(0.023)	(0.022)	(0.021)	(0.014)	(0.021)
Unadjusted model	0.220***	0.229***	0.206***	0.076***	0.185***
	(0.023)	(0.022)	(0.02)	(0.014)	(0.021)
ME of a Probit model	0.169***	0.181***	0.136***	0.052***	0.134***
	(0.023)	(0.021)	(0.017)	(0.011)	(0.019)
Observations	28,551	28,551	28,551	28,551	28,551
Cisgender			*reference*		
Gender minority	0.075**	0.083***	0.059**	0.012	0.067***
	(0.032)	(0.028)	(0.023)	(0.014)	(0.025)
Unadjusted model	0.096***	0.095***	0.074***	0.020	0.082***
	(0.032)	(0.028)	(0.023)	(0.014)	(0.026)
ME of a Probit model	0.073**	0.079***	0.054***	0.009	0.061**
	(0.031)	(0.027)	(0.021)	(0.012)	(0.024)
Observations	28,692	28,692	28,692	28,692	28,692

Source: IDI (2024) and author's own calculations. Each regression controls for sex at birth, ethnicity, age, relationship status, region living in, regional deprivation, born overseas, household income, and year of interview. The number in parenthesis refers to robust standard errors. ***, **, and * are significance at the 1%, 5% and 10% level, respectively. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ. Individuals are identified as gender minority when being gender diverse or when gender identity and biological sex differ.

Unadjusted model refers to a linear probability model as described in Eq (2).

ME of a Probit model refers to the marginal effects of a probit model, assuming that the probability of a positive outcome is determined by the standard normal cumulative distribution function.

Physical offence: includes robbery and non-sexual assault. *Personal offence*: includes personal theft, property damage, assault incl. sexual, robbery, fraud and deception, cybercrime, harassment and threatening behaviour. *Interpersonal offence*: includes sexual and other assault, harassment and threatening behaviour, robbery, and damage of personal or household property if the victim knows the offender. *Multiple victimised*: reporting more than one victimisation in the past 12 months.

When looking at any offence type, we see that LGBTQ+ individuals are 11.1 percentage points more likely to report being a victim of a crime in the past 12 months compared to non-LGBTQ+ individuals. The difference of the unadjusted model is 14.3 percentage points. The difference between the two is 3.2 percentage points (14.3-11.1), which is slim. This means that the socio-demographic characteristics of LBGTQ+ individuals help explain some of the differences in crime victimisations observed between LGBTQ+ and non-LGBTQ+ individuals. The results are similar when examining other offence types. For example, the estimated likelihood of being a victim of a physical offence is 2.8 percentage points higher for LGBTQ+ individuals compared to non-LGBTQ+ individuals. This is only slightly lower than the coefficient of the unadjusted model of 3.8 percentage points.

We repeated our regressions by estimating probit regressions and predicting the average marginal effects. The effect size is very similar to what we find when applying the adjusted linear probability model. For example, LGBTQ+ individuals are, according to the Probit model, 10.8 percentage points more likely to report being a victim of a crime in the past 12 months compared to non-LGBTQ+ individuals. The coefficients for different types of crimes in the Probit models are modestly smaller than the coefficients of the adjusted and unadjusted regression results. However, the standard errors in these models are also smaller. This suggests that the observed differences in coefficients are not attributable to an underestimation bias.

The next set of results considers sexual orientation as a factor and shows that gay/lesbian and bisexual individuals are significantly more likely to report being victimised compared to heterosexual/straight individuals.[14] This finding holds across the different offence categories except for physical offences, where gay/lesbian individuals had no significantly different likelihood compared to heterosexual/straight individuals. The regression estimates indicate that bisexual individuals are significantly more likely to report being victims of an offense compared to gay or lesbian individuals, with heterosexual individuals serving as the baseline group. For example, gay/lesbians individuals are, on average, 2.9 percentage points more likely to report being victim of an interpersonal offence compared to heterosexual/straight individuals—the difference is 16.9 percentage points for bisexual individuals.

We also find significant differences by gender identity. Gender minority individuals are, on average, 7.5 percentage points more likely to report having been a victim of any offence compared to cisgender

[14] Due to small sample size, we do not explore differences between gay/lesbian individuals and bisexual individuals.

individuals. Significant differences are also observed across all other offence categories, except for physical offences.

Table 6 estimates Equation (3), which examines how LGBTQ+ victimisations vary by region. We calculate the marginal difference (in percentage points) of being a victim for (i) LGBTQ+ people compared to non-LGBTQ+ individuals living outside of Auckland and Wellington and (ii) for LGBTQ+ people compared to non-LGBTQ+ individuals living in Auckland or Wellington.[15]

Table 6: Regression results on crime victimisation and location

	Offence category				
	Any	Personal	Interpersonal	Physical	Multiple victimised
Non-LGBTQ+ outside of AKL/WLG	*reference*				
LGBTQ+ outside of AKL/WLG	0.142*** (0.020)	0.138*** (0.019)	0.110*** (0.016)	0.034*** (0.011)	0.117*** (0.017)
Non-LGBTQ+ in AKL/WLG	*reference*				
LGBTQ+ in AKL/WLG	0.078*** (0.021)	0.093*** (0.018)	0.078*** (0.015)	0.021** (0.010)	0.067*** (0.017) ***
Observations	28,692	28,692	28,692	28,692	28,692

Source: IDI (2024) and author's own calculations. Each regression controls for sex at birth, ethnicity, age, relationship status, region living in, regional deprivation, born overseas, household income, and year of interview. The number in parenthesis refers to robust standard errors. ***, **, and * are significance at the 1%, 5% and 10% level, respectively. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ.
Physical offence: includes robbery and non-sexual assault. *Personal offence*: includes personal theft, property damage, assault incl. sexual, robbery, fraud and deception, cybercrime, harassment, and threatening behaviour. *Interpersonal offence*: includes sexual and other assault, harassment and threatening behaviour, robbery, and damage of personal or household property if the victim knows the offender. *Multiple victimised*: reporting more than one victimisation in the past 12 months.

The regression results indicate a positive and significant β_2 coefficient (not reported here). This means that individuals, independent of their LGBTQ+ status, are more likely to report being a victim of a crime when living in Auckland or Wellington. However, when comparing the regional differences by LGBTQ+ status, we observe substantially larger differences outside of Auckland and Wellington. For example, the likelihood for LGBTQ+ individuals living outside Auckland or Wellington to report being a victim of any offence in the past 12 months is, on average, 14.2 percentage points higher compared to non-LGBTQ+ individuals living

[15] Due to small sample size, we cannot perform the regression by sexual orientation or gender identity.

outside these two cities. For those living within Auckland or Wellington, the difference is 7.8 percentage points.

5.2 Perceived Reason for Crime Victimisation

Survey respondents who reported having been victims of a crime were asked about the perceived reason for their victimisation. We test for differences where perceived reasons were related to ethnicity, sexual orientation and sex, with each reason a dummy variable equal to 1 if the respondent perceived the victimisation to be related to these reasons, 0 otherwise.[16] Separate regressions were run for each perceived reason and controlled for socio-demographic characteristics. As a robustness check, we also test whether any type of discrimination might have been the underlying perceived cause, which is a much broader measure that captures other forms of discrimination (e.g., discrimination due to disability). Table 7 presents the estimated coefficients for perceived reasons for crime victimisation.

The results show that ethnicity is more commonly cited as one of the perceived reasons for victimisation by LGBTQ+ individuals compared to non-LGBTQ+ individuals. However, this the coefficient is not statistically significant and the effect size is modest at 1.7 percentage points. However, there are large differences when examining sexual orientation or sex as the perceived reasons for victimisation. LGBTQ+ individuals who reported being a victim of a crime in the past 12 months are, on average, 12 percentage points more likely to state that the perceived reason for the victimisation is their sexual orientation compared to non-LGBTQ+ individuals. Even though in a smaller magnitude, sex also plays an important factor. Interestingly, while the coefficients for gay/lesbian and bisexual individuals are of similar magnitude regarding sexual orientation as the perceived reason, we see larger effects for sex among bisexual individuals (14.5 percentage points compared to heterosexual individuals) compared to gay/lesbian individuals (6.2 percentage points compared to heterosexual individuals).

When examining the motivations behind crimes against gender minorities, sexual orientation and sex remain significant factors. However, compared to the sexual orientation minority group, sex is a more prevalent motivation for crimes within gender minority groups. Interestingly, sexual orientation is a less

[16] We are not aware of an indicators in the NZCVS that refers to gender identity as a perceived reason. The study *Counting Ourselves* by Veale et al. (2019) shows that more than two-thirds (67%) of the study's participants had experienced discrimination and gender identity/being trans or non-binary is the dominant reason.

common motive for crimes against gender minorities than it is for crimes targeting gay, lesbian, or bisexual individuals.

Table 7: Regression results on the perceived reason for crime victimisation

	Perceived reason			
	Ethnicity	Sexual orientation	Sex	General discrimination
Non-LGBTQ+		*Reference*		
LGBTQ+	0.017	0.120***	0.109***	0.132***
	(0.011)	(0.016)	(0.018)	(0.019)
Observations	9,135	9,135	9,135	9,135
Heterosexual/straight		*Reference*		
Gay or lesbian	0.012	0.113***	0.062**	0.098***
	(0.020)	(0.030)	(0.028)	(0.033)
Bisexual	0.015	0.145***	0.145***	0.162***
	(0.015)	(0.025)	(0.027)	(0.029)
Observations	9,075	9,075	9,075	9,075
Cisgender		*Reference*		
Gender minority	0.028	0.056*	0.076*	0.084**
	(0.028)	(0.032)	(0.039)	(0.042)
Observations	9,135	9,135	9,135	9,135

Source: IDI (2024) and author's own calculations. Each regression controls for sex at birth, ethnicity, age, relationship status, region living in, regional deprivation, born overseas, household income, and year of interview. The sample is restricted to individuals who have reported having experienced at least one offence in the past 12 months. The number in parenthesis refers to robust standard errors. ***, **, and * are significance at the 1%, 5% and 10% level, respectively. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ. Individuals are identified as gender minority when being gender diverse or when gender identity and biological sex differ.

5.3 Consequences of Crime Victimisation

The NZCVS contains detailed information on the consequences of crime victimisation. The first column of Table 8 looks at the perceived seriousness of the offence. Survey respondents have the option to assign reported offences a score ranging from 0 to 10, where higher scores indicate higher perceived seriousness. We construct a binary variable equal to 1 if the responder reported at least one offence with a score of 9 or 10, indicating having experienced a highly serious offence, 0 otherwise.[17] On average, according to our

[17] As explained in Section 4, cut-off points are chosen based on the distribution of the outcome variable.

definition, 22.4% of the individuals who have been a crime victim in the past 12 months have experienced a highly serious offence. The results show that LGBTQ+ individuals were not more likely to perceive the offence as highly serious compared to non-LGBTQ+ people.

The second column examines whether there are differences in the reporting behaviour towards police. The survey asks, for those who were victims of a crime, whether the offence was reported to the police, by oneself or someone else. We construct a binary indicator variable equal to 1 if at least one offence was reported to the police and 0 otherwise. The results show no systematic difference between LGBTQ+ and non-LGBTQ+ individuals with respect to reporting their victimisation to the police.

Table 8: Regression results on causes and consequences

	Perceived serious	Reported to police	Taking time off	Physically injured
Non-LGBTQ+		*reference*		
LGBTQ+	-0.018	-0.028	0.034**	0.042***
	(0.018)	(0.022)	(0.018)	(0.014)
Observations	9,039	8,985	7,866	9,075
Heterosexual/straight		*reference*		
Gay or lesbian	-0.012	-0.051	-0.020	-0.023
	(0.030)	(0.038)	(0.026)	(0.017)
Bisexual	-0.019	-0.007	0.064**	0.099***
	(0.026)	(0.032)	(0.028)	(0.024)
Observations	8,982	8,928	7,818	9,018
Cisgender		*reference*		
Gender minority	0.020	-0.019	0.040	-0.022
	(0.043)	(0.050)	(0.043)	(0.024)
Observations	9,045	8,985	7,866	9,075

Source: IDI (2024) and author's own calculations. Each regression controls for sex at birth, ethnicity, age, relationship status, region living in, regional deprivation, born overseas, household income, and year of interview. The sample is restricted to individuals who have reported having experienced at least one offence in the past 12 months. The number in parenthesis refers to robust standard errors. ***, **, and * are significance at the 1%, 5% and 10% level, respectively. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ. Individuals are identified as gender minority when being gender diverse or when gender identity and biological sex differ.
Perceived serious: A binary indicator that takes the value of 1 if the responder reported at least one offence with a seriousness score (ranging from 0 as non-serious to 10 as very serious) of 9 or 10, and 0 otherwise.

The third and fourth columns examine the impact of an offence on the victim. Table 5 shows LGBTQ+ individuals were more likely to be victims of a personal, interpersonal or physical offence. We, therefore, want to test whether they are also more likely to take time off or were physically injured. We construct two binary variables that are equal to 1 if the person experienced at least one offence in which they were physically injured or they took some time off after the victimisation and 0 otherwise. The results indicate that LGBTQ+ individuals are, on average, significantly more likely to take time off (3.4 percentage points)

and were physically injured during the offence (4.2 percentage points) compared to non-LGBTQ+ individuals. When we repeat our analysis by sexual orientation, we can see that in particular bisexual individuals are significantly more likely to take time off (6.4 percentage points) and were physically injured during the offence (9.9 percentage points) compared to non-LGBTQ+ individuals.

Table 9: Regression results on safety feeling and life satisfaction

	High safety feeling	High life satisfaction
Non-LGBTQ+		*reference*
LGBTQ+	-0.047** (0.022)	-0.096*** (0.013)
Observations	9,123	9,114
Heterosexual/straight		*reference*
Gay or lesbian	-0.031 (0.037)	-0.002 (0.038)
Bisexual	-0.052* (0.031)	-0.199*** (0.032)
Observations	9,057	9,054
Cisgender		*reference*
Gender minority	-0.033 (0.050)	-0.027 (0.050)
Observations	9,123	9,114

Source: IDI (2024) and author's own calculations. Each regression controls for sex at birth, ethnicity, age, relationship status, region living in, regional deprivation, born overseas, household income, and year of interview. The sample is restricted to individuals who have reported having experienced at least one offence in the past 12 months. The number in parenthesis refers to robust standard errors. ***, **, and * are significance at the 1%, 5% and 10% level, respectively. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ. Individuals are identified as gender minority when being gender diverse or when gender identity and biological sex differ.
High safety feeling: A binary indicator that takes the value of 1 if the responder reported a feelings of safety score (ranging from 0 (is not at all safe) to 10 (completely safe)) of eight or higher, and 0 otherwise. *High life satisfaction*: A binary indicator that takes the value of 1 if the responder reported a life satisfaction score (ranging from 0 (very low life satisfaction) and 10 (very high life satisfaction)) of seven or higher, and 0 otherwise.

Lastly, we want to understand how experiencing a crime relates to feelings of safety and life satisfaction after being a victim of crime and whether we find differences by LGBTQ+ status. The survey respondents were asked about their feelings of safety and provided a score ranging from 0 (is not at all safe) to 10 (completely safe). We construct a binary variable equal to 1 if the score is eight or higher (high safety) and 0 otherwise. In our sample, 75.1% of the survey participants have a high safety feeling according to our definition. The results in Table 9 indicate that LGBTQ+ individuals are significantly less likely to report a high feeling of safety after a victimisation compared to non-LGBTQ+ individuals. Second, participants were asked about their life satisfaction, which ranged between 0 (very low life satisfaction) and 10 (very high life satisfaction). We construct a binary variable equal to 1 when the score is seven or higher (high life

satisfaction) and 0 otherwise. 71.2% of the responds are classified having a high life satisfaction according to our definition. We find in the second column of Table 9 that LGBTQ+ individuals are, on average, 8.6 percentage points less likely to report high life satisfaction compared to non-LGBTQ+ individuals. When we investigate differences by sexual orientation, we see that bisexual individuals are, on average, 19.9 percentage points less likely to report a high level of life satisfaction compared to heterosexual/straight individuals.

5.4 Interaction with Public Agency Records

The second research aim of this study is to examine the interaction of individuals who reported being a victim of a crime and their service uptake with public agencies following a victimisation, and whether there are differences due to LGBTQ+ status. Service uptake includes whether the individual is recorded by the police as a victim, they made an ACC claim, received an MSD benefit, or received treatment for mental health in the past twelve months.

We expand our regression as described in Equation (4) by adding as a covariate a binary indicator on the uptake of the respective agency interaction 13 to 24 months prior to the interview date (except for police records). Given there is a possible correlation between an individual's likelihood of public agency uptake pre- and post-victimisation, we need to control for persistence in uptake over time.[18] For example, we expect someone with a mental health prescription in the past to have a higher likelihood of having another mental health prescription in the future compared to someone who did not have prior mental health prescriptions.

Table 10 shows the regression coefficients for the full sample, those individuals who have reported being a victim of a crime in the past twelve months, and those experiencing an interpersonal or physical offence or more than one offence (multiple victimised).

The first column of Table 10 refers to the likelihood of being recorded as a victim in police records. As MoJ (2024) described, only a small fraction of offences are reported to the police. The coefficients indicate that, when considering all types of crimes across the full sample, we do not observe statistically significant

[18] Another limitation of the model is that we cannot control for crime victimisation in the time window 13 to 24 months prior to the interview date. Due to small count, we are not able to centre the service uptake with public agencies around the date of victimisation.

differences between LGBTQ+ and non-LGBTQ+ individuals in the likelihood of being recorded by the police as a victim of a crime. When we subset this to i) those who were victimised in the past twelve months and ii) those who were victims of an interpersonal or physical offence or who are multiple victimised, the results show that LGBTQ+ individuals were less likely to report to the police compared to non-LGBTQ+ individuals. The result of the first test, although showing a larger magnitude, is not statistically significant. One explanation may be the lack of statistical power – there are 342 LGBTQ+ individuals who experienced an interpersonal or physical offence or more than one offence. Of these 342, only 8.8% (about 30 individuals) of those are recorded as victims in police records.

Columns IIa and IIb examine ACC claims, and columns IIIa – IIIc examine MSD benefit uptake. There are hardly any significant differences in ACC claims and MSD benefit uptake for the full sample of LGBTQ+ individuals compared to non-LGBTQ+ individuals. This is also the case when examining ACC claims and MSD benefit uptake for the subsample of victimised and multiple victimised individuals. Additionally, we can observe that the magnitudes of the regressions for these two benefits are generally very small. Possible reasons include the fact that these benefits are not solely limited to victimisation; for example, anyone with accidents can claim ACC, and individuals with low living conditions can claim MSD benefits.

Lastly, columns IVa-IVc examine differences in mental health treatment where individuals receive mental health-related drug prescriptions as recorded by PHARMAC and/or mental health referrals recorded by PRIMHD. We observe a statistically significant higher uptake of mental health treatment for LGBTQ+ individuals compared to non-LGBTQ+ people, irrespective of whether they were victimised in the past 12 months or had been victims of an interpersonal or physical offence or were multiple victimised. For example, LGBTQ+ individuals are, on average, 6.9 percentage points more likely to have received at least one mental health prescription compared to non-LGBTQ+ people. This increases to 9.5 percentage points when trimming the sample to those reporting being the victim of an offence in the past 12 months; and 11 percentage points for victims of an interpersonal or physical offence or if multiple victimised. The results indicate a higher uptake of mental health prescriptions or referrals among LGBTQ+ individuals, which correlates with their lower sense of safety and increased likelihood of physical injury compared to non-LGBTQ+ individuals. Additionally, although PHARMC and PRIMHD records do not explicitly confirm whether these issues stem from crime victimisation, it is more probable that the mental health concerns are linked to post-victimisation trauma rather than to ACC and MSD-related issues.

Table 11 and Table 12 further discuss the public service uptake among the LGBTQ+ subgroups. For the sexual orientation minority group, gay and lesbian individuals are significantly less likely to report crimes to the police. Specifically, they are 1.3 percentage points less likely in the full sample, increasing to 5.7 percentage points in the Interpersonal/Physical/Multiple victimised group. A similar pattern is observed

in the gender minority group, with decreases of 1.6, 6.9, and 9 percentage points in the likelihood of reporting incidents to police across different victimisation contexts.

The data shows variability in ACC and MSD benefits claims. Bisexual individuals who were victimized in the past 12 months are more likely to claim general benefits, though the significance level is low. Conversely, there is a noticeable drop in ACC claims among gay or lesbian individuals, particularly for those experiencing Interpersonal/Physical/Multiple victimisation, which may be linked to their reduced reporting to police due to possible challenges in substantiating claims without adequate evidence.

For MSD benefits, the differences between LGBTQ+ subgroups and the non-LGBTQ+ group are minimal, but a significant increase in unemployment benefit claims is noted among bisexual individuals, albeit by a modest four percentage points.

The mental health data reveals larger disparities between LGBTQ+ subgroups and non-LGBTQ+ groups, with subtle intra-group differences also evident. Both gay/lesbian and bisexual groups report higher general and emotion-related PHARMAC claims. Among those in the Interpersonal/Physical/Multiple victimized groups, gay/lesbian individuals show a 13.9 percentage point increase, and bisexuals show a 12.8 percentage point increase in claims. These groups also generally report higher PRIMHD claims; however, these findings are not statistically significant overall. Only the bisexual group reports a three-percentage point increase in PRIMHD claims. The gender minority group similarly reports an approximately five percentage point increase in PHARMAC claims for both general and emotion-related issues, though PRIMHD records do not demonstrate significant evidence.

Table 10: Regression results on interaction with public agencies by LGBTQ+ status

	Reported to police	ACC claim	ACC non-work claim	MSD benefits	MSD unemployment benefits	MSD supported-living benefits	PHARMAC record	PHARMAC record (emotion)	PRIMHD record
	(I)	(IIa)	(IIb)	(IIIa)	(IIIb)	(IIIc)	(IVa)	(IVb)	(IVc)
Full sample									
Non-LGBTQ+	*reference*								
LGBTQ+	-0.001	0.005	0.005	0.000	0.018**0	-0.013**	0.069***	0.057***	0.018***
	(0.006)	(0.013)	(0.013)	(0.008)	(0.007)	(0.005)	(0.011)	(0.009)	(0.007)
Observations	28,692	28,692	28,692	28,692	28,692	28,692	28,692	28,692	28,692
Victimised in past 12 months									
Non-LGBTQ+	*reference*								
LGBTQ+	-0.017	0.014	0.008	-0.011	0.008	-0.006	0.095***	0.076***	0.024*
	(0.011)	(0.021)	(0.02)	(0.012)	(0.011)	(0.008)	(0.017)	(0.015)	(0.013)
Observations	9,135	9,135	9,135	9,135	9,135	9,135	9,135	9,135	9,135
Interpersonal/Physical/Multiple victimised									
Non-LGBTQ+	*reference*								
LGBTQ+	-0.029*	0.004	-0.002	0.005	0.025	-0.004	0.110***	0.091***	0.028
	(0.016)	(0.027)	(0.026)	(0.016)	(0.016)	(0.011)	(0.023)	(0.021)	(0.018)
Observations	5,772	5,772	5,772	5,772	5,772	5,772	5,772	5,772	5,772

Source: IDI (2024) and author's own calculations. Each regression controls for sex at birth, ethnicity, age, relationship status, region living in, regional deprivation, born overseas, household income, and year of interview. The number in parenthesis refers to robust standard errors. ***, **, and * are significance at the 1%, 5% and 10% level, respectively. Individuals are identified as LGBTQ+ if the person's sexual orientation is gay/lesbian, bisexual, or other, or when being gender diverse or when gender identity and biological sex differ.

Reported to police: NZ Police data on recorded victims of crime. *ACC claim*: ACC Injury Claims data which records information on accepted claims related to injuries and accidents, including the time of the accident and the nature of the accident (work vs non-work-related claim). *PHARMAC*: MoH's Pharmaceutical data contains information about subsidised medication dispensing. The dataset contains details on the issuance date of the prescription and the chemical identification of the drug. We follow Bowden et al. (2020) and use the chemical ID to identify mental-health-related drugs (any) and those that are intended to treat depression, anxiety and emotional problems. *PRIMHD*: MoH Programme for the Integration of Mental Health (PRIMHD) data which collects information on secondary mental health referrals. These refer to mental health programmes and interventions provided outside of general practitioners and hospitals. *MSD benefits (any)*: Ministry of Social Development (MSD) benefit claim data. This dataset holds information on people who have received a working-age social welfare benefit, including the type of benefit. We differentiate between unemployment/sickness-related benefits and supported-living benefits (e.g., accommodation supplement, sole parent support).

Table 11: Regression results on interaction with public agencies by sexual orientation

	Reported to police	ACC claim	ACC non-work claim	MSD benefits	MSD unemployment benefits	MSD supported-living benefits	PHARMAC record	PHARMAC record (emotion)	PRIMHD record
	(I)	(IIa)	(IIb)	(IIIa)	(IIIb)	(IIIc)	(IVa)	(IVb)	(IVc)
Full sample									
Heterosexual/straight					*reference*				
Gay or lesbian	-0.013*	-0.012	-0.007	-0.011	0.002	-0.006	0.076***	0.060***	0.011
	(0.008)	(0.022)	(0.022)	(0.011)	(0.01)	(0.007)	(0.018)	(0.016)	(0.01)
Bisexual	0.011	0.019	0.009	0.016	0.040***	-0.017**	0.086***	0.071***	0.030**
	(0.011)	(0.021)	(0.02)	(0.013)	(0.013)	(0.008)	(0.018)	(0.017)	(0.013)
Observations	28,551	28,551	28,551	28,551	28,551	28,551	28,551	28,551	28,551
Victimised in past 12 months									
Heterosexual/straight					*reference*				
Gay or lesbian	-0.032*	-0.025	-0.033	-0.005	0.000	0.010	0.107***	0.074***	0.033
	(0.017)	(0.036)	(0.034)	(0.019)	(0.016)	(0.013)	(0.028)	(0.025)	(0.02)
Bisexual	-0.001	0.051*	0.028	-0.013	0.012	-0.008	0.106***	0.083***	0.023
	(0.018)	(0.03)	(0.029)	(0.018)	(0.018)	(0.012)	(0.025)	(0.023)	(0.02)
Observations	9,075	9,075	9,075	9,075	9,075	9,075	9,075	9,075	9,075
Interpersonal/Physical/Multiple victimised									
Heterosexual/straight					*reference*				
Gay or lesbian	-0.057**	-0.088*	-0.103**	0.009	0.003	0.015	0.139***	0.123***	0.054
	(0.026)	(0.052)	(0.048)	(0.028)	(0.026)	(0.018)	(0.047)	(0.044)	(0.034)
Bisexual	-0.010	0.039	0.017	0.011	0.039*	-0.006	0.128***	0.105***	0.021
	(0.023)	(0.037)	(0.036)	(0.022)	(0.023)	(0.014)	(0.032)	(0.029)	(0.026)
Observations	6,276	6,276	6,276	6,276	6,276	6,276	6,276	6,276	6,276

Source: IDI (2024) and author's own calculations. Each regression controls for sex at birth, ethnicity, age, relationship status, region living in, regional deprivation, born overseas, household income, and year of interview. The number in parenthesis refers to robust standard errors. ***, **, and * are significance at the 1%, 5% and 10% level, respectively.

Reported to police: NZ Police data on recorded victims of crime. *ACC claim*: ACC Injury Claims data which records information on accepted claims related to injuries and accidents, including the time of the accident and the nature of the accident (work vs non-work-related claim). *PHARMAC*: MoH's Pharmaceutical data contains information about subsidised medication dispensing. The dataset contains details on the issuance date of the prescription and the chemical identification of the drug. We follow Bowden et al. (2020) and use the chemical ID to identify mental-health-related drugs (any) and those that are intended to treat depression, anxiety and emotional problems. *PRIMHD*: MoH Programme for the Integration of Mental Health (PRIMHD) data which collects information on secondary mental health referrals. These refer to mental health programmes and interventions provided outside of general practitioners and hospitals. *MSD benefits (any)*: Ministry of Social Development (MSD) benefit claim data. This dataset holds information on people who have received a working-age social welfare benefit, including the type of benefit. We differentiate between unemployment/sickness-related benefits and supported-living benefits (e.g., accommodation supplement, sole parent support).

Table 12: Regression results on interaction with public agencies by gender identity

	Reported to police	ACC claim	ACC non-work claim	MSD benefits	MSD unemployment benefits	MSD supported-living benefits	PHARMAC record	PHARMAC record (emotion)	PRIMHD record
	(I)	(IIa)	(IIb)	(IIIa)	(IIIb)	(IIIc)	(IVa)	(IVb)	(IVc)
Full sample									
Cisgender					*reference*				
Gender minority	-0.019**	-0.029	-0.024	-0.011	0.017	-0.013	0.051**	0.045**	0.012
	(0.009)	(0.028)	(0.027)	(0.016)	(0.014)	(0.012)	(0.021)	(0.018)	(0.012)
Observations	28,692	28,692	28,692	28,692	28,692	28,692	28,692	28,692	28,692
Victimised in past 12 months									
Cisgender					*reference*				
Gender minority	-0.069***	-0.027	-0.010	0.004	0.038	-0.010	0.050	0.064**	-0.006
	(0.015)	(0.045)	(0.044)	(0.027)	(0.025)	(0.018)	(0.036)	(0.031)	(0.022)
Observations	9,135	9,135	9,135	9,135	9,135	9,135	9,135	9,135	9,135
Interpersonal/Physical/Multiple victimised									
Cisgender					*reference*				
Gender minority	-0.090***	-0.017	-0.006	0.046	0.069*	0.010	0.029	0.038	-0.002
	(0.024)	(0.059)	(0.056)	(0.036)	(0.036)	(0.024)	(0.049)	(0.043)	(0.032)
Observations	5,772	5,772	5,772	5,772	5,772	5,772	5,772	5,772	5,772

Source: IDI (2024) and author's own calculations. Each regression controls for sex at birth, ethnicity, age, relationship status, region living in, regional deprivation, born overseas, household income, and year of interview. The number in parenthesis refers to robust standard errors. ***, **, and * are significance at the 1%, 5% and 10% level, respectively. Individuals are identified as gender minority when being gender diverse or when gender identity and biological sex differ.

Reported to police: NZ Police data on recorded victims of crime. *ACC claim*: ACC Injury Claims data which records information on accepted claims related to injuries and accidents, including the time of the accident and the nature of the accident (work vs non-work-related claim). *PHARMAC*: MoH's Pharmaceutical data contains information about subsidised medication dispensing. The dataset contains details on the issuance date of the prescription and the chemical identification of the drug. We follow Bowden et al. (2020) and use the chemical ID to identify mental-health-related drugs (any) and those that are intended to treat depression, anxiety and emotional problems. *PRIMHD*: MoH Programme for the Integration of Mental Health (PRIMHD) data which collects information on secondary mental health referrals. These refer to mental health programmes and interventions provided outside of general practitioners and hospitals. *MSD benefits (any)*: Ministry of Social Development (MSD) benefit claim data. This dataset holds information on people who have received a working-age social welfare benefit, including the type of benefit. We differentiate between unemployment/sickness-related benefits and supported-living benefits (e.g., accommodation supplement, sole parent support).

6 Conclusion and Policy Implications

We use 2018 to 2023 data from the New Zealand Crime Victimisation Survey (NZCVS) that is linked to Stats NZ's Integrated Data Infrastructure to analyse how crime victimisation prevalence and experiences vary across LGBTQ+ and non-LGBTQ+ individuals. We investigate multiple aspects of crime, including different offence types, the seriousness of the offence, the perceived reason and motivation for the offence, and the consequences of victimisation.

We present empirical evidence that LGBTQ+ individuals experience significantly higher crime victimisation rates across all types of offences compared to non-LGBTQ+ individuals, even after controlling for differences in socio-demographic characteristics. We see large differences by sexual orientation - bisexual and gay/lesbian individuals experience much higher rates of crime victimisation compared to heterosexual/straight individuals, with even larger differences for those who identify as bisexual. Similarly, gender minorities face much higher crime victimisation rates compared to cisgender individuals. These results match with overseas findings.

Our findings also show that LGBTQ+ individuals face a much higher likelihood of targeted crime, particularly sexual orientation-targeted crime, compared to non-LGBTQ+ individuals. They also face significantly higher chances of sex-targeted crime and other forms of discrimination. Additionally, LGBTQ+ individuals are more likely to experience severe consequences of crime, such as taking time off work or sustaining physical injuries after their victimisation. In more diverse areas like Auckland and Wellington, the difference in victimisation rates between LGBTQ+ and non-LGBTQ+ groups are narrower compared to victimisation rates outside of these regions.

We also linked crime victimisation experiences with societal perceptions. Overall, LGBTQ+ individuals are less likely to have a high safety feeling or a high life satisfaction, particularly among bisexual individuals, compared to non-LGBTQ+ individuals.

Our findings also highlight the vulnerability of the LGBTQ+ community relative to non-LGBTQ+ individuals regarding the overlap of crime victimisation and a higher uptake of mental health treatment.

Future research might build on our findings and explore further aspects:

- In general, the LGBTQ+ sample has a relatively small number of observations. Therefore, it is not possible to estimate trends over time or explore differences within the LGBTQ+ communities. This is particularly relevant for the gender minority sample. The 2023 Census might provide insights with the new population-wide information on sexual orientation and gender identity.

- Insights could be improved if agencies, like the police, record information on whether events have a connection to the status of a sexual or gender minority.
- Exploring further the link between crime victimisation and the mental health impact for LGBTQ+ individuals. Understanding how healing processes differ between LGBTQ+ and non-LGBTQ+ individuals is crucial when designing responses to victimisation and tailoring support for LGBTQ+ people. This includes exploring the role of discrimination and stressors that contribute to mental health issues.
- Examining differences in crime victimisation between LGBTQ+ and non-LGBTQ+ individuals concerning time, location, and offenders can help develop root cause prevention strategies.
- Connecting our research with work-related data can help provide insights into how crime victimisations affect LGBTQ+ and non-LGBTQ+ individuals differently in the workplace. This can help to provide tailored workplace support to lower the repercussions of crime victimisation.

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